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## THE PARADOX OF THE COMMONS

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## THE PARADOX OF THE COMMONS

### **Introduction:**

Embedded in the literature on the management of resources in general, and of common property, or common pool resources in particular, is a conventional wisdom that, "the tragedy of the commons as a food basket is averted by private property or something formally like it." (Hardin, 1968) Evidence that this premise persists is offered by Grima and Berkes, when they observe that "... privatization - which seems to be the obvious solution under the market economy paradigm - is not the only solution." (Grima and Berkes, 1989).

My intentions here are first, to challenge the conventional wisdom, and second, to relate my search for prescriptions that have the capacity to control the tragedy of the commons. Because of the time constraints imposed on us here today, and the fact that I am reaching far beyond my academic credentials, the ideas which follow are not thoroughly developed. They are offered for discussion in this forum.

### **Does privatization control overexploitation?**

For some time, we have known that agricultural practices applied to privately owned land degrades soils and impoverishes ecosystems to the detriment of all. Almost two decades ago, an alarming decline in soil nitrogen, and an equally alarming increase in soil salinity on privately owned farmland was documented at the University of Saskatchewan in Saskatoon. Indeed, the degradation of privately owned agricultural soils in Canada is so widely recognized that it led the Senate of Canada to document the extent of wind and water erosion, the loss of soil organic matter, increasing salinization, increasing acidification, soil contamination and soil compaction, all the consequence of agricultural practices applied to privately owned land in all regions of Canada (Anon. 1984). Estimates of reductions in crop yields attributed to this degradation range between 10 and 75 percent, depending upon the soil and crop in question. The consequences, and many of the causes are discussed in an excellent article in the popular press (Sutherland, 1990).

While there can be little argument that society as a whole is impoverished by the soil degradation documented in the above publication, evidence that privatization fails to avert "the tragedy of the commons" is reinforced the moment one considers the effect of the same agricultural practices on aquatic resources and wildlife. For example, the removal of stream cover from privately owned agricultural land has been a major cause of stream bank instability and the loss of important fish and wildlife habitat, as has the construction of irrigation works. Eutrophication of aquatic systems is accelerated by leaching of fertilizers, and the impact of pesticides and herbicides on both aquatic and terrestrial wildlife is a perennial concern of field personnel charged with the management of these resources. In addition to degrading the soil, agricultural practices applied to privately owned land erodes and often destroys other resource values (Anon. 1976).

In the best scientific tradition of hypothesis testing, the "experimental" results are unmistakable. The hypothesis is false. At least in the context of the cash economy, privatization does not control "the tragedy of the commons".

### **If privatization doesn't control the tragedy, what, if anything, will?**

In Hardin's example of overgrazing, the tragedy consists of two principle components:

1. the degradation of a resource, and
2. the economic behaviour of an individual

Of these, the second is of primary importance. That is, if it were not in the individual's self interest to degrade the resource, he would not knowingly do so. This line of reasoning leads to questions concerning the identity of controls on our economic behaviour, and a discussion loaded with danger.

Reading sporadically and widely in a shamefully undisciplined way, shunning the time honored academic tradition of searching only in refereed journals, risking life, limb, reputation and fortune to obtain some practical "real life" experience as an independent commercial fisherman, and living as much as possible among fishermen, I have been searching for the identity of these controls for a number of years. As importantly, I have sought some benign framework

within which to discuss them. As an ecologist venturing into unfamiliar territory, you may justly accuse me of excessive simplicity, or worse. My hope, however, is to stimulate a discussion from which I can learn more.

Broadly speaking, the controls on our behaviour may be grouped in two sets: those operating within the confines of the cash economy, and those which operate in the much wider social context. Market forces on the one hand, and social forces on the other. My guess - thesis if you prefer - is that of the two sets of controls, the latter are most powerful. To illustrate, the current social disgust with tobacco smoking is likely a more powerful deterrent than the high cost of the habit, or, for that matter, the health risks involved. Certainly that is the reason cited by most of those I know who have kicked the habit recently. And observing the tactics of the advertising industry, I wonder how much of its influence on consumers derives from rational economic decision making and how much of it influences us in "non-rational" ways.

If the notion that social forces exert more effective control on our behaviour than economic incentives, then I am led to ask if Hardin missed something in his illustration of the tragedy. Once neighboring farmers perceived the overgrazing, would social sanctions have been applied to bring the individual's greed under control? Especially in small communities, group or peer pressure is enormously powerful.

Examining recent experience with the management of publicly owned rangeland in British Columbia and Oregon, it is difficult to avoid the name E. William Anderson. A range specialist with the USDA Soil Conservation Service for many years, Bill developed a process he calls coordinated resource management planning, or CRMP (Anderson & Baum, 1987). While its initial development was motivated by problems of overgrazing and a need to provide forage for both domestic cattle and wild ungulates, CRMP has been effective in resolving problems of overexploitation involving forestry and fisheries as well. The central reason for its success is that it harnesses social forces within a group of people with vested interests in a common resource. If CRMP were scrutinized by a social psychologist, I suspect it might be described at least in part, as community building. In the absence of community, where narrow economic interests prevail, the resource is degraded. With the addition of social forces present within a

community, the degradation can be reversed. When the process fails to harness these social forces, or, when it fails to maintain them, the conservation problem reappears.

It sounds like I'm preaching alchemy, doesn't it? I cannot name these "forces", nor do I know how to measure them. Yet they appear to exist. At the local level where CRMP seems most effective, I suspect these "social forces" are associated with shared or common interests, with individual honour, or even with bonding. Anderson attributes the success of CRMP to social forces which are harnessed in a small scale participatory democracy.

In quite a different context, that of corporate management, a related story seems to have emerged. A rapid read through books like "In Search of Excellence" suggests that those corporate managers who can develop a sense of community within their organization "succeed". Conversely, corporations in which individual self interest prevails are much less competitive. A principal feature of "excellent" corporations is that individuals participate in the activity of the corporation for their mutual benefit. Workers in these corporations assume responsibility for their product, and for each other. Because of the participatory management practices which the "excellent" corporations adopt, management problems are greatly reduced. Successful corporate managers appear to encourage the development of a self-regulating community of workers that seems to display many of the same attributes as the communities that Anderson's CRMP develops.

If the above interpretations are correct, they suggest that individual self interest, the cause of the tragedy, can be controlled by naturally occurring "social forces" that are present in groups of us bound together in something called community. Further, one of the elements which creates "community" is a shared interest in a common resource upon which all depend. This is the paradox of the commons. That is, individual self interest, the force which drives us to overexploit, is not controlled by privatization but **can** be controlled in the context of a commons.

The theoretical foundations of sociology appear to support this conclusion. Tonnies (1987) describes two states or phases of society. The first, *Gemeinschaft* (Community) is one in which group relationships are governed by collective

sentiment rather than the calculating self-serving behaviour which dominates the second phase, Gesellschaft (association). The latter phase of social relationships is described as legalistic or contractual, rational, and, dare I say it, macho male in character, and they are relationships in which the cash economy is the dominant medium of exchange. Gemeinschaft, or community relationships are, on the other hand, characterized as being female, family oriented relationships which display intuitive non-linear reasoning. Exchanges are characteristic of a subsistence economy. In a Gemeinschaft, status is acquired by giving. In a Gesellschaft, status is acquired by having. These two forms or phases of society appear to be yan and yin, or right and left hemisphere thought patterns of which each individual is capable. As in the case of the individual, it is difficult to imagine one of these being absent, but their relative dominance is thought to vary.

As I understand the economist's discipline, it focuses exclusively on Gesellschaft relationships - the cash economy and left hemisphere thinking. Most of its assumptions are either denials of Gemeinschaft (community), or deliberate attempts to remove intuitive behaviour and non-linear thinking characteristic of the right hemisphere from consideration. Rational man and perfect competition for example. Yet again paradoxically, the most successful business managers are those that can develop the social forces of community within their organization; those that have mastered the art of management jujitsu, of gaining control by yielding it. And the most successful attempts to control overexploitation of common property resources are, similarly, those which develop similar attributes within the "community" of people dependent upon those resources.

Prescriptions developed to control our behaviour toward the resources on which we depend are almost all developed by economists and others whose belief in the ultimate supremacy of Gesellschaft, of government control and the cash economy is unshakable. In spite of our experience in the Forest Industry with the quota system and similar forms of tenure, Individual Transferrable Quotas are proposed as solutions to fishery problems. Rather than harnessing "natural" controls on our individual behaviour that are displayed in Gemeinschaft, or community relationships, they continue to propose legal, administrative and economic controls that will likely bury us together with our economy before they can effectively control the tragedy of the commons. This, in spite of the apparent

effectiveness of community processes, examples of which are well developed in the third world and have begun to emerge here (Ross and Usher, 1986).

It is not my intention to suggest that senior level government is unnecessary. The role of senior management in the corporate world has not vanished, but simply changed. Nor is it my intention to belittle the role of the individual. The conclusion which I have come to is that control of "the tragedy of the commons" and probably that entire class of "wicked" problems which have no technical solution, can be found in undefined "social processes" present in something called community (Gemeinschaft). By understanding community processes more thoroughly, by learning how to build them, we can use them constructively to reduce conflict, control overexploitation, and introduce administrative, economic and other efficiencies all of which we desperately need.

### **Community Forestry in British Columbia**

Presently, there are two examples of municipal tree farms in British Columbia, neither of which has been intensively studied. But we do have three graduate students now developing thesis proposals that will begin to rectify this situation.

The tenures of the two are substantially different. One is on land owned in fee simple by the municipality, the other is on provincial crown land held by the municipality as a Tree Farm Licence granted or awarded under the same legislation which governs Tree Farm licenses held by industrial organizations like MacMillan Bloedel, Fletcher Challenge and Canadian Forest Products.

In addition, two major watersheds, one supplying water to the Capital Regional District (Victoria) and the Greater Vancouver Regional District (GVRD) are managed for both water and wood production. Although management priorities differ from those of the municipal tree farms (their primary product is water) these watersheds can be considered as municipal forests as well.

Interestingly, the current public debate surrounding management of provincial forest lands has focused very little attention on these areas. Only the

GVRD watershed where siltation is sometimes an issue, has received the attention of the press. As you might gather from all of the foregoing, my inclination is to encourage comparative studies of these management units with those held by private industrial interests. My hope is that some students will make sociological and socioeconomic comparisons so that we may trace differences in their biophysical manifestation.

Thank You

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