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RESOURCE MANAGEMENT REGIMES AMONG THE SWIDDEN AGRICULTURALISTS OF BORNEO: DOES THE CONCEPT OF COMMON PROPERTY ADEQUATELY MAP INDIGENOUS SYSTEMS OF OWNERSHIP?

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ABSTRACT

The emergent nature of multiple interests over land and forest resources in the Rungus society of northern Borneo and their jural loci are analyzed and compared to the property systems of other swidden agriculturalists of Borneo: Kantu', Iban, Bulusu', Kenyah, and Bidayuh. In order to map faithfully the local contours of property systems, cross-culturally valid observational procedures are developed to distinguish the type of jural entity holding rights and the incidents of ownership. The variety of jural mechanisms a collection of individuals can utilize to manage multiple interests are illustrated by this comparison. Rights may be owned by a corporation, a corporate group, or by individuals, in the latter case jural collectivities and jural aggregates must be distinguished. The literature on "common property systems" has not developed such formal

observational procedures that isolate the dimensions of indigenous jural systems, and therefore tends to pose ethnocentric questions. And development planning proceeds in ignorance of local systems of property relations and their controls, thereby contributing to the degradation of resources as illustrated by cases in Borneo.

Introduction

The term common property focuses attention on an important set of phenomena whose common features are resources that involve multiple users or consumers. But are the members attributed to this category natural siblings or adopted? The literature is far from clear on this. I shall argue that they are indeed step-siblings and not a natural family and that, therefore, the term common property hides more than it reveals. But this is a matter that can be corrected.

Furthermore, I shall argue that common property has invited a number of ghosts and goblins to its feasts who have corrupted the conviviality of the meeting. In discussions of common property, the ghost of the English commons often attends. But it is an imposter. It is the ghost of what people believe the English commons to be, but nowhere is it specified what type of commons or who

are the right holders.[1] As a result, the actual holders of title are usually left out of most discussions of commons, as I shall show. Thus, when considering other jural systems -- for we really are talking about jural systems when we talk about property -- the discussions can be peculiarly ethnocentric and ignorant of the actual incidents of ownership.[2] In fact in Oakerson's (1986) model for the analysis of 'common property', the nature of the jural structure is never raised so that the incidents of ownership do not become one of the variables. This appears rather odd since our society is consumed by concerns over property.

This tends to suggest that in addition to the step-sibling question, and the ghost of the English commons, another spectre has to be exorcised. This is a rather sinister spectre, seen by some and not others. It is the hidden stream of colonialist thought in the concept of common property as presently phrased. And for those who deny the existence of such a spectre, his twin brother haunts us. He serves the neocolonialist interests of the members of the socioeconomic and political centres of the new nations, the elites who are trying to rationalize the systems of property relations of those peoples on the peripheries of their society for

their own self-interests (see Appell 1985a; 1985b; 1985c; n.d.; Netting 1982).

Thus, it is characteristic of colonial regimes and expansionist centres to ignore the incidents of property relations in societies on the peripheries and to claim that 'private ownership' has natural advantages on scant empirical evidence and largely on the basis of myths in the western world that justify ideas of progress and the capitalistic enterprise with its ideology of economic fundamentalism (Appell n.d.). This is the oft repeated cry by which the peoples of the peripheries are deprived of their property rights in favour of those members of the centres. As Netting nicely puts it: 'Inequalities grow not from within a system but by imposition and coercion from outside. Laws and economic arrangements become instruments to preserve and extend a distribution of property that benefits only an elite' (1982: 492).3

To deal with this spectre I will advance a new conceptual scheme that is more precise, more jurally appropriate, and more reflective of the underlying values of the society at interest. This will bring into analytical focus the bundle of rights and the title holders, whereas in the past there has been more emphasis on the 'thing' (res) itself.

Because the term common property is so corrupted -- and there is still an additional family of hobgoblins to deal with -- it should be relegated to the rubbish heap. But it has become too embedded in the discussion. So I propose to use it to refer to those situations where there are multiple users of a resource who hold divided title but undivided shares in the physical object. Divided title may either be by parallel rights, that is identical rights held by multiple title holders, or stratified rights. In stratified rights, the rights are divided by type, such as residual and use rights, and these are vested in different jural persons.4

Some have applied the term common property to open access, but as many have pointed out, this is inappropriate. In open access there is no property relationship until a product is taken possession of. (See discussion below.)

There is one final nest of hobgoblins to clean out that have infested the discussions of common property from the beginning. They are called up when the term private property is mentioned. These are the illegitimate offspring from historical and philosophical debates over the nature and origin of private ownership. And they have so corrupted our perceptual mechanisms by assumptions and concepts that prejudge the data so as to

make any discussion of property relations a wonderland accessible only to those who confuse the ghosts of ideological debates in the intellectual past with real issues. There are the goblins of social philosophy that are concerned with justice or injustice of property accumulation; the spooks of political philosophy concerned with what governmental arrangement will either inhibit or encourage disparity of wealth. And all these ideological debates are based on the phantom of a false, speculative history of the development of the institution of property on an evolutionary scale in which tenure in 'primitive' society was communal, whatever that means. As Netting has pointed out: 'Such grand evolutionary dichotomies have a disconcerting way of evaporating or being qualified out of existence by the evidence of careful, firsthand studies of unfamiliar societies that are the distinctive contribution of modern anthropology' (1982: 448). But in none of these discussions has the actual incidents of ownership ever been determined.

What does the term private ownership mean? Does it mean sole ownership? Or is it used to contrast with communal? With communistic? With collective? With state? With public? With common property? Thus, the term private should be exorcised from discourse on ownership of common pool resources as it is inappropriate

for our understanding of the actual incidents of ownership in any empirical case. And it perpetuates what appears to be a colonialist mentality.[5] But again it has a long history, and to completely excise it would only confuse, although I have tried to minimize its use in the discussion here.

Malinowski took the first modern and intellectually sound position on the problem of multiple ownership and the ideological nonsense that had been written on private versus communal property. In response to the claims by Rivers that the canoe was the subject of common ownership in Melanesian culture and the extent to which communistic or socialistic sentiments dominate the people of Melanesia, he writes:

> Nothing could be more mistaken than such generalizations. There is a strict distinction and definition in the rights of every one and this makes ownership anything but communistic. We have in Melanesia a compound and complex system of holding property, which in no way partakes of the nature of 'socialism' or 'communism'. A

> modern joint-stock company might just as well be called a 'communistic enterprise'. As a matter of fact, any descriptions of a savage institution in terms such as 'communism', 'capitalism' or 'joint-stock company', borrowed from present-day economic conditions or political controversy, cannot but be misleading.
>
> ... Ownership, therefore, can be defined neither by such words as 'communism' nor 'individualism', nor by reference to 'joint-stock company' system or 'personal enterprise', but by the concrete facts and conditions of use. It is the sum of duties, privileges and mutualities which bind the joint owners to the object and to each other (1926: 19-21).

Unfortunately his clarion call has not yet been fully heard. Peters (1987: 174) also draws attention to

the problems that these privatizing hobgoblins have created. She writes 'A model based on the dualism permeating Western thought (individual vs. society, private vs. communal, self-interest vs. altruism, ideal vs. actual) fails to provide the analytical tools necessary to understand the paradoxes and conflicts in Botswana's grazing areas,' or I might add any property relationship. She discusses how the private ownership versus communal or collective forms was a colonialist argument that permeated discussions on the proper uses of land in the Bechuanaland Protectorate and distorted the actual incidents of local ownership. (See also Appell 1971b for a discussion of how this same argument distorted the analysis of land rights when the British started anthropological field work in Sarawak following World War II.)

The problem is that there is no term, to my knowledge, in Anglo-American law that covers the same semantic ground that the term common property has recently come to cover in which there are multiple users of a resource. This lack of a viable conceptual scheme has led in the past to a corrupted vision of local land tenure regimes.6

What concepts are available in Anglo-American jurisprudence? Cribbet (1975) uses the term multiple

ownership but excludes the corporation from this. Salmond uses the term co-ownership and contrasts it with sole ownership. Co-ownership is equivalent to what others have called 'concurrent ownership' (Williams 1957: 306-7).

Concurrent ownership is classically used to refer to situations in which there are multiple persons participating concurrently in the same property with either parallel rights or stratified rights (Bernhardt 1975; Rutter 1977). These involve the following forms in Anglo-American law: joint tenancy, tenancy in common, tenancy by the entirety, community property, and tenancy in partnership. Joint tenancy involves concurrent interests with the right of the survivor to take the whole. Tenancy in common again involves an undivided interest in the whole property, but there is the right of survivorship in that these interests are heritable. In tenancy by the entirety ownership is limited to husband and wife, but in some states that have common property laws for married couples, tenancy by the entirety is not recognized.

In general, those using the term concurrent ownership have excluded the corporation from this category (e.g. Cheshire 1962), with the exception of Casner and Leach (1969). They also have included trusts

under this category. But the major problem is that these categories include forms of jural entities that are located specifically in Anglo-American law with their peculiarly ethnocentric interests. And they all exclude a form that occurs in many societies that I have called the jurally corporate group, which I shall shortly discuss. Thus, these concepts are not ones that can be taken cross-culturally with much success.

Finally, we must look at the term 'joint' which appears in terms such as joint tenancy, joint rights, or joint use, (see Runge 1986). These 'joints', I argue, should be deleted from the discussion, and my analysis of why this is so will also explain why I am uncomfortable with the term common property and believe that it should be used only with great caution. The term joint suggests that the rights are held by individuals, which in some instances of its use they may be and others they may not. Furthermore, the term has a meaning in Anglo-American law of survivorship in that joint holders succeed each other and the rights are not heritable. This entails certain technical aspects of the law regarding the nature of the title (see Casner and Leach 1969: 281-82), with joint tenancy contrasting with tenancy in common.[7] Thus, this term is inappropriate for understanding the indigenous system of property relations which in most cases does not

have these culture-laden incidents of ownership but their own incidents.

The term 'common' is massively polysemic. Right of common involves, for example, the right to pasture on the waste in common with the lord, and the term commoners refers to those persons who hold such rights. But this right is frequently confused with rights in common, described above. Again these terms are loaded with idiosyncratic features of our own legal system and can be used only with great caution in discussion of other systems. The language of jurisprudence does indeed give us great analytical power at a certain level for inquiry into other jural systems. But for mapping the structure faithfully of other legal systems, it can only be used with great caution and in the end we must develop our own language of analysis. This will, of course, be based on the discipline of jurisprudence but will improve on it by developing abstract analytical concepts applicable to all jural systems (see Gluckman 1969 and Bohannan 1969 for a discussion of this issue; see Appell 1973, 1980, 1981, and 1988 for a discussion of the nature of cross-culturally valid analytical systems).

Thus, the tragedy of the commons question was wrongly phrased from the beginning. Perhaps the question could have been approached more satisfactorily if it has

been phrased in terms of complete title in contrast to divided title. Oakerson (1986) came close to this in his definition of common property (see Note 4). Divided title refers to those situations, as we shall discuss, where there are more than one title holder either with the same rights, that is parallel rights, or with rights of different type, as in stratified rights.

Complete title refers to those forms of ownership where there is possession, right of possession, and right of property. This latter refers to the situation where a person has lost right of possession, and to recover it a writ of right has been given for recovery of property after there has been adverse possession of not more than sixty years (see Black 1968). However, these are the peculiar, ethnocentric aspects of land law situated in the history of Anglo-American law and cannot be moved to other jural systems without cultural contamination. Nevertheless, it might be useful to phrase the concept of complete title so that it is cross-culturally applicable.

However, even complete title does not ensure against depletion and degradation of natural assets, where there is access to external commodity and capital markets (see Appendix). And certainly the type of title is only a beginning. For other incidents of ownership must also be

examined and, most importantly, the nature of the jural locus of the title.

The Nature of Property Systems

To respond to Bromley's (1986a:5) call for a taxonomy of resource management regimes that goes beyond the mere simplicity of common property, private property, and open access, we must develop a universal method of classifying property relations.

Property systems involve social relationships, and they consist of six parts: (1) a jural entity holding (2) interests over (3) a scarce good or resource with respect to (4) other jural entities, (5) the associated jural sanctions that maintain this relationship, and finally (6) the mechanisms that regulate how entrance and exit of these property relations occurs, which may include devolution or devisal of these interests.8

In each society these variables are constructed in culture-specific ways to manage multiple interests over a resource. And this produces a wide range of common property regimes. Therefore, before any definitive and scholarly conclusion can be reached on the sociologically naive tragedy problem, it is critical to identify the exact type of property regime that is involved. Critical

to this is to determine the actual pivot of ownership; that is the jural locus of the rights or title in question.9

[Insert Table One about here.]

To proceed in determining the jural locus of ownership with a cross-culturally valid system of analysis it is critical to construct a grid for each of these six aspects of the property relationship. For interest-holding jural entities this grid may include fictional jural entities that we term corporations. That is they are fictional in that there is no social counterpart to the corporation (see Appell 1983a; 1984). These may be rare in indigenous societies, although they may appear in African societies particularly with regard to religious shrines. Then there are jurally corporate groups in which rights reside with the group as a jural entity, and there is a role that provides for representation of the group in jural actions. Thus, the group as an entity may enter into jural relations. Finally, multiple interests may be held by individuals in jural collectivities in which the social relations of the co-owners are recognized in the jural system so that they may nominate someone to take jural action on behalf of all their interests, but they are not considered as a corporate group. Finally, there is the jural aggregate in which rights again reside with the members of the co-owning group but each individual has to represent his own interests in any jural action (see Appell 1971b; 1976; 1983a; 1984; 1988).10

These distinctions provide a universal grid whereby we may isolate the locus of ownership interests. I have been involved in constructing similar grids for interests and scarce goods and resources but have not yet reached a complete inventory. However, I will illustrate the importance of this approach to determining the nature of resource ownership and management by ethnographic materials from Borneo.

To illustrate the point of this approach, it will be useful to review the argument of Feeny et al. (1990) -- see also Berkes et al. (1989) -- as this demonstrates the difficulty inherent in the common property concept and the importance of distinguishing property regimes.

But first it is important to emphasize that their general conclusion is well founded. They are right on target when they argue that the management of resources by a community of users can be a productive and nondestructive method of management and that ownership of a resource by more than one individual does not lead to the tragedy of the commons. Their article is an immensely useful summary of empirical data and presentation of evidence.

However, they have defined common property resources as a class of resources for which (1) exclusion of potential users is problematic; and (2) each user is

capable of subtracting from the welfare of other users. They then list four types of property-right regimes in which common property resources are held: (1) open access in which there is an absence of well-defined property rights; (2) private property in which an individual or corporation has the right to exclude others and regulate its use; (3) communal property, in which the resource is held by an identifiable community of users who can exclude others and regulate use; (4) and state property.

There is an inconsistency in this argument. First, open access cannot involve a common property resource for there is no property involved in open access until possession is taken of the 'thing'. The term 'common pool resources' (see Ostrom 1986; 1987) would have been more appropriate and less confusing.

This is an important distinction, for when they give an example of common pool resources under private property regime they use the exploitation of oil pools in Pennsylvania. 'In an 1889 Pennsylvania Supreme Court decision, the doctrine of law of capture was applied to oil [italics added]. Private property rights in oil were assigned only upon extraction. In practice, this means that each owner of surface rights has the incentive to accelerate their pumping of oil to the surface. The

result is a duplication of drilling and other capital costs, substantial reduction in the overall rate or recovery, and dissipation of economic rents' (Feeny, et al. 1990: 6). In many ways this is an example of open access of a derivative form, as mineral rights have to be paid to the land owner. But nevertheless in this example oil is not property until captured, and is similar to fish and a variety of other resources in situations of open access.

Second, the inclusion under private property regimes ownership both by individuals and corporations -- does this include both private and public corporations? -- seems counterintuitive. And their difficulty in finding examples of individual or corporation ownership of common pool resources suggests that this is indeed rare, or that this approach to understanding property regimes is wanting. I suspect that this is because such property regimes almost always involve divided rights rather than full ownership, or complete title.

Third, their classification does not identify the locus of the rights, i.e., the title holders, so that communal property may include three different types of property systems that we have defined: ownership by any form of jural isolate, including corporate groups, corporation, etc., the members of a jural collectivity,

or the members of a jural aggregate. The holder of title is an empirical issue in each of their classes of property rights, yet such loci of rights are seldom identified. And the difference in loci of rights will influence how the users manage their property.11

But before we proceed it is important to draw attention to Netting's position on land tenure. He makes the critically important point when he writes: 'Land tenure, I contend, does not make sense unless considered as part of a system involving the products of that land, the technology applied to gain subsistence, and the population sustaining itself from these resources' (1982: 447). He adds that historical ideologies, market forces, and labour expenditure must also be considered (1982: 491). I would only add any understanding of a system of tenure must be founded on delineating the actual incidents of ownership and their loci. Which is the point of this paper as this level of analysis is not always made.

The Jurally Corporate Swidden Villages of Borneo

In all the swidden agricultural societies of Borneo, to the best of our current knowledge, the village as a jural entity traditionally held residual rights over its

village reserve (see Appell 1971a; 1971b; 1983b; 1986). The territory which I have called the village reserve was referred to as the area of disposal by the early Dutch customary law scholars, whose important and pioneering work begun at the turn of the century has been all but ignored.12

All the members of the village may cultivate their swiddens in the village reserve, but non-residents of the village may not do so without the prior permission of the village headman. This use right is thus a derived right, dependant on acceptance to residence (Appell 1976).

Other rights may be held by the village, but these vary with the society. These rights usually involve who may cut housing timbers and firewood, who may collect forest products, and how wild fruits and game collected by nonresidents must be shared with residents.[13]

Thus, the degree of elaboration of the jural personality of the village in Borneo -- that is the sum total of its rights and duties -- varies with the society.

While village members have the capacity to create use rights from the village reserve, these use rights vary in terms of their length of duration and thus may be divided into two basic types: the circulating usufruct system and the devolvable usufruct system.

Resource Management Under Circulating Usufruct: The Rungus Case

The Rungus system illustrates the nature of circulating usufruct. No permanent use rights, that is devolvable use rights, may be created by cutting a section of the forest reserve for a swidden. Thus, any member family of the village may cut any part of the forest in the village reserve without seeking the permission of the prior cultivator of the area. These rights over an area exist until all the produce from the swidden has been removed.

Entering and Exiting These Jural Rights. Use rights to cultivate are not transacted either by buying or selling. Nor are they devised in any form of succession. If a family for a variety of reasons finds one village not to its liking, or cannot find a good place to make a swidden, it may leave and enter another village without any disabilities. Rights to entrance are not based on kinship. Only the headman's approval is needed to enter.

Management of Interests Under Growing Scarcity. Leaving a village is one way of managing scarcity. Also, traditionally, whole villages have at times picked up and entered new unoccupied territory.

However, the problem of scarcity was not an issue until there was colonial government intervention. The British government took tracts of Rungus land for plantations, with the result that Rungus villages or their members had to relocate. Then the government opened up the region to Chinese settlement, with again the loss of Rungus lands. This, along with population increase, put pressure on the land/population balance.

At some time in the past after the British arrived, the Rungus response to growing scarcity of land was to make boundaries between villages more firm and explicit. Nonresidents who cut swiddens in the reserve of another village had their swiddens fired prior to their being dry, ruining them for farming. Finally, village headmen got together and decided that if any farming was done by nonresidents without permission, the village headman had the right to sue for a gong. Thus, growing pressure resulted in the elaboration of the jural personality of the village (see Appell 1988).

Also about this time three villages whose territories backed up on a mountain decided to keep this area in primary forest and not cut it for swiddens. It provided needed raw materials for housing, granaries, etc. It furthermore protected the watershed of streams and rivers from which these villages got their water. This was critical as the Rungus area experiences a difficult dry season each year. Thus, what once was open access was turned into interests held corporately by each village over that section of the primary forest that backed up each village's territory.

However, the policing of this became difficult. When relatives of key men in the village cut the primary forest for swiddens, it was difficult to fine them. So the policing of this was turned over to the forest department, and this area was gazetted as a forest reserve.

After the British left the region, creating Malaysia, the state government gave this area out to Chinese for timber cutting. This produced an aggressive reaction by the Rungus in which the Chinese and the politicians involved were threatened. Cutting was stopped but only after much of this former reserve was destroyed.

However, a division of opinion grew in the community. Some wanted to let the cutting go on so that they would get the royalties. External markets had intruded into the local village society. Some wanted money to meet the schooling costs of their children. Others wanted to use it for new consumables. However, a more influential section of the community resisted this, arguing that the loss to the environment was greater than the rewards that the individual families would obtain.

In this regard, it is interesting to note that in all discussions of Hardin's tragedy the destruction of what is termed commons implies that the resultant profit will be consumed. There are instances when the conversion is turned into capital, which is an important form of conversion. For attempts to limit such conversion may prevent the creation of capital for investment, limiting the economic progress of such societies.

The disruption of the Rungus traditional system occurred from successive governments failing to recognize the Rungus land tenure system. Only individual title was recognized, not corporate title. As a result of this, the jural personality of the village as a corporate land holding entity has been eroded so that when individuals obtain title to land, they sometimes sell their title to

wealthy outsiders from the city who have sufficient cash reserves. This has now produced Rungus villages that no longer have their cultural integrity, and this has produced a certain amount of tension between Rungus residents and outsiders.

Jural Collectivities and Jural Aggregates

Before we can consider the nature of devolvable usufruct, we must first make the distinction between jural collectivities and jural aggregates. These are illustrated by Rungus tree ownership.

All the descendants of an individual who planted a fruit tree have the right to collect its fruit. If it is an unimportant variety of fruit, or a common one, no cultivation of it will occur. Then, if it is destroyed, all who have an interest in it can attend the village moot to sue the person who destroyed it and get their share of the settlement. These holders of parallel rights form a jural aggregate.

However, if it is a valuable fruit tree, and cultivation of it will increase its production of fruit, one of the descendant living closest to it will take on this job, which includes fencing around the tree during fruiting season. He gets a prior share and a larger

share of the fruit. He also has the obligation to call all the other right holders within a reasonable distance from the tree to come and collect the fruit. If this tree is destroyed, the cultivator is responsible to sue for restitution. He tells all co-owners when the village moot will occur. And it is up to them to come. The cultivator takes the jural action. He is the person recognized by the jural system as responsible for this. But the others must attend to obtain a share of the restitution. Otherwise, if they do not come, they get nothing. This represents a jural collectivity in which the social relations between the co-right holders is recognized and one person is allowed to sue on behalf of the others.

The Management of Interests Under Growing Scarcity. Interest in trees among the Rungus is not a major economic asset. If one moves away from a village to a distant village, interest in trees an ancestor has planted are seldom activated as the distance involved to come for a share of the fruit is not worth the return. When one interest holder fails to activate his interests, then over time in succeeding generations the interests tend to be forgotten. Also in marrying one may get rights over trees from the family of a spouse, so that

his own interests may not be worth the trouble to activate and protect.

However, with valuable property this form of devisal presents the possibility of numerous quarrels among interest holders. This occurs over valuable jars among other Dusun-speaking groups. Among the Bulusu' they have devised a simple method of dealing with this. The have extensive fruit tree groves, and the produce of these groves is of some value as the fruit is sold in commercial centres (see Appell 1985b). When the set of co-owners become so large as to be cumbersome in terms of activation of rights, or the rights have become so widespread as to produce little return to each member of the set, or quarrels over the distribution of the fruit becomes too burdensome, the interests of the others are bought out by the eldest in the sibling set or the person who has had the responsibility of clearing around the trees just prior to the fruiting season.

Resource Management Under Devolvable Usufruct

In some societies of Borneo permanent use rights over an area cleared of primary forest can be established. This devolvable usufruct may be of two types: partitionable in which the rights are held

corporately by a domestic family and rights to this are split if the domestic unit through population growth partitions (see Freeman 1970); and devisable usufruct in which the rights are devised to all descendants of the original feller and held in severalty by all of these.14

For example, among the Bidayuh Land Dayak of Sarawak use rights over land are devised in the same way as rights over fruit trees among the Rungus. However, they manage access to these rights differently if there are contending parties.15

If in one year two right holders do want to use the same piece of land, there are two rules to decide who should have prior right to it. These are the rules of least use and the rule of the superior right of an elder.

The rule of least use states that 'if, of two or more claimants to land, one has used the land less recently than others, then that person has the best right to it'. However, 'if none of the present claimants has used the land before, then the respective time since their fathers, grandfathers, or even more remote ancestors have used it is taken account of and priority granted to the claimant whose ancestors have used it least recently' (Geddes 1954: 61).

The second rule of the superior right of an elder applies, Geddes writes (1954: 61), in cases in which the

first one cannot decide between claimants owing to the fact that they are all descended equally from the person who last used the land. Then, 'if two or more claimants, none of whom have used the land before, are descended equally from the last person who did use the land, the best right to it belongs to the oldest' (1954: 61).16

In contrast, among the Mualong Dayak of West Kalimantan the individual who has cut primary forest has the right to cultivate that area four times before it returns to the village reserve and open to other village members to cultivate. As a result, these extended use rights may pass on to the descendants of the original feller until consumed (Drake 1982). 'These extended use rights are shared by the spouse and children and will pass on to their descendents until consumed' (Drake 1982: 102).

The issue in cognatic systems is how the ramification of potential right holders is contained. Among the Bidayuh the size of the set of co-owners of cultivation rights is constantly being eroded by members moving to other villages, by forgetting that rights exist after several generations of not using them, and choosing to ignore rights if one has access to better rights. Conflict is thereby minimized.17

The Kantu' Dayak Case: Partitionable or Corporate Usufruct. We turn to the final example showing the adaptive responses to challenges to growing scarcity in the village reserve. As with the Rungus case, it is another example of what I have termed emergent structuralism (Appell 1988). No society is frozen in time but there is constant social change and self transformation. If we conceive of the social structure as consisting of the jural order, then there is by definition an opportunity structure. The social structure not only defines the opportunities that it is permissible to exploit, but also provides the decision paths and techniques that lead to antisocial behaviour in what I have termed the contrastructure. Decision making and transactions in the opportunity structure do not generate social forms, however. New social forms are the product of a second level order of events, a reflexive event by the members of the society scanning their own opportunity structure for those changes in the activation of this order, for the pile up of decisions in one sector or the other, for the differential exploitation of resources, that threaten the society's conceptions of equity. Then these new shifts in the opportunity structure are then encoded into the social structure by

a legitimizing act or relegated to the counterstructure as deviant by a representative body of members.

Dove (1985) provides the history of land tenure changes among the Kantu' Dayak. In the beginning, the land tenure system was that of circulating usufruct similar to that of the Rungus. That is each resident domestic family had the right to cultivate a swidden in any part of the forest in the village reserve that was unused, and the cutting of such a swidden did not establish permanent usufruct rights over that area. The Kantu' stated that as long as there was chronic warfare, rights over secondary forest were of little value. First, there was an adaptive value in the village being relatively mobile and able to advance or retreat as conditions warranted it. Second, because of warfare it was important that all the households farm near one another with their swiddens in a cluster. And finally, the exigencies of warfare placed a premium on primary forest because primary forest swiddens minimized the need for weeding, which in turn lessened the defensive burden for the men and heightened their offensive capabilities.

The first modification of this system produced extended usufruct as the result of a pig sacrifice to remove the danger of an omen. If an omen was observed during the planting of a primary forest swidden, the

household making the swidden was required to make an offering of one or more pigs. This then gave the household the prior right to farm that particular section of land once more at a time of its own choosing before the land reverted to the village reserve.

With the cessation of warfare, the next stage involved the development of devolvable usufruct in which households were able to claim permanent use rights to forest areas that they had cleared of primary forest. These rights developed for two reasons. First, the cessation of warfare and the removal of pressures against a more sedentary existence enabled the Kantu' to start planting rubber groves, which is a useless endeavour unless the group can remain in the same area for two generations or more. The second factor was that the Kantu' were surrounded on three sides by the Iban, who recognized such devolvable rights, and the Kantu' followed suit so as not to be disadvantaged in any land disputes with the Iban.

As a result of these changes, the population grew putting additional pressures on the land. The Kantu' land tenures system further developed in response to this. One change was the new customary law that any household on leaving a village had to forfeit their devolvable rights to secondary forest. And such areas

vacated reverted to the status of primary forest, and devolvable rights could be reestablished over the area by the household that first recut the forest. Any household that announced their intention to move was from that time on forbidden to sell its land rights.

But as land became scarcer this procedure lead to many disputes among the households. As a result, the longhouse headmen began to take all such rights themselves and enjoyed them personally. Eventually the longhouse members began to resent the actions of the headmen that put them into a privileged position. The customary law was again changed so that devolvable rights to land abandoned by a departing household reverted to the village reserve which household members could farm in rotation as circulating usufruct, identical to the initial form of land tenure.

It is important that growing population pressure and outside markets did not lead to a shift toward individual ownership of land. Instead the legal personality of the Kantu' household, a corporate jural isolate, enlarged. And note that the devolvable usufruct rights are held by the household corporately not by individuals so that in this instance of divided title both use rights and the residuary rights of the village are held by jurally corporate groups.[18] This is an important point, as one

surmises that many cases of shifts to alleged 'privatization' of land tenure may in fact be similar to this, but as interpreted through Western eyes it appears as a growth in individual ownership.

Conclusions

The ethnographic data from Borneo illustrate that the analytical concepts used in discussion of common property have to be revised so that they map accurately the local contours of property systems. For as Netting writes: 'A lack of understanding of the conceptions and operations of property systems in other societies is a frequent cause of conflict, injustice, and exploitation' (1982: 451).

Furthermore, the data suggest that there is no necessary unilineal movement under scarcity from divided rights to full sole ownership. In the Kantu' case the jural personality of the domestic unit as a corporately jural grouping has enlarged in response to scarcity.

The variation in Bornean land tenure systems remains unexplained. Netting (1986) as the result of his own research and a review of the literature has drawn attention to the importance of ecological factors in determining the type of land tenure system in use. This

issue has been discussed by Appell (1971a; 1983b), Dove (1980), and others in the Borneo Research Bulletin with no solution to the problem. I (Appell 1971a) raised the question as to whether devolvable usufruct might be an adaptive response to heavy rainfall, as secondary forest drys out faster than older forest. In the Rungus environment there is a severe dry season which might make circulating usufruct more adaptive. However, our research in 1980-81 proved this hypothesis wrong and suggested that historical factors might also be at play. Among the Bulusu' we found circulating usufruct in one of the wettest regions of Borneo (Appell 1983b).

But wherever there are multiple users of common pool resources, some sort of control, or as Hunt (1990) has termed it, internal jurality, develops. This occurs even in situations of open access, as for example the rules of the Buffalo hunt that emerged among the Metis of Canada (Purich 1988). Sometimes the development of internal jurality is more successful than at other times. But it is always the natural product of group interactions, contrary to Hardin's sociologically naive claim. The problem to be studied is under what conditions does it flourish to provide the most efficient, sustaining use of common pool resources.19

However, the real tragedy occurs when outside interests attempt to rationalize the use of resources from their own self-centred, cultural perspective, ignoring the local jural system and the ecological constraints. This results in the breakdown of the internal jurality so that for the period in which these resources devolve into open access major depletion and destruction of them occurs before any internal jurality has a chance to develop (see Bromley and Cernea 1989; Berkes 1986; Runge 1986; and Feeny et al. 1990 for examples).

It is better to build on what is already there than to assume nothing exists.

NOTES

[1] Is the model taken based on common appendant, common appurtenant, common by several, common in gross? Does it involve common sans nombre, common of piscary, common of estovers, common of turbary, common by vicinage, common of shack, common of foldage, common of herbage, common of fowling, common of warren, common of ingress, common of digging, etc.? All of these are what I have termed derived rights (Appell 1976) with the exception of common in gross. That is they are dependant on and derive from other rights, such as the right of membership in a village, the right to occupy a house, etc.

[2] Hoskins (1963: 4) warned his readers: 'Contrary to a widespread belief, however, all common land [of England and Wales] is private property. It belongs to someone, whether an individual or a corporation, and has done so from time immemorial. ... [They] are therefore not public property...' Yet, in discussion of common property it is not infrequent to find private property contrasted with common property.

[3] See in Larson and Bromley's (1990) rebuttal of those who have argued for the economic efficiency of 'private ownership' as 'cure' to the so-called tragedy of the commons. Colonialist regimes, both true and the

decentralized ones of the new nations, have held this position for years as they have attempted to take over the property of indigenous peoples. The call for privatization is frequently made by elites and/or scoundrels to gain control over the property of the less sophisticated on the peripheries, as happened with the American Indians in the 19th and 20th centuries. See Prucha (1973) for a reprinting of the public debate over the Dawes Act which was to provide individualized tenure to Indians on various reservations. 'Most devastating were the relentless workings of the Dawes General Allotment Act. The Dawes Act and its subsequent modifications achieved but one of the goals of the reformers, and that spectacularly, for it swiftly moved Indian land into white ownership' (Utley 1985: 268-69). Privatization is also so attractive as it externalizes many of the costs as in the case of certain enclosures which forced populations to immigrate to western Canada to take up lands that were held by the Indians. Ciriacy-Wantrup and Bishop (1976) refer to this as the tragedy of the commoners. Fernandez (1987: 268) refers to this as the authentic tragedy of the commons.

[4] Oakerson's (1986: 13) definition of a commons as 'an economic resource or facility subject to individual use but not to individual possession' is on the face of

it very attractive. But it ignores the jural nature of the relationship, specifically the type of rights and their loci. Furthermore, possession does not mean ownership (Honoré 1961). Also it would include state ownership, while the thrust of many of the arguments on common pool resources is that state ownership is a form contrasting with 'common property' ownership.

[5] One of the more invidious spectres of colonialism is found in the discussion about appropriate ownership regimes and the planning of these for a population without their voice, interests, and participation being elicited.

[6] Netting (1982) demonstrates clearly how additional inequities in distributive justice have occurred when a government attempts to change the local system of tenure without a knowledge of the ecological basis of land use.

[7] There are four unities that must exist in any joint tenancy: (a) unity of time in that the interests of the tenants must vest at the same time; (b) unity of possession in that the tenants much have undivided interests in the whole; (c) unity of title in that the tenants must derive their interests by the same instrument; (d) unity of interest in that the tenants must have estates of the same type and duration (see Casner and Leach 1969: 281). The joint tenancy can be

severed and converted into tenancy in common if any of the unities are destroyed.

[8] This analysis of property relations builds Hallowell's (1943) seminal clarification of the nature of the property relationship. A jural entity is a social person, a group, or a fictional person, such as a corporation, that may enter into jural relations within a specific jural system.

[9] Not only is Hardin's construction of the tragedy problem sociologically naive and historically false, but it has become a myth of our times. This suggests that it serves certain social psychological functions in the western mind part of which may be to justify its ideology of property.

[10] Bromley and Cernea (1989) in their excellent discussion of the problems in common property and the impacts of outside interference argue that common property always implies a corporate grouping. But they do not distinguish between a sociologically corporate grouping and a jurally corporate grouping, a critical distinction. If they mean a jurally corporate group, the Rungus data, which we shall discuss, suggests that other jural isolates may hold rights over common property.

[11] Bromley raises related issues on the term common property: '...we ought to be very careful in our use of

the terms "common pool resources" and "common property resources." We have not yet arrived at a consistent definition of what is, and what is not, a common pool resource. More seriously, to talk of common property resources may leave the impression that there are certain natural resources that are only controlled by common property arrangements' (1986b: 595).

[12] See Koentjaraningrat (1975: 86-113) for a bibliographic review of this field of inquiry. See Haar (1948) for a discussion of the concept of area of disposal. Jessup and Peluso (1986:517) are misinformed when they state that Weinstock (1979) found village territorality to be a common feature of Bornean systems. The scholars of the Dutch adatrecht school pointed that out early in the 20th century. After World War II when English anthropologists began their work in the British Bornean possessions, they chose to ignore this aspect of land ownership because of the claims of the government that the indigenous peoples were communal owners of land, i.e., on the thin edge of communism. I brought this aspect of the jural system of Bornean societies and its entailments for development to the attention of the current generation of scholars in a series of articles based on my own research (see Appell 1971a; 1971b; 1983b; 1986).

[13] Jessup and Peluso (1986: 518) in their discussion of Borneo village structure claim that the village is a kinship unit. But they do not distinguish whether it is de jure a kinship unit or only a de facto one. (For a discussion of this issue in another context see Appell 1973.) That is, among the Bulusu' and the Rungus kinship is not the critical requirement for joining a village, although usually you join a village where there are kinship ties. Among the Bidayuh Land Dayak, the village is neither de jure nor de facto a kinship unit (see Appell 1971b). The extent to which this holds for other groups in Borneo is not clear.

[14] The ethnographic materials on devisable usufruct are unclear in any of the societies where this occurs as to the actual locus of the rights over area cleared of primary forest. Does the feller establish the rights for himself or for the whole domestic family that he is a member of? If they reside with him and he divorces his wife, his wife's subsequent children by other men will not hold rights to cultivate. If they reside with the domestic family, the wife's children by other men on the death of the original feller or on divorce from him will have access to these rights. I discuss the tests to determine the locus of rights in Appell (1986).

[15] Rights to cultivate an area of ancestral land cannot be activated until a man has married, had children, and resides in a separate longhouse apartment. While it is clear that rights among the Bidayuh over cultivatable swidden areas are held by individuals, it is not entirely clear in the ethnography of Geddes whether the set of interest holders form a jural collectivity or a jural aggregate. I surmise, however, that they form a jural collectivity.

[16] Jessup and Peluso's (1986: 518) generalization that in Borneo property rights are forfeited by a person who permanently leaves the village is of limited validity. The degree to which this is so depends on the ethnic group involved, their jural organization, the type of property, and the type of rights. For example, among the Bulusu' of East Kalimantan and the Rungus of Sabah, Malaysia, rights to enjoy the profits from fruit trees is not forfeited on leaving a village. With regard to rights to cultivate, Whittier writes that among the Kenyah: 'Children moving to other villages, retain a tertiary right to the land, but with land pressure in the area today, it is unlikely that such rights can be activated' (1973: 62). Among the Bidayuh Land Dayak, rights to cultivate ancestral lands are not forfeited on leaving a village but only the right to activate those

rights without permission of the village headman or without returning to the village to reside (see Appell 1971b).

[17] This is a critical issue for understanding how cognatic societies work and how limits to the expansion of multiple interests as a result of population growth are managed. It would be worthwhile to make an inventory of the various methods.

[18] Dove in his review (1985) does not specifically deal with the problem of jural corporateness by giving case materials from jural disputes. But I infer this corporate jurality from the various arguments on land that he presents.

[19] I believe that Ostrom (1987) has phrased the problem wrongly on the development of internal jurality. It is not a case of whether or not it develops. It is a consequence of all social groupings.

APPENDIX

The Failure to Consider External Capital and Commodity Markets in Dealing with the Problem of the Depletion of Resources Under 'Private' and 'Common Property' Ownership Regimes

In the literature on the tragedy of the commons that I have been able to cover there is little discussion of the impact of external commodity and capital markets on the problem of depletion of common pool resources under open access and the various property regimes. However, the development of commodity markets outside the socioeconomic system of common property does result in individuals taking advantage of the common property to expand their own economic interests. (See Vondal 1987 and Berkes 1986 for examples; see also Berkes 1987 for an example where the lack of external markets preserved a well-functioning common property system.)

When capital from external markets becomes available, under whatever regime of ownership, the decision to conserve or deplete resources is partly taken out of the hands of the user or users. That is, the cost of capital and its payback period are the product of other factors beyond the ecosystem concerned. And these may force both single users and multiple users to exhaust

the resource to meet these payments. The farmer who has to meet his bank payments will do so to prevent loss of his farm, even if this may require him to use the farm on a non-renewable basis, and the devil take the consequences. There is always the chance that the price for his product may rise in the future for him to make his profit even at the cost of his soil. Furthermore, for multiple users of a resource, if there is an external capital market, a single user may exhaust as much of the common pool resource that he can, defying the community sanctions, so that he can convert his exploitation into another form of resource that will provide greater ultimate returns, either as in education or by putting his profits into Swiss bank accounts. Under these conditions the exploitative user expects to remove himself from the community of users and therefore no longer needs to adhere to its sanctions or the network of exchanges for him to be economically viable.

Thus, one of the prime causes of the depletion of resources is fractionating of local human ecological systems so that markets are no longer part of that system but are developed outside the socioeconomic and ecological system of the users of common pool resources. A focus on this problem rather than on whether members of indigenous systems are natural conservators or whether

private property is more advantageous than other forms of ownership should make the debate more productive.

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