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Management Regimes

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Property Rights and The Performance of Natural Resource Systems
Background Paper prepared for the September 1993 Workshop

Management Regimes

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"Management Regimes" -- Remarks prepared for the Meeting on Property Rights and the Performance of Natural Resource Systems, September 2-4, 1993, The Beijer Institute, Stockholm, Sweden.

Bonnie J. McCay

I review some of the generalizations many of us have made or accepted as they relate to management regimes; fuller treatments of these and related topics can be found in McCay and Acheson (1987), Berkes (1989), Bromley (1989), Ostrom (1990). I also make suggestions about how we conceptualize regimes and forms of user-participation, to help clarify concepts and raise issues that may contribute to the development of theory concerning property rights and the performance of natural resource systems. In closing, I offer a challenge to focus on culture and the commons.

I. Management Regimes and the Commons

A. We should distinguish between the features of the resource and those of the ways people choose to relate to the resource and each other (Feeny et al. 1990; Berkes et al. 1989; Ostrom 1990). Vincent and Elinor Ostrom (1977) long ago argued for the use of the term *common pool*, rather than *common property*, for that class of resources that are particularly problematic to human institutions because of the difficulties of bounding or dividing them, the likelihood that one person's actions may affect another's enjoyment of the resource, and so forth.

B. *Common pool* resources may be under a variety of management regimes, including those we identified as *open access* (or no governance), *communal property*, *state property*, and *private property* (Berkes et al. 1989; Feeny et al. 1990: 4, listing many other references to similar distinctions). The first three types of management regime are more often lumped as "common property." Splitting the category and examining case studies shows that there is no simple one-to-one relationship between regime and outcome, in terms of sustainable exploitation (Feeny et al. 1990: 13).

I will rejoin the lumpers by subsuming each of the first three under the rubric *common property*. Back to splitting: For purposes of theory development, it may be helpful to separate property rights from management regimes (Figure 1 below). Property rights are among the institutional conditions that influence management regimes but are not the same as management regimes.

C. Figure 1 (below) offers 3 general types of property: private property, common property, and open access. *Open access* is the null condition, of no property claims. For some purposes it may be appropriate to distinguish this case from a socially-constructed agreement that all citizens, inhabitants, people have rights of use, a kind of common property. *Private property* is usually defined in terms of exclusivity and transferability (e.g., Regier and Grima 1985); private property rights are more exclusive and generally (but not universally) more transferable than are common property rights. It is essential that we

recognize the potential variability of the "bundles of rights," as the lawyers say, for private as well as common property (see Dowling 1975 for an African case study of limits to transferability of private property).

Common property refers to a class of property rights. Among the features typically found in that class are a right to use something in common with others; or, a right not to be excluded from the use of something (Macpherson 1978); and some expression of equality or equitability in the allocation of rights (Ciriacy-Wantrup and Bishop 1975). Much more variable are the boundaries, which may be virtually non-existent in cases of open access or very tightly circumscribed, as in some village communal systems, as well as the degree of governance, or lack thereof.

D. Like all property, *common property* does not refer to things but to social agreements about human relationships to them (Furobotn and Pejovich 1972; Bohannon 1963). *Common property* is a cultural artifact, socially constructed and contested, not a natural or necessary condition. In this way it is distinct from the condition of *open access*, as this appears in economic models, even though some common property regimes may have been specified, or socially constructed, as open access.

E. Having separated property rights from management regimes, the following emerge as a possible initial typology:

Laissez-Faire -- in place of open access in the original scheme; the management significance of open access for common pool resources is that there is virtually no governance nor is there effective market-based regulation; particularly prone to "tragedies of the commons" if pressure on resources is high enough;

Market Regulation -- in place of private property, the argument being that private property is relevant to management insofar as it allows market mechanisms to work more effectively; governance is required to uphold private property claims and other conditions of the market; may be source of "tragedies of the commons" as well as tragedies of misplaced faith in market remedies, particularly where "externalities" and long-term and indirect ecological effects are involved;

Communal Governance -- in place of common or communal property in the original scheme; highlighting the existence and potential of user-governance and local-level systems of common pool resource management, irrespective of whether rights are common or private or a mixture; collective action challenges may be met, or not, in a wide variety of ways; of special interest where the interests of people and the sustainability of their resource use are not well served by governments and where privatization is not feasible or politically acceptable;

State Governance -- in place of state property in the original scheme, recognizing the central role of the state, or central government, to most common pool systems whether state-owned or not. "State property" can be the property owned outright and used exclusively by agents of the state, on the one hand, and property deemed public, over which the state exercises governance --the latter is most important; see Marchak (1987);

Last, an addition to the scheme: *International Governance* (Young 1989), which has features and challenges to common pool management that differ from state governance, if not communal governance, such as the lack of centralized enforcement. The free rider problem is a very sore point for international institutions as is their reliance on suasion and indirect penalties for breaking the rules.

These categories are crude and simplistic but are offered as a suggestion about how we might move toward developing theory. A typological table could be constructed with three-dimensional boxes for each combination. We might find some impossible or very unlikely combinations, although I must confess I cannot think of any except open access and market regulation, which happens to be the crux of the "tragedy of the commons" (Hardin 1968) in the sense that some define the problem as the failure of market mechanisms to give appropriate signals where property rights are not well defined.

The virtue of this typology, like the shorter one that preceded it (Berkes et al. 1989; Feeny et al. 1990), is that it underscores the tremendous diversity of management regimes that can and do exist, beyond the laissez-faire commons, and can be used to ask questions about the ecology, economics, and sustainability of natural resource systems.

Figure 1

Types of Resources:

Common Pool

Non-Common Pool

Types of Property:

Private Property

Common Property

Open Access

Types of Management Regimes:

Laissez-Faire

Market Regulation

Communal Governance

State Governance

International Governance

One of its problems, however, is that it virtually begs for additions and sub-types, and one is quickly led to the point that they are all potentially interrelated. For example, there can be no market regulation without private property, and no private property without some level of governance. Communal regulation is often dependent on authority granted from central government powers (I define a central government as the agency that has a monopoly on the use of force and is the ultimate recipient of taxes). And so forth. Examining relationships between communal and state governance leads to further questions. One is, what is the community? Some may be defined in terms of the geography of people's residences and working places; others in terms of occupations or occupational specialization (i.e. tuna fishermen versus clam fishermen); others in terms of interest groups (i.e. harvesters, processors, environmentalists, tour operators, consumers). Some common property governing communities may in fact be comprised of members of a local elite, rather than the larger populace (cf. Rodman 1989; Vondal 1987, for incisive case studies), raising questions about how social, economic, and political hierarchy and heterogeneity affect the nature and success of common property governance (McKean 1992, Hackett 1992). Not to mention the trickier questions about what "community" means in experiential, moral, and social-organizational terms and how it affects various forms of common property governance (Taylor 1987; Singleton and Taylor 1992; Ostrom 1992).

II. Co-Management and User Participation

Also to the point is the question of the autonomy of "the state," or, put another way, the way that common pool resource users (and members of other interest groups) interact with the state in developing and changing systems of governance. Like it or not, the fact remains that central governments are major actors with respect to common pool resource use and management.

We have come to use the term "co-management" to introduce this topic, but it can be seen (Figure 2) that co-management is but one of a variety of forms of interaction between a government and its public. My discussion will focus on fisheries --after all, the problem of the commons has been called "the fisherman's problem" (McEvoy 1986) because open-access fisheries provided important early illustrations of the problem (Scott 1955; Gordon 1954).

The wider domain of citizen involvement in environmental and social issues (Hance et al. 1988; Arnstein 1969) provides a schema that may be useful for our purposes. As I have adapted it (Figure 2), the extremes of fisher (/user/public) participation in public policy would be, at one end, Government Power, and at the other end, Fisher Power. Either the government acts unilaterally, as it seems to do from time to time, e.g., the State Department's relations with foreign countries that affect fish markets, or closures of fisheries due to public health concerns, or the fishers completely ignore government, create their own systems of resource allocation and management or subvert government programs.

More common, at least in democratic polities, is the vast "in between" arena, whereby the fishers (or other users) and the government (or whatever agencies are involved) are interacting. An imaginary "ladder of fisher participation" (Figure 2) would have a number of rungs, according to the level and degree of fisher, or fishery community, power in the process. Following Hance et al. (1988), I have simplified the model first proposed by Sherry Arnstein (1969)--based on observations of community action politics in poor urban areas-- to six rungs, the two extremes already mentioned, and then the "in between" steps: Inform, Consult 1, Consult 2, and Co-Management. Elsewhere (McCay in press) I have analyzed in some detail the differences among these stages, with illustrations from my observations of the fishery management process in the USA. A brief commentary is provided here:

The three rungs of the ladder (Figure 2) following Government Power represent situations where members of the community are allowed to listen to what is happening and perhaps to have a voice, but their power is weak. At the Inform level of fisher participation, the government agency talks, the fishers listen. This is what many officials believe to be the most appropriate way of involving citizens because they view the problem as one of education and the means to education as one-way communication. Press releases and newsletters are vehicles, as are many public hearings and other meetings held by fishery management agencies, councils and committees. This style of interaction is promoted by bringing people in at a late stage in planning, so that people have little opportunity to influence the plans. One-way communication is also promoted at meetings by "the simple device of providing superficial information, discouraging questions, or giving irrelevant answers" (Arnstein 1969: 219; see M.E. Smith 1982 for a fisheries case study).

People quickly become frustrated and angry when restricted to the Inform level of citizen-government interaction over a matter that concerns them, such as developing new mesh sizes and closed seasons for a fishery. They demand at least the right to be heard, and they often are accorded that right. In Consult 1, the government agency asks for limited

Figure 2: Ladder of Participation in Fisheries Management

- > **Fisher Power:**
Fishers Act Independently
 - > **Co-Management:**
Fishers & Gov't Work Together
 - > **Consult 2:**
Gov't Asks for Input & Intends to Listen
 - > **Consult 1:**
Gov't Asks for Input, Prefers not to Listen
 - > **Inform:**
Gov't Talks, Fishers Listen
 - > **Government Power:**
Gov't Acts Without Communicating with Fishers
-

input but seems to prefer not to listen. Public hearings are required for fishery management plans in the U.S. regional management system; often they are run in a pro forma way, e.g., industry members rising to speak or read prepared statements, members of the council committee sitting with little sign of active involvement in listening.

In Consult 2, members of the fishery community are asked for meaningful input and the agency indicates that it intends to listen and take what it hears into account in developing policy. Many advisory committees are run this way: the government agency or management council with the mandate to manage fisheries is genuinely concerned to get advice from the industry. This kind of consultation is usually best nurtured at more informal meetings, where people feel freer to express themselves and there can be on-going dialogues. However, people are rightly suspicious even when the meeting becomes open and communication appears to be two-way (or more). They may be confused about whether they are in a Consult 1 or Consult 2 situation, depending on their expectations about whether the government officials really will listen. Those expectations are affected by a longer history of interactions that affect credibility and trust.

There is another "rung" in this ladder, not shown in the diagram, where citizens are brought into the decision-making process as members of advisory and planning committees. It can be a style of non-participation (Arnstein 1969), used to legitimize programs that are required to have public participation but without actually granting any power or authority to members of the public. Consequently, it can be a very empty gesture, a fact that can embitter participants, who leave the system (see Hanna's [1992] portrayal of the risks of "exit" from the system including non-compliance, and hence the importance of ensuring loyalty to the system by giving fishers "voice"). If, on the other hand, participation is structured so that the advice and expertise of fishers is used in and actually influences the decision-making process, this can be a step toward genuine co-management....

Co-Management entails power-sharing in a partnership between government agencies and citizens with a stake in the common pool resource. Co-management has been over-romanticized and under-estimated.... Examples of co-management would be situations in which meetings are called jointly by fisher organizations and government officials; where fishers have oversight and monitoring powers in relation to a specific fishery management system; and where fishers are funded to hire technical consultants (see Hance et al. 1988 for parallels in environmental protection matters). American Indian tribes in the west have formal co-management powers in fisheries that often include those features (see Pinkerton 1989 for specific cases and a thorough introduction to co-management). Successfully co-managed fisheries that are now well documented include some with historical depth, like the inshore fisheries of Japan, managed by cooperatives (Ruddle 1989) and the Lofoten winter cod fisheries of Norway, managed and enforced by groups of fishers (Jentoft and Kristoffersen 1989). Newer examples include the user of European Community producer organizations as vehicles for allocating IQs among fishers in the UK (Jentoft and Kristoffersen 1989; see also Meltzoff and Broad 1992) as well as a variety of arrangements between state agencies and tribal groups in North America, where courts have upheld the

sovereignty of the tribes (Cohen 1986). Even more recent is the co-management system used for an ITQ system in Nova Scotia, Canada. The decision to use ITQs was made unilaterally by the Minister of Fisheries, in 1989, but the details of the system and many of the details of its implementation and change are done by a committee intended to represent both industry and government [Apostle et al. 1993].

The ideal system of co-management is one where almost all management functions are the shared responsibility of government agencies and fishermen. Fishers should be directly involved in decision-making (as opposed to the advisory role they more often have) and have authority to construct and implement regulations. We are talking about co-management when some if not all of the following are observed in natural resource management, as they were in the fjord fisheries in Norway (Jentoft and Mikalsen 1992):

- o bottom-up rather than top-down process
- o participatory
- o user-groups play active role in decision-making
- o government authorities are involved at various stages of regulatory process but overall keep a low profile.

Co-management promises an institutional response to the problem of how to persuade people to put their collective interests above their private interests. In theory (Jentoft 1989; Pinkerton 1989), co-management will improve both the effectiveness and the equitability of fisheries management. Co-management may also improve compliance with agreed upon rules. If decisions are made by fishers themselves, e.g., by majority rule, then there is internal coercion to follow the rules, versus top-down rule-making which often results in rampant and gleeful violation. Once rules become the government's, even the fishers who asked for them or agreed to them may be compelled to find ways to break them (for a telling case in Iceland, see Durrenberger and Pálsson 1987). However, the argument goes, if fishers themselves have a clear and important role in making and implementing the rules, and if a majority agree to them, they are more likely to follow them and to coerce others to do the same.

Effectiveness is partly a question of accurate appraisal of the situation and the effects of changing the rules. Resource assessment is critical. It seems logical that under a co-management system, resource users would be more likely to share accurate information than they are under other systems. This would reflect more fundamental changes in behavior and attitudes as fishers become and are treated as responsible co-managers. The recent disaster in Newfoundland, where one of the major cod stocks has come close to extinction, is traceable in part to faulty science, and that in part to the failure to take into account the knowledge, experience, and catches of inshore fishers (Steele et al. 1992). Co-management is one of the ways that "indigenous" and non-expert knowledge and interests can be meaningfully brought into management.

There are other arguments for co-management systems, such as the likelihood that they will be more equitable, based on the premise that resource users are more familiar with the intricacies of local social and economic situations and therefore are more able to respond to the special needs and interests of different groups or individuals than are governments, which usually try to treat everyone alike (but see McCay 1988, where an experiment in co-managed resource enhancement failed to meet local criteria of equity). In addition, a co-managed regulatory process may be more responsive to changing conditions. The organizations of resource users involved may be able to change rules more quickly, and are in general more flexible and responsive than government (Jentoft 1989; see McCay 1980 for the flexibility of a New Jersey fisheries cooperative).

III. Culture and the Commons

The culture of the commons is a strong and unifying theme of my own work and another perspective from which one can approach the problem of property rights and natural resources. I include both the "high" culture of academics, politics, and law and the "low" culture of people who claim, contest, and exercise property rights in the course of their lives. A number of research questions and topics follow. For example, how do these two cultures interact? What about the contested terrain of privatizing common property rights? Of the nature of community?

Culture includes the realm of people's expectations about nature, themselves, and each other, e.g. whether people are seen as far too greedy and selfish to ever get together on anything "common", whether they see themselves as significantly affecting the natural world and its resources, etc., and how these things affect how people behave, including their ability to come to terms with the management of common property. We could and should also include expectations about the relationships between citizens and their governments, with respect to the management of natural resources, expectations which, when not met, may lead to unexpected responses (cf. Krauss 1983 on citizen activism in the wake of discovery of poisonous chemicals at Love Canal, New York). Culture also includes the values and beliefs people hold about social and ecological relationships, how they are prioritized and linked to each other, and how these affect how people behave. Can we even imagine a world in which people actually cooperated with each and sacrificed their immediate self-interests to achieve a better balance with the rest of the natural world? As an anthropologist, I hold as axiomatic that these and other dimensions of culture are both various and changing, and should be incorporated into any theory about human ecology and the commons.

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