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# COMMUNITY RESOURCES IN BORNEO:

# FAILURE OF THE CONCEPT OF COMMON PROPERTY AND ITS IMPLICATIONS

# FOR THE CONSERVATION OF FOREST RESOURCES

# AND THE PROTECTION OF INDIGENOUS LAND RIGHTS

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## INTRODUCTION

Western thought since the time of Aristotle has been muddled by the lack of conceptual clarity over the ownership of land and productive resources. It has tended to focus on the false contrast between private property and common property, without clearly distinguishing what either of these mean.

## HISTORICAL CONFUSION AND HEGEMONIC DISCOURSE

## THE CONTAMINATED CONCEPTS OF COMMON PROPERTY AND PRIVATE PROPERTY

The term common property in everyday usage has been historically applied to two different property regimes: *res nullis*, resources that are open access and are not encumbered by any property rights; and resources that have multiple users. This term contrasted with private property, which sometimes referred to a resource held by an individual and at other times referred to property that was not state owned. The term common property as *res nullis* was applied to indigenous populations by explorers and colonists, who did not bother to determine what native rights over property existed. Its usage signaled that the resource was open for the taking by the intruders. This misconception and confusion has continued on until today.

An anonymous author reporting on his 1496 voyage to America wrote that the Indians owned everything in common (see Arber 1885; also see Zolla 1973). James Hall writing in 1835 used the same discourse. The

Indians "must, indeed, be tutored into a sense of private property. For '...the insecurity of property, or rather the entire absence of all ideas of property, is the chief cause of their barbarisms'" (Pearce 1988:72).

Thus, these folk categories of common and private property carry with them an unexamined load of assumptions and ideological contaminants which make them useless for understanding property relations in other societies (for example see Johannes (1977:121).

Peters (1987) reports that in southern Africa these colonial models of preferred land tenure have permeated the debate in Botswana distorting the actual incidents of local ownership. "The belief that certain collective or corporate forms of social organization and property relations stifled initiative and/or encouraged lackadaisical and careless use of resources was generally held by colonial officers, missionaries, and traders. It was embedded in an ideology that regarded private ownership as the superior opposite of

communal forms, and whose premises were based on a long history of Western thought. It was through this lens that problems were diagnosed.... Through that same lens, prescriptions for change were conceived and announced: the introduction of new forms of exclusive land tenure and the private ownership of wells. With hindsight, one can see that these were constructions of a reality projected by the colonialists themselves, who persistently tried to squeeze African landholding systems into a model that set private and individual in opposition to communal and group" (Peters 1987:179).

Claims of the efficiencies of private property over what was called "communal" or "common property" are still part of the discourse of neocolonial elites in Third World countries who want to rationalize, on their terms, the economies of peripheral peoples. This universally occurs without sufficient knowledge of the peripheral property systems or their relationship to environmental processes. These are self-serving claims by the new elites of former colonies who want to privatize land tenure systems for the benefit of

themselves and other members of the economic and political centers who have the cash to invest in former tribal lands. This has contributed to a growth of landlessness, and repeats what happened to the Indians of North America (see Appell 1985a, 1991b).

## HARDIN AND HIS CRITICS

In 1968 Hardin changed the focus of the debate claiming that the "commons" as a form of property ownership resulted in environmental destruction and degradation. Although Hardin's article was conceptually flawed and empirically wrong, it provided the impetus for refocusing the age-old arguments about what modality of property ownership, on the one hand, would provide the most efficient use of a resource with the least externalities and, on the other, what modality promoted the most desirable forms of liberty and social justice. The concern over efficiency was now shifted to how property modalities contribute to environmental degradation and the social costs of previously unexamined externalities to open access resources such as air and water.

Hardin's critics (Appell 1993; Berkes 1989; Berkes, Feeny, McCay, and Acheson 1989; Bromley and Cernea 1989; Feeny, Berkes, McCay, and Acheson 1990; McCay and Acheson 1987; National Resource Council 1986) have shown that Hardin's argument was historically uninformed, sociologically naive, economically

simplistic, and just plain wrong. They have also provided important case studies showing the value of indigenous knowledge of resource utilization and that traditional forms of ownership have efficiencies which in many cases are more productive and suitable to the local environment than planned development interventions (see also Johannes 1977; McKean 1986; Berkes 1985).1

However, the issue that I will address here is the fundamental logical flaw that occurs in Hardin's argument as well as in the rebuttals of his critics. That is, if a form of property ownership affects the productivity and conservation of a resource, then it is critical to identify precisely the property modality involved and specifically the locus of ownership before assessing its contribution to productivity and sustainability. Neither Hardin nor his critics have yet to develop the observational procedures to identify precisely either the jural status of the property right owners or the nature of the rights held.

## ANALYTICAL CRITIQUE OF THE DEFINITIONS OF "COMMON PROPERTY"

Let us now briefly analyze the recent usages of the term "common property" by Hardin's critics in a discourse that is confusing, hardly useful or jurally informed.

Berkes, Feeny, McCay, and Acheson (1989; expanded in Feeny, Berkes, McCay, and Acheson 1990) define common property resources as a class of resources for which exclusion of potential users is difficult and costly and joint use involves subtractability in that each user is capable of subtracting from the welfare of others. The term common property resources is an oxymoron as resources and property are concepts of a different order, and, furthermore, they have included under this concept property modalities other than common property. Thus, their taxonomy of four basic property right modalities for common property resources includes: private property, a resource held by an individual or corporation; communal property, a

resource held by an identifiable community of users; state property; and open access, a resource without well-defined property rights so that access is free and open to all as with ocean fisheries of the last century. Although classed as property, open access turns out not to be property at all.

Bromley and Cernea (1989) also use the oxymoron of common property resources in their analysis of the problems in managing such resources and the failure of Hardin's logic. But as do others (e.g. McCay and Acheson 1987) they make the point that Bromley and Cernea (1989), Hardin, and other social scientists have frequently confused open access with "common property" modalities. They also distinguish four possible resource regimes: state property, private property, common property, and non-property, or open access.

Note that Bromley and Cernea contrast private property with common property. Yet they write (1989:14): "Common property is in essence 'private' property for the group and in that sense it is a group decision regarding who shall be excluded."

These definitions of property modalities fail not only because they are contradictory and confusing, but largely because they do not distinguish whether the rights are held by individuals, as a jural aggregate or jural collectivity -- as we shall explain -- or held by a corporation, or by a corporate group. And they do not distinguish the types of rights held. Yet these distinctions are critical to the ultimate goal: the understanding of management forms and how they affect productivity and resource degradation.

Thus, these classifications need to be revised, as we shall now do, first looking at types of rights and then the nature of jural entities.

## FRAGMENTED OWNERSHIP:

## FORMS OF RIGHTS AND OBJECTS OF OWNERSHIP

The concept of common property when it does not refer to open access is a form of multiple ownership. But how do we distinguish between the various forms of multiple ownership and determine the relationship between right holders? I propose a conceptual scheme that is universally applicable and forms a critical part of the observational procedures to determine the nature of property ownership.

When there are multiple interests of any kind in a property object, I refer to this as co-ownership. In co-ownership there is the issue whether each of the co-owners individually owns a right in the object or benefit stream from the object, or whether the co-owners share a single right. A shared right involves the ownership by all of a single right, as in partnerships (Salmond 1957:306) and joint rights. Let's look at the Diagrams, in this case Co-ownership Form 1. And as we discuss these diagrams, I would appreciate it if any of you would indicate which one diagrams the structure of a common property regime.

[Insert Diagrams about here.]

Please note two things. First, a shared right may occur in all the various forms, but I have not indicated it for purposes of simplicity. Second, jural entities holding rights may be individuals, corporate groups, or corporations. This variation has important implications for the management of the resources owned. But again for simplicity I have not added this variable to the diagrams, which are only focusing on the various types and levels of rights in situations of co-ownership. We will discuss the various jural forms shortly.

When multiple rights exist in an object or benefit stream, two types may occur which I have termed: parallel rights and stratified rights. The term parallel rights refers to the situation in which the co-owners hold identical interests. Such "co-owners have simultaneous interests in every portion of the thing, but no separate interest in any particular portion of it" (Cribbet 1975:94), or what is referred to as having an interest in undivided shares of the object.

In the instance of stratified rights, two or more jural entities hold interests of a different order in the same object as is the case with villages in Borneo. It is common for a village practicing swidden cultivation to hold residual rights to a distinct village reserve as a corporate group. Only the members of that village may cut their swiddens in that territory. The right to cut swiddens is a parallel right held in some Borneo societies by the individual members and in others by domestic families as corporate groups. The use rights over the area cut may be held only temporarily, lasting only until the last crops of that year are removed, or they may be durable in that they may be devised on other generations or held theoretically in perpetuity by the corporate domestic family. Another example of both parallel and stratified rights is provided by interests over those types of fruit trees among the Rungus that require care and cultivation. In this case the rights are held by individuals as a jural collectivity. All descendants of the original planter have parallel rights to collect

the fruit. The descendant living closest to the tree takes care of it and has the prior rights to the first fruits in exchange for his care before he calls the other right holders to participate in collecting the fruit. These rights to fruit are consequently stratified. Parallel interests and stratified interests are thus not mutually exclusive. Each type of stratified interests over an object may also have co-owners who hold parallel rights or even a shared right. But we shall discuss these cases in detail shortly.

## FORMS OF JURAL ENTITIES: THE LOCI OF PROPERTY RIGHTS

Let us briefly review. We have shown that the discourse that includes terms such as common property and private property is neither analytical nor scientific. It does not identify the types of rights nor the loci of rights. Instead this type of discourse is hegemonic and culture bound to a particularly ideological system of the West. As a result it distorts indigenous systems of property. To prevent this we have presented a cross-culturally applicable grid of the various forms of ownership that gets to the meat of property relations.

We will now present an analytical grid of jural entities that is also cross-culturally applicable, and with this I hope we can put the coffin lid on the concepts of common and private property as useful for scientific discourse.

A jural entity, or jural isolate, is a social form that has the capacity to enter into jural relations, and thereby own property. The sum total of these capacities is referred to as the jural personality of that social form (Durham 1958). I have identified

three universal forms: the individual, the corporate group, and the corporation (Appell 1974, 1976b, 1983, 1984; see Table One).

[Insert Table One about here.]

A corporate group is composed of a social grouping of natural persons that holds interests as an entity and not in severalty. A corporate group contrasts with a corporation in that a corporation is an artificial jural entity without a social counterpart. Neither the officers, nor the board of directors, nor the stockholders are the corporation.

Corporate groups must also be distinguished from those social groupings or other social forms in which rights to property are held by the individual members rather than by the group itself. Two types may occur: a jural aggregate or a jural collectivity. A jural aggregate is a social form in which the individual members hold the interests in severalty. It has no jural existence above and beyond its individual members; it cannot enter into jural relations. A jural collectivity is a social grouping in which interests are also held in severalty by the individual members. But it differs from a jural aggregate in that its sociality is recognized by the jural system in which it is lodged. Thus, the jural system permits a member of

that social form to sue on behalf of the other members to facilitate jural actions while still denying the grouping a separate jural status, a distinct jural personality (see Appell 1976a, 1976b, 1983, 1984, 1991a, 1993).

## JURAL AGGREGATES AND JURAL COLLECTIVITIES

It is now time to look at the ethnographic materials from Borneo to explicate the analysis presented to this point.

We will first look at jural aggregates and jural collectivities among the Rungus of northern Borneo (Appell 1971, 1974, 1976b), the members of which hold rights in severalty over fruit trees. This creates a jural form that I have called a tree-focused structural isolate (Appell 1983, 1984).

Rights to certain fruit trees are held individually by all the descendants of the original planter, as we have noted. I have referred to the rights in this system of co-ownership as parallel

rights. See Diagram Form Two. Those holding these rights have the right to harvest fruit from the trees planted by an ancestor. This structural entity, composed of the co-right holders, forms a jural aggregate, for each of the right holders has to take jural action on his own to receive compensation if the fruit tree is destroyed.

There are other fruit trees with more valuable fruit that require guarding and cultivation to ensure both a good harvest and to prevent others than the descendants of the original planter from picking the fruit. The descendant living closest to the trees has the obligation to care for and guard these trees. In return he has the right to pick the first fruit, after which he must inform the other right holders to come, if they want, to take their share. The individual who guards the tree also has the obligation to bring a jural action for compensation if the tree is destroyed. He initiates this action on behalf of the other right holders. But they must be present at the time of the moot in order to be able to receive a proportion of the

settlement. This is a jural collectivity as one person can take jural action on behalf of the other members. But it is not a corporate group, for the group as an entity does not receive the compensation, only those members of the collectivity who are present at the settlement.

## THE RUNGUS VILLAGE AS A CORPORATE GROUP: CIRCULATING USUFRUCT

We will now look at two types of land tenure in Borneo. There are a number of other types, but time requires our inquiry to focus only on two (but see Appell 1992).

The Rungus village holds residual rights over a clearly demarcated area, which I have called the village reserve. The village as a corporate entity is found universally among the indigenous swidden cultivators in Borneo (see Appell 1992). Cultivation rights are limited to resident villagers. 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 harvested. I have termed this form circulating usufruct. The structure of this systems fits Form Four in the Diagrams.

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.

## EMERGING NATURE OF THE JURAL PERSONALITY OF THE RUNGUS VILLAGE

We must now introduce an additional set of theoretical constructs on the developmental nature of property relations. I have termed this emergent structuralism. No society is frozen in time. There is constant social change and self-transformation. If we conceive of a social system as consisting of the jural order, then by definition there is an opportunity structure. The jural structure not only defines the opportunities that it is permissible to exploit, but also provides the decision paths and techniques that lead to antisocial behavior 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. This includes the pile up of decisions in one sector or the other and the differential exploitation of resources that threaten the society's conceptions of equity. These new shifts in the opportunity structure

are then encoded into the jural order by a legitimizing act or relegated to the countrastructure as deviant by a representative body of members. Thus, the forms of social systems are constantly emerging. We will now use this theoretical perspective to analyze the emerging nature of the jural personality of the Rungus village.

The problem of scarcity of land for the Rungus was not an issue until 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 to other village areas. 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. In one case nonresidents who cut swiddens in the reserve of another village had their

swiddens fired in secret by the headman of that village prior to their drying out, thus 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 reserve became difficult. When relatives of key men in the village cut the primary forest for swiddens in this reserve, it was difficult to prosecute them. At this point the Rungus took advantage of the plural legal system provided by the British. They had instituted new laws governing forest use while leaving certain disputes to be settled at the village level under the old customary laws. The Rungus arranged for this area of primary forest to be gazetted as a forest reserve so that the policing of it was turned over to the Forest Department.

After the creation of Malaysia and the departure of the British colonial government, the new state government illegally gave this area out to Chinese for timber cutting, it is rumored, on the basis of a payoff to certain government officials. 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.

At this point 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.

Please note that in Hardin's discussions the destruction of what is termed "the 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 EROSION OF THE JURAL PERSONALITY OF THE VILLAGE

During the period of British colonialism, the Rungus land tenure system was disrupted by the view that the Rungus territory was underutilized, and this view was carried on by the succeeding post-colonial government. The British essentially viewed Rungus forested territory as *res nullis*, open access. In 1961 a British District Officer walked through the Rungus territory, along with a Chinese entrepreneur, and found what he thought as unoccupied forest. He was not able to read the forest cover to ascertain that what he saw was secondary forest recovering from swiddening. And he did not realize that every inch of the territory was divided up between the various Rungus villages which had clear and distinct boundaries and which owned their reserves corporately. The British officer, furthermore, did not recognize the use rights of village members. As with the British government as a whole, his conceptual bias did not allow him to conceive of anything but individual title to land. And so pressure was put on the Rungus to apply to the government for individually titled and owned tracts of

land in their village reserve. Neither the British government nor its post-colonial successor recognized the complex social system of the Rungus or their agroecology as stabilizing forces (Appell 1992, n.d.). As a result of this, the jural personality of the village as a corporate land holding entity has been diminished, which has also eroded the authority of the village headmen and the village moot. This has led to the dispute over the uses of village forest reserves. And 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. As a result, there is a certain amount of tension between Rungus residents and outsiders and a growing disparity in ownership of land, with the beginning of a landless peasantry.

But the failure of the British to recognize the Rungus system of Rungus land tenure has also led to environmental degradation. The Rungus had sacred groves around wet places and stream banks which were

inhabited by potentially dangerous forest spirits. If the forest homes of these spirits were cut down, they would vent their anger on the intruder by causing him to become ill. With Christianization, this sanction was no longer viable. At the same time the British did not realize that these sacred groves existed so that in the surveying for land ownership the groves ended up in the individually held land lots. Since the groves formed a less immediate productive part of such land, many of them were cut down to plant permanent tree crops or vegetable gardens. As a result, the hydrological cycle of the region has been interrupted both by this and the intrusion into the forest reserve so that the usual dry season has been markedly extended. There are now major water shortages in the region (Appell n.d.). At the same time a variety of birds and animals formerly inhabiting the village reserves have disappeared and a number of tree and plant species can no longer be found. The failure to recognize the indigenous system of land tenure and

agroecology has not only resulted in jural and social disorganization but also environmental degradation.

If the present government would recognize the corporateness of the village, allowing no land to be sold to nonvillage members, the rapidly growing social disorganization, landlessness, and environmental degradation could be ameliorated.

## DISCOVERY PROCEDURES

I have presented a conceptual framework to determine the nature of rights and their locus in Appell (1971). Let me briefly mention the three most important discovery procedures for filling the conceptual scheme with ethnographic content: the analysis of cases of conflicts; case materials on the transactions of rights; and the identification of what social entity has created the right and if not for himself or herself, for whom. Case materials must be collected on any conflict over rights or any jural actions taken to obtain indemnification for loss of rights on the destruction of property. Also cases on the transactions of rights by sale, loan, or inheritance provides critical data. If an individual creates a right, for example, through his own work in planting fruit trees, one must determine whether he or she did this on behalf of the group of which he or she was a member, i.e. the family, or for himself or herself alone. This can be determined following who gets rights if the individual's spouse dies, or if

there is a divorce, and a remarriage occurs involving additional children.

## THE KANTU' DAYAK CASE

We turn to the final example showing the adaptive responses to challenges of growing scarcity in the village reserve, which illustrates nicely the usefulness of the theory of emergent structuralism.

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. The Kantu' stated that as long as there was chronic warfare, rights over secondary forest were of little value. There was an adaptive value in the village being relatively mobile and able to advance or retreat as

conditions warranted it. And because of warfare it was important that all the households farm near one another with their swiddens in a cluster. 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. 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. This 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. 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.

Eventually, the population grew putting additional pressures on the land. The Kantu' land tenure 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. Such areas vacated reverted to the status of primary forest. Devolvable rights could be reestablished 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 more scarce this procedure led 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 in 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.

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, became stronger with the assumption of devolvable use rights. And note that these 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. This is an important point. It suggests that many cases of the 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).

To provide this understanding we have presented cross-culturally applicable analytical techniques that permit identifying the jural entities that hold rights, the structure of those rights, and how they may be divided. And this has resulted in a conceptual framework that more adequately reflects the indigenous systems of property relations.

Furthermore, the Borneo data suggest that there is no necessary unilinear movement under scarcity from co-ownership to individual ownership. In the Kantu' case the jural personality of the domestic unit as a

corporately jural grouping has grown in response to scarcity and new markets.

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 internal jurality flourish to provide the most efficient, sustaining use of common pool resources.

Thus, the ethnographic materials from Borneo illustrate that given the unimpeded opportunity, indigenous societies, like most societies, have the capacity to respond to challenge. The Bornean societies we have discussed have tried to conserve their valuable resources. And they have adapted their

jural systems to the new contingencies of the growing scarcity of resources and the development of outside markets. Thus, they can respond adaptively, that is unless they are overwhelmed by the demands for coping by imposed social change (see Appell 1994); or unless the external rules under which they must operate are so changed by the sociopolitical centers that the society's adaptive capacities are invalidated.

Thus, the real tragedy occurs when outside interests attempt to rationalize the use of resources from their own self-centered, 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 major depletion and destruction of resources can occur before any internal jurality has a chance to develop (see Bromley and Cernea 1989; Berkes 1986; Runge 1986; and Feeny, Berkes, McCay, and Acheson 1990 for examples). And this produces a growing social disorganization, with its concomitant social ills.

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

NOTES

[1] McKean's (1986) historical study of common lands in three Japanese villages found no environmental degradation as a result of this form of ownership.

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