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Market or Community Failure? Critical Perspectives on Common Property Research

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The best known revisionist perspective on the so-called "tragedy of the commons" underscores important conceptual and hence policy errors and has been important in contributing to understanding of conditions in which collective action for common benefits, with respect to common pool resources, can take place. Characterizing this perspective as a "thin" or abstract, generalizing explanatory model, with strengths and weaknesses thereby, we discuss a "thicker" or more ethnographic perspective that emphasizes the importance of specifying property rights and their embeddedness within discrete and changing historical moments, social and political relations. We argue that this perspective leads to a focus on "community failure" rather than "market failure" as the presumed cause of environmental problems, and hence, to questions about how markets, states, and other external and internal factors affect the capacities of communities and user-groups to respond adequately to environmental change.

Key words: common property, resource management, environmental policy, embeddedness

Arguments about problems with "the commons" in the modern era derive from attempts to understand the political economy of capitalism and, more particularly, the "failures" of capitalist markets from the perspective of liberal economics. Why, in a capitalist economy generating so much wealth, are there so many poor people? That was the question prompting William Forster Lloyd's Oxford University lectures in the 1830s (Lloyd 1977). He explained poverty by virtue of an analogy between a pastoral commons and the English labor market, and between a calf and a human child, the calf armed with "a set of teeth and the ability to graze," and the child armed with a "pair of hands competent to labor" (Lloyd 1977:11). Rights to enter the pasture or the labor market are open to all and thus pastures are overgrazed and labor markets are over-saturated, resulting in the low wages and miseries of the laboring classes. Given free rights, resowing the pasture or raising wages would do little good because overstocking and overpopulation will only recur. Lloyd's Malthusian view was picked up in the 1960s by Garrett Hardin (1968), who added the language of marginal

utility from economics to the pastoral analogy. Even though there might be signs of overstocking, it is rational for the individual cattle owner to add more animals to the pasture because his utility will be positive, say +1, whereas the negative utility to him is but a fraction of -1 because the costs of overstocking will be borne by his neighbors as well. The rational decisions of each individual accumulate to create an irrational dilemma for the group, and freedom becomes tragic.

The model that Hardin revived was taken up by students of institutional and natural resource economics and the evolution of property rights. The question changed from why so many poor people to why natural and economic resources were wasted and depleted. Based on institutional economics and notions of transactions costs and externalities, the problem of the commons was defined as one of incomplete or non-existent property rights, which they labeled "common property" or, synonymously, "open access." Common property, in the sense of no property rights or other controls on access, became the key source of disincentives and externalities; without well-defined and exclusive property rights; markets fail to do their jobs matching individual and social interests.

The metaphor of the "tragedy of the commons" has become a folk and academic explanation for many social and environmental problems. One of its appeals is doubtless the fact that like its close relative in political science, public choice theory, its prescriptions and assumptions can be congenial to those from the political "left" as well as the political "right." But it is not unchallenged. In this article, we review recent critical perspectives on problems of the commons and emphasize the importance of taking an approach that recognizes the embeddedness of resource extraction practices, institutional arrangements such as property rights, and other features of commons dilemmas. This approach underscores the role of communities, which are absent from the neo-classical model

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of the tragedy of the commons. It also calls for the importance of specifying property rights, commons dilemmas, and related matters within discrete and changing social, economic, political, and historical contexts.

Problematic Assumptions and Ideas

Impacts of the idea of the “tragedy of the commons” on policy and research are numerous and profound. Despite this, many within the research community have mixed feelings about the model. Objections have been raised to some of its implicit and explicit assumptions. There also are serious questions about policy recommendations that are deduced from this model (or narrative or metaphor or theory, depending on its representation and use).

Hardin and others may be criticized for reducing common property to open access, ignoring the wide variety of property relations that may be encompassed by the term. Ciriacy-Wantrup and Bishop (1975:715) first pointed to the need to distinguish “common property” from “everybody’s property,” the latter being a condition of no property rights at all. Common property refers to a highly variable class of property rights. Among the features typically found are a right to use something in common with others; 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: “a distribution of property rights in resources in which a number of owners are co-equal in their rights to *use* the resource” (Ciriacy-Wantrup and Bishop 1975:714).

Common property, like all other property, is a social institution rather than an attribute of nature (McCay and Acheson 1987). “Sometimes both the institution and the resources subject to the institution are called the ‘commons.’ It is helpful, however, to differentiate between the concept, the institution, and the particular resource that is subject to the institution” (Ciriacy-Wantrup and Bishop 1975:715). Ostrom (1990) argues 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. A key argument of the revisionist perspective on “commons” issues is therefore that one should distinguish between the features of the resource and those of the ways people choose to relate to the resource and each other (Berkes *et al.* 1989; McCay 1995a).

The critique by Ciriacy-Wantrup and Bishop opened up the possibility of seeing common property as a positive, not negative, institution. As they (and others since) observed, many institutions for regulating access and use of common pool resources have evolved, such as riparian institutions for water management, and some of these involve jurisdiction by a social community other than the state. The more optimistic view about common property is supported by simulation models (e.g., Axelrod 1984) which show that coordination and cooperation among users may evolve and prevent “tragedies” from occurring, even in the absence of an external initiative.

Thus, under certain conditions resource users are capable of managing the resource themselves. This has led to interest in community-based common pool resource management as

well as the somewhat less “communitarian” (Rose 1994) tactic of advocating more participatory and democratic systems of resource management, often under the rubric of “co-management” (Pinkerton and Weinstein 1995). Co-management, where aspects of management authority are delegated to or shared with resource users, organizations, or local communities by the state, may be strengthened when founded on exclusive property rights, as is for instance demonstrated among Japanese coastal fishermen portrayed by Ruddle (1989), but it may also function under conditions of open access, as shown in the management of the cod fishery of the Lofoten Islands of Norway (Jentoft and Kristoffersen 1989).

Although a Hobbesian view of self-interest propelling public choice can account for such institutions, the critical eye also turns to the assumption of self-interested behavior. Many social researchers feel uneasy about the perception of resource users as atomized, self-centered utility maximizers, derived from neoclassical economics: “As a paradigm, it reduces human beings to predators, unrestricted by collective strategies and responsibilities” (Bjørklund 1990:83). In contrast, social researchers underscore the social and moral aspects of user behavior. Users form communities. Natural resource extraction is guided by social values and norms, many of them “non-contractual” (Durkheim 1964), some of which stress moderation and prudence.

Community and the Commons

“Community” in its moral and experiential as well as social meanings is therefore critical to the evolution of viable “commons” institutions (Singleton and Taylor 1992). It is often observed that in the parable offered by Garrett Hardin, “each herdsman (entrepreneur) acts essentially alone for his own good without regard for the good of others; *there is no community*” (Fife 1977:76; emphasis added). In fact, Hardin recognized community, but he argued that an individual following “the voice of the community” in the context of common property is faced with a double-bind of being condemned for not being a responsible citizen, on the one hand, and for not being a rational individual on the other (Hardin 1968:1246). People are rewarded by being good citizens, but also by free-riding and opportunistic behaviors. The commons dilemma arises when rewards from the latter outweigh those from good citizenship to the extent that people will make choices that have ultimately sub-optimal results, even when they know better.

Criticisms of this model draw on a variety of perspectives and propositions that are basic to social science understandings of human communities. Public choice and game theorists hold to a methodological individualist stance and tend to see communities as the aggregate outcomes of the strategies of individuals, influenced by incentive structures to which some of them may have contributed via collective action. Add a little mutual experience and communication to the situation, and the equilibrium outcome may be cooperative rather than mutually destructive. Other social scientists take an anti-reductionist, Durkheimian perspective: people form multi-stranded networks and groups that are fundamentally moral in character; the community is not simply “added up” by its individual parts, but constitutes an integrated whole (Durkheim 1964). Thus, a fishing fleet is regarded as more than an aggregate of individual

vessels. It is also a system of social relations that under certain circumstances may constitute a corporate group (Jentoft and Wadel 1982). For instance, among the Saami of North Norway, pastoralists form households that form groups, such as the basic reindeer herding unit, the "siida," which is instrumental in making collective decisions pertaining to resource use (Bjørklund 1990:80-1).

There are many other perspectives. Social actors have multiple goals and occupy a plurality of roles that sometimes are in conflict; people attribute meaning to their environments; both means and goals are infused with norms and values. Rather than confronting the user with an unsolvable dilemma or double bind, the community can provide normative guidelines and meaning to the private sacrifices involved in collective action. Goals, means, norms, roles, and so forth are socially constructed (Berger and Luckmann 1967), in processes wrenched and warped by power and money (Habermas 1984) and by hegemony playing upon social categories like race, class, gender, and even occupation.

Our point is general: community exists, it counts, and it shapes the nature and outcomes of commons problems. We do not deny the problem of defining community, nor the risks of essentializing this construct. Moreover, the institutions and organizations created and formed by resource users are situated within a larger system, or within systems of different layers and scale, and must be analyzed accordingly (Ostrom 1995).

As members of a local community or an ethnic group, users are guided by ethical principles and/or social duties and responsibilities. Competition and cooperation are not mutually exclusive (Taylor 1987b). Indeed, competition requires some agreement as to what people are vying for, who are legitimate competitors, and which strategies are permissible. And cooperation may require competition, as shown in recent experiments in consensual decision-making about the management of public lands in the United States, where the threat of further legal and legislative battles helps maintain hope and interest in alternative forms and fora for decision-making.

Rather than perceiving the other as an outsider, if not intruder, common resource users may see themselves as "co-venturers" or a socially integrated "we" (Etzioni 1988:9). Social-psychological qualities important to collaboration such as solidarity, trust, and altruism are often "bounded," i.e. limited to the specific community or group (Portes and Sensenbrenner 1993). Thus, communities of resource users are not simply aggregates of individual acts. They often result from deliberate collective action or gain a sense of identity and shared purpose through patterned interactions over time. However, traits such as unity, homogeneity, coherence and stability, much less the capacity to engage in and carry out collective action, should not be assumed. Communities are not static but change over time and they are often characterized by social fissures, as Barrett and Okudaira (1995) have shown even for Japanese fishery cooperatives, which are more widely thought of as exemplars of successful local-level, community-based fishery management.

Communities are symbolically constructed (Cohen 1985), not just geographical and social entities. As repositories of meaning and referents of identity and belonging, they are more than the coalitions and transactional relationships they become in many "thin" analyses. Reliability and loyalty result from involvement and commitment, not just from calculations of self-

interest. People remain members of communities and adhere to shared norms and values not necessarily because it pays or from fear of sanctions but also because they feel morally committed. The free rider in the Prisoner's Dilemma is in the narrow sense a rational actor, but her acts may be considered immoral by those around her and herself.

Explanation, Thin and Thick

Criticisms of Hardin's Tragedy of the Commons are problematic. The rich and complex case studies in the literature on the arrangements developed by local communities to deal with commons issues (i.e., McCay and Acheson 1987, Berkes 1989, Bromley 1992) are frequently interpreted simplistically to support the conclusion that successful commons management requires being small-scale and self-governed or that when left to their own devices people will reach viable solutions to their collective dilemmas. This is partly because of the power of storytelling: the "communitarian" perspective shares with the Tragedy of the Commons model both the persuasive powers and the analytic risks of powerful metaphors and narratives (Rose 1994). Good story lines are easily applied to many situations with the risk of misrepresenting the more complex and shifting social, cultural, and ecological relationships and processes at stake.

Rigorous, empirically based comparative analysis helps counter the romancing tendency. Ironically, this task may be aided by Hardin's Tragedy of the Commons story. Deficient as a model which illuminates general laws and principles, it can nonetheless be a useful analytic tool, a Weberian "ideal type" that "makes description of empirical phenomena in comparable and unambiguous terms possible" (Brox 1990:230). This is equally true of the communitarian approach, which examines endogenous and exogenous factors that distinguish between successes and failures at community-based common resource management (Ostrom 1990, McKean 1992). From comparative case-study analyses, middle-range theory is developing about the conditions under which groups of resource users can create and maintain viable systems of commons management (Ostrom 1990, McKean 1992). Similar work has been done on the conditions for successful "co-management" or collaboration among various groups of stakeholders ranging from resource users to government agencies and non-governmental public interest groups (Pinkerton and Weinstein 1995; McCay and Jentoft 1996).

The comparative approach has, however, suffered from over-reliance on "thin" rather than "thick" modes of analysis. Social theory is marked by the predominance of "thin" or abstract, generalizing explanatory models, based on presumptions of rational action and methodological individualism (Little 1991). They help guide questions asked and providing frameworks for comparative analyses, as noted above. Moreover, practitioners of "thin" studies recognize in one way or another the importance of culture and "community," although the nature of these variables is a matter of dispute and is, in any case, abstract and generalized (Ostrom 1992, Singleton and Taylor 1992).

The term "thin" is of course used to indicate its opposite, "thick," which has been underrepresented thus far in commons studies. We follow Little (1991) in appropriating Geertz's (1971) term "thick description" and tempering it. We use "thick" to

indicate a more ethnographic and hence complex perspective on human/environment relations. It calls for careful specification of property rights and systems of resource use and their embeddedness within discrete and changing historical moments, social and political relations, and environmental conditions.

A “thicker” perspective calls into question the value of relying heavily on any theoretical model when trying to account for and understand particular situations. For instance, reliance on either the Tragedy of the Commons model or the “thin” version of the communitarian critique tends to narrow one’s focus to property rights. Numerous situations of resource use and abuse are analyzed almost entirely in terms of “common property” or “open access.” This may be so even when property rights are not the issue at all; where the social dilemma and free riding implied are not demonstrably at play; or where the property rights that make a difference are not those being analyzed. The result is misplaced analytic focus, which can have major repercussions for policy and people, as shown in the recent history of the fisheries of Newfoundland, Canada, where the Tragedy of the Commons mode of explaining the demise of the fisheries has led to policies that focus on sharply cutting employment in the fisheries, despite evidence that the majority of people had little to do with the collapse of the northern cod stocks, in comparison with the effects of major problems in science and policy (Matthews 1993, Finlayson 1994).

Moreover, if the goal is to account for human/environment interactions and their social and ecological consequences, as opposed to a goal such as supporting or challenging a particular model, there are philosophical reasons to be cautious about embracing grand or middling theories and models and making them the centers of our analyses (Vayda 1996). The “causal/mechanical” approach to scientific explanation (Kitcher 1985) emphasizes showing the causes actually operating in a particular situation; it may or may not call for use of a model such as the Tragedy of the Commons or its opposite.

A “thick” approach calls for attention to cultural and historical specificity and suspension of overarching models although not the explanatory endeavor. A suggestive example is the academic misuse of the term “common property” as the same thing as no property rights at all (McCay 1995a). This might be related to the historical fact that in North America, “common property” has lost its meaning as anything other than the general power of the state, under the rubric of legal doctrines and the general sentiment of “public trust,” reducing the issue to one of compensable “taking” versus private property rights. Among the possible reasons is the fact that the legal status of communal “custom” did not travel very well across the Atlantic, from English common law to American law, in part because Americans crafting new institutions seemed to want nothing between the individual and his political representatives (Rose 1994). More generally, in the Western world, the rise of radical individualism, capitalist practice and liberal economic theory, were linked to a shift in understanding of property. Property came to be seen only as an individual right to exclude others from the use or benefit of something — that is, private property — when logically and historically it pertains to a broader class of individual rights, including the individual right not to be excluded from something (MacPherson 1978:202).

The “thin” revisionist approach to the “commons” problem is squarely modernist, with but a shift in assumption about

human nature (more cooperative) and the degree of social interaction (more collective). We argue that a more satisfying, “thicker,” approach would focus on the causes and consequences of particular situations, which may require pushing outward in space or backwards in time but which resists *a priori* definitions of causes or units of action (Vayda 1996). In that sense it is post-modern. It would add concerns about the interplay of conflicting interests and contested and agreed-upon meanings and definitions (Peters 1987). It might look at the specification of property rights and other institutional arrangements in particular intersections of history, politics, culture, time and space. It should be open to a fuller range of possibilities. Situations of resource decline may be due to the mismatch between individual intentions and social goals because of imperfect property rights. However, they could also be due to conflict among competing groups; the opportunism of privileged elites; internally or externally induced differences in the ability of groups to make and enforce institutional arrangements; or the inadequacy of human efforts to understand, predict, or control nature.

Our general points are to recognize the reality and importance of community but to avoid over-reliance on either “individual” or “community” as such. A “thicker” approach to analysis requires the specificity and detail of analysis that should help correct for tendencies to embrace overly simplistic and often misleading models.

Embeddedness

The analytical perspective advanced above is related to the notion of “embeddedness” introduced to the social sciences by Karl Polanyi, who argued “that man’s economy, as a rule, is enmeshed in his social relationships” (Polanyi 1957:46). Similarly, Granovetter and Swedberg (1992) argue that economic action is socially situated: enmeshed in economic and non-economic institutions and networks of ongoing social relations. In their work, “embedded” has two often confused but distinct and valuable meanings. One is the methodological prescription that analyses of seemingly economic behaviors should focus on the social dimensions of those behaviors. This position reflects the fact that all economies are in some way embedded in other and larger structures. The second is the ontological claim that cultural systems differ in the extent to which economic transactions are embedded in social life and constructs of culture. Of particular interest in this regard is Giddens’ (1994) notion of a process of “disembeddedness” whereby local communities lose critical points of control over both economic matters and governance.

The embeddedness position is appropriate as an analytical perspective for a “thicker” study of environmental problems. It brings dimensions of social life and community into the analytic framework concerned with both causes and consequences of problems in the use and management of common resources. For instance, Gísli Pálsson criticizes the conventional approach in the anthropology of fishing, the “natural model,” for only featuring the technical and ecological aspects of production and thus failing “to appreciate the ways in which production systems are differentiated with respect to their social relations.” As an alternative, he proposes a model “which emphasizes the act of fishing, or any other extractive activity, as inevitably embedded

in social relations" (Pálsson 1991:157-8). Embeddedness does not refer solely to social relations. In an investigation of the grazing lands of Botswana, Pauline Peters (1987) contends that the "definitions of rights, of relative claims, of appropriate uses and users are not only embedded in specific historical sets of political and economic structures but also in cultural systems of meanings, symbols and values" (1987:178). She later writes that "without [a] keener sense of the relations in which individual users are embedded, we cannot penetrate the dynamic of a commons, which is necessarily a social system" (1987:193). Robert Paine's study of Saami reindeer pastoralism in Scandinavia brings the argument further: "The costs of disregarding the embeddedness factor (and in worse-case scenarios, terminating it by legislation) can be enormous even in economic terms" (Paine 1994:193).

Contrary to the neo-classical and "new institutionalist" economic perspectives which see rational behavior as motivated by desire to maximize individual gains, the embeddedness perspective would regard rationality itself as "anchored" within the social context (Selznick 1992:57). The user is restrained by a number of concerns, for instance those pertaining to his roles as community member. It then follows that one would want to know why, in particular situations, people seem to be using individual rationalizing calculi of costs and benefits in making decisions, rather than taking that as a fundamental assumption or heuristic about human nature: "It is an error to suppose that an individual calculus can explain a commons system — rather, one has to understand the socially and politically embedded commons to explain the individual calculus" (Peters 1987:178). Thus, Davis and Jentoft (1993), criticizing the common assumption of individualism as a core trait of small-scale fishermen, take care to specify the nature of individualism among small-scale fishers of Nova Scotia. They discern two types ("utilitarian" and "rugged"), only one of which fits the Tragedy of the Commons scenario, and they attempt to show the conditions leading to an increase in one form over another, with hypothesized consequences for appropriate collective action.

The model of the Tragedy of the Commons casts such tragedies as the result of market failure, due to imperfect property rights and hence incentive structures. The approach we advocate opens the possibility that tragedies of misuse and abuse of common resources might as well be the result of "community failure." A working hypothesis is that the social conditions required for tragedies of the commons may result from situations where resource users find themselves without the social bonds that connect them to each other and to their communities and where responsibilities and tools for resource management are absent, perhaps because of "dis-embedding" processes (Giddens 1994), but possibly for other endogenous and exogenous reasons (see Taylor 1987a). A certain Tragedy of the Commons may be the product of specific configurations and disruptions of social life rather than a "natural" outcome of individual rational behavior in the context of "imperfect" or unspecified property rights. A "thick," contextualized and "embeddedness" analysis would allow for this as a possibility, depending on empirical evidence. Taking Giddens' perspective that local communities can suffer the effects of "dis-embeddedness" carries the risk again of romanticizing local communities and forgetting the facts of their long-standing and ongoing ties to larger and more complex social and economic

realms, including markets and organizational sectors made up of industries, professions and national societies. Increasingly, these and the forces that guide their actions are truly global.

Not only are ecological crises and the forces causing them spreading globally; so also are prescriptive models for problem solving. In this process, those who espouse the Tragedy of the Commons model have played a large role within research and policy communities concerned with natural resource management. Not only do they bring a simple and easily recognizable definition of the common property problem, but they also advance explicit guidelines for political action. This is the power of the Tragedy of the Commons metaphor (Boulding 1977). Thus, the problem of Saami reindeer pastoralism is cast as structurally identical to those facing Maine small boat fisheries or Botswana cattle ranges, and in all settings the solutions advanced are the same: enclosure of the commons, preferably through privatization but, if need be, through government imposed regulatory constraints.

The analytical notion of embeddedness may apply as well to situations where common resource users are at the receiving end of a policy process that takes place at national and international levels, and that is heavily shaped by the broader institutional patterns and practices of each country (Jentoft and McCay 1995:236; Meyer and Rowan 1977). The embeddedness perspective is closely related to "political ecology," highlighting the impact of extra-local forces on natural resource systems. It bears as well the markings of a social science aware of the power of discourse and communication, including the roles of cultural, political, and other forces in shaping scientific expertise and formal environmental decision-making (Litfin 1994).

Disembedding Forces and Community Failure: Agendas for Research

Tragedies of common resource decline and abuse are legion. The problem we address is how to explain them. The Tragedy of the Commons approach locates the cause in the lack of private property rights, which leads to "market failure." The approach we suggest leaves open the question of what the cause of any particular tragedy is, but which by emphasizing embeddedness opens up the possibility of "community failure" as an important cause. The question is shifted from the existence of one or another form of property rights to why some communities succeed in preventing or ameliorating problems in the use and management of common resources and others do not.

Open access and other configurations of property rights (including private property in some circumstances) may be the cause in some cases; internal and external relationships of power and authority may be the cause in others; rapid population growth and technological change may be part of the cause; graft, corruption, and other patterns of behavior that undermine systems of resource management and their enforcement can be involved. Potential explanations are many.

Without weakening the point about the need to keep open the question of what is at play in a particular case, we focus on the need for research on two powerful causes of community failure, the state and the market. The tragic irony is that these are also the best-known policy prescriptions for Tragedies of the Commons.

The State and Community Failure

Hardin's message is not as gloomy as most critics say. A pro-active state can prevent the Tragedy. The state must attain a steering function in the design, implementation and enforcement of resource regulations. The state has a legitimate role to play in natural resource management. The question is not why but how the state should interfere. Hardin identifies two options: the stick — banning and punishing user-behavior that is contrary to the common interest; and the carrot — providing incentives to encourage users to act to the benefit of the collective. In both instances the idea is to compensate for the social responsibility missing among users trapped in a Tragedy of the Commons or Prisoner's Dilemma and to correct for the failure of the market to provide a solution by itself. Unfortunately, only too often inequities, inefficiencies, and gross mis-management result.

Whether the state has the ability to fulfil the stewardship role is therefore a major question. Government agencies and legislative bodies vary in their capacities to manage "the commons" entrusted to them. Even if government agencies were fully proficient in the stewardship role, there may be ambiguous and unintended social impacts, some of them subtle. In particular cases, the state appears to be part of the problem rather than the solution. Taylor holds:

[I]t is perhaps ironical that the state should be presented as the savior of people caught in the Prisoners' Dilemma [and other collective action problems] of a large society; for historically the state has undoubtedly played a large part in providing the conditions in which societies could grow and indeed in systematically building large societies and destroying small communities. The state has in this way acted so as to make itself even more necessary [Taylor 1987b:167].

A similar and more direct criticism is raised with respect to fisheries management. Kasdan (1993:7-8) argues that: "[a]pplying a Tragedy of the commons perspective which treats communities as if they are totally lacking in any ability to manage local resources because of unrestrained individual competition, results in politics which bring about the very conditions which that perspective presupposes." Davis and Jentoft (1989:208) contend, again with reference to the fishery, that "the redefinition of participation in fishing as a privilege granted to individuals by government through issuance of limited entry licenses countervails practices or attitudes among small boat fishermen that reference individual self-interest to collective organization and outcome." In summary, solutions typically proposed for Tragedies of the Commons, ranging from regulatory constraints and rationalization programs to privatization and quasi-privatization (as in individual transferable quotas and transferable emissions permits) can reduce the capacity of communities to manage their common-pool resources. Ironically, a consequence is that the state becomes ever more indispensable. Thus, applying policies derived from the Hardin model may result in a self-fulfilling prophecy, as Maurstad (1992:16) claims is unfolding in the Norwegian small-boat fishery: "The tragedy is that there was not any tragedy until the solutions to counteract it were introduced. At least we do not know this for sure. What we know is that now the conditions for Hardin's tragedy are being created." Here is an important agenda for social research.

Bureaucratic involvement in resource management may have a latent dis-embedding function. In effect it means a "'lifting out' of social relations from local contexts of interaction" (Giddens 1994:21) with respect to responsibilities that were previously a concern of commons users. Vertical linkages — the individual user vis-à-vis government — take precedence over horizontal linkages such as those that users have with each other and that are lived out within their local community and on the commons. Former cooperative and symbiotic relation patterns are transformed into competitive and "positional" (Hirsch 1976) relationships, bringing users into dependency in their relationship with government and at odds with each other. Thus, the conditions that are conducive to social action — solidarity, trust, equality — are eroded. When that occurs, the Tragedy of the Commons is inevitable, but not so much as a result of market failure as the resource economists would have it. Rather, it is an outcome of community failure.

Market and Community Failure

The state is not singularly responsible for community failure. Communities are pressured by internal and by other external forces, such as markets. With reference to the Asia-Pacific region, Kenneth Ruddle argues that "the commercialization and monetarization of formerly local and mainly subsistence or reciprocal exchange or barter economies, which now link them with external markets... 'leads' to the breakdown of traditional management systems through the weakening or total collapse of traditional moral authority" (Ruddle 1993:1). In the final analysis, the process may evolve into a situation where the market penetrates and redefines social relations, which become basically instrumental and utilitarian. Social interaction is strategic and ego-centered. As community life evolves according to the logic of the market place, it assumes a character pointed out by Polanyi (1957:57): "Instead of economy being embedded in social relations, social relations are embedded in the economic system." Thus Jürgen Habermas' argument (1984): the daily lives of human beings are increasingly being dominated by money transactions and bureaucratic control.

Like many other social researchers we urge more attention be given to the potential of co-management institutions and the inclusion of user-knowledge in resource management as a way of re-embedding management responsibilities within the local community. Whether or not it is possible to restore those qualities of communities that previously made them capable of managing their resources and thus reverse the dis-embedding tendencies of modern management systems is a compelling research issue. A case in point that should lend itself to empirical analysis is the recent "community development quota" (CDQ) experiment in the state of Alaska. The results so far seem mixed. In his study of this system Townsend (1996) finds little evidence of cooperative solutions to fisheries management problems within communities. If the devolution of management authority and "communalizing" of resource rights are necessary prerequisites for re-embedding management systems in communities, they are hardly sufficient, at least if the goal is more than generating economic rent.

While participatory and devolutionary management schemes such as CDQ's and co-management hold promise in many respects, there are reasons to be skeptical. There is as much

danger in careless use of the communitarian metaphor as in the metaphor of the greedy herdsmen ignoring the effects of their self-interested behavior on others. Communities are not always well integrated, homogenous, cooperative and equitable in their distribution of resources. Self-governing and co-management schemes may well result in the entrenchment of such inequities (Davis and Bailey 1996). However, there are similar reasons to be skeptical of two other metaphors often used with respect to common property. The notion of the free rider is based on the perception of an atomistic, socially disembedded actor, who will always follow an ego-centric cost-benefit logic in his or her choices, counting on others to supply the costs. Similarly, at a collective level, the "fox in the henhouse" metaphor is often used to "prove" the futility of co-management models. Again, the assumption is one of opportunistic behavior, that it is in the natural interest of resource-users to conspire in over-exploitation, even when they form an organized group. In contrast, the embeddedness perspective argues that organizations are part of, and are legitimized by, the larger social and cultural frameworks within which they operate. Normative controls and dispositions apply to user-organizations just as much as to the individual user.

The tragic irony to which we refer includes reliance on market-based regimes for managing common resources and environments. Partly in response to perceived problems with government management, "the new resource economics" advocates doing away with the freedoms of the commons which allegedly lead to its ruin, largely by creating private property, as in Gary Libecap's book "Locking Up the Range" (1981), which proposed privatization of the extensive public lands of the American west. A similar literature exists on the virtues of privatization of land and other resources in the Third World. It is assumed that privatization will provide incentives and rewards to users who harvest the resource responsibly and according to their long term interest, thus easing the pressure towards over-use. The burden of scholarship in this neo-institutionalist literature is, then, to explain why private property solutions have not yet come about where they do not exist. "The persistence of seemingly perverse property rights in the face of what would appear to be obvious alternatives" (Libecap 1989:3) is identified as an important point of entry to the study of processes of institutional change. An alternative perspective, the one we advocate, would strongly question the "seeming perversity" of communal, public, and other non-private property rights. The goal is less to discover why people may be reluctant to privatize access and other rights, although that is an important question, than to examine these questions in relation to questions about embeddedness, dis-embeddedness, and the workings of communities. Moreover, we urge continued research on the social and cultural ramifications of market-based regulatory systems, such as "individual transferable quotas" in fisheries, and how these attempts to minimize "market failure" in resource management may relate to community success and failure (McCay 1995b).

Concluding Remarks

The Tragedy of the Commons model has tended to naturalize certain institutional and human conditions — open access, egoism, greed, competition — and to demonize common

property and the commoners. The multi-disciplinary critique over the past two decades has attempted to restore the cultural and situational relativity of the conditions of that tragedy and the values and potentials of rights held in common. This critique is rooted firmly in the social sciences, as shown by the attention it gives to the social and cultural contents and contexts of situations framed as "the commons." Fundamental issues in the social sciences, including relationships between individuals and society, the nature of community, and the embeddedness of economic behavior and the role of collective institutions such as the state, are played out in recent debates about how to understand and deal with the human ecology of the commons.

We suggest that tragedies of the commons be thought of as instances of "community failure" as much as of "market failure." In this context we call for a loose and expansive construct of community, one that would stretch from homesteads to townships to seats of central government and on to loose alliances among environmentalists or business leaders, the fragile institutions of international relations, the more robust institutions of global commerce, and even to "epistemic communities" (Haas 1990) of scientists and others engaged in trying to cope with common pool environmental problems. The task is then to determine, for any given case of apparent abuse of common resources, where the failures lie and what can be done about them. To do this requires exploring how property rights are understood by various parties and how those meanings are translated into behavior, custom, and law. It requires understanding the nature of conflicts over rights and responsibilities, the roles of science and other forms of expertise and of larger global processes affecting land and natural resource management throughout the world. It also requires understanding, respecting, and building upon the social and political capacities of local communities, but also of the disembedding forces of modern society.

External forces such as the state and market mechanisms may play a constructive and even crucial role in resource management. We have, however, warned against their more ambiguous impacts where misleading assumptions and models are translated into public policy in a way that produces the very conditions under which the Tragedy occurs. In some cases the state and/or market forces have played a critical role in eroding the capacity of collective action of communities. In other cases the failure may be explained by already prevailing shortcomings at the community level, such as lack of knowledge, dis-organization, stratification, conflicts of interest, inter-ethnic rivalry and the like. Thus, "community failure" may be both result and cause of central government initiatives. To what extent the re-embedding of management systems through devolution of regulatory functions to local communities can help to restore these qualities crucial to collective action is an important issue, calling for bold initiatives from communities, government, and other organizations, and thoughtful and critically designed social research.

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