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### Commons and markets: opportunities for development of local sustainability

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## Commons and markets: opportunities for development of local sustainability

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Development studies have often evolved amidst a tension between the tendency to declare all forms of communal management archaic and in need of modernisation via privatisation and market integration, and the temptation to essentialise indigenous management with nostalgia while vilifying market impacts. Closer examination suggests that common property systems will not simply collapse under market pressure, or create defensive bulwarks to maintain market-free enclaves, but can strategically engage with market systems and global trade. This offers opportunity for the design of sustainable environmental policies. Ethnographic examples open discussion of an often dismissed possibility: sometimes the connection of small-scale societies to market systems has created a productive opportunity that has allowed these communities to survive.

**Keywords:** commons; development; niche markets; social and ecological resilience; sustainability; environmental policies

### Development and market impact on collective natural resource management

The connection of a market-dominated modernity to relatively isolated or peripheral small-scale societies often results in social, economic and environmental upheaval. Local communities without access to large distribution networks or long-term storage technologies have tended to organise their economic life around diversification strategies (Brush 1986, Kelley 1995), small-scale production, and collective forms of work, land, and resource tenure (Ostrom 1990, Bromley 1992). Capitalistic market economic stimuli, focused on mass production, monocropping strategies, and private property, often cannot function without radical transformations in the social and environmental fabric of a society. Development studies have often evolved amidst a

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bilateral tension, if not contradiction, between 1) the tendency to declare all forms of communal management archaic and in need of modernisation via privatisation and market integration, and 2) the temptation to essentialise indigenous management with nostalgia while vilifying market impacts.

Garret Hardin's 'tragedy of the commons' (1968) constitutes a highpoint of the modernising narrative the logic of which indicates that only privatisation or public expropriation can efficiently manage resources in a modern world. Since Hardin's article, researchers have provided ample ethnographic evidence of actual commons' functionality (Feeny *et al.* 1990, Ostrom *et al.* 2002). Anthropologists, amongst others, have taken it upon themselves to prove Hardin wrong and have documented case after case of communal ownership and management that have worked sustainably for generations. In the course of this rebuttal Hardin himself even retraced his steps to clarify the difference between his open-access model and functional common property regimes (Hardin and Baden 1977). Hardin was describing the economic behaviour of individuals as envisioned on the basis of rational choice theory, in which actors trying to maximise individual utility will pursue short-term exploitation of open-access resources (Agrawal 2001). Open-access resources are prone to uncontrolled first-come-first-serve exploitation in which rational utility maximisation for the individual, causes severe degradation to the common resource pool. The conflation of such unregulated open-access resource systems with collectively managed common property has been the source of many misunderstandings. The environmental collapses described by those advocating for modernisation of the commons are often actually situations of common property where collective management institutions have broken down under state policies promoting market-based incentives for overproduction (Hann 2003, Verdery and Humphrey 2004).

On the other hand, the anthropological emphasis on the historical viability of indigenous communal forms of management has encouraged the foregrounding of the negative impacts that market incentives have on traditional management systems. The scenario is all too common: access to large trade networks, the monetisation of the local economy, and external markets always ready to absorb commodities often shift productive efforts from small-scale, diversified activities to monocultures and large-scale, mostly unsustainable, land use change. These processes result in community fragmentation, *de facto* privatisation of common areas, and alimentary dependence on external products often associated with a low-quality diet (Ensminger 1992, Peters 1994). Documentation of these sometimes devastating effects fosters further nostalgic valorisation of traditional management practices. There have been attempts to find middle ground between these two types of essentialisation – condemnation and idealisation – of the commons. Even some World Bank projects recognise the existence and functionality of common property (Goldman 2005, Horton 2006).

The goal of this paper is to move beyond tolerance of the existence of common property as an anachronistic curiosity or as a reservoir of resources

for the marginal poor, toward understanding its potential as a resource and recognising its value as a management strategy for peripheral communities in a contemporary hyper-modern economy. The use of common property as a diversification strategy or as an organised market strategy develops risk coping mechanisms for communities dealing with strong, short-term pressures (Takasaki *et al.* 2004). In recent years there have been several interesting attempts to analyse the relationship between small-scale societies and the market (Antinori and Bray 2005, Johnson and Berdegué 2004), including its integration mechanisms (Godoy *et al.* 2005), the effects on local inequalities (Godoy *et al.* 2004), and the negotiation processes between companies and communities (Morsello 2006, Zarin *et al.* 2004). A broad examination suggests that common property systems will not simply collapse under market pressure, nor create defensive bulwarks to maintain market-free enclaves, but can strategically engage and integrate with market systems and global trade. Success, obviously, is a complicated term of difficult definition. For the purpose of this paper we are looking at evidence of local collective action coordinated with external market agents that has not resulted in the dismantling of the former and that has not compromised the viability of the local environment.

This paper does not deny that the penetration of international markets has often resulted in the dismantling of small-scale economies. Here, however, we present some ethnographic examples that open the field of discussion to an often dismissed possibility: sometimes the connection of small-scale societies to market systems has created a productive opportunity that has allowed these communities to actually survive as such. In specific cases the market has provided an economic niche for a specific commodity communally produced or owned. The efficient communal management of such a commodity allows other aspects of the local small-scale economy to remain viable, and the high profitability potential of an exclusive, communally managed commodity may subsidise and foster local development.

In this article we describe a process of selective market articulation that is neither an example of progressive privatisation of the commons, which can result in fragmentation of the community's resources and often in disempowerment of its less powerful actors, nor an instance of successful protection of the pre-market status quo. It is, in fact, a process of adaptation that fundamentally alters the commons as a productive and managerial institution because part of the commons are redirected to a collectively controlled market-oriented production. The ethnographic cases described in this article are examples of locally controlled (bottom up) integration of an area into a regional or international market. This is, thus, an example of the malleability of the commons, their capacity to change over time and to adapt to distinct social and economic stimuli.

The communal exploitation of a high-value commodity, furthermore, emphasises decision-making behaviours that may improve social and ecological resilience at a local level. Firstly, managerial decisions are resolved

by collective groups and therefore are more likely to be taken in a consensualised form that favours long-term, equitable economic and social goals. Secondly, if this market-oriented economic activity is segregated as a separate, additional arena, complementing the community's customary, diversified productive portfolio, locals are presented with a wide array of economic alternatives. And, thirdly, the combination of the previous two characteristics provides incentives to generate ecological sustainability (Adger 2000). These communities are generally in a relative position of social and geographical isolation or marginality and the survival of common property is probably a consequence of this isolation. Controlled engagement with market systems may offer a new type of resource to these communities. Although common property does not have an innately higher value and often displays an institutional morphology that benefits some segments of the local society over others, it is, nevertheless, characterised by a local accountability, a local responsibility to ecological and social continuity and relative fairness that state ownership, often distant and expert dominated, and private property, easy to alienate from parts or the whole local community, do not have.

The environment in most countries of the world, independent of their level of development, is being reconfigured by conservation policies, radical speculation, energetic and transportation infrastructures, massive natural resources extractions, urbanisation, or development schemes. The understanding of the economic potential of common property and communal management in a contemporary market-dominated context may positively inform policies designed to articulate local environments and communities with international global trends in a sustainable way.

The contemporary global economy, characterised by its uneven development (Smith 1990, Harvey 2006), its emphasis on fast mobility of commodities, people, information, and energy (Castells 2000, Sassen 2002), meanings and taste (Appadurai 1996, Hannerz 1992) and its quick cycles of local growth and collapse in the search for the productive comparative advantage (Ferguson 1999), offers a somewhat encouraging ground for relatively isolated communities with a valued commodity. In the contemporary hypermodern society transportation costs are not a controlling issue and priced commodities can be easily relocated to distant niche markets willing to pay for rarity or quality. In this article we present ethnographic cases showing that the morphology and functional structure of the new global markets have opened an opportunity for locally controlled economic development associated with communal management. We also show that local collapse is not the necessary outcome of communities-market articulation.

In the following section we will proceed, first, to review a sample of literature looking at several fields in which local communities' control of communal land tenure and enterprising market production has resulted in interesting and innovative interactions between communities, resources and the market. Secondly, we will advance to a more in-depth approach to three specific cases for which we will provide more detailed ethnographic

information. The valuable commodities that communities can commercialise are often related to the ecotourism sector, but some of the cases considered include products from an extractive economy. It is important to keep in mind, however, that communal management does not necessarily translate into sustainability. The market always provides incentives for overuse/overextraction. Every successful market-oriented endeavour has the seeds for its own collapse. There is such a thing as too much market success, especially if we are talking about ecotourism or ecoharvesting. The sample of literature and cases provided in this article is not randomly selected or designed to produce statistically significant results, but to point out a noteworthy pattern that seems to be emerging in some isolated communities in their interactions with global markets.

### **Tracking down commons that deal with markets**

In this central section of the article we will review an array of cases and provide ethnographic details on several specific cases of local communities that, in very different ways, have organised themselves in order to extract monetary income from their commons while maintaining or reinventing the collective sense of identity and improving the possibilities for ecological sustainability. These are cases in which the voracity of the market has been buffered by a well-organised community and has been redirected so it actually helps communities to persist as such.

The market potential of the commons, or resources contained in the commons, may produce a profit that acts as a subsidy for the rest of a community's traditional productive activities. In a world dominated by monetised economies, the monetary revenues produced by such activities may represent a key resource for the continuity of the community in a national society or a transnational network. Taxes, medicines or public services have to be paid in legal tender. Subsistence practices rarely produce such currency.

This connection needs to be understood in the frame of a hypermodern, globalised market dominated by urban nodes and focused on fast and cheap circulation of information, people and commodities. It is this specific configuration of societies that dominates the international market that is opening niches for ecotourism and trophy hunting (Africa and Australia), high quality, wild salmon (Alaska), organic Fair Trade coffee (Latin America), rainforest derived food and cosmetic products (Brazil), ranching and agricultural subsidies (Western Europe and North America), and mines and hydropower (Canada and Spain).

In the last 100 years, for instance, conservation policies have taken a heavy toll on indigenous communities from America (Cronon 1996, Sepez 1998) to Africa (Neumann 1998) to Asia (Rangajaran 1996). The last 15 years, however, have seen the emergence of a new tendency. Local communities surrounded by biodiversity or dramatic landscapes have identified the potential for eco-business implicit in their lands. In a globalised world in which cities dominate

everyday life, a 'natural' experience, charismatic animals, and dramatic spaces become coveted commodities. The communally owned lands of many indigenous groups of the world have a high potential to attract visitors, or public subsidies as economic alternatives or companion strategies to resource extraction.

In a strange twist, the emergence of new environmental values in the industrialised world resulted in the creation of a market for what used to be classified as wastelands and unproductive wild animals. Although the conservation movement has also paid attention to private property, the need to encompass large areas or to affect as much habitat as possible has produced incentives to negotiate with local communities in order to change or modify the use of their commons (Brosius and Russell 2003). Indigenous communities have also cautiously recognised the opportunities presented by the consolidation of the conservationist movement and ecotourism. This realisation has been connected to a wave of successful indigenous territorial claims (Steenkamp and Uhr 2000).

The consolidation of the environmental movement and the consequent increase in the value attributed to sustainable uses for nature have created a market for biodiversity. Interestingly enough, this social process initially resulted in the intervention of state-level public institutions, creating biodiversity reserves such as parks and refuges. Natural assets, such as biodiversity, have become collective, national public goods in need of transgenerational protection. That trajectory problematised the ability of a preservationist conservation ethic projected or imposed on peripheral landscapes to be integrated with the continuation of local resource practices. Concomitantly, the private sector recognised the economic potential for tourism in these natural areas, which metropolitan elites sought. This complex and dual emergence of nature as a commodity connects remote communities to three different types of markets: private consumption – via tourism, public funds – via subsidies (Boyce and Shelley 2003), and niche production – via increased values for products from natural areas.

As a result of this consolidation of post-scarcity values (Giddens 1995, Inglehart 1997) organic products have secured a significant parcel of international trade. Shade-grown coffee trade, for instance, although not often cultivated communally, has provided incentives to small producers to establish cooperatives (communal distribution institutions) in order to access and control access to international markets (Lyon 2006).

The engagement of collectively managed common property with international markets on terms that are potentially favourable to communities and sustainable for the resources is an occurrence that counters expectations about the commons from both sides of the field. A closer examination of some specific examples from three different ecoscapes (a tropical rainforest, a montane topography, and a marine environment) enables a critical dissection of the phenomenon. In a classic piece published in 1990, Elinor Ostrom analyses the conditions that facilitate the functionality of the commons. Interestingly enough, elements identified by her such as social interdependency,

resource dependence, consolidated leadership and institutional arrangement, accountability and clear jurisdictional borders seem to be connected to the possibility of generating sustainable practices when the commons face market integration. Commoditisation introduces new variables into the social and ecological equation that articulates the commons, but its stability and its impact on the integrity of the resource base seems to essentially depend on the same organisational principles that regulate the commons in an autarkic situation.

### *Amazonian forest products*

The territorialisation of the Terras Indígenas Kayapó, several indigenous reserves in the Central Brazilian Amazon, in the 1990s has held several advantages for Kayapó communities. Notably, the availability of external markets, resources, and aid have increased and at the same time the Kayapó can retain their own governance regimes within the reserve. There are several reasons for this. First, the large size of the protected area, biophysical wealth, and isolation of communities from urban centres has attracted NGOs interested in environmental conservation of the area, while at the same time limiting markets in the region to logging of high-value timber species and mining operations. Much focus has been spent on the latter two, as examples of villages liquidating their natural assets and dismantling their communal management strategies in favour of short-term monetary gains (Zimmerman *et al.* 2001). After experimenting with these forms of the market (i.e., mining and logging), the majority of Kayapó communities terminated these activities once deleterious social and environmental impacts began to reveal themselves and governmental sanctions prohibited them from continuing (Turner 1995). Post-logging and mining, many leaders began to rethink their market activities, and with the help of NGOs and the National Indian Foundation (FUNAI), sought alternative markets for their common pool resources.

Alternative markets, while not offering the same monetary returns as large-scale extractive activities, are viable and competitive sources of income for indigenous communities. Recently, conservation programmes have begun to utilise Non Timber Forest Products (NTFPs) as new models for forestry management strategies (Arnold and Pérez 2001). The Kayapó have been involved in the collection, trade, and/or sale of NTFPs since they have been under the jurisdiction of FUNAI, then Indian Protection Service (SPI), as early as the 1960s but arguably beginning in the late 1930s. The neoliberal marketplace has opened up new niche arenas for value-added products, especially Brazil nuts, which are the 'only internationally traded seed crop collected exclusively from natural forests' (Peres *et al.* 2003). For example, in the 1990s, two communities (Aukre and Pukanu) entered into a contractual relationship with the Body Shop, which bought Brazil nut oil from the Kayapó for a cosmetic line based on that same oil (Morsello 2006). The project ended by 2001, for complex reasons, but villagers are looking for an opportunity to create another NTFP project that they can sustain over the long term.

In addition to niche markets for NTFPs, villages, such as village of Aukre, have a few other sources of income: the national welfare system, selling of handicrafts, seasonal jobs, support from environmental NGOs, and government posts within the community. Conservation International has a long-term relationship with the village of Aukre and attempts to provide many opportunities for villagers to increase their income without engaging in logging or mining (Zimmerman *et al.* 2001). Along with technical support to protect the borders of the reserve, Conservation International also has developed sustainable projects that range from the sale NTFPs to a research station on the reserve. Market activities within the village thus vary from seasonal work to government salaried positions, depending on the household and the family. These sources of income provide a steady, albeit unreliable, cash flow that is used to buy basic western foodstuffs (i.e., rice and beans), personal goods, and hunting and fishing materials (hooks, lines, ammunition, etc.) that allow the Kayapó to continue their customary subsistence and ceremonial practices.

Kayapó communities' recent attempts at market integration have taken advantage of alternative markets that specialise in the sale of NTFPs because of their symbolic value associated with the environment or cultural heritage of the region. These enterprises have emerged as a consequence of the globalising effect of neoliberal policies that delocalises consumers from their purchases, especially food items. In response, markets focused on specific places and people have emerged as a backlash to what has been referred to as the 'McDonaldisation' of society (Ritzer 1993). Consumers in urban centres in Latin America and in northern countries with environmental and social values are the targeted buyers for such products (Nigh 1997, Sivaramakrishnan and Vaccaro 2006). New sets of valuable commodities are emerging with complex social lives (Appadurai 1986).

These projects, however, are not easy to launch, as they require start-up capital, dependable buyers, and high transportation costs. When successful, there is a real viability for long-term economic gain. Villages like that of Aukre have relied on other sources of income for cash flow in between projects. Households, then, can diversify their income in the gap between sustainable development projects without dismantling communal resources. And future opportunities for entry points into the global marketplace are being designed so that they retain traditional modes of social organisational and land use while engaging with capitalistic enterprises. With that said, although future opportunities offer more sustainable practices, the social and ecological effects of such projects, such as changing values, social inequalities, and intensified productive practices, still need to be addressed.

### *Spanish mountains*

In the Pyrenees the modern connection of the mountain communities to the lowland industrialised cities resulted in steady economic decay and a process of acute depopulation that only the conversion of the area into a tourist haven at

the end of the twentieth century has slowed down. Entire communities were abandoned and most lost important demographic contingents, which often threatened their social viability. Pyrenean communities have traditionally managed their mountains communally. Although trade was an unquestionable part of economic life, households were characterised by a diversified food production that included small quantities of livestock, cereal cultivation, and horticulture. The communal management of the upper part of the ranges provided summer pastures to all members of these communities. These areas were fundamental to the viability of the local productive system.

The industrialisation of Spanish and French societies had dual consequences to these peripheral communities: wage jobs became readily available and mass production made acquisition of most food less expensive than producing it. The result was mass migration downstream. Houses were closed and people left. The area and its territory could not produce enough to monetarily sustain all its inhabitants, or at least to provide the way of life available in the lowlands. During that period houses and territory were almost worthless. In a fading montane society, ranching had lost most of its economic profitability and communal mountains went into a period of infra-utilisation. Only the best pastures were kept and bush and trees started to appear in marginal lands. The value of those lands was strictly connected to the stubbornness of the old timers that still used them.

The last 20 years of the twentieth century, however, witnessed a fundamental change in the economic life of the Pyrenees. In this period the hyper-developed western urban markets started to generate a high demand for a specific activity that required territory and infrastructures: tourism. It was not about extracting a particular commodity such as timber or coal, but about changing the patterns of landscape use. In the last 30 years the range has been occupied by dozens of ski resorts with their associated hotels, even more protected areas, and thousands of second residences (Vaccaro and Beltran 2007a).

Gradually, the Pyrenees became a first-class tourism destination and, accordingly, the price of real estate skyrocketed. Suddenly, the commons, covering the upper ranges and perceived as wastelands for most of the previous 80 years, became extremely coveted territory with high potential for profitability. Ski resorts and mini-hydropower plants started to offer significant dividends to the owners of the commons where they are located.

Space (dramatic and steep) and hydrologic resources have become high yielding commodities that provide a flow of cash unheard of in these mountains. This change in the value associated with a specific commodity supplies influxes of money that help the surviving households associated with the commons to endure and thrive. In other words, low profitability activities in the commons are subsidised by the revenues generated by a market-oriented partial use of its high profitability resources. Not surprisingly, social conflicts associated with the control of the commons have emerged. Second residents or ex-inhabitants of the villages that left during the migration have attempted to join (or rejoin the commons) to have access to a share of its benefits. In most

cases the inhabitants have endeavoured to resist these attempts by enforcing or creating rules regulating belonging (Vaccaro and Beltran 2007b).

The Pyrenees have endured a long period of economic and demographic decay that threatened the complete dismantling of traditional tenure and productive systems. The irruption of new economic stimuli has brought new productive opportunities that have resulted in remarkable behavioural and institutional changes. The depopulation has left more land available for fewer people. At the end of the twentieth century this factor has provided a venue to achieve a level of quasi-mass production that the highlands were never capable of achieving. The traditional system was characterised by small herds of several species.

The common pastures have fewer herds than ever before, but the herds seem to be bigger than in the past. This factor is the consequence of the diminished competition for the communal lands, but also of the non-market economic incentive provided by European Union subsidies to support ranching. These big herds would not be sustainable only with the private valley pastures. They would not be sustainable either with the level of population of these mountains 50 years ago. The underused commons offer the base for the expansion of this relatively profitable resource.

In coordination with this phenomenon we have also observed the emergence of local institutions that attempt to communally manage new activities. The cow ranchers of la Pobla de Lillet and Castellar de n'Hug, for instance, have created an association. This institution, which mimics functional and organisational traits of old communal institutions, has provided them with the political weight to negotiate an agreement with the neighbouring natural park to allow their cows to summer on some of the high pastures contained in the park. Also, this organisation has facilitated the creation of significant economies of scale. In summer, for instance, only one cowboy takes care of the collective herd.

This is not an area traditionally characterised by the presence of significant herds of cows. The fact that these animals are not care-intensive, the availability of common and public lands, and the efficiency of the new communal management, provided incentives to the gradual and relatively widespread emergence of cow herding as an important economic activity.

### *Alaskan fish*

In 2002 a small but very productive salmon fishery in Alaska was remodelled by the concerted effort of a group of Chignik fishermen with the cooperation of the State of Alaska. The Chignik Seafood Producers Alliance (known as 'the Co-op') was responding to difficult economic conditions in the fishery brought on by global market dynamics. The goal was to search for new ways of managing fisheries that are time–effort concentrated: to replace competition among permit holders for the fish with a cooperative effort that reduced costs and thereby boosted profits. Although this controversial experiment was ended

by the Alaska Supreme Court in March 2005, the Chignik salmon cooperative is an exemplary case study for exploring emergent uses of communal resource use.

Three villages make up the Chignik cluster on the Alaska Peninsula about 250 miles south-west of Kodiak: Chignik Bay (population 85), Chignik Lagoon (population 70) and Chignik Lake (population 120), with large commercial canning facilities located in Chignik Bay (Sepez *et al.* 2005). These remote communities are accessible to each other and the outside world only by boat or by small plane. There are few or no retail stores in the communities; most supplies are brought in by barge and many wild plant and animal resources are harvested for local use. The inhabitants are predominantly Alutiiq, an Alaska Native group sometimes formerly called Russian Aleut. The Chignik sockeye fishery has been a relatively stable commercial fishery for over 100 years. Alaska statehood in 1955 expropriated power over fisheries from the Seattle-based salmon canning industry, which had dispossessed them from indigenous people. The fishery was run as an open access resource system. In 1973 the state's Limited Entry Act closed all open access salmon fisheries in Alaska by creating a mandatory permit system.

Limited entry created an interesting interplay of different property types with resource access subject to command and control resource management (Holling and Meffe 1996). The permit gave the holder the right to fish in the common pool fishery, and became a piece of private property freely transferable in an open market (often valued in the hundreds of thousands of dollars). The state declares when fishing is permitted and when it is closed to allow for escape of some fish back into the river system (command) and enforces the rules (control). Within the group of private individuals holding the right to fish from the state, access to the resources is on a competitive basis and is open to all permit holders for the same time period. The sustainability of the resource is secured by limiting fishing time to manipulate how many fish have been removed from the system by fishermen and how many have escaped to spawn another generation. The tendency towards overcapitalisation in such systems (Kirkley *et al.* 2002) is controlled in part by a 58-foot length limit on vessels.

The creation of the Chignik cooperative eliminated the competition among participating vessels in order to reduce costs and increase profits. The state allocated 69% (or about 0.9% per permit) of the harvestable fish to the collective of 77 Chignik fishermen, keeping a slightly higher per permit quota (about 1.3% per permit) available for competitive harvest by the 23 fishermen not willing to join (Bowens *et al.* 2006). For the Co-op, only 19 vessels were sent out to catch the allocation, and after their expenses the revenue was shared equally. The rest of the vessels remained in dry dock or pursued other activities and the savings of not having to prepare gear, hire crew, and supply fuel and other goods to those vessels was a primary basis of the Co-op's ability to generate more revenue for members on average than they would have been able to generate independently. Taking into account only the revenues produced,

notwithstanding a below-average salmon return to the Chignik River system that year, the cooperative managed to generate \$20,000 for each of its members, whether they fished or not. Those that fished also received an additional \$65,000 to cover operational costs such as crew wages, gear maintenance or fuel.

By creating a commons from the state allocations based on their private property permits, Co-op fishermen shared the benefits of collective action and efficient harvest, but generated enormous conflict around the state and within the three Chignik communities. The first source of conflict was that the Co-op did not appear to represent a Pareto improvement. In other words, high-liners (the most successful harvesters) perceived that sharing revenue equally with those having lesser fishing histories would not make them individually better off, either relatively or absolutely, even if it would make the collective better off on average. Many of these vessels stayed out of the Co-op. The second major source of friction was over the loss of crew jobs in the communities. Co-op members were able to save on costs and boost their own revenues precisely because they were not hiring other locals to work on their vessels. The third major source of conflict was over the ethos of working for a living. Community members unhappy with the Co-op would call them 'communists' derogatorily for their collective action, although ironically the Co-op was actually creating a new kind of ownership class. Most members received their cheques not for doing any work, but simply for owning a permit. The state's allocation of fish to the Chignik Co-op was struck down by the State Supreme Court in 2005 on the basis that it was inconsistent with the spirit and intent of the 1973 Limited Entry Act.

Since the Chignik sockeye salmon fishery had sustained productive output over many decades, it is necessary to look to non-biological forces to understand the dynamics that led to the creation of the Co-op. It was not biological pressure, but the global economy and the vicissitudes of international market forces in relation to a specific high yielding commodity that promoted the temporary abandonment of individualised open access exploitation to an organised, collectively managed, communal endeavour. Farmed salmon, largely from Canada, Chile, and Norway, disembarked with force on international markets in the 1990s. This influx resulted in a significant devaluation of salmon prices to fishermen. Moreover, this state of affairs, instigated and structured by global economic dynamics, coincided with a period of low productivity in Alaskan waters. The decrease of the catch, a regional factor, added additional economic and social stress on the communities heavily dependent on salmon. The combination of these negative factors resulted in a sharp decline of harvest value: from \$481 million on average in the first half of the 1990s to \$141 million in 2002 (Knapp and Hill 2003). The average resale value of a Chignik seine fishery permit dropped from over \$400,000 to \$186,000 (Free-Sloan 2003). Fishermen with high loan payments due were in danger of losing their livelihoods. As one Co-op member put it, 'The other guy isn't my competition. The farmed fish is.'

As in the Kayapó case, the cooperative enabled a specific niche-oriented marketing strategy to situate their product in a stressed and overflowing market. The Co-op successfully marketed their product as high-quality, wild-caught salmon to compete against the mass-produced farmed salmon. Again, the emergence of post-scarcity values created an economic space for a revalorisation of a locally, collectively produced commodity. The Chignik cooperative attempted to restructure the fishery by cooperative action over competitive access, with distribution of rewards among all members. It changed a commercial fishing permit from a permit to compete on the fishing grounds into a permit to collect an equal share of the net benefits of communal production. The defeat of the cooperative in court is, amongst other things, the triumph of an individualistic approach to production associated with a perception of the goods at stake as a state resource with open access to permit holders rather than a collective allotment.

### **Commons, market and opportunities for local development**

From an applied perspective the identification and communal management of specific high yielding economic assets can be an important factor to consider while designing development projects. This approach considers that the revitalising effects of a market economy, although theoretically based on private operators, can also operate in the framework of communal management.

In these pages we have documented cases in which, after an adaptive period, communal management may be surviving or re-emerging. The very same characteristics that undermined common property across the globe may, in some cases, provide the way out of the monetisation dilemma generated by the connection to the market. The transformation of a local economic system based on subsistence production and interchange of goods, into a market-oriented and money-dominated system, may indeed foster privatisation, dispossession of some segments of the population, and generate dependence from the scarce labour positions that generate money. If, however, the community remains in control of the commons and succeeds in creating or remaining in control of established political institutions that function as valid mediators with outside agents such as corporations, the state, or NGOs, the community may also succeed in managing integration into the global market. The commons, carefully managed, may become a source of controlled income for the community that may subsidise the continuity of non-market-oriented activities and of the society itself. These cases point out to the importance of civil society for social and ecological sustainability, especially when society has diverse managerial tools that extend beyond private property and its associated products. Collective production can generate economies of scale that may provide a competitive advantage to those marginal locales in need of monetary income and market alternatives. The emphasis on bottom-up decision-making processes in the communities, implicit in communal management, strengthens the likelihood of social and environmental justice in these types of enterprises.

The ethnographic examples provided in this article provide evidence that the market, although it often does, does not always dismantle local communal managerial practices. Some communities have succeeded in keeping control over key local resources and in connecting to the market and exploiting a specific high-yielding commodity in a communal way (benefiting the collective and not just individual owners).

This local use and commercialisation of a specific commodity allows the community to attract cash flows from the international market. No traditional community, however, exclusively focuses on a single commodity. Rather, this is the defining characteristic of industrialised economic systems. The cash generated by the commons, funnelled and absorbed by the local economic system, may actually allow local households to sustain diversified productive practices mainly oriented to subsistence. The characteristics observed in the presented ethnographic examples push us to hypothesise that the attributes of the resources are relevant variables to understand the emergence of these types of processes: resources like game, non-timber products, fish, or mountain tops, difficult to privatise because of their nature or distribution, are conducive to the maintenance or revitalisation of communal managerial ways. Communal management may gain a competitive edge by reducing or externalising some costs. In these cases, the market provides economic incentives to maintain, revive, or create some form of communal management.

When locals have been moderately successful in remaining in control of communal resources (because of efficient organisation, geographical marginalisation, or agreements with governmental authorities that preceded the discovery of important resources in their area) and have had enough time to adapt to the new trends brought about by a market economy, the emergence of a new commodity has provided the cash influx needed by the local communities to prosper in that economy. A specific natural resource attains higher economic status (due in part to market perceptions about nature) and its collective management (exploitation) provides a significant income (bolstered by cooperative efficiencies) to the local communities – income that is fundamental for the viability of the communities themselves.

Communities will not revert to pre-modern configurations, and, probably, few true common property systems could survive unchanged under a complete remodelling in capitalistic terms. However, in development terms, an awareness of the capacity of local managers and communal institutions for dealing with the market on their own terms could be a significant step forward towards fostering sustainable and just development. Communal management does not guarantee fair and sustainable development. The impact of market engagement will depend in part on the process and outcome of intra-community redistribution of the generated resources. Nonetheless, the opportunity for collective products to be both market and community successes through strategic engagement and local control is one that challenges the overly polarised view of commons and markets.

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