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INFORMAL INSTITUTIONS, CPR'S AND THE SOCIAL CONTEXT OF FAIRNESS

Forest and Pasture Management in a Village in the Indian Himalaya, 1987-92

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A convention is institutionalised when, in reply to the question, "Why do you do it like this?" although the first answer may be framed in terms of mutual convenience, in response to further questioning the final answer refers to the way the planets are fixed in the sky or the way that plants or humans or animals naturally behave.

- Mary Douglas (1986)

1. Introduction

Durable institutions for the management of common-pool resources (CPRs) have been studied as parts of the complex conjunctions between natural systems, human institutions and individual agents, as well as in the context of general "design principles" necessary for their success (Berkes 1989; Bromley 1992; Ostrom 1990, Ostrom 1994). While these studies have provided much valuable information about the mechanisms, procedures and principles that distinguish successful CPR institutions, there are other issues which can broadly be categorized as cultural -- such as the role of norms, fellow-feeling and community in CPR regimes or the implications of diversity in perceptions of self-interest and understandings of nature -- that have been relatively neglected. [1]

[1] I should clarify that by "cultural" I do not refer to national cultures but to the different political cultures that inhabit particular spaces, arenas and institutions within a society (Douglas 1978; Thompson, Ellis and Wildavsky 1990). As we shall see, one way in which local and informal institutions constitute significant though complex (perhaps composite is a better word) actors in society is as mediators of plural, contending views arising in the various political cultures.

At least in part, this is because such issues are very complex, vary across cultures and societies, and involve interdependent utility functions arising from processes of social interaction. Some have even gone so far as to call these issues "intractable" (Keohane 1993: 9). Perhaps one reason for this complexity is that the tools and methods of the dominant traditions of economic and political theory widely used in the study of CPRs do not seem particularly well-suited to an appraisal of the role of social interactions and cultural norms in individual interest formation; nor are these tools of much help in facilitating understanding of the social transactions and networks involving interdependence, reciprocity and discourses on fairness that are a central aspect of institutions (Rayner 1994).

Thus while these dominant traditions of analysis have been valuable in helping compare the essential features of CPR institutions with other sorts of institutions as well as in providing lessons for policy in respect of different institutional categories, they have had less success in explaining the normative values that underlie the high social capital and low transaction costs necessary for the origin and maintenance of CPR institutions.[2] A principal reason for this is the commitment embedded within these intellectual traditions to a characteristic set of ideas about the human person which can be described as methodological individualism. The rational, profit-maximizing individual studied over conceptually isolated one-shot or, at best, serial transaction does not seem particularly well suited to an analysis of institutions that are developed and maintained by enduring bonds of trust and reciprocity,[3] though this is not for want of trying. There is here a seeming problem of "fit" between the tools of analysis and the subject itself.

If by rationality is meant a substantive or outcome rationality where individuals optimize personal benefit over all possible transactions, then rationality evidently does not describe the behaviour of most people; typically and most of the time it has been remarked that we do not know what we want, we do not know what we know and we do not act according to what we know (Elster 1989). In fact some authors like Cantor *et al* have argued that a version of instrumental or procedural rationality which is in practice further constrained by our social commitments and associations with others is more empirically credible. Significantly, these authors also note that while the centrality of social bonds and trading networks in economic exchange has been recognized by analysts of

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[2] Though Robert Putnam's extensive work on political institutions in Italy is a valuable and notable exception (Putnam 1992).

[3] As demonstrated by the analysis of "social capital" in CPR institutions; see for example Putnam (1992, 1993) and Ostrom (1990, 1995).

informal economies, students of formal markets often tend to ignore this dimension of exchange relationships (Cantor et al 1992: 31).

The essential point I am making here is that it is necessary to see informal CPR institutions embedded in and determined by the *nature of society* at least as much as by the institutional requirements of different resources (Blaikie 1993). The bundle that makes up the values, beliefs, world-view and experiences of a society is hard to calibrate against a universal metric without much that is of relevance being missed in the process. This is unfortunate among other reasons because this bundle precedes the formation of individual interests within social institutions, such as the holding of property as well as alternate practices of resource use.

While the study of CPR institutions has so far yielded many lessons for resource management policies, there is need to supplement such gains with studies that pay closer attention to cultural, normative and perceptual variations within the broad set of institutional dynamics that characterize CPR regimes. I believe the concepts and tools to begin this exist though they do not seem so far to have been used for the specific analysis of CPRs. In this paper I will deal with two illustrative issues: the role of perceptions of fairness and understandings of ecosystem resilience in social interactions related to CPR management.

Perhaps it is unnecessary to stress the importance of such issues for the study of CPR institutions and management regimes. Recent work by Ostrom (1995) and Snidal (1995) suggests that, to some extent, heterogeneity of interests is endogenous to CPR institutions in that it may arise as a consequence of specific institutional arrangements with respect to a resource. Beyond this and in general, the implications of heterogeneity have been inadequately treated in the literature on CPRs; a common assumption is that some form of homogeneity of beliefs is required for the building of "community" as well as of CPR institutions (Taylor and Singleton 1993; Keohane and Ostrom 1995).

Instead of being viewed as an obstacle to the study of CPRs, heterogeneity can be viewed as an aspect of networks of solidarity and interdependence that are an essential element of all social relations. More than a hundred years ago, Durkheim (1893) distinguished between *mechanical* solidarity, in which actors are bound to each other on the basis of similarities, and *organic* solidarity, where actors are bound by ties of interdependence based on differentiated roles. Rather than view such social forms as part of a unilinear shift from preindustrial to industrial society (as Durkheim saw them) it is possible to identify both kinds as coexisting in most modern societies. From such a perspective it is possible to turn the argument on its head, and instead to say that rather than commonality or divergence explaining the presence or absence of institutional solidarity, it is the form and nature of the *institutional endeavour* itself that validates and supports

particular forms of solidarity to the exclusion of others (Douglas 1983; Thompson et al 1990; Rayner 1994).

What is satisfying about such an approach is that it now becomes possible to show how homogeneity and heterogeneity are related to the maintenance of particular social relationships and institutional enterprises rather than emerging randomly. However, in approaching CPR institutions in this way, i.e. in relation to the form of the society in which they are embedded, we cannot expect simple results. The social patterns and processes which maintain CPR regimes and institutions are complex, multilayered and dynamic in a way that (to paraphrase Jon Elster's observation) makes them more amenable to "vague, thick" patterns or mechanisms than to strongly predictive theories (Elster 1989).

Section two describes some of the analytical literature on views of fairness and ecosystem response. The distinct heterogeneity of views outlined here is ordered into a typology, facilitating understanding of the typical implications of divergent views in everyday management contexts. In section three, I provide some examples of the role and function of heterogeneity in an empirical case of forest and pasture management by a local institution in a Himalayan village in Garhwal, India. Section four sums up some implications for the study of CPR regimes and institutions.

2. Informal Institutions, Fairness and Representations of Nature

> *The life chances of the citizen in modern societies do not depend exclusively on market choices or on governmental decisions. To an increasing extent, they also depend on allocations made by relatively autonomous institutions, beginning with admission or non-admission to nursery school and ending with admission or non-admission to nursing homes...Many of these encounters are relatively insignificant...Other encounters decide matters of life and death...Be the issues small or big, the sum total of all such decisions can rival the market and the state in their importance for shaping our lives.*
>
> - Jon Elster (1992)

Informal institutions are reflective of a society's conventions, norms, values and relationships. Latent within a society, they are organizations, groups and rules that recede into and emerge from the structure of society in response to specific stimuli and in particular contexts. Like other local institutions, they use widely diverging principles of management and allocation.

Jon Elster, in his study of local justice (1992), distinguishes the meaning of "local" from "global" in three senses: 1. by institutional arena or sector of activity; 2. in the sense of

variations across countries; and 3. in the sense of more local variations within countries. Elster further distinguishes "local" justice from "global" justice in three ways: 1. it is designed by relatively autonomous institutions rather than centrally designed by governments; 2. it is not compensatory, or only partly so (unlike global justice which is intended to compensate individuals for various types of bad luck resulting from the possession of "morally arbitrary properties"); and 3. it is typically concerned with allocations in kind, including goods and burdens, rather than with cash transfers.

The local institution as seen here is principally concerned with matters of allocatory fairness in everyday contexts of management. Elster's distinction is useful in pointing to some essential features of local CPR institutions in contrast with more formal and larger institutions in environmental management, as well as for the characteristic role perceptions of fairness play in local institutions. While discourses on fairness can exist in respect of all human institutions, their typical role in local institutions is as an essential part of informal networks of reciprocity and social engagement central to institutional formation. It should be noted that Elster's local institutions are hardly limited to CPR institutions at the fringes of the market. Instead, they seem as important as markets and the state in their impact on human life.

Views of Organizational Failure

To compare the informal institution we are considering in this paper with other kinds of institutions it is necessary to employ a framework of institutional transformation that is less restrictive and more dynamic than the usual markets and hierarchies distinction. Market failure has often been used to analyse the strengths of markets in relation to bureaucracies (Williamson 1975). As is well known, market failure is an analytical device used to consider cases where the costs of individual transactions are too high to maintain the conditions of completely contractual market relationships. But this concept has other, more extended uses.

For instance, Kenneth Arrow has suggested that relationships of trust maintained through ethical and moral codes may be societal reactions to compensate for market failure. He argues that "in the absence of trust, it would become very costly to arrange for alternative sanctions and guarantees, and many opportunities for mutually beneficial cooperation would have to be foregone" (Arrow 1971). Arrow seems to be pointing here to a version of social solidarity and relationship that maintains and corresponds to a third kind of organization.

As transaction costs increase, bureaucratic organizations provide a way to maintain trust, develop expertise and enhance institutional resilience. The shift to bureaucracies involves as

well new forms of relationship and new normative and informational requirements: the balanced reciprocity of markets must be tempered with the authority of rank and status, and price information has to be substituted with rules. Ouchi (1980) uses this general conceptual scheme to describe a third organizational form (table 1). He argues that when a bureaucracy fails the sole remaining form of mediation is the "clan". He suggests that the clan, an organizational structure which he derives from Durkheim's ideas of organic solidarity, relies on a total congruence of goals and common values to create much more informality and a less explicit statement of rules.

Table 1: An organizational failures framework

Mode	*Normative Requirements*	*Information Requirements*
Market	Reciprocity	Prices
Bureaucracy	Reciprocity, legitimate authority	Rules
Clan	Reciprocity, legitimate authority, common values	Traditions

From Ouchi 1980

Mary Douglas comments that though Ouchi may be right, his belief in the implicit creation of goal congruence and common values without the specification of a motivating mechanism suggests that the clan idea needs further analysis. Using her own anthropological experience in Africa, she develops the concept of the clan or sect as one of the three basic forms of solidarity. Douglas argues that the bounded group without a strong internal structure must rely on voluntary consensus and contribution, making it particularly susceptible to leadership that employs the idea of external threats and pressures in order to damp dissidence, accuse competitors of treachery and maintain the boundaries of the group. She contrasts Ouchi's idealistic notions about the small, self-governing group in which roles are ambiguously defined with her own reservations about the satisfaction of living in a universe that is constantly threatened by plots and betrayals (Douglas 1983).

Views of Nature & Perceptions of Fairness

From the study of ecosystems and in an attempt to link physical, biological and social phenomena, Crawford Holling proposes a four-fold typology of ecosystem functions. He suggests that the ecosystem functions of (1) exploitation (2) conservation (3) creative destruction and (4) renewal are analogous to the

institutional forms respectively of (1) entrepreneurial market (2) caste or bureaucracy (3) sect (4) ineffectual institutions (Holling 1986: 312). Holling's four-fold typology bears a resemblance with other analytical frameworks in economics, technology assessment, psychology and institutional analysis perspectives of cultural anthropology.

That perceptions of nature and ecosystem resilience vary across social and political cultures has been noted by numerous authors (Douglas 1966, 1975; Rappaport 1979; Pedersen 1992; Simmons 1993). Social perceptions of the complexity of natural systems seem to confirm Kantian assertions on the fundamental impossibility of making unbiased representations of things. Holling's stimulating work, though it spans many disciplines and is admittedly difficult to test in a scientific way, suggests that there are characteristic "myths of nature"[4] associated with particular forms of social solidarity and institutional endeavour that represent dominant perspectives within different kinds of organizations. Such myths, though in themselves only partial representations of ecosystem behaviour, play an important role in influencing perceptions of the stability and resilience of ecosystems among people in different group and organizational structures, especially under conditions of uncertainty and incomplete information.

Thompson, Ellis and Wildavsky (1990) link Holling's myths of nature to the grid-group typology of cultural theory, suggesting that each form of social solidarity, political culture and preferred mode of organizing possesses its own typical myth. In the cultural theory framework, "grid" signifies extent of structure, institutional authority and role prescription while "group" describes the degree of influence exercised on the individual by the shared values and beliefs of larger reference groups. High and low values for the two variables result in a typology of four political cultures, each characterized by a distinct pattern of alliance and authority: hierarchists (high grid, high group) whose preferred form of organization is bureaucratic, egalitarians (low grid, high group) whose internally unstructured mode of organization is the sect, or clan, individualists (low grid, low group) who prefer the unfettered competition of the free market, and fatalists (high grid, low group) for whom all organizations are equally ineffective. The four political cultures with their preferred myths of nature (represented as ball-in-landscape stability diagrams) are shown in figure 1.

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[4] Holling uses the term to refer to a set of recurring (and limited) understandings among human institutions of the resilience of ecosystems. While ecosystems are typically non-linear, fluctuating unpredictably from one state to another due to the development of complex internal processes and structures, the myths of nature are based on characteristic perceptions that seem to underlie the response of different organizations and constituencies in studying and managing ecosystems.

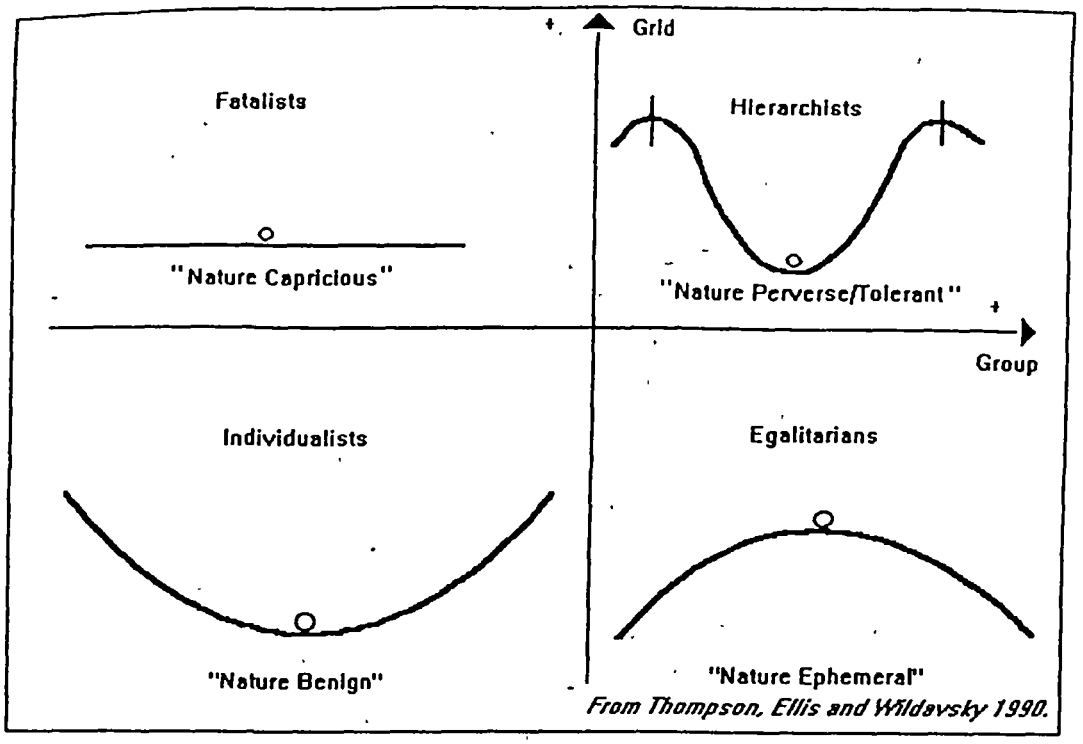

Figure 1: The four political cultures and their "myths of nature"

It should be noted that this typology does not imply a rigid or unchanging descriptive matrix of individuals or, indeed, of institutions. Instead, rather like the distinction between public and private goods, it represents extreme types along a continuum of possibilities. In practice, it is quite possible and even common to change one's political culture from one context to another; for instance, to be hierarchist in one situation and egalitarian in another. The value of the typology is that it suggests some of the assumptions associated with certain characteristic, recurrent roles as well as offering a way to explore their interaction in everyday contexts of rule setting, distributional fairness and policy.

De Vries (1994) uses the cultural theory framework as a paradigmmatic classification to assess understandings of carrying capacity or environmental utilisation space. He concludes that a large part of the concept of carrying capacity cannot be investigated in a strictly scientific sense because it involves assumptions and perceptions of nature that vary radically among different constituencies and individuals. De Vries suggests that carrying capacity is not something to be defined but instead to be explored in interactive, heuristic ways.

Van Latesteijn, *et al* (1994) investigate alternate global scenarios for the use of copper and energy arising from different paradigms of sustainability. They point out that these scenarios vary

tremendously over different ecological and socio-economic contexts, and comment that the concept of an environmental utilisation space reflects an essentially normative position that does not acknowledge the plurality of existing positions and paradigms. For van Latesteijn, *et al* sustainability refers not so much to an objective quality but to an ascribed, subjective and essentially political value whose robustness consists of the many differing interpretations it is capable of supporting.

Further, Rayner (1994), Schwarz and Thompson (1990) and others suggest that the different forms of solidarity and modes of organizing of the different political cultures can be related to characteristic views on the scarcity or abundance of resources, to distinct ideas about distributional fairness and to the legitimacy of various forms of consent. For instance, the hierarchical mode of organizing subscribes to a version of fairness in which distribution varies by rank and station, i.e. the norm of fairness is defined by procedures and rules; the egalitarian mode requires fairness to result in equality of outcomes, or parity; the individualistic mode demands that distribution be in some relation to inputs, or fairness as proportionality; and for the fatalistic fairness is a random event, a sort of "potluck". The different attributes of the political cultures are listed in table 2.

Table 2: Characteristic attributes of the different political cultures

	Hierarchists	*Egalitarians*	*Individualists*	*Fatalists*
Myth of Nature	Perverse/ Tolerant	Ephemeral	Benign	Capricious
View of Resources	Scarce	Depleting	Abundant	Lottery
Idea of Fairness	Priority	Parity	Proportionality	Potluck
Model of Consent	Hypothetical	Direct/ Explicit	Revealed/ Implicit	No consent

From Schwarz and Thompson 1990 & Rayner 1994

If perceptions of fairness vary so radically then how do individuals ever reach agreement about what is fair in specific contexts? In his study of how local institutions allocate scarce goods and necessary burdens, Jon Elster (1992) uses empirical evidence to suggest three basic forms of preference aggregation:

(1) Where a scheme corresponds to the values and interests of several participants, agreement can be arrived at through a process

of *coalition building*. Coalitions about which allocative principles or procedures to adopt can often be the result of overdetermination, i.e., the same principle is justified from several different perspectives. An example of the latter is the solid employer-employee coalition in favour of the seniority principle in employee layoffs. Workers tend to believe senior employees deserve preferential treatment, and management finds it efficient to accord it to them. Workers also vote in favour of seniority from the perspective of self-interest.

(2) When there is no successful coalition a process of *bargaining and compromise* can take place among the participants. This usually involves the adoption of some mixed principle, often reached through a process of bargaining and adjustment. A composite point system to measure compliance with several differing principles advanced by participating groups is one example.

(3) Agreement may also take place through a process of *accretion* of principles, so that new decision-making principles are added without old and often contradictory ones being removed. Elster suggests this is the case when local schemes have to accomodate a large number of outside demands, pressures and interests.

Interestingly, each of these three processes of preference aggregation corresponds to a specific kind of solidarity and a particular transactional style. While the egalitarian style favours coalitions and consensus, the individualistic believes in bargaining and, in practice, the hierarchical style will often accumulate a bundle of principles over time. Elster's list is ordered in a way that suggests much of his sample originates in societies that are strongly predisposed in favour of egalitarianism.[5]

The analysis of political cultures describes not only a typology of individual roles but also suggests that particular transactional modes and institutional regimes favour different processes and procedures for reaching agreements. That institutional regimes are in turn more than an aggregation of individual preferences should be clear for, as has been noted earlier, particular situations and problems favour different forms of solidarity and serve to validate substantially different ways of organizing.

Finally, Thompson (1993) describes how an informal Himalayan village commons institution provides a forum for an interactive probing of plural perceptions of fairness and sustainability. By assuming that there is no one right way to achieve these goals the members of such an institution create a resilient social structure in the face of complex uncertainties about social alignments and

[5] In fact, a large part of Elster's empirical material is based on studies from four countries: the US, France, Norway and Germany.

potential surprise in relation to the behaviour of the local ecosystem.

Thompson suggests that the Himalayan villagers in this kind of informal institution employ a deliberate strategy of institutional diversity. For instance, the hierararchical mode is used to manage the village forest: biomass can be removed for daily consumption but transgressions beyond a determined norm are punished through a system of informal sanctions. This suggests a view of nature that is forgiving and stable, but only upto a point; i.e. nature as tolerant/perverse. Farming and trade are managed individualistically, balancing risk against rewards and revealing a view of nature as essentially benign. However, large-scale commercial extraction of natural resources and external threats to village autonomy are contended with in the egalitarian mode: the tree-huggers of Chipko present a view of nature that is essentially fragile and ephemeral. Finally, there are always some fatalists in every village: the free-riders who sneak produce from the forest, will not contribute dues to the institution, or falter in generating the capital and self-confidence needed to risk potentially profitable trading expeditions to remote highland villages.

Moreover, by growing trees on private lands or by converting to stall feeding from open grazing, Thompson's Himalayan villagers display a capacity to switch from one transactional mode to another as necessitated by circumstance. By matching different institutional modes along with the particular ideas of fairness and myths of nature attached to them to the solution of complex natural resource management problems, they demonstrate an accomplished ability to achieve institutional resilience through a diversification of options. Thompson terms such multidimensional institutions "clumsy", and argues that as vehicles for sustainable development they compare favourably with other institutions devoted to measuring success along a single axis -- whether the measure is profit, taxes or popularity.

Because of its internal dynamic of organization each institutional mode is suited to the solution of particular kinds of problems. The essential issue is the way nature is politicized and employed in the legitimation of different forms of power and authority. Douglas (1983), for instance, has suggested that because the egalitarian mode of the clan must continually point to external threats looming on the distant horizon in order to damp dissidence and clarify internal factions, it is particularly well suited to the prediction of low-probability, high-risk events such as environmental change.

We have seen how different modes of solidarity, styles of transactional relations and ways of organizing are related to particular views of fairness and of the resilience of nature. Moreover, we have discussed the value of considering fairness and sustainability as "clumsy" concepts or, at the very least, as

inherently complex ones capable of plural and competing definitions. We have also seen how by deliberately mixing its transactive styles the informal institution, arguably and conceptually, is well suited to doing just this. We can now turn to a typical example of natural resource management by an informal village institution in the Himalaya.

3. Social Interaction in an Informal Institution

Saklana is the name of a relatively isolated valley at the southern end of the Himalayan district of Tehri in Uttar Pradesh State. The altitude of this valley ranges from about 1200 meters to 3000 meters. Much of it, especially its upper reaches, is covered with coniferous and mixed oak forests. Human settlement in the upper part of Saklana Valley consists of 9 villages further divided into various hamlets, which are the basic unit of settlement. The main economic activity of the villagers is mountain farming and rearing livestock. Of late one or two vegetable crops are being grown for the market. These help to supplement the subsistence from mountain agriculture on steep, terraced hill slopes.

Few sociological or ecological studies of this area exist. However, Gerald Berreman described social structure and everyday life in a neighbouring valley in *Hindus of the Himalaya*.

Saklana's villagers derive most of their fuel and fodder requirements from local forests. These are divided into many categories but essentially comprise of three types of state forest: reserved forests protected for ecological purposes; other forests that may be worked under contract from state authorities; and revenue (or civil/soyam) forests, most of which support only shrubs and are effectively open access resources. In addition private lands and fields hold a considerable number of trees.

Villagers have access and withdrawal rights to certain state forests under various "concessions" and traditional rights conceded them in the past. The precise details of these are extremely intricate and confusing. In practice the Forest Department, which has one forest guard over the 200 sq. km. of forests in the area, will prosecute major offences such as farming in forests, tree felling and construction but will overlook withdrawals for subsistence purposes. Commercial felling has been successfully opposed in the past through local protests and this, combined with the fragility of the steep valley slopes, has led to an official ban on commercial felling since 1988-89.

Forest management, including decisions on which areas to close for regeneration, are achieved through informal and collective arrangements in each settlement. Such decisions often mean that women and children, who do most of the collection of biomass, have to walk long distances to fetch their family's daily needs. While

high rainfall (>200 cm/yr) and an alluvial soil structure aid regeneration, forests located closer to hamlets are generally thinner due to lopping, forest fires and other factors. Because of their high fuel and fodder content oak trees are under particular pressure. They have been lopped to bush height in places to make collection easier.

The hamlet of Pujargaon lies roughly halfway along the valley at an altitude of 1600 meters. It is home to 32 families belonging to two extended families, the Saklanis and the Tiwaris. Both are brahmin castes. Though kinship bonds are strong, in general the two groups are well integrated and the occasional disputes within the village have little to do with caste or family alliances. Recent instances of collective action within the village are few since the traditional irrigation system collapsed after government interference in the mid 1980s.[6]

The Origin of the Informal Institution

Unlike neighboring Kumaon Tehri has never had local forest management through village forest councils. This led to an interesting development over 1987-88. In mid 1987 the local sub-divisional magistrate, lobbied by villagers and NGOs, passed an order allowing village committees to manage and care for selected portions of revenue forests. Under this order title over these lands would be transferred to village committees, though without rights of resale. In other words, virtually all aspects of the management and control of such lands would effectively be given to the village committees.

Government officials came to Pujargaon in May 1987 in order to discuss the implications of this order. A degraded tract of revenue land near the hamlet was mentioned as suitable for transfer by several villagers. This land, a windswept hillock measuring some 10 hectares, was being used as an open pasture at the time. The officials asked the assembled villagers to constitute an institution, elect office bearers, and frame appropriate management rules to enable them to begin procedures for transferring the land to the village community. Beyond this, the officials gave no directions or advice about how the villagers were to proceed..

[6] This happened when the local government authorities attempted to line the irrigation system with concrete. The system no longer works because (the locals say) the water channel has disappeared *under* the concrete due to bad engineering. This could have been repaired, but the concrete lining ended the collective regime of maintenance that acted as a basis for strengthening social capital and collective action within the user community. In other words the principal reasons for the collapse were social instead of technical; or rather, a misfit between technology choice and social organization. For a conceptual analysis of the role of social capital in similar irrigation systems in Nepal, see Ostrom 1995.

The institution came into being literally overnight. Office bearers were elected the next day, and a meeting of the entire hamlet was called a few days later to discuss details of the management regime. Some families who lived close to the hillock tried to prevent its closure, arguing that alternate grazing was too far away and would involve many additional hours in their workday.

Ultimately, however, the villagers adopted the following basic rules:

1. The office bearers, consisting of a president, secretary and watchman were to call meetings and make suggestions, but effective decisions could be made only by the general body consisting of every adult in the hamlet, either through consensus or simple majority. No office bearer would be paid except for the watchman.

2. All grazing was to be closed for five years, and withdrawals of grass allowed only in the lean (winter) season. Violations of this rule after repeated warnings by the watchman were to be fined by the contribution of twice the amount of usual labour. (This rule had one exception; see below).

3. One able-bodied person from each household would plant oak saplings and high-yielding grass on the hillock for four hours every Sunday during the initial season of July to September 1987. (Additional persons were to be provided at this time by households being punished for violations of rule 2).

4. At the end of five years a regime for distribution of forest products from the land would be decided through a process of collective discussion and consensus.

This simple regime worked well over the rest of 1987. By consensus, rule 2 was suspended for the only widow in the village who was permitted to gather her needs of biomass freely throughout the year. Because oaks grow slowly, a high-yielding perennial grass was planted between the trees for winter fodder until the trees matured. Of a total of three violations of rule 2 between 1988-89, two were punished (in the remaining case punishment could not be enforced due to the offender's continued recalcitrance).

Relevant events over the next few years are quickly recounted. By 1988 the only major problem was occasional grazing by those villagers who lived closest to the hillock. Despite repeated warnings and threats this problem was never resolved, nor was any suitable fine levied. This led to some bitter feelings, but the office bearers contended that tempers would run high and the situation become worse if physical enforcement were used.

The most interesting events, and those with which we are principally concerned, took place in 1992 during informal discussions about the withdrawal of grass and fodder from the hillock at the end of the agreed closure period. At this time a problem occurred about the watchman's salary. The salary for the first three years had been paid by a Delhi NGO on condition that the remaining amount be raised through collections from the villagers. Apparently no one remembered to make the collections, and the watchman now demanded what was owed him. Whether seriously or otherwise, he held out an intriguing threat: until he was paid he would continue to guard the hillock and prevent others from entering it.

Bisu, the watchman, is old and rather stubborn and everyone took him at his word. The first meeting to discuss the details of the withdrawal regime thus had to address the problem of how to pay him. This meeting was held during the summer harvest and consequently only 14 of 32 households were able to attend. At this meeting Jagdish, who has made a considerable amount of money in recent years by transporting vegetable produce to market on mules, offered to pay the remaining salary on one condition. This condition was that for five years the hillock would be exclusively his to use - a private and not a collective resource. Since the villagers present assented to this arrangement a written agreement was drafted and signed. On the spot, Jagdish paid Bisu the balance of his salary.

Matters did not end here however. The other villagers protested that this agreement was unfair. Collective inputs had been made and the outputs could not be cornered by an individual because of a mere lack of the watchman's salary. Further, the arrangement suggested by Jagdish implied that he was free to degrade the natural resources of the hillock without being held accountable by the village.

Over the next few weeks these arguments became a major bone of contention within the village and led to frequent arguments, wrangling and even some fisticuffs between Jagdish and Rajendra, one of the office bearers. A consensus emerged that a regime of collective benefits was the only acceptable outcome of a process involving collective burden, and that this desired outcome could not be forfeit through the decision of a minority of villagers.

A new meeting was called. In the days before this meeting, one of the villagers went to each house in Pujargaon and lobbied for a fresh vote to overturn the earlier one. This man, Murari, managed to convince each household to contribute an equal amount towards the watchman's remaining salary. At the second meeting, representatives of 17 households signed another agreement for the collective use of the hillock and paid the watchman the sum that had been due to him.

The problem now was whether this agreement effectively superseded the earlier one. Jagdish claimed it did not since the earlier one was binding by being prior in time while Murari and others claimed the earlier one was superseded in light of the fact that a requisite majority had signed the new one. In fact, a number of people who had signed the earlier agreement signed the later one as well when convinced by Murari that the earlier one had been a mistake. An old man made the point that the welfare of the community took precedence over the benefit of an individual and all this legalistic wrangling, a view with which most present seemed to concur.

Jagdish refused to take back the amount he had paid Bisu, and swore that he would obtain justice. Bisu now had two salaries, a situation that nobody (with the possible exception of Bisu himself) was pleased with. At a gathering of villagers some days later Jagdish became abusive, vowing that succeeding generations of his family would extract retribution from the village for the unjust way he had been treated. This is an extremely insulting thing to say in Himalayan village society and everyone agreed he had gone too far. A punishment was devised to bring the entire matter to an end. The villagers decided the money Jagdish had given Bisu would act as a fine to be used for the maintenance and care of their common forest.

Fairness and Social Capital in the Informal Institution

A number of interesting features in these events should be noted. One, the speed with which the institution came into being suggests its components were already present in the *form of the local society.* By this I mean that the transfer of the land (or rather, officialdom's expression of an intention to transfer it) acted as a signal prompting institutional articulation through the discussion and framing of appropriate rules. That these rules were incomplete initially and took an evolutionary course is evident from the allocatory problems that subsequently emerged. This, I believe, is often the case with informal institutions not only because they are built on an informal agreements but because the rules emerge from within a continual, dynamic pattern of social interaction and engagement.

Two, information about the responses and preferences of others is always incomplete in actual social settings, and the pattern of relationships, reciprocity and trust on which informal institutions are founded is continually reinforced and reinvented through social interaction. Such incomplete information also relates to the response of the local ecosystem, or to uncertainty about other exogenous events that the institution must deal with. This process of continual interaction and adaptation has been termed "clumsy" (Thompson 1993) but in a good way, implying flexibility and resilience in the face of institutional disequilibrium and ecosystemic surprise.

The role of fairness and social capital in the functioning of this institution will be evident though it is not a simple one. We have considered the case of the widow who was the exception to the parity rule concerning distributive allocation. The numerous laborious chores she had to perform led to a consensus that it was not fair to increase her burden and she be entitled to free access in consonance with the priority accorded to her needs.

We have also seen that certain violations of the rules were not punished. Even the most robust commons regimes have occasional offenders, for there are always "times when and places where those who are basically committed to following a set of rules succumb to strong temptations to break them" (Ostrom 1994: 8). As long as these offences remain isolated I believe that, given the delicate nature of relations in the existing social order, such exceptions do not weaken the regime. In fact, as Mauss (1925) observed, a running balances of unfairness in transactions can lead to the expectation of future reciprocity and thus serve to strengthen the total stock of social capital.

The individualistic behavior of Jagdish as well as Bisu can be seen as a form of opportunism - defined as "seeking self-interest with guile" (Williamson 1985: 30) - within an initially fatalist social context. For individualists, bidding and bargaining for benefits is a moral, legitimate strategy. We have seen how this display of opportunism changed the prevailing social context from fatalism to egalitarianism (through the effort to enforce the parity rule in contributing to Bisu's salary) even though this process took some time. Egalitarians consider opportunism immoral for it represents a fatal threat to the delicate maintenance of parity in their social bonds and relations, something that must be opposed through continual demonstrations of the unity of the group (exemplified here by Murari's energetic coalition-building efforts).

If individualism or opportunism, fatalism and egalitarianism are evident in later events concerning the allocation of benefits, hierarchy is present in the process of rule making and standard setting at the beginning, particularly in the principles of need and priority that were used to determine exceptions to the rules. This in considering interactions within this small Himalayan village commons a set of remarkably diverse and fluid social groupings are evident, each with its own distinctive notions of fairness and unfairness.

A last point concerning relations with external agencies and factors must be made. Young (1995) points out that most actually existing CPR regimes are not isolated, self-contained examples but complex mixes of traditional arrangements and recent interventions stemming from the policy initiatives of states. Even in the case of an isolated mountain valley like Saklana, a variety of state interventions were behind both the failure and success of regimes administered largely by local informal institutions. If the

irrigation canal failed as a consequence of a project to make it "permanent" by lining it with concrete, the transfer of a degraded forest to the village community prompted its ecological rehabilitation by means of a resilient regime designed and maintained entirely by the community.

While such external interventions can be seen as disabling or enabling of local institutions and efforts, it is useful to consider them in the context of fairness in the relationship between local institutions and state agencies. When policies are seen to be fair it is possible for local actions to be nested in larger environmental regimes and enterprises (as is the case with the joint forest management policies introduced in many Indian states since the 1970s). On the other hand, when policies are considered largely unfair by the majority of people subject to them a variety of locally disruptive tactics will often be the only result.

An obvious example is the appropriation of forest commons by the state during British Rule (a policy inherited and extended by the Indian State) which, in all its contextual ramifications, was patently unfair in the view of the subsistence peasants of Garhwal. The result - outrage at the denial of subsistence - is evident in the continual tension, protests, false compliance, arson and subversion that mark the history of this policy (Guha 1989). These conditions in turn have meant that the situation on the ground has never approximated the intentions of the policy. In fact, the numerous concessions, exceptions and soft interpretations referred to have been necessary to give it even minimal *de facto* credibility.

Feigned outrage and disruption can, of course, also represent bargaining tactics at both the individual and collective levels. Jagdish's strategy in the case above can partly be explained as an individualist bargaining ploy. But whereas bargaining is a form of negotiating for maximum possible gains, fairness principles while they may act as referents for bargaining are not themselves subject to negotiation.

Typical reactions to outcomes of bargaining, both individual responses ranging from guilt to outrage as well as the societal checks and mechanisms described in the Saklana case can thus be related to particular notions or interpretations of fairness. As Elster (1989: 124) observes, "For any norm of distribution describing the fair outcome as *X*, there is a norm of behaviour telling people not to accept less than *X*. Often, people will refuse to share on what they perceive to be unfair terms, preferring to break off negotiations and take a loss rather than accept what they would get according to their threat-based bargaining power". The latter is rather an accurate description of Jagdish's behaviour.

What we see here is the operation of a characteristic process in which agreements on fairness build trust and lead to a consolidation of social capital, resulting in extended community networks and the possibility of successful institutions. Even in cases of perceived unfairness the norm of fairness continues to operate by generating obligations of future reciprocity.

4. Conclusion

We have seen how separate conceptions of fairness are used to validate different roles and interests with respect to the utilization of a resource. Different ideas of ecosystem resilience, though less explicit in day-to-day management decisions, underlie and validate alternate institutional regimes of resource management. Instead of a heterogeneity or homogeneity of beliefs or interests, I have argued that it is the dominant procedures for facilitating agreements between alternate options for management and distribution inherent in the institutional regime that produce successful CPR management regimes. I have illustrated this through a typical example of local CPR management by an informal institution in the Himalaya, but much more work in diverse empirical contexts is needed to test these assumptions.

In recent years there has been a growing literature on the role of conflict resolution mechanisms in CPR management. Much of this literature stresses the resolution of explicit conflicts and divergent interests without considering the interaction of varied cultural beliefs and assumptions which lead to conflict. An implicit assumption within a large part of this literature seems to be that more streamlined or clear mechanisms for conflict resolution will facilitate success in CPR management. I believe the actual remedy lies elsewhere.

If, as Mary Douglas argues, discourses on justice and fairness are the very form of a society (Douglas 1993), then conflicts and the advancement of different procedures for their resolution are an integral part of any regime of resource management given the many divergent perceptions that are evident among all but the smallest group of individuals. Because different procedures of mediation are linked to different forms of solidarity and distinct ways of organizing, and because these ways of organizing may in turn depend on diverse social and environmental factors, methods of conflict resolution should be an seen as an integral part of institutional regimes for CPR management. Well-meaning proposals for new procedures that originate from outside the CPR institution may harm as well as help in maintaining the delicate balance of interests, beliefs and relationships that are involved in CPR institutions.

In linking such normative concerns to different forms of solidarity and organisational regimes I do not mean to propose a rigid matrix for the analysis of CPR institutions. Socially embedded forms of organisation and management regimes for CPRs, as the literature shows, demonstrate an enormous variation. The framework outlined here may provide one way to study these variations and the plural assumptions about managing the commons that are related to them. Clearly, much more empirical work on these aspects of CPR management is necessary before such links can be confirmed.

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