

THE LITTORAL AND THE LIMINAL: Challenges to the Management of the Coastal and Marine Commons

Bonnie J. McCay

Rutgers the State University, New Brunswick, New Jersey, USA
mccay@aesop.rutgers.edu

'Between the low water and the flotsam and jetsam of the high-tide mark, land and sea wage a never-ending conflict for possession.' - Rachel Carson. In: 'Undersea', *The Atlantic Monthly*, September 1947.

Abstract Coasts - the littoral - have features that make them 'liminal', that is, neither one thing nor the other, transitory, and on the threshold. Such features of in-between-ness are often treated culturally as problematic, even taboo. I explore the liminality of ocean and coastal commons, including their dynamics and their boundaries, landward and seaward and side-by-side and issues related to their management. This leads to the value-laden and contentious domain of 'property rights' analysis, including the familiar domain of privatized property, the still poorly charted territory of commonly held property, and the mythical terrain of no property or 'open access,' the lands and seas where *res nullius* is the rule, and our imaginations run wild with visions of fabulous wealth, whether fish or gold, or of fabulous monsters, once depicted in explorers' charts and now seen as illegal and undocumented fishing vessels. I conclude with a turn to the more familiar coastal waters and shores and the rough charts of the commons, as yet frontiers, with a view toward how anthropological analyses can contribute to improved policy for ocean and coastal management.

Introduction: The Littoral as Liminal

The topic of the 2007 'People and the Sea' conference, the fourth sponsored by the Centre for Maritime Research at the University of Amsterdam, was 'Who owns the coast?' It is a question about ownership. Ownership is a statement about belonging and identity; it is also a statement about property, about claims of rights and attributions of liability and responsibility that constitute and are shaped by the institutions and processes of law and culture. The question therefore can be about who has what kinds of rights to and liabilities and responsibilities for the coasts. This leads us into the value-laden and contentious domain of 'property rights' analysis, including the familiar domain of privatized property, the still poorly charted territory of commonly held property, and the mythical terrain of no property or 'open access', the lands and seas where *res nullius* is the rule, and our imaginations run wild with visions of fabulous wealth, whether fish or gold, or of fabulous monsters, once depicted in explorers' charts and now seen as IUU (illegal, unreported, and unregulated) fishing vessels.

Property is a term for institutions that relate people to places and things. Property institutions are core to most societies as a way of ordering and allotting rights of access to and use of as well as responsibility for natural and cultural resources on land and at sea. Property in coastal and marine systems is very problematic. What is there about *coastal* property that makes this ownership question problematic and therefore interesting? What are the coasts, anyway? In my reading, 'the coast' encompasses coastal lands, coastal (or 'nearshore' and 'inshore') seas, and the intertidal zone in between. The coast has fluid and often difficult to define boundaries; it is dynamic and subject to intense natural and socio-economic pressures; and therefore coasts have features that pose challenges to societies seeking to control and benefit from the coasts through institutions such as property and resource management.

Coasts are both littoral and liminal. Littoral means of or on the shore - especially a seashore, brushed by the tides. Liminal, according to the Merriam-Webster Dictionary, is based on the Latin for threshold, and it means barely perceptible, or, relating to, or being an intermediate condition: in-between, transitional. In cultural theory, liminal signifies phenomena that do not fit well into cultural categories; the ambiguous, the ambivalent, the untidy, and very often therefore that which is treated culturally as sources of fear, risk, and danger, or simply forbidden (for example: Firth and Leach 1967; Leach 1964). Coasts are valued aesthetically and for their many critical functions, economic, social, and ecological. But they are also liminal, in-between and both land and sea, bathed by both tides and 'run-off', sculpted by forces of wind and waves that intersect and play upon the consequences of plate tectonics and bulldozers. Their boundaries are often vague, shifting, and contested. If not feared or tabooed, they do pose cultural, political, and survival challenges and opportunities.

Liminal also refers to a transitional condition, as in the phrase, 'in the *liminal* state between life and death'¹. We can think of the socio-natural coastal systems this way, too, in the historical sense, as frontiers, places which are subject to phases of discovery and intensive exploitation and overexploitation. They are or have been places of refuge and opportunity as well. But their frontier status is transitory - for instance, many of the denizens of coastal ecosystems are as yet wild, but others are fully tamed. We may ask where and under what conditions they become more settled and sustainable socio-natural systems and how this affects life there. They are on the threshold, and we are led to ask, who owns them and what futures can we imagine and create for them?

Boundaries and Liminality

If property depends on clearly defined boundaries and some continuity in the thing itself, then coastal/ marine property is complex and problematic indeed. A fundamental notion in managing the commons is that one needs clear, agreed-upon, defensible and socially and ecologically sensible boundaries, boundaries that mark off who has rights, who has responsibilities, who has jurisdiction, where, and for what. However, littoral boundaries are liminal; they are complex,

contextually contingent, and changing, challenging those who want solid and easily defined property rights or management jurisdictions.

Landward Boundaries

The landward littoral, the shore, changes diurnally and seasonally with the tides - dramatically so with floods and tsunamis; subsidence or elevation of the land; submergence or revelation from changes in sea level, as is happening at an alarming rate today. Human structures and attempts to manage the force, flow, and level of the sea and the highly valued edges of the land are costly and sometimes futile efforts to constrain these dynamics (Bush *et al.* 1996).

The liminality of coastal systems does indeed make them areas of risk and danger, and the boundaries we construct reflect this. For example, in the wake of increased storm activity and increased liabilities, insurance companies in the United States are redefining the 'coast'. Coastal area' is how insurers describe the area of *uninsurable* risk and danger, and in recent years this area was from 1000 feet to the shore in much of the Mid-Atlantic region, which is vulnerable to hurricanes and northeasters. In September 2006, one of the largest insurers in the us changed 'coastal area' to one mile rather than 1000 feet (Fleishman 2007). This is shifting the burden even more than before to the public domain for emergency assistance, to newcomers as against long-time residents, *et cetera*, and it raises even further the costs of living at the coast, forcing many fishing and waterman families to move inland. Thus, coastal boundaries shift in response to the perceived effects of climate change and the business decisions of mega-corporations, and these shifts can have powerful implications for social justice.

As with all questions, the question of coastal boundaries is partly a matter of context and power - for what? Where? To what effect? The political ecology of this question about the inland boundary of 'coasts' is revealed administratively in countries with 'coastal zone management' programs, such as the us where both landward and seaward boundaries are established by law or administrative fiat, reflecting geographical and political realities. For example, in the State of New Jersey the inland boundary varies according to both ecology and the power of existing interests. In one zone, along the heavily industrialized area across from New York City, it extends only to the first road or property line, a very narrow strip, leaving untouched by planning constraints most of the land along that coast. But along the major length of the shore, where development is primarily seasonal residential, the boundary of the 'coastal zone' goes inland from half a mile to twenty-four miles, depending largely on the extent of wetlands but also existing development (NOAA not dated).

From other perspectives, such as concern about pollution, the effects of sedimentation on marine habitats, or the fate of anadromous fish species, a much-expanded inland boundary may be constructed such as a watershed or river system. Ecologists and other natural scientists often strive to push coastal boundaries inland, especially with greater efforts toward ecosystem-based management, and this may be reflected in administrative law and practice. For example, the State of Oregon defines its coastal zone in watershed terms, such that it extends inland to the crest of the coastal range of mountains, and the State of Hawaii de-

clares that all land is coastal (NOAA not dated). With such 'bio-regional' notions of landward coastal boundaries, challenges quickly arise for governance because the betwixt and between of historic structures and systems of governance rarely align spatially or temporally with ecosystem processes (Lee 1993).

The matter of political boundaries includes the up-stream/down-stream boundary issue but also the side-by-side boundaries between socially constructed places and polities, including international ones. These are relevant in several ways and scales. One is that human adaptations to coastal environments and the highly mobile strategies often taken by coastal fishers, bargemen, merchants means that there can be strong ties among coastal peoples that cross local, regional, and national lines, as are predominant along the coasts of West Africa (Odotei 1991). Another which leads into my next boundary topic, the 'at-sea' one, is that viewing coasts as parts of marine ecosystems can require a much larger scale, especially if one's ecosystem of choice is a 'large marine ecosystem' such as, for example, the Benguela Current or the Chukchi Sea.

Seaward Boundaries

Coasts extend beyond the edge of land into the waters. Certainly if we are interested in coastal cultures and their adaptations (and management issues), then we must move our boundaries into the sea, following the fishers to their fishing grounds and the swimmers and boaters to their limits. How far?

On maps, seaward boundaries of national jurisdiction often look like much simpler contours and straighter lines than do the inland boundaries of coastal systems, but these Cartesian representations are largely fictions of national and international treaties and law, and their parameters and import reflective of imperatives of merchant capitalism, industrial capitalism, and postindustrial capitalism (Steinberg 2001). The seaward boundary of a coastal system may be determined by the reality or practicality of jurisdictional claims, from the 3-mile range of cannon shot that allegedly was determined by Thomas Jefferson as the limit of the territorial sea, to the 200-mile exclusive economic zone. In the 1970s, in the course of the Law of the Sea conferences of the United Nations (formalized in 1982), almost all nations chose 200 nautical miles as a definition of their coastal interest in fishing and other extractive activities, cutting broad swaths from the sea to become parts of the littoral.

From ecological perspectives, coastal boundaries may be viewed in relation to phytoplankton productivity, the plumes and whorls of great ocean currents, and the shallow undersea plateaus and islands known as continental shelves and offshore banks. The idea of 'large marine ecosystems', based on such large-scale ecological and oceanographic phenomena, has taken hold among marine scientists and geographers (Sherman *et al.* 1990; Sea Around Us 2008). Such large, expansive scales are important to the tasks of regional coordination and ecosystem-based management. They also pose major challenges for governance, in part because they may cut across the EEZ jurisdictions of nations. At the international level there are also ocean space boundaries created by the UN Food and Agriculture Organization, to organize the data it collects on fisheries and aquaculture (FAO 2006).

Many nations and sub-national units have other ways of delimiting at-sea boundaries, for example in distinguishing between 'inshore' and 'offshore' fishing grounds to protect inshore habitats, spawning populations, and/or fishers' interests. Thus the straight and simple boundary lines can become numerous and complex. This is particularly true where people have taken pains to do more fine-grained mapping of marine ecosystems and fish stocks and are attempting to use these maps to counter measures that derive from very large-scale models of fish stocks, as in the northeast United States. There, the groundfish (particularly cod and haddock) are treated by government scientists as large regional populations, but the efforts of Ted Ames and others, interviewing elderly fishers and interrogating historical data, suggest a far more complex 'meta-population' biological reality, based on spawning sites (Ames 2004). It results in lace-work images of coastal waters and can open up new possibilities, some as yet barely articulated, for fisheries and coastal management.

Boundaries are being redrawn all the time, as we continue to extend the imperative of control into marine realms. Conservationists add new ways of thinking about space and the sea, especially marine protected areas and networks of marine protected areas (for example: Mora *et al.* 2006; Agardy *et al.* 2003). Recognizing mounting conflicts among multiple uses, conservationists are also arguing for 'ocean zoning,' a broader vision of coastal waters that are carved into functional zones, separating and laying claim to areas for offshore mining or wind power, commercial or subsistence fishing, recreational fishing, diving, and boating, transport, and other uses (Crowder *et al.* 2006).

Visions of the seaward expansion of the coasts therefore include the long, gently contoured lines of 200 mile 'exclusive economic zones' (eezs) expanding outward from land masses and islands; huge balloons of 'large marine ecosystems' (lmes), perhaps bisected by functional zones; bio-regional units such as UN Food and Agriculture Organization regions; and then the more complex dotted and lacy views of fishing spots, spawning grounds, special fishing territories or concessions; and protected areas - woven together and represented by lines one could trace among them of the movements of currents, whales, fish, turtles, boats, larvae, nutrients, and carbon.

As the geographer Philip Steinberg (2001) has argued, territorialization of the oceans has been a halting and incomplete process, with much of the ocean still conceptualized essentially as 'anti-civilization,' a deep void. The construction of truly functional territorial boundaries has been limited mainly to narrowly defined coastal zones and discrete marine places. In the era of industrial capitalism, these coastal spaces were only partially claimed as true territory, mostly related to the control of trade (Steinberg 2001:169). In the postmodern world, the trend is an intensification of territorial control of ocean space, expressed in development planning through frameworks such as integrated coastal and management (Cicin-Sain and Knecht 1998) and fishery management systems that expand state interests far out to sea (Steinberg 2001:172). However, the liminality of the coasts and coastal oceans remains, with development objectives confused with and confounding others, as the ocean is becoming less an essentially empty site to be used for trade than 'a site to be consumed, an intriguing space with a rich past

and a non-functional present that makes it safely available for appropriation by the tourist's gaze' (Steinberg 2001:170).

The Problem(s)

As suggested above, a major class of problems in ocean and coastal management concerns mismatches between scales of organized activity, governance, and ecological systems, a topic being addressed extensively in other publications (e.g., Wilson *et al.* 2000, Berkes 2006, Young 2006). Some coastal and marine phenomena require large-scale institutional regimes, but others may be better addressed by small-scale ones, as evinced in the movement toward community-based management. However, the fluidity, dynamics, and complexity of marine ecosystems makes it difficult to come up with a simple institutional solution, even in regions such as coastal Japan with a long history of community-based management for coastal fisheries (Takahashi *et al.* 2006). Complicating the picture even further are the connections among 'roving bandit' industries seeking products like sea urchins or aquarium-fish all around the globe, ignoring most national and regional boundaries and creating even more challenges for governance (Berkes *et al.* 2006).

Complicating such problems of scale are the difficulties experienced in actually enforcing claimed boundaries at sea, a persistent problem for small fishing cooperatives as well as for nation-states, although one that has some technical solutions, such as requiring the use of electronic responders on vessels to monitor their positions in ocean space.

Turning to the land edge of the coast, not least of the problems applying the notion of 'ownership' to the littoral is the challenge of holding onto a piece of real estate on a storm-battered beach. Property on coastal lands - whether modest homesteads, large real estate developments, salt-hay meadows, or coastal farms - is usually based on the terrestrial model of solid land and fixed boundaries. This is uncovered as a wistful fiction when erstwhile 'property owners' see their homes crumble and float away, the beaches in front of their hotels vanishing overnight, or their pasture lands flooded with salt water. Claims to landed property often resist the counter claims of rising and turbulent seas only with massive engineering assistance or rebuilding aid from generous governments with deep pocketbooks, while the poor scramble for resources to rebuild their stilted homes and lives on slightly firmer ground.

Vulnerability to coastal hazards has strong socio-economic patterns (Cutter 1996), as shown in a study of exposure and vulnerability to climate-change-induced coastal flooding in a New Jersey area (Wu *et al.* 2002). The December 2004 tsunami that struck South and Southeast Asia; Hurricanes Isabel (West Africa 2003) and Katrina (US 2005) that devastated parts of the US Gulf of Mexico coast are extreme events of this kind. Atoll-dwellers of the Western Pacific ocean, Inuit and other citizens of the far North, and people trying to eke out a living on the fragile delta lands of Bangladesh or the Irawaddy Delta of Southeast Asia are suffering from both insidious and extreme assaults, paying the price for global climate change. A

persistent social science challenge is helping to identify and strengthen sources of resilience and needy pockets of vulnerability in these contexts.

Meanwhile, wealthy vacationers, opportunists, entrepreneurs, and planners seek their own advantage on the valuable but exposed and mobile coasts. These days, throughout the world, coastal 'development' is more likely to mean building resorts and expensive housing than the enhancement of the socio-economic welfare of traditional coastal water-dependent communities. The subtler process of 'gentrification' has already transformed many fishing villages into picturesque second homes for urbanites and exurbanites, and this process is likely only to intensify, insurance or none. Among the results is the loss of access to spaces and facilities, much less the fuller resource of 'community', for people who fish and trade along the coast, the so-called 'working waterfront' issue fraught with implications for social justice (for example: Island Institute 2007). Property issues are liminal: what are the rights of customary users of coastal waterfronts, beaches, and waters in relation to the rights of titled property owners? What are the rights of the working class when property values skyrocket?

A nearly taboo topic - one that is politically untouchable - in the us, particularly my State of New Jersey, is the legitimacy of the 'right' of coastal property owners to support from local, state, and federal governments - and hence from other tax-paying citizens - to protect and rebuild their property and to replenish the beaches that help create the marketable value of that property. On the one hand the rights of private property owners are treated as unquestionable and inviolate, even to some extent to the efforts of governments to provide public access to the beaches and to guide land uses to less vulnerable ones (that is, requiring that after a property is damaged from a storm, it be rebuilt further back; promoting the creation of large dunes that may block the views). At law this can be claimed as uncompensated and therefore illegal 'taking' of private property rights, a much disputed and difficult arena affecting environmental regulation (for example: Botello-Samson 2006). On the other hand, the 'un-propertied' rights of people dependent on waterfront properties and access (beaches, wharves, moorage, docks), weigh less, play a lesser role in rebuilding efforts, even when supported by constitutional, common, or customary law - as in New Jersey and many other us coastal states, which have a 'public trust doctrine' protecting public rights to the littoral. Long ago E.P. Thompson identified and discussed this disparity (Thompson 1975, 1993), and it seems central to coastal issues today (McCay 1998).

This leads to the question of 'common property', an institutional domain that, like the coasts themselves, is very difficult to define and rarely recognized for what it is. When it is working well, it is often misinterpreted as either private property or regulation by a centralized bureaucracy. When working poorly, it is even more often misinterpreted as open access.

The Commons Problem

The Many Faces of 'Common Property'

The liminality of coastal and marine systems is reflected in the persistence of ownership claims that are sometimes called 'common property'. True to this con-

dition of liminality, 'neither one thing nor the other', 'common property' is difficult to define, to bound, and to tame. Neither one thing nor the other - neither private property nor public property; or perhaps better construed as overlapping or intertwined with both - common property can still be defined, if broadly (see McCay and Acheson 1987 and Ostrom 1990). Its outer boundaries are that it involves some kind and level of *shared use-rights* rather than exclusive ones and that there is some sense of a *community of users and owners*, whether it be the 'commonwealth' of all citizens of a nation or a tightly knit group of fishermen exploiting the resources of a lagoon.

Like all property, common property is many-stranded, and comes in many varieties depending in part on the make-up of those strands, or sticks in the bundle. The common rights and community claims involved may pertain to rights of access and use. They may or may not include rights to modify the property in question - as for example to dam a waterway, dredge sand from a beach, or put net pens out in the bay for fish farms. Common property may or may not encompass the right to sell or lease the resources or places in question. These may be treated as inalienable or subject to community oversight. Or they may not.

Related is the question of whether the regime includes rights to make decisions about 'the commons'. People may have access and use rights but must rely on their representation in local or central governments to influence decisions about the management and fate of the commons. On the other hand they may hold the power to do that themselves ('self-governance'); or they may have some kind of shared governance ('co-management').

In a world largely defined in terms of clear-cut, black and white categories of ownership and non-ownership, such institutions are perplexing if not downright perverse. The transaction costs for making decisions are often very high - it can be very difficult to get a large group of co-owners to agree to major changes, especially ones that affect their rights of access and use; and there can be other disincentives for making what outsiders believe to be wise decisions. In the economists' terms, common property regimes are ones of 'imperfect' property rights. On the other hand, common rights and community claims can be the institutional basis for local stewardship, the basis for collaboration and cooperation for a sustainable future (Charles 2001). Coastal systems, liminal as they are, are on the threshold to go one way or the other.

Open Access and the commons

When a common property regime is working well, it is often misinterpreted as either private property or regulation by a centralized bureaucracy. When working poorly, it is even more often misinterpreted as open access. The question of what open access is reflects the liminality of coastal and marine phenomena. It is a lingering and not fully resolved matter of some importance. 'Open access' is widely accepted as the primary structural condition leading to 'tragedies of the commons', as Garrett Hardin argued (Hardin 1968). Many people, probably most, continue to use it as Hardin did as a synonym for total freedom. Open access is the uncivilized realm of the open seas and untamed coasts, of pirates and unflagged fishing boats, an arena of total freedom from rules and policing, or what legal

scholars call *res nullius*. It is a lawless regime, at the farthest edge of a frontier, where, as Kenneth Boulding once noted, there is no community (Boulding 1977). Such a case is definitely not one of common property, because if there is no community, there is no property, property being a social institution. The word 'property' is a sign of institutions, not of empty seas.

When the problem for coastal systems is cast as open access, alternative policy solutions are few, the most logical being enclosure. But another meaning of open access brings it within the domain of common property and leaves open the possibility that the commons can remain open but be effectively managed. Open access can be a condition of a common property regime: it can be *res communes* instead of *res nullius*. Institutions signify some level of social agreement about rights and activities - and it very well may be that in some traditions and situations that agreement is for free, untrammled participation, as United States citizens remember on July 4th and the citizens in France do on July 14th. In such political and historical contexts, open access rights may be strongly cherished as part of citizenship, as well as the last frontier of space and resources not enclosed by private property.

Finally, open access indeed sets up the potential for the dynamic that leads to 'tragedies of the commons', but it can also be one that has the potential for 'comedies of the commons', (McCay 1995) or situations in which some of those involved work together to come up with rules and restrictions, restrictions on what one does rather than on whether one has access. The inclusive, open access commons can be a managed commons, as most easily seen in the case of public parks.

Common Property as Liminal

Bridging, conflating, and sometimes expanding private and public interests to something approaching what we are calling 'common property', that 'in-between' condition of sharing and community, people are engaged in 'comedies of the commons'. In a world of institutions, people have and sometimes take the opportunity to review, reflect, and revise the situation, to create rules, adapt old ones, and try to make them work, and this is what I mean by 'comedy', following ancient Greek drama, where comedy is 'The drama of humans as social rather than private beings, a drama of social actions having a frankly corrective purpose' (M.E. Smith, cited in McCay and Acheson 1987; see also Rose 1986).

The potential for 'comedies of the commons' is often viewed solely in terms of local community-based or bottom-up systems. However, the institutions involved can be very top-down, expansive, inclusive, and abstract, enough so that many analysts would call them 'public property' or 'government property'. They may be based on notions of public right and ownership, often deriving from national constitutions, such as that of Mexico, where the natural resources of the coasts and seas are the 'patrimony' of all citizens, who maintain the free right of access - although the government may provide exclusive concessions for some species (as I will discuss more below). This is typical of many nations founded on 'revolution', and it is also expressed as the public trust doctrine of English and American common law, preserving common rights of fishing, navigation, and

beach use to citizens in tidal and/or navigable water bodies and adjacent shores (McCay 1998). The 'common property' element is found in notions of social equity and the inalienability of use rights.

Such public, inclusive regimes usually have government mandates to manage coastal littorals and waters on behalf of the public, the fundamental mandate of centralized, bureaucratic systems of coastal, fisheries, and maritime management. Anthropologists, sociologists, and others have devoted considerable effort to studying some aspects of these management regimes, particularly how they affect fishers and other residents of coastal communities - in essence the 'social impact' enterprise. They also study whether and how the knowledge, ideas, and preferences of fishers, other resource users, and local citizens influence the design and/or implementation of government management systems - the 'participatory' and 'co-management' theme.

In these institutional settings there may be more-or-less freedom to enter (and leave) the commons or, put another way, greater or lesser degrees of open access and of enclosure - and hence greater or lesser inclinations toward 'tragedies of the commons' (through the dynamics of open access) or 'tragedies of the commoners' (as some members of the public gain special privileges while others lose public rights). In many nations coastal lands and waters are experiencing increasingly restrictive conditions either because the coasts are being industrialized, urbanized, and gentrified (Lamarque 2008) or because of the use of limited entry measures and protected areas for managing fisheries and other marine activities. Our study of the narratives of New Jersey fishermen reveals a process of 'creeping enclosure', where the cumulative effect of many small changes in fisheries management and coastal land use has been very sharp narrowing of alternatives for people who try to make a living from coastal waters (Murray et al. 2007). These processes may have profound implications for coastal futures, narrowing as they can available alternatives for governance and action (St. Martin et al. 2007). Indeed, the capacity for one major alternative, community-based resource management, is often lacking where traditional coastal activities are swamped by tourist, industrial, and other 'new' uses of coasts and coastal oceans (Weber and Iudicello 2005).

Having stretched the domain of 'common property' as far as many public resource management regimes, especially those guaranteeing some measure of social equity and generalized access rights, let me restrict it. A high degree of democratic participation of the public or a broad range of interested stakeholders is a dimension of interactions within such management regimes that makes it appropriate to think of them as common property concerns. Where resource users, coastal community dwellers, and others claim and obtain the right to be engaged in planning and implementing a management regime, they are claiming a common property right as well. But it does not help analysis to cast all public resource management regimes as 'common property' even if they do have elements of participatory decision-making. Another important and variable ingredient is a sense of community among the resource users and between them and government officials. This does not mean that they are necessarily in harmony or of like minds. A sense of community is helped by trust, a history of social ties, and

shared sentiments but it does not demand them. More critical is the existence of some sharing of knowledge of and dependence on shared resources and places as well as a history and an anticipated future of social interaction. Those interactions can be antagonistic as well as cooperative, rife with conflict as well as friendly, epistemic (that is, a common pursuit of knowledge) as well as sentimental. The kind of community that emerges may be somewhat transitory, a so-called 'epistemic' community (Haas 1992) of officials, experts, resource users, and others that is organized around coastal issues like development or resource management. But it can be the basis of an effective 'comedy of the commons', as elements of participatory democracy and community are interwoven with authority and expertise emanating from government institutions.

Exclusivity and the Commons

Just as I am posing very fluid boundaries in classifying much government-run coastal and fisheries management as common property-like, so I will venture beyond the norm to suggest that some forms of what we think of as 'private property' are also common property institutions with the capacity for generating 'comedies of the commons'. This can be the case when exclusive, fairly secure property rights are granted to social groups such as cooperatives, land trusts, or municipalities. One example is the fishery concession granted to cooperatives on the Pacific coast of Mexico, which have contributed to the ability of some of the cooperatives to gain certification by an eco-labeling institution (McCay *et al.* 2008). However, it could also include many so-called 'rights-based' fishery management systems otherwise construed as privatized systems where property is traded and valued in markets. This is evident in the individual transferable quota (ITQ) systems for marine fisheries management. The privatization involved is only partial because the fish still 'belong' to the larger commons, subject to management, and the ITQ rights holders are usually members of a defined and exclusive group of those with history in the fishery and/or the wherewithal to pay high costs of entry. Community is present in these regimes, which often involve some degree of organization and in certain cases organized investment in fisheries research (Harte 2001). They not only have the 'club member' attribute, with high costs of entry, but also a shared history and future, and a strong sense of their rights to be engaged in management, as expressed in efforts at co-management and cooperative research with government agencies.

The kind of community created in these exclusive cases needs to be carefully examined, though. Even within community-oriented systems of exclusive property rights, such as fishing concessions, there can be serious issues of exclusion and social justice. In the case of ITQs, it constitutes a narrowly defined group, those who own the tradable access rights and the managers and scientists who work with them (McCay 2004). Moreover, the power relations and discourse of privatization can lead to the diminishment of community (Lowe and Carothers forthcoming).

Common property of a type sometimes call public-private collaboration (Wondolleck and Yaffee 2000) is also seen when networks of private property owners become invested in watershed or shoreline management projects for the

public lands nearby; when environmental non-governmental organizations (ngos) collaborate with local property-owners and towns in creating conservation easements, transfer-of-development-rights, and other mechanisms to protect endangered species and critical habitats; and when villagers erect barriers to a rising sea or manage a marsh for salt hay production.

Nested and Complex Systems

Tragedies and comedies of the coastal commons almost always take place in nested systems of governance, where there are very complex assignments of ownership and responsibility that further muddy the waters and muddle our analysis. For example, in my state, New Jersey, the citizens are 'owners' of the beaches and other 'public trust doctrine' places (including all land below mean high tide water mark), and the state legislature is trustee for them (McCay 1998). The tidewater 'commons' is therefore owned by all citizens of the state, who have recognized rights of access and use for purposes such as fishing, navigation and, in more recent years, coastal recreation. They have a say in how the coastal commons is managed mainly through their political representatives, who serve as trustees in state government. The trustees are supposed to treat this property as inalienable, but have allowed much of it to be granted away to private individuals and firms as 'riparian rights', and therefore some tidal lands and waters are claimed as exclusive private property, and contested is the extent to which members of the general citizenry retain rights of fishing, navigation, bird-watching, *et cetera* on those lands and waters.

This system evolved in the early nineteenth century, and by the end of that century had fully replaced smaller-scale common property systems, such as the tidewaters of the southern tip of the State. Presumably Native Americans exercised usufruct rights within their loosely defined polities; we do not know very much about that. It is clearer that those tidewaters, marshes, and beaches were included within the boundaries of a huge grant from the King of England to William Penn, for colonizing purposes, and were treated as part of the shared commons of early settlers. They were bought up by one of the settlers in a questionable transaction in the eighteenth century. They were then granted by his repentant son to citizens of the local townships, who held exclusive rights and management powers in a full-fledged local common property management system.

In the colonizing phase of this history, the coastal beaches, marshes, and tidal waters were gazetted, part of a business venture called a 'proprietorship', and as such looked very much like the kinds of land that could be claimed from the proprietors as private property. A group of farm owners tried to form a cooperative to purchase Cape May's tidelands in order to preserve its common attributes, but they had trouble organizing themselves to do this; one of them went ahead and bought up all of the coastal hunting, fishing, and fowling lands and waters, simply because it was, strangely in context, for sale. The tidelands and the hunting, fishing, shell fishing and fowling associated with them became fee simple private property, and people had to ask for permission to use them. They grumbled, and eventually the family granted the tidelands to two local townships to manage as commons for local citizens.

The state took over jurisdiction by the end of the nineteenth century, interpreting the public trust doctrine as one requiring state-level ownership; but the legislature soon turned around and delegated those aspects of the coastal regimes that involved the beaches to coastal municipalities. New Jersey's coast is almost entirely a barrier beach, fronting estuaries fringed with wetlands, and the greatest social and economic value has been those beaches, which are crowded with summer residences and amusement parks.

In one sense, what has evolved is a viable system of decentralized, community-based governance of the commons. The coastal municipalities are responsible for keeping the beaches clean, attractive and safe for tourists and residents, and they do this by extracting revenue from beach users and controlling how many and who uses them. They limit access. They require beach user permits, which can be costly, and they decide about providing parking, toilet, and changing facilities for outsiders who wish to use their beaches, often making poorly disguised efforts to reserve beaches to local residents despite the general 'public trust' law stating that they are available to all citizens. But if and when a major northeaster or other storm washes away the beach and boardwalk, the federal government is called upon to help replenish the sandy beaches, highlighting for awhile questions about the legitimacy of the ways that the municipalities keep large numbers of the public from the beaches.

This narrative could be enriched by further details about coastal fisheries of New Jersey and the changing and complex systems of jurisdiction and rights, including the persistent tension between public access rights and the exclusionary actions of coastal municipalities. In exchange for taking the responsibility to keep beaches clean and providing lifeguards, the municipal governments have authority to regulate beach access, an authority which is often used in an exclusionary way, against the general public right of access to the state's beaches (Urban Harbors Institute 2003).

The main point is simply that property rights for coastal commons are complex and multi-faceted, and concepts of simple 'ownership' - whether public or private or this liminal common - do not suffice. John Stelhaus recently observed this for wildlife and forest management, too, and added that there have been increases in the tendency to challenge and contest simpler understandings of ownership:

'Perhaps one of the most fundamental changes in resource management is the tendency for concepts of simple and complete ownership to give way to a tenure relationship that fits more closely with the...view of a bundle of rights that can be disarticulated and held by different people. In some ways, this view of tenure has been quietly with us for a very long time. Wildlife has long been legally viewed as owned and managed by the state, not by individual landowners, and there is wide recognition that easements can be used to separate development rights from land ownership. What has changed is that previously widely accepted and stable distributions of tenure rights are being contested much more frequently' (Schelhas 2003:20).

Ownership and the Commons

The liminality of the coastal littoral is reflected in ambiguities and contradictions concerning 'ownership' itself. What does ownership mean and on what basis can one claim it? This is particularly interesting and problematic for the oceans, where land-based polities may claim jurisdiction and ownership but tides, currents, plants and animals are wild and hard to contain. In law in many systems, it is understood that no one owns the fish until they are caught; that the governments with jurisdiction are for all practical purposes the 'owners' of the fishing grounds, having the power to make and enforce rules, and that those who harvest fish and shellfish own the tools of their trade (that is, boats and gear), their skills and knowledge, and whatever rights or privileges they have been granted by government. They do not own the fish, even if they have exclusive and tradable fishing rights like ITQS (National Research Council 1999). And they do not own the fishing grounds.

If stewardship is dependent on ownership, then this is a must-flawed situation, and it indeed helps account for the decline in many of the world's fish stocks and fisheries. It is important, nonetheless, to examine more carefully the location and specifics of property claims. For instance, fishers often feel and claim 'ownership' of fishing grounds and fish, the law and ecology notwithstanding. A folk version of the Lockean idea that 'ownership' is derived from and justified by the work of transforming 'nature' into useful product is alive and well among fishers and their organizations, who often talk in terms of 'owning' parts of the coast and sea by virtue of their long use of those places. The common property right to participate in making decisions about coastal and fisheries management is in part derived from the notion that 'it belongs to us'. One could argue that catching fish or shellfish is not the same as working the land, but a day and night spent on a fishing boat should be enough to disabuse one of that idea, given how hard the labor is.

Work done with coastal fishers in participatory mapping of fishing grounds reveals and may even enhance such a sense of ownership (St. Martin and Hall-Arber forthcoming). It verges upon a 'commons' notion of ownership, closely connected with community membership and the community-based transmission of knowledge (St. Martin 2006). This kind of ownership is about knowing and belonging, about identity and long-term, meaningful relationships with natural systems. It is not just the ownership that one takes to the bank or loses in a divorce court; it is the ownership that leads one to protest abuses (such as oil and gas exploration on fishing grounds) and to claim compensation or privilege and a seat at the table in management or conservation decision-making.

In privatized or 'right-based' access systems such as ITQS, expressions of ownership are closer to those of private ownership of marketable commodities. About ten years after ITQS went into effect in an offshore sea clam fishery on the Mid-Atlantic coast of the US, a mate on a clam boat mused about his loss of an opportunity to become an owner in the fishery, because of the impossibility of simply working one's way up given the high cost of buying into the ITQ market; in that context, he said to me, 'you know, every clam in the sea has someone's initials

on it now - and not mine'. And when a private firm announced intentions of mining sand in the region, representatives of this industry immediately raised the possibility of suing for loss of property, translating their notion of owning shares in an annual quota (the itqs) into rights to the resource itself and its habitat. In a separate ITQ system, in the Canadian province of Nova Scotia (Apostle *et al.* 1998), we were told an anecdote about conflict between local ITQ holders and a fisher who quite legally harvested cod with the intention of selling the cod roe, the ITQ holders claiming ownership rights to the offspring of the roe.

Common property notions of ownership have the potential of being transformed into a more commodity-oriented sense of ownership, a tendency that is intensified with management regimes such as itqs, where there is the added - and very capita list - argument of ownership rights due to monetary investment. Some expressions of ownership are increasingly associated with active engagement in protecting fish and shellfish stocks or marine habitat. Some fishing cooperatives on the Pacific coast of Mexico hold term-limited concessions for valuable species (mainly abalone and lobster). Their 'ownership' is formal and clear - although the actual boundaries between cooperative-owned concessions may be disputed and they must deal with the counter claims of 'free fishermen' and their constitutional rights, as well as a UNESCO biosphere reserve and pressures from NGOs to create marine protected areas (mpas) - this is the liminal littoral, after all. But within those and other constraints, the cooperatives that hold the exclusive concessions, granted to them by Mexico's federal government are fully and explicitly engaged in self-governance, for some matters, and co-management with the federal government fisheries agency, for others, enough so to claim the stewardship required to gain certification by the Marine Stewardship Council (MSC), a global NGO, as well as to improve the change that their concessions will be renewed (McCay *et al.* 2008).

Explaining the stewardship that is so evident among the fishing cooperatives that received MSC certification in Mexico calls for a historical perspective, examining shifts in thought, practice, and organization that have taken place over the past decade or so, leading to The exclusive ownership through the concession system is clearly part of it, an essential component, and one that the cooperatives zealously guard, but there is more, grounded in political economy, history, regional identities, and self-conscious learning from particular experiences with El Nino events and government interactions that have shaped the evolution of stewardship (Weisman 2007). It is not quite the same, as conservationists would have it, on behalf of future generations abstractly speaking, but rather a way of safeguarding the future of one's own offspring and community. Conservation practices are like having a savings account, just in case it's needed (Weisman 2007).

Community and the Commons

When viewed as 'commons', and within governance structures that resemble this strange construction we are calling 'common property', coastal systems are truly demanding. Decline in the productivity of coastal fish stocks, stresses on the lit-

toral itself from overdevelopment and climate change, and the simple fact of dependence on coastal systems by millions of people throughout the world require some clearer views. But, as I suggested earlier, clarity is not easily achieved.

One of the blind spots - or areas marked as too ambiguous or risky to enter - in this complex world of the coastal commons is that of 'community' - 'community' reflected in and generated by shared use, knowledge, liability, and authority; community created through social interactions over time; community linked to the places and activities that people care about; community in past, present, and future. Anthropologists and sociologists have marked 'community' as their business, but they have not been very persuasive that it exists or matters at home, in postmodern capitalist settings, beyond the exotic locales of their foreign-land fieldwork or the increasingly distant past (St. Martin 2001). If community appears at all at home, in more urbanized and industrialized coastal areas, it is relegated to stakeholder participation and focus groups.

Hegemony of the economic mind-set in Western culture, emboldened by the problematic of places and processes like those of coasts and oceans, has led to an overwhelming preoccupation with 'market failure' and 'imperfect property rights', the dark side of the commons, and solutions such as privatized access rights or itqs, in fisheries; as well as titling property rights on land (De Soto 2000). But interviews with fishers, even in 'First World' industrialized fishing ports, show evidence of processes 'such as shared environmental knowledge, cooperative, and a sense of a desire for community...' (St. Martin 2005:972). Mapping projects help make these processes visible; a recent example comes from impact analyses for a regional fishery management council that showed the presence of port-based communities at sea, 'the very domain thought to be devoid of a social 'landscape' and populated only by competing individual fishermen' (St. Martin 2005:973; McCay *et al.*, 2002a; 2002b).

The movement toward ecosystem approaches to ocean and coastal management may be interpreted as calling for greater attention to 'community' as well, as recently argued with respect to fisheries management. It requires 'a parallel and complementary shift ... [T]owards context and inter-relationships among and between fishermen and fishing communities; a sensitivity to locations and how they are inhabited by communities and socio-economics processes and fish harvesting practices across multiple scales...' (St. Martin *et al.* 2007:223). Communities need to be repositioned as more than just sites of 'social impact' but rather as determinants of both fisheries dynamics and management options. This approach requires the disaggregation of measures such as fishing effort and a differentiation of practices across space and within and between communities, recognizing and documenting the social landscape that overlays, interacts with, and, in part, constitutes the natural environment (St. Martin *et al.* 2007).

The need to consider communities and community-generated knowledge and practice relative to ecosystems is well illustrated by the example of mpas. Widely associated with ecosystem-based approaches to marine resource management, they restrict a variety of human activities across often large areas of sensitive habitats. Voluntary compliance is extremely important to their success because these places are usually vulnerable to incursion, hard to monitor. There-

fore, the success of mpas is contingent on the support of marine resource users who depend upon the area being considered for protection (Christie *et al.* 2003). Incorporating the practices and knowledge of marine resource users into MPA siting and design can be critical to their success, not only because of the specifics of that knowledge but also because of the greater legitimacy and therefore support they may have.

A recent MPA experiment on the Pacific coast of Mexico is telling in the importance of community as well as local knowledge. In August 2006, a pilot marine reserve project was begun in the waters of Isla Natividad, Baja California Sur, through a partnership between a Mexican environmental group, Comunidad y Biodiversidad (COBI), and a fisheries cooperative, the Cooperative Society of Divers and Fishermen (Sociedad Cooperativa Pesquera 'Buzos y Pescadores'). Pilot closures - to all fishing and tourism - are handled as field experiments, with controls and scientifically designed monitoring, to provide data that can be used to decide whether sufficient benefits of closures are seen to continue them at the end of a six-year agreement. The cooperative will use the results to help decide whether to include fully protected marine reserves as part of their management strategy in the future. The decision will be theirs if all goes as planned.

Science and scientific partnerships are an important aspect of this effort. COBI engaged the Partnership of Interdisciplinary Coastal Oceans, a group with strong expertise on marine ecology and oceanography working on the California Current ecosystems of the US west coast. The project is highly participatory, and local fishermen perform much of the scientific monitoring. Equally important to the future success of the project, is that the program was developed by a local institution - the cooperative - that is already committed to sustainable fisheries management. Indeed, the cooperative had already experimented with closed areas to protect shellfish, hired its own biologists, and set up routine monitoring of lobster and abalone stocks for management purposes.

Conclusion

Behind this discussion of the coastal waters and shores and the rough charts of the commons is the intention of raising issues and talking about ideas that can contribute to improved policy for coastal and ocean management. The question 'who owns the coast' is critical to that task, because ownership and the property rights implied are central to management policy, shaping as they do the social distribution of costs, benefits, and responsibilities.

'Who owns the coasts' is a daunting and much disputed question. Given the liminality of processes and things on land and at sea, given the resistance of the seaward side of things to being securely bounded, and given particular and general histories, ownership is a mixture of public and private, large-scale and small-scale, enduring and transient, settled and contested claims. What that mixture is and how it is expressed depends on how 'coasts' are defined and represented as property. The nature of the bounded system, the nature of the property right, and the community associated with the right and the system are all critical.

They derive from physical factors, such as how far the 'coasts' reach inland and offshore and how subject they may be to tidal scouring and hurricanes; they also derive from social and political factors, such as who is doing the defining and with what power, and how the property rights are agreed upon and configured. Who owns the coast and views about boundaries and such also depend on the natural and cultural heritage of ecological, geological, and institutional structures and processes for particular coastal places.

I have argued that much of what passes for property relations in coastal and ocean situations can be labeled as 'common property', but what this is a liminal institution: neither one-thing nor the other, neither fully public nor fully private. Common property is very difficult to grasp and defend but a distinct and often effective reality, especially when it is the basis of what I have called 'comedies of the commons', social action for corrective purpose. It is an institutional domain that is difficult to define and rarely recognized for what it is, and it is frequently misinterpreted, especially when it is working well, as either private property or regulation by a centralized bureaucracy. Ethnographic and historic precision is called for to discern what the institutional framework is and how it works in any given case, time, and place.

Many people argue that 'rights-based management' is necessary for rationalized marine fisheries, but this is flawed as an argument for the basis of motivations for conservation. Moreover, they appear to have a very narrow notion of what 'rights-based' means. Going back to the main theme of the 'People and the Sea' conference, 'Who owns the coast?' another silenced or tabooed domain concerns the 'rights' people have to live on and from the coast, and whether the only rights that matter are those created by market transactions, titled property, or formal citizenship. What about rights to a way of life? What about food security and human rights? And what about the rights structures and other incentives for those who have found other ways of 'getting by' economically without pushing systems to their limits, what Thomas Princen (2005) calls 'the logic of sufficiency' and claims to have found in at least one Maine lobster fishing community.

The coastal commons are as yet frontiers in these regards, places where the beaches come and go, the tides rise and fall, the risks of loss and the opportunities of gain shift unpredictably, and property rights are hardly ever simple or stable, even though people like to pretend that they are and invest much to make them so. As relatively new frontiers, coastal ecosystems offer opportunities for experimentation in sustainable living, possibly less hamstrung by the institutional 'lords of yesteryear' than are some inland ecosystems (Wilkinson 1992) but in any case too valuable, essential, and beautiful to ignore.

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Note

- 1 Merriam-Webster online dictionary, quoting author Deborah Jowitt