



Clayoquot Alliance Working Paper Series

Natural resource management and property rights: getting the institutions right

Drawing on illustrations in the Clayoquot Biosphere Reserve region

Dr. Martin Bunton

Department of History, University of Victoria

Email: *mbunton@uvic.ca*

Date: *1 December 2004*

Not for citation without the permission of the author(s).

The Clayoquot Alliance for Research, Education and Training is a unique partnership, founded with the goals of forging creative links between the University of Victoria and the communities of Clayoquot Sound, providing a forum in which community interests and needs become academic concerns, and making the education and training resources of the University more accessible in the region. For additional copies of this paper, and for information about the Clayoquot Alliance, please visit: www.clayoquotalliance.uvic.ca/ or contact info@clayoquotalliance.uvic.ca.

Abstract

The purpose of this paper is to consider the “lessons learned” from a growing interdisciplinary body of literature on common property regimes (much of it grounded in case studies from around the world), and to clarify key concepts and processes which might be brought to bear in an analysis of changes that are taking place in Clayoquot Sound. At the heart of this ongoing transformation lies a wariness of the roles played by centralized, bureaucratic planning, by conventional resource management science and by unmitigated market forces, as well as an appreciation for a more highly contextualized notion of the nature of rights to resources, one which recognizes the experiences, practices, and knowledges embedded in local communities. At stake, therefore, are the very mechanisms of exclusion: whose views, frameworks, interests are to be recognized in the management of a community’s adjacent natural resources? Why, exactly, and to what end?

Introduction

The purpose of this paper is to consider the “lessons learned” from a growing interdisciplinary body of literature on common property regimes (much of it grounded in case studies from around the world), and to clarify key concepts and processes which might be brought to bear in an analysis of changes that are taking place in Clayoquot Sound. Hard hit by the challenges arising from the need to transform a resource-based economy, the Clayoquot Sound community has in the past decade been heavily engaged in the process of building decision-making capacity and developing new resource management institutions. At the heart of

* This paper draws largely from research conducted as post-doctoral fellow with the Clayoquot Alliance for Research, Education and Training, and from the many conversations with Rod Dobell, Principal Investigator. His many contributions and very helpful comments are gratefully acknowledged.

Natural resource management and property rights: getting the institutions right

this ongoing transformation lies a wariness of the roles played by centralized, bureaucratic planning, by conventional resource management science and by unmitigated market forces, as well as an appreciation for a more highly contextualized notion of the nature of rights to resources, one which recognizes the experiences, practices, and knowledges embedded in local communities. At stake, therefore, are the very mechanisms of exclusion: whose views, frameworks, interests are to be recognized in the management of a community's adjacent natural resources? Why, exactly, and to what end? These questions are made all the more complicated when one considers not only the multiple number of conflicting interests that need balancing in our increasingly globalized world, but also the positions and assertions invoked by ongoing efforts in the region itself to address political rights and social justice issues through treaty settlement (in addition to the creation of innovative new institutions) and, moreover, by the general lack of knowledge about the natural resources themselves. In consulting the growing literature on common property regimes, this paper concentrates on the cases made for the resilience of property rights institutions built to accommodate both social and natural diversity (and, it should be said at the outset, on the cases made for the limits on what we are likely to ever know about complex, fluid social and natural orders). But first, some clarification of our notions of private and common property, and on the tragedies and comedies associated with them.

A Contested Field

Failures in natural resource management over the last several decades have prompted increasing analysis of the systems of rights and responsibilities that manage human use of natural resources. Daniel Bromley observed in 1991 that it is only "once we have a better understanding of different property regimes [that] we can begin to comprehend the richer tapestry that is

Natural resource management and property rights: getting the institutions right environmental policy.”¹ Some clarification of the sort Bromley called for has emerged from recent critiques of long-standing categories of reasoning about property: simplistic taxonomies based on either the ability of an *individual* to manage rights to natural resources or of the *state* to regulate them have been brought into question, as are the epistemologies that support them.

The usual starting point in the literature championing individual rights to property is Garret Hardin’s 1968 metaphoric thesis about ‘the tragedy of the commons’. In Hardin’s utilitarian analysis, degradation and overuse of natural resources necessarily emerge when individual users, unable to exclude others from pastures that are “open to all”, refuse to bear the full cost of further use or exploitation because they can’t be assured that they will capture the benefits of investment and conservation. If anyone can exploit a resource then no one has an incentive to invest and conserve. Thus, it is argued, only when rights to resources are individual, secure and transferable will borrowers and lenders feel secure enough about assets to undertake the necessary capitalization that brings about improvements, while inefficient or wasteful users will deem it more profitable to sell their rights to more efficient users who value the resource more (that is, feel that they might command a higher market price for it). By reducing transaction costs, private, secure and transferable rights to property are, in this context, key to an efficient market economy and the exchange activity of individuals. Often based on modern game theories, arguments thus in favour of secure individualized rights to resources assume that in addition to wealth creation, self-interest is inherent to successful property regimes. As a result, the drama of the commons is, in this literature, fated to play out as tragedy: the only way out is externally imposed government or private ownership.

¹ Bromley, 1991, 3.

In the private property literature, Hardin's metaphoric commons thesis is the frequent point of departure. However, in so far as enforceable and transferable rights to property in precisely defined individual allotments are meant to provide an efficient framework of certainty for trade between entrepreneurial strangers, a discussion of the genealogy of private property (and the rhetoric that lies behind it) can, for Carol Rose, be usefully broadened to include the larger Enlightenment project. As Rose observes, "the doctrines of fixed promise-keeping and fixed property entitlements developed more or less contemporaneously with an Enlightenment-era social theory that envisioned a radical separateness among human beings."² According to Rose, a key supposition in the literature defending, and essentializing, private property as a "natural right" is the idea of a world populated by people acting in predictable ways, making decisions according to unchanging influences. It is rhetoric that largely disregards any notion of a collective, or of context and background, or of the embeddedness of individuals in society or culture. Another key notion of fixed entitlements is the assumption that relationships between people are those of individual strangers, are fundamentally linear in causation and usually are one-off transactions. There is little recognition of ongoing interactions, of coming around the same table again addressing different questions in new circumstances. As Rose notes, attempting to secure fixed entitlements to one's own property requires "an ability to bound off every entitlement with a kind of perfect language, a language that reflects in the present all future contingencies... it supposes that human beings have no memories or new ideas that influence later choices, no ability to persuade one another."³ And, a radical separateness between human beings and the environment.

² Carol Rose, 1994, 222. See also John Weaver, 2003, 28: "Improvement and property rights have had a reciprocal association since the Enlightenment."

³ Carol Rose, 1994, 222-223.

The conception of nature as distinct thing -- in a passive state (*i.e. “to do with what one wants”), external and subordinate to atomistic human rights holders, “over which man shall have dominion” -- has resonated strongly in conventional resource management science.⁴ According to Holling, Berkes and Folke, assumptions of land as divisible units of property waiting to be put to use (and once transformed into a human artifact and, thus generating wealth, becoming owned) have long provided resource managers with a picture of a detached, certain world or, in their terms, “a mechanistic view of the natural world”:

The conventional worldview that has come to dominate Western culture is based on Newtonian physics as the model for science... The general conception of reality from the seventeenth century onward saw the natural world as a multitude of separate material objects assembled into a huge machine. It was believed that complex phenomena could be studied and controlled by reducing them all to their basic building blocks and identifying the mechanisms by which parts of the machine interacted... Nature was viewed merely as a storehouse of raw materials; resources were thought to be valuable only to the extent that they could be used to create wealth.⁵

For these reductive tendencies, scientific methodology has left itself open to renewed accusations that it unduly ignores “the complex whole of nature, the quality of organic interrelatedness that defies analysis by the physicist or chemist... Breaking nature down into atomistic parts cannot result in a true understanding of the whole. Special qualities emerge out of interactions and collectivities.”⁶ In the mechanistic view of the natural world, private property rights played a greater role in preserving the ability of human beings to develop their capacities than it did in conserving the natural environment. As Rose suggests, the liberal rendition of property

⁴ See also Donald Worster, 1994.

⁵ C.S. Holling, Fikret Berkes & Carl Folke, 1998, 344-345.

⁶ Donald Worster sums up “the ecologists’ argument” against “scientific blindness” in *Nature’s Economy*, 1994, 21-22.

Natural resource management and property rights: getting the institutions right reflects the attitude that human beings are outside of nature. It gives the earth and its creatures over to those who make them so clearly as to transform them, so that no one else will mistake them for subdued nature.⁷

The domination and commodification of nature can be understood to have entailed a transformation of ethical attitudes, a “desacralization” of the world.⁸

Such transformations, happening at the same time as (as a result of?) European colonial administrators were expanding their control over large parts of the world, resulted in the liberal view of property being inseparable from the vocabulary of European domination over non-European areas.⁹ The representation of nature as external to individual rights holders, as abstract space ‘to do with what one wants’, played a key role in the history of European territorial expansion across the globe. The colonial (and then the independent, post colonial) state moved towards bringing title to land under private or state control, including resources that previously were being managed by local communities. To the extent that British officials drew only on classical economic perspectives of well-defined property lines in individual plots of land, they could not acquire a sense of the embedded knowledge of lived in places and instead saw only non-viable, non-productive use of natural resources.¹⁰

Land was something to be measured, allocated and traded because in this way it could be “improved”, “bettered”, “advanced”, and entered into networks of world trade.¹¹ Cole Harris describes attempts by colonial officials to demarcate reserves in British Columbia in the following terms:

⁷ Carol Rose, 1994, 20.

⁸ C.S. Holling, Fikret Berkes & Carl Folke, 1998, 345. (Cf. Polanyi, 1980)

⁹ John Weaver, 2003; Huri Islamoglu, 2000.

¹⁰ Also, William Cronon, 1983.

¹¹ John Weaver, 5. Compare, Hernando de Soto, *Why Capitalism Triumphs in the West and Fails Everywhere Else*.

The whole process depended on maps. At the hearings, chiefs were often asked to point out on a map the lands they sought, and were expected to include sketch maps with their applications... These maps were of course cultural constructions embedded in assumptions about property rights, representation, and classification that the commissioners took for granted. As such they were indispensable. They enabled the commissioners to locate their decision in abstract geometrical space devoid of content except that which their own data collections and predilections inclined them to place there. They provided a measurable, transportable, and archivable record, the minimalism of which tended to undermine Native claims while serving the purposes of the commission.¹²

To be clear, none of this is meant to slight what John Weaver refers to as “the importance of legal packaging conjoined with good surveys.”¹³ It is not here denied that investments commonly require the presumption of security to produce tangible results. Rather, this discussion aims to highlight the simplifying nature of the process of individualizing tenure to land: backed by state power, surveys and courts have in fact transformed rights they were ostensibly meant to describe. Accommodating the diversity of definitions and rules on the ground was neither possible nor desirable. Describing how the encounter between European and aboriginal property regimes in fact helped frame the idea of private property, Rose observes,

Now it may well be that North American Indian tribes were not so indifferent to marking out landed property as eighteenth century European commentators supposed. Or it may be that at least some tribes found landed property less important to their security than other forms of property – in migratory animals, for example – and thus felt no need to assert claims of property to land. [But] it is doubtful whether the claims of *any* nomadic population could ever meet the common law requirements for establishing property in land. Thus the audience presupposed by the common law of first possession is an agrarian or a commercial people – a people whose activities with respect to the objects around them require an unequivocal delineation of lasting control so that those objects can either be managed or traded.¹⁴

Self-serving myopic nature of colonialism aside, the image of private property as a basic individual right secure against any encroachment, even by -- especially by -- government

¹² Cole Harris, 2002.

¹³ John Weaver, 13.

¹⁴ Carol Rose, 19. Also, William Cronon, 1983.

Natural resource management and property rights: getting the institutions right agencies, has today indeed become a dominant one.¹⁵ As Arun Agrawal observes, “the dominant beliefs structuring environmental policies until as late as the 1980s held that markets and states were the appropriate institutional means to address externalities stemming from the public goods nature of resources.”¹⁶ The significance attributed to private property regimes in triumphal discussions about America’s victory in the Cold War, and embodied more practically in discourses of liberalism related to the development of former socialist areas;¹⁷ the popular backlash in the United States, increasingly supported by the courts, against layers of governmental regulations viewed by many as a “takings” contravening the Fifth Amendment;¹⁸ the expansive definition of private property recast in debates on “globalization” and “growth through trade”, as multi national investors seek greater protection in an era of huge increases in cross-border flows of capital;¹⁹ all suggest possible narratives which help explain the continued entrenchment of the idea of private property, such that individually-owned property seems often to be synonymous with “property” itself.

However, a growing body of literature seeks to contest privatization as a general policy prescription, arguing against property as an institution that simply imposes itself from outside and remains external to the identity of the persons caught up in it, and against the reduction of property to canonical categories. One of the major concerns raised about the impact of the metaphoric commons is that it has unduly restricted the spectrum of rights commonly thought

¹⁵ See Jennifer Nedelsky, 1990, for a discussion on how, in the United States, the idea of private property has come to prevail. Link also to rise of development and evolution of ‘corporations’.

¹⁶ Arun Agrawal, 2001, 43.

¹⁷ Richard Pipes, *Property and Freedom*. Compare, Hernando de Soto’s best selling *The Mystery of Capital: Why Capitalism triumphs in the West and fails everywhere else*.

¹⁸ See Nanci Marzulla, 2001. Also, submissions to *Harvard Journal of Law and Public Policy*, 1990, 13/1.

¹⁹ See William Greider, “The Right and US Trade Law: Invalidating the 20th Century” on MAI... But note that while globalization can appropriately be identified in many cases with a political ideology in favour of market mechanisms, there are also global countermovements, very much bounded by conceptions of rights to property, accentuating local communities and forms of social identity. See Nicholas Blomely, 1998. “The world seems to be getting larger, not smaller; and home is becoming more important, not less.” Edward Chamberlin, 2003. More on this later in the paper.

Natural resource management and property rights: getting the institutions right available: as a result, note Berkes and Folke, “Western resource management often assumes a very limited set of property rights: state property (regime based on government regulation), private property (market based regime), or else a ‘tragedy of the commons.’”²⁰

Liberal views of property are frequently accused, therefore, of ignoring the relationships - social, economic, political, legal, environmental, etc. – that are constitutive of it. Reducing the property relation to a person and an asset represents a simplified abstraction of a much more complicated relationship which needs to be thought of more in terms of entitlements and obligations of persons and of groups of persons that are inseparable from their social relations to each other and to the environment in which they live (“the hole in the middle of the donut”). Critics of liberal perspectives on resource management problems have increasingly begun to question the neo-utilitarian arguments and to reconceptualize the privateness and publicness not so much of the goods but, more to the point, of the rights and of the owning entities.

As a result of this reorientation, privatization of property can no longer be considered as complete as once assumed (nor is common property as common). Elinor Ostrom’s 1990 *Governing the Commons* took the lead in exposing Hardin’s ambiguous use of the term “commons”, arguing that the concept of open access resources – those characterized by no property rights which as a result do tend to generate conflict and degrade the environment - should not be confused with common property arrangements. Confusion over the term common property emerges when it is used to refer not to a form of property so much as to its absence. Common property is best understood as access that is limited, not open: a specific group of users holding a specific set of rights in common. With this in mind, an increasing number of scholars

²⁰ Fikret Berkes and Carl Folke, 1998, 18. According to Arun Agrawal, “In an enduring achievement, scholars of common property have shown that markets or private property arrangements and state ownership or management do not exhaust the range of plausible institutional mechanisms to govern natural resource use.” Agrawal, 2001, 41.

Natural resource management and property rights: getting the institutions right are pointing out that in fact common pool resources, over long periods of time, have been managed and governed in sustainable ways by groups of people exercising joint proprietorship rights. Indeed, as Carol Rose reminds us, “collective but non public property is all around us.”²¹ When placed in historical and comparative perspective, examples abound of successful institutions to manage common pool resources. Even the classic example of the medieval common fields is no longer viewed as a tragic land-use policy, but rather as part of a sustainable agricultural practice “which succeeded admirably in its time.”²²

It is worth clarifying that, in highlighting the potential for property rights regimes to be located in and managed by local communities, the role of the regulatory state comes under as much scrutiny as the private property rights regime. The common property rights literature supports arguments raised against the homogenization and simplification inherent to statist and industrial management plans, as well as of market-driven forces. Such arguments against centralization are emphasized well in James Scott’s *Seeing Like A State*. Scott describes the schematized processes of abstraction and simplification which characterize the attempts by state bureaucracies to understand complex sets of environmental relations. In central state planning exercises, Scott observes, the power of resolution is enhanced when the subjects are treated as standardized units:

The subject was singularly abstract... generic subjects who needed so many square feet of housing space, acres of farmland, litres of clean water, and units of transportation and so

²¹ Carol Rose, 2. In observing “our collective myopia of certain forms of common property” -- that is, the denial that they are anything but tragic -- Rose asks “why the burst of interest in traditionalist communities and their norms?” In part, no doubt, rising suspicion against government regulation led the search for alternatives. But other processes are at stake : “might the new interest in Common Property Regimes and norms stem from a growing internationalism, including the extremely belated recognition that tribal and traditionalist peoples the world over have been subjects of vicious expropriation, in part because their holdings and products never counted as “property”.

²² Susan Cox, 1985, writes: “The concept of the commons current in medieval England is significantly different from the modern concept; the English common was not available to the general public but rather only to certain individuals who inherited or were granted the right to use it, and use of the common even by these people was not unregulated.” See also: Ostrom, 1990; Rose, 2000.

much food, fresh air, and recreational space. Standardized citizens were uniform in their needs and even interchangeable. What is striking of course is that subjects – like the ‘unmarked citizens’ of liberal theory – have, for the purposes of the planning exercise, no gender, no tastes, no history, no values, no opinions or original ideas, no traditions, and no distinctive personalities to contribute to the enterprise. They have none of the particular, situated, and contextual attributes that one would expect of any population...²³

What critics of the role played by large scale planning, as well as by profit maximizing individuals subject to market forces, in resource management share is their recognition of the need for a more highly contextualized notion of the nature of rights to resources, and recognition of the experiences, practices and knowledges embedded in local communities. Against the argument in favour of guaranteeing secure individual title, is a growing body of literature that emphasizes property as a fluid social convention: “All property rights flow from the collective,” writes Daniel Bromley, who – citing Kant – describes property rights as a relationship

involving benefit streams, rights holders, and duty bearers... Property claims failing to win this external acknowledgement will not be recognized as legitimate by those forced to forswear interest in the benefit stream.²⁴

Whereas the defenders of private property tend to talk about property as a natural universal status quo in its individual abstract form – a timeless, sanctified entitlement that can change only with great difficulty - the common property group focuses attention on change and adaptation and emphasizes the specific conditions and contexts, defined by time and place, under which rights are produced, constructed and authorized or legitimated: as Bromley concludes, “institutional change is inevitable in the real world and to hide behind some Lockean fiction of private property is empty scholasticism at best, and intellectual malfeasance at worst.”²⁵

²³ James Scott, 346. The argument here appears to be that what might be gained in the capacity to formulate policy at a general level, for large segments of a population at a time, risks being lost in its realization for individual communities. So complex balancing issues are clearly at stake here: maintaining, when necessary, the capacity to formulate and work with simplified abstract models while ensuring the capacity for effective realisation through compliance by situated communities. This issue will be taken up later in the paper.

²⁴ Bromley, 5.

²⁵ Bromley, 8.

Though at times risking an overly romanticized view of traditional or local practices, this growing literature on the subject of common property makes a strong case that property rights regimes governing access to and use of resources are unduly flawed when they exclude the local community's interactions with the natural world and dismiss the relationships within which the community is embedded and the knowledges with which it is endowed. The intensely contextualized nature of property is emphasized. Property rights are viewed as social constructs reflecting diverse social, historical, cultural contexts - where categories and assumptions are fluid and continually struggled over.

In making the case that property does not have to be individually owned in order to be efficient or productive, the common property literature nonetheless clearly accepts that well-established rights are necessary to create incentives and allow for credible commitments to be made for environmental resource protection and sustainable management. The literature rejects, however, the supposition that such systems refer only to rights that are *individual* and *inalienable* and *transferable*: common property can to some extent be thought of as shared private property and some useful analogies can be made with business partnerships, joint stock corporations and trusts.²⁶ On the other hand, the primacy of rights other than simply alienability or transferability needs to be acknowledged: the allocation of rights of access, management, withdrawal and exclusion are emphasized as critical to the successful governance of natural resources.²⁷

²⁶ Dobell, 1999. McKean, 36.

²⁷ Ostrom and Schlager, 1996.

Advantages of Community Based Management

By attending to the changing nuances of the complex local social and environmental context, the common property literature attributes voice and agency to the local community.²⁸ “Systems of property rights and rules defined, implemented, monitored, and enforced by resource users themselves,” write Elinor Ostrom and Edella Schlager “are likely to perform better than systems of property rights and rules defined, implemented and enforced by an external authority.”²⁹ Why? Though some explanations have already, if indirectly, been put forth, it is worth spelling out in greater detail the underlying assumptions and observations, particularly those to do with efficiency, sustainability and, more problematically, equity.

1. *Efficiency*. It is commonly argued that property rights systems based on locally agreed upon rules economise on monitoring and enforcement costs. Such costs are, in effect, transferred to the resource users themselves, where – according to cogent arguments of how property regimes are established – it belongs.

According to Bromley, a property right is less about a relationship between a person and an object than it is about the relationships among people with respect to that object: “A right is the capacity to call upon the collective to stand behind one’s claim to a benefit stream... Rights can only exist when there is a social mechanism that gives duties and binds individuals to those duties.” Or, as Rudmin has put it, “to own is to be perceived to own.”³⁰ For a property right to be established, those who hold the right must have “the ability and wherewithal” to enforce their

²⁸ The literature reviewed here considers general advantages. For discussion of benefits particular to the West Coast of Vancouver Island [WCVI], see Evelyn Pinkerton, 1999; and Andrew Day, 2003. On the challenge of co-managing salmon stocks, see Federal-Provincial Post Treaty Fisheries Joint Task Group (Donald McRae and Peter Pearse), 2004.

²⁹ Ostrom and Schlager, 1996, 145.

³⁰ Quoted in Ian Reeve, 1999, 3.

Natural resource management and property rights: getting the institutions right
right to take action in a specific domain and to monitor compliance among others who might
have an interest in that domain.³¹ Bromley:

First and foremost, *all property rights flow from the collective* as opposed to flowing from some alleged “natural rights” that are claimed to be logically prior to the state... Second, and logically deducible from the first, *property rights are instrumental variables*. That is, if the core of property is the external acknowledgement (that is, “social recognition”) of the legitimacy of that particular claim by the “owner”, then it follows ineluctably that property claims failing to win this external acknowledgement will not be recognized as legitimate by those forced to forswear interest in the benefit stream.³²

The key point to recognize here is that when communities’ lives depend upon the use of adjacent resources, a “socially unrecognized” transfer of their presumed rights into other hands does not in and of itself deny them the physical opportunity to use them. As Margaret McKean observes, the transfer of rights from traditional users adjacent to the resources in question “converts owner occupiers into poachers” and in fact brings about the sort of commons tragedy it was originally intended to prevent. Adjacent communities still have ample opportunity to use the resources, “but when they lose secure property rights in the resources to others, they also lose any incentive they might have felt in the past to manage these resources for maximum long term benefit.”³³ Their acknowledgement is required.

Locally devised rules can be the easiest for monitoring, either among users or between their group of users and those from “outside”. As Ostrom and Schlager explain in the case of coastal fisheries, there are efficiencies waiting to be captured:

Gear used on a boat can be determined by looking at the boat or examining its harvest activities. Whether a boat is using gear in the appropriate zone can be determined by viewing its harvesting activities, and the gear it is using. Whether a boat is harvesting from its assigned spot can be easily determined by looking at the boat’s locations. Also it is difficult for fishers to hide or cloak rule infractions. Either a boat is on its assigned spot or not. Thus, monitoring can be engaged in as fishers go about their business. ... Enforcement

³¹ Ostrom and Schlager, 1996, 141.

³² Bromley, 5. Italics in the original.

³³ McKean, 35.

Natural resource management and property rights: getting the institutions right is also likely to be effective. Fishers face relatively powerful incentives to report and or sanction rule breakers... The victims of rule breakers face strong incentives to take action to enforce the rules.³⁴

External authorities, in contrast, are hard pressed to devise systems of rights and rules that are as effective, efficient and legitimate as those emerging from local institutions: put simply “while the livelihoods of resource users depend upon such institutions, the livelihoods of external bureaucrats depend on numerous other considerations.”³⁵

According to Margaret McKean, efficiencies can also be observed in common property regimes when one focuses on the need to deal with negative externalities: that is, when the extraction by resource users in one area imposes high costs on adjacent users.³⁶ If we think of common property regimes as privatizing the rights to goods without dividing the goods into pieces (as discussed above) then such arrangements, as McKean points out, “offer a way of parceling the *flow* of skimmable or harvestable ‘income’ (the interest) from an interactive resource system without parceling the *stock* or the principal itself.”³⁷ Obviously environmental resources have to be managed in a way that takes into account how extractions and interventions in one zone will negatively affect the use and value (e.g., in protecting water, soil, vistas, climate, etc) in adjacent zones. If an area is parceled into individual allotments that are managed separately, the potential for negative impacts on each other’s use can be alleviated only through endless bilateral negotiations: and, to be sure, until fairly recently policy making tended to favour institutional arrangements that left it in the hands of markets and states to address the externalities associated with public goods. But, the common property regime offers the potential for a more efficient institutional alternative in that it posits a way to make resource management

³⁴ Ostrom and Schlager, 146.

³⁵ Ostrom and Schlager, 146.

³⁶ The question of adjacency, and how one defines the boundary of a resource, will be picked up later in the paper.

³⁷ McKean, 36-37. The advantages for sustainable ecosystem management will be discussed in the next section.

Natural resource management and property rights: getting the institutions right decisions jointly “acknowledging and internalizing the multiple negative externalities that are implicit in resource use.”³⁸ In this way, collective management tries to reap the benefits of an economy of scale, promising that collective management and collective decision making will reap lower transaction costs than bilateral exchanges that seek recourse to external authorities:

Sharing the ownership of the resource base is simply a way of institutionalizing the already obvious need to make Coaseian deals to control what are externalities for a parceled system and internalities for a co-owned system.³⁹

Ostrom and Schlager agree: many of the negative externalities that unregulated use of these systems would produce can be controlled as a result of the rules crafted by users in their own collective-choice arenas.⁴⁰

When one moves out of the realm of the general and theoretical, however, considerable practical problems can be envisioned when trying to create the conditions for such communicative action. And it is worth recognizing that much of the literature tends to avoid this question by assuming that such conditions already exist: “common property regimes can be particularly attractive in providing administrative efficiency when resource management rules can simply be grafted onto the functions of a preexisting community organization.”⁴¹ This is surely an important point deserving of more discussion than it has received in the literature on common property, much of which is geared more towards retrieving and legitimating common property regimes (and their traditions of negotiation and cooperation) than in actively prescribing the crafting of new institutions. And this is why emphasis needs to be on institutional innovation to create the recognized legitimate spaces for more inclusive deliberations.

³⁸ McKean, 39.

³⁹ McKean, 42.

⁴⁰ Ostrom and Schlager, 139.

⁴¹ Ibid.

As is, some fairly large assumptions are made:⁴²

- Participants are relatively homogenous in regard to information and preferences about the resource.
- Participants share a common understanding about the potential benefits and risks associated with the continuance of the status quo as contrasted with changes in norms and rules that they could feasibly adopt.
- Participants share generalized norms of reciprocity and trust that can be used as initial social capital.
- The group using the resource is relatively small and stable.
- Participants use collective choice rules that fall between the extremes of unanimity or control by few and thus avoid high transaction or deprivation costs.
- Participants can develop relatively accurate and low-cost monitoring and sanctioning arrangements.

Over the last decade or so, many studies have shown persuasively that models of consensus and cooperation in communities which have traditionally managed resources will contribute towards efficient, sustainable resource management and thus need to be recognized and authorized, rather than being relegated to the dustbins of history. As Ostrom and Schlager argue, local level governance structures are not anachronisms: “They are not relics clung to by culture-bund, illiterate or isolated groups of resource users. They have been consciously designed and adopted to resolve pressing resource use issues.”⁴³ But, as Carol Rose notes, community based rights structures “may be fabulously complicated”, particularly when contrasted to the necessary simplicity of Western notions of private property rights (to be easily tradeable among strangers, rights need to be easily understood). Entitlements in common property regimes seem to be driven towards complexity: “Papuan fisherman, for example, own overlapping rights to fish in certain places as well as other rights to fish with certain equipment; pre-contact Maori families owned overlapping rights in objects as small as individual bushes (some had fowling rights, others had berry rights); and in medieval Europe, villagers owned scattered strips in the fields.”⁴⁴

⁴² These are drawn specifically from Ostrom and Schlager, 142-3. But they recur frequently enough.

⁴³ Ostrom and Schlager, 148.

⁴⁴ Carol Rose, 2001. 248-9.

Natural resource management and property rights: getting the institutions right

If, as Ostrom and Schlager suggest, homogeneity of preferences, common understandings, norms of reciprocity and trust, and shared collective choice rules among a relatively small and stable population are necessary for the full enjoyment of such complex entitlements, long residence and extended practice are presumably at stake. Should an outsider enter, what kind of “a seasoning process” if any should he or she be subject to?

2. *Sustainability*. Much of the literature on natural resources and property rights acknowledges at the outset that the actual social patterns of human interaction with the natural environment are as complex and embedded as are relationships in the natural world. “It has never been more important,” write C.S. Holling and Steven Sanderson “to understand the conjunction of human and natural systems, and the nature of their interactions.”⁴⁵ Everything is connected to everything else. Resource management has as a result been rethought in ways that recognize the natural world of which we are a part as one of inherent uncertainty, complexity, surprise, constant fluctuations, and limited ability to control. Moreover, ecosystems are considered a moving target, and any intervention on the part of resource managers must be recognized as resulting in yet more, highly unpredictable, changes. As the mechanistic view of nature has been replaced by a view of ecosystems as nested in time and place, this has necessarily drawn attention to the social and institutional structures in which they are embedded (or vice versa). This, clearly, risks throwing the deck of private property rights cards high in the air.

With its emphasis on either private ownership of resources, or government bureaucratic regulation, the modernist paradigm of environmental management has tended to assume that natural resources were characterized by linear relationships. Concepts were developed for the

⁴⁵ C.S. Holling and Steven Sanderson, 57.

Natural resource management and property rights: getting the institutions right
efficient utilization of resources as though stocks were discrete commodities in space and time.

As has already been discussed, the literature highlighting the inadequacies of conventional science emphasizes the non-linear nature of the environmental challenges confronted:

Non-linearity results in unpredictable behaviour, either because periodically small changes can propagate dramatically and flip the system into another development path, as in chaos theory, or because stability regions collapse as slow processes accumulate and move the system from one set of controlling mechanisms and processes to another, as in catastrophe theory. It is the non-linear property that generates the four-stage cycle of exploitation, conservation, renewal, and reorganisation.⁴⁶

Awareness of the unpredictability of ecosystems drastically undermines conventional resource management science and its assumptions of a very linear, clockwork world - “reductionist, mechanistic, and detached from people, policies and politics.”⁴⁷ Much recent conceptual work has embraced the adaptive management approach “in which human management and natural systems dynamics interweave.”⁴⁸ Adaptive management offers an attempt to deal with the unpredictable interactions within an ecosystem, and between ecosystems and people. “It takes the view,” note Berkes and Folke “that resource management policies can be treated as ‘experiments’ from which managers can learn.” Thus, adaptive management hinges on social and institutional learning. One of the main differences from conventional management approaches, is adaptive management’s emphasis on the significance of feedbacks from the environment in shaping policy, followed by further experimentation to shape subsequent policy, and so on.⁴⁹

Recognizing similarities between traditional ecological knowledges, based in local community systems and thus situated in immediate experience and direct engagement, and the

⁴⁶ C.S. Holling, Fikret Berkes and Carl Folke, 352.

⁴⁷ C.S. Holling, Fikret Berkes and Carl Folke, 345-6.

⁴⁸ C.S. Holling and Steven Sanderson, 57.

⁴⁹ Berkes and Folke, 1998, 10.

Natural resource management and property rights: getting the institutions right

integrated precautionary approaches of adaptive management and ecosystem perspectives, some scholars of adaptive management have emphasized the need to “recapture” formerly marginalized knowledges, practices and institutions. Locally constituted property regimes, it is argued, neatly fit the complex, changing physical environments (as well as match the local social and cultural environment, about which more later). Common property regimes can thus be considered a practical necessity: that the spatial and temporal scales relied upon by the community of local practitioners are the most appropriate adaptive management techniques for complex resource bases, and that local or traditional bodies are most consciously attuned to the human impact on adjacent resources and best able to recognize the feedbacks that signal disturbance.⁵⁰ When natural resource management is overly centralized, valuable feedback information may be unavailable (government biologists in their big city offices “cut off” from the daily reality of engaged fishers – or, perhaps more accurately, the complete elimination of biologists and ‘gumboot’ scientists as resources are reallocated in increasingly bureaucratized negotiations).⁵¹ The general conclusion is that common property regimes show greater flexibility and responsiveness to the dynamics of natural resources than private, individual holders, with their interest in security and alienability, or than resource management institutions of government agencies. Ostrom and Schlager: “External authorities would be hard pressed to devise such institutions because they lack the information and the understanding to devise such institutions, and because they lack the commitment to ensuring their viability and longevity.”⁵²

However, if we move from the theoretical to the practical, we are again left with some significant challenges and ambiguities, particularly concerning diverse scales. At the level of the individual, who is included in the community? At what point does a local knowledge or

⁵⁰ Gillsi Palsson, 1998, 49.

⁵¹ See for example, Carl Folke, Fikret Berkes and Johan Colding, 1998, 432.

⁵² Ostrom and Schlager, 146.

Natural resource management and property rights: getting the institutions right experience count as traditional for the purpose of contributing to a process of adaptive management (we will pick up later the question of being included in the community authorized to practice it). Moreover, some scholars question the conditions under which the transfer of knowledge take place: “because governments, corporations, policymakers and scientists are best trained to absorb information through already familiar frameworks, the question of how to acknowledge the resource rights and learn from the knowledge of forest living communities is not a simple one.”⁵³ Indeed it raises questions about the institutional apparatus necessary to structure resource management: the nature and kinds of knowledge that would need to be merged and transmitted; the conflicting interests and differences of power at and between every level that would have to be balanced.⁵⁴ Clearly, some effort is required in finding the common ground necessary to capture the knowledge that is there to be offered.⁵⁵ But some people may not want to share data; others may want to claim ownership, risking a process of commodification (a privatization of intellectual property?) that may transform knowledge while attempting to represent it. Still other scholars warn that the process of recognizing traditional knowledges, though ostensibly aimed at a holistic approach, risks accepting unwanted value judgements and in the end creating new (or recreating old, colonial) boundaries: “on the one hand we find striking differences among the philosophies and knowledges commonly viewed as indigenous, or western. On the other hand, we may also discover that elements separated by this artificial divide share substantial similarities.”⁵⁶

⁵³ Tsing, 2003, 26.

⁵⁴ Atkinson, 241: “One might even ask whether the image of balance itself, or of balancing acts, is an apt metaphor to represent such unequal contexts – of values, rights, and concerns – among such differently situated and differently empowered communities.”

⁵⁵ Chamberlain, 2003. Aslo, Nadasdy, 2003.

⁵⁶ Agrawal, 1995, 415. See also Gisli Palsson, 52. Thinking of the ways in which our identities are constructed in particular contexts, e.g. through the recognition of socially significant others, leads to a recognition of the fluid nature and cultural embeddedness of these processes (Jackson, 2003). In the global context which defines the politics of identity today, it is not just commodities that are mobile: so too are our ideas and national

The problem of diverse scales also manifests itself in terms of the size of the resource in question: in particular, when the focus on communities-of-place managing adjacent resources results in management practices becoming so decentralized as to lose sight of the feedbacks between user groups of, say, adjacent ecosystems: “Environmental disturbances in one area,” Folke, Berkes and Colding remind us “generates feedback somewhere else.”⁵⁷ To the extent that a certain intimacy lends itself to overcoming regional resource problems in a local community, the relatively limited range of social interactions of that community risk exacerbating larger, even global, environmental problems: Just as individuals who fail to integrate their management of a shared resource can quickly find themselves in Hardin’s commons, so too presumably can community property regimes (such as fishing communities whose residents catch migratory stocks) when challenged to confront problems that extend beyond their boundaries:

while a given community of resource users may have devised property rights and rules that reduce negative externalities among its members, the collective actions that they take, or fail to take, may have adverse consequences for adjoining communities or resource users...⁵⁸

“In the contemporary world of integrated markets and international environment problems, the need for coordination at the higher end of the scale is greater than ever before.”⁵⁹ National governments, foreign governments, international agencies and multinational companies and environmental organizations may all have to become involved in crafting a response to such externalities. But the challenge of a centralized, larger institution integrating diverse users, competing for a single resource, without compromising the locally designed property

imagination reshaped in increasingly transnational ways. As Arjun Appadurai warns, the days in which groups were tightly territorialized, spatially bounded, historically unselfconscious and culturally homogenous are gone. The challenges remain of defining and negotiating “indigenous” rights as local communities become more socially complex.

⁵⁷ Carl Folke, Fikret Berkes and Johan Colding, 1998, 432.

⁵⁸ Ostrom and Schlager, 146-7.

⁵⁹ Carl Folke, Fikret Berkes and Johan Colding, 1998, 432.

Natural resource management and property rights: getting the institutions right mechanisms is surely a complex one (and, to some extent, goes against the conclusions raised in the common property rights literature).⁶⁰

3. *Equity*. In addition to questions of efficiency and sustainability, there remains to be addressed the looming question of equity. In granting legitimacy to levels of community governance, in ways that challenge and transcend conventional political boundaries, we are on the one hand respecting, in very utilitarian ways, the extent to which the knowledge and management practices of, say, indigenous coastal peoples are necessary for conservation of coastal ecosystems. That is, their presence and interactions can't be ignored, and moreover they have accumulated over long periods of time a large body of knowledge about the interaction of peoples and resources from which policy makers would be remiss not to learn.

But, clearly, also at stake here are the ways outside forces have in the past destroyed traditional communities (in part, at least, out of the belief that the eclipse of such community norms was an integral part of 'progress', and 'professionalization', as defined by theories of change based on the pursuit of individual self interest and on the spreading of market relations, or on the 'civilizing' imperative of Christianity).⁶¹ The growing awareness that the management practices of indigenous inhabitants need greater recognition stems then as well from recognition

⁶⁰ See Carol Rose, 2003, for a discussion of how "tradable environmental allowances" [TEAs] fare compared to common property regimes in managing environmental problems with large, global dimensions. As TEAs essentially bring the well rehearsed advantages of private property rights to bear – encouraging care and investment by rights holders – then allotments must be individual and secure, so holders can plan and trade accordingly (242). As Rose observes, resource size seems to favor TEAs, with their formal structures and reliance of governmental enforcement rather than social norms. Indeed, "TEAs operate best at larger scales, and rather more poorly at the local level. One of the positive features of TEAs is precisely that they can be traded, so that allowances tend to flow to those who value them most. But trading works best in large, thick markets. That is why TEAs are feasible for the far-ranging gases like sulfur dioxide, where many market participants can participate in trades, but TEA regimes are less easily established for more localized pollutants,"(241) and are insufficiently responsive where environmental resources are most densely interactive, complex, and fluctuating." (243).

⁶¹ For example, Henry Maine, 1917.

Natural resource management and property rights: getting the institutions right that they have certain pre-existing rights to resources which governments and companies must learn to acknowledge.

From a social justice point of view, the case for local management is not based so much on the inherent capacity, or usefulness, of traditional communities and their management systems, as on their inherent rights: an end in itself, not a means to an end (sustainable management, efficient policy making). Indeed, when considering the right of access to some percentage of adjacent resources, the issues at stake for traditional communities may lie even deeper than a question of social justice – it may be a question of identity (“we have not given up the hahulthi of our chiefs”).⁶²

So what happens when these goals -- efficiency, sustainability, equity -- are in tension? This begs the further question: is the right of a specific group to exclude others (e.g., non-residents and other outsiders) from access to adjacent resources an inherent right or a privilege granted for functional reasons? If traditional community has an inherent value (one that seeks to be defined at least in part, by its steadfastness and resistance to change) can we necessarily expect of it the sorts of flexibility and adaptability required by the arguments justifying community management in terms of efficiency and sustainability as raised above? Will an emphasis on pursuing innovative management approaches produce the expected results in absence of good and just governance? As Jane Atkinson warns, in local situations characterized by relative poverty, as well as by the insatiability of markets for adjacent resources, the maintenance of an integrated precautionary approach to ecosystem management will likely face the challenge of ensuring that short term economic gain not be placed above long term sustainability. In recognizing the

⁶² See Shaw, Derek. 2001. “Restoring First Nations to the Land: Lessons from Clayoquot Sound.” A Joint Report by the Nuu-chah-nulth Tribal Council and the Natural Resources Defence Council; Nadine Crookes, 2003, 2003, *First Nations Perspectives on Coastal Planning*. Clayoquot Symposium 2003: Health Across the Water, Tofino, B.C.

Natural resource management and property rights: getting the institutions right
hybridity of the justifications for common property management systems, does one not at some point need to determine which goals are primary and which are subsidiary?

Which right and which goals – cultural rights, rights to livelihood and societal well-being, biodiversity conservation, or habitat integrity – are vested with the power to trump other concerns and other claims?⁶³

Conclusions

Among the obstacles to arriving at any firm conclusions about the general organization of common property regimes are the large number of factors that have been emphasized in the literature as being critical to sustainable common pool management, and the fact that the literature to this point has focused more on the case study method, producing divergent conclusions, than on fully developing a theory of what makes for a successful common property regime.⁶⁴ Confronted with the overwhelming challenge of reclaiming common property regimes “from the dustbin of history”, the emphasis, from a variety of disciplines, on certain case studies which highlight either efficient use, or sustainable conservation or equitable allocation is understandable and commendable but, as Agrawal observes, comes at a cost:

The cost is the lack of careful analysis of the contextual factors that frame all institutions and that affect the extent to which some institutions are more likely to be effective than others. The same institutional rules can have different effects on resource governance depending on variation in the biophysical, social, economic, and cultural contexts... just as institutional analysts and theorists of collective action provide inferences that are sometimes in tension, scholars of common property also highlight outcomes and causal connection that often run counter to each other.⁶⁵

Of course, if there is one thing to learn from the literature on property rights and natural resources it is that there is no straight line through the forest, no straight passage through the

⁶³ Atkinson, 241.

⁶⁴ In his synthesis of the findings of the empirical literature on the governance of common pool resources, , Agrawal accounts for as many as 35 factors. Agrawal, 2001, 45.

⁶⁵ Agrawal, 2001, 45.

Natural resource management and property rights: getting the institutions right sea:⁶⁶ social institutions will have to be managed as adaptively (ongoing experiments with built in feedbacks) as the resources they themselves are meant to manage. Getting these institutions right, it can perhaps be safely concluded, hinges on recognition of two important understandings.

First, to promote increased participation entails challenging dominant taxonomies of property rights regimes (markets and states as the only appropriate institutional means of addressing environmental externalities) and of resource management policy making. Although at one time resource management discussions were considered the preserve of ‘experts’ (generally perceived now as a narrower cult than they perhaps fairly should be), crises in resource management (and in resource management science) have fuelled efforts towards a more democratic or participatory environmental debate. Through increased communication and the building of support systems, barriers are broken down so as to put important new issues forward, generate discussion, empower participation, promote accountability, and generally better inform decision-making processes. Environmental problems are social problems, so social institutions have to be at the forefront of efforts to solve them. Sally Eden observes that ways need now to be found to widen the public policy process (in its design *and* implementation phases) so as to become more inclusive of diverse views. Government officials and conventional scientific experts or managers can’t be perceived as having the floor to themselves. In this public and reflexive discussion, other contextualized ways in which people relate to their environment must be considered: “policy tends to assume that providing environmental information and education will secure behavioural change, when behaviour is in fact intimately dependent upon public interpretation of the issues.”⁶⁷ Citizens need to exercise the agency to participate effectively in

⁶⁶ Cf Rene Descartes, *Discourse on Method* and his path of logic founded on straight lines of mathematical reason. See P. Sahlin, 1994.

⁶⁷ Sally Eden, 1996.

Natural resource management and property rights: getting the institutions right governance as well as the discretion necessary to achieve compliance.⁶⁸ From a property rights perspective a useful point is captured by Benjamin Constant, “the great proto-liberal” of the late 18th and early 19th centuries, who observed, “the liberty of the ancients... was conceived as the opportunity to participate in the governance of one’s own community; it was the absence of external tyrannies. The liberty of the moderns, by contrast, is liberty of the individual to develop his capacities and his spirit without let or hindrance even from his community.”⁶⁹

Second, that increased recognition of the need to problematize existing taxonomies of property rights regimes responds to increased awareness of the social, economic, political and environmental relationships that are constitutive of property regimes. Less a relationship between a person and an object, property is about relationships among people with respect to that object. Whereas the private property literature has tended to assume that property users are short term profit maximizing individuals, the common property rights literature focuses on social mechanisms to mitigate self interest (communication, trust, anticipation of future interactions) and thus on the potential to overcome resource management problems collectively and voluntarily and create something of a public good by doing so.⁷⁰ To a large extent the process appears centers on the question of exits and entrances. Unlike the dominant, liberal notions of property rights, where participants retain flexibility with regard to getting in or getting out, common property regimes tend to be defined by the constraints thrown up around questions of entry and exit.⁷¹ The result then is the constitution of a group of people, glued together by

⁶⁸ Dobell, 2000.

⁶⁹ Cited in Charles Fried, 1990.

⁷⁰ See for example Charles Fried, 1990. “We libertarians and Lockeans tend to be a somewhat rag-tag and disshevelled bunch. What moves me is my attachment to human liberty, liberty of spirit, liberty from the crowd, from the state, and even from that now fashionable entity – the new golden calf in the legal academy – the community (or, less charitably, the petty impositions of village tyrants).” Significant assumptions are made about the nature of the resource as well, and these will be picked up on later in the paper.

⁷¹ Rose, 3-4.

Natural resource management and property rights: getting the institutions right
community based management institutions, who, because their ability to sell out is constrained,
are forced to interact in complex ways, on multiple fronts, in a changing environment. As Rose
observes,

complex entitlement structures encourage continuity in C[ommon] P[roperty] Regime]'s membership, because outsiders cannot easily buy in and insiders cannot easily sell out. This structure provides a background condition of “repeat play” among group members, often said to be an important factor in solving collective action problems: repeat play helps participants to build up cooperation and trust, and hence it impedes breakdown from internal shirking and cheating.⁷²

The legitimacy of the institutions will presumably be determined by the extent to which these interactions are generative of mutual trust and shared behavioural norms. Where local, customary practices do not already exist to serve as the glue that makes cooperation possible (the situation prevalent in many of the published case studies), the need to cooperate in integrated, precautionary adaptive management schemes will determine the successful adoption of communicative action. The difficulty we are left with then (one that, again, represents a fairly significant gap in the common property literature)⁷³ is conceptualizing generally about ways of creating mutual trust, shared behavioral norms and communicative action in communities where shared assumptions around homogeneity and communicative action do not, for whatever reason, already prevail, or where people may not be willing, or able, to set aside their personal and strategic interests, and power positions (“the brutal politics of it all”) in order to share ownership of all adjacent resources, or where the over-riding feature is inevitable scarcity of the resource, a scarcity ensuring that not all interests can be satisfied.⁷⁴

⁷² Rose, 2000. 65.

⁷³ For a useful survey of the limits of the literature, and its emphasis on the case study approach generally, see Arun Agrawal, 2001.

⁷⁴ On the considerable practical problems apart from theoretical problems, in creating the conditions for communicative action, see Cees Leeuwis, 2000.

To summarize, discussions of new forms of community-based management and governance effectively amending property rights regimes in the Clayoquot Sound region will necessarily have to take place on an already structured and highly contested field, and cannot be disconnected from other debates, political, social, economic, nor from the discourses that inform and support them. The durability of a new property rights regime in CS will necessarily depend, not on its ability to reflect natural essences, as are sometimes posited, but rather on its ability to provide the framework that can meet the necessary goals (whether to do with ecology, governance, economics) of a diverse, fragmented and changing community in a changing world.⁷⁵

Sources

- Agrawal, Arun. 2001. "Common Resources and Institutional Sustainability". *The Drama of the Commons*. Washington, DC: National Academy Press.
- Agrawal, Arun. 1995. "Dismantling the Divide Between indigenous and Scientific Knowledge." In *Development and Change* 26, 413-439.
- Berkes, Fikret and Carl Folke, 1998. "Linking Social and Ecological Systems for Resilience and Sustainability". In *Linking Social and Ecological System: Management Practices and Social Mechanisms for Building Resilience*, edited by Fikret Berkes and Carl Folke. Cambridge: Cambridge University Press.
- Berkes, Fikret and Carl Folke, editors. 1998. *Linking Social and Ecological System: Management Practices and Social Mechanisms for Building Resilience*. Cambridge: Cambridge University Press.
- Blomely, Nicholas, 1998. "Landscapes of Property". *The Legal Geographies Reader: Law, Power and Space*. Oxford: Blackwell Publishers.
- Bromley, Daniel. 1991. *Environment and Economy: Property Rights and Public Policy*. Oxford: Blackwell.
- Chamberlin, J. Edward. 2003. *If this is your land, where are your stories: finding common ground*. Toronto: A.A. Knopf Canada.
- Committee on the Human Dimensions of Global Change, Elinor Ostrom ... [et al.], editors. 2002. *The Drama of the Commons*. Washington, DC: National Academy Press.
- Cox, Susan. 1985. "No Tragedy on the Commons." *Environmental Ethics* 7, 49-61.
- Cronon, William. 1983. *Changes in the land: Indians, colonists, and the ecology of New England*. New York: Hill and Wang.
- Crookes, Nadine. 2003. "First Nations Perspectives on Coastal Planning." Clayoquot Symposium 2003: Health Across the Water, Tofino B.C. www.clayoquotalliance.uvic.ca/Symposium2003/Symposium_Proceedings_Final.pdf
- Day, Andrew. 2003. "Community Benefits from Aquatic Resources Clayoquot Symposium 2003: Health Across the Water, Tofino B.C. www.clayoquotalliance.uvic.ca/Symposium2003/Symposium_Proceedings_Final.pdf
- De Soto, Hernando. 2000. *Why Capitalism Triumphs in the West and Fails Everywhere Else*. Basic Books.
- Dobell, 1999. "Amending Rights to Nature."
- , "Citizen Involvement, Engagement and Agency: Interjurisdictional experience in environmental governance."

⁷⁵ See also discussion in Jenny Reardon, 2001.

- , "Devolution and Discretion: Building Community-Based Resource Management into Contemporary Governance."
- Eden, Sally. 1996. "Public participation in environmental policy: considering scientific, counter-scientific and non-scientific contributions." *Public Understanding of Science*, 5.
- Federal-Provincial Post Treaty Fisheries Joint Task Group (Donald McRae and Peter Pearse). 2004. *Treaties and Transition: Towards and Sustainable Fishery on Canada's Pacific Coast*. Vancouver, BC Fisheries & Oceans Canada ; Victoria : Ministry of Agriculture, Food & Fisheries ; Ministry of Attorney General, Treaty Negotiations Office.
- Fitzpatrick, P. 1992. *The Mythology of Modern Law*. London: Routledge.
- Folke, Carl, Fikret Berkes and Johna Colding. 1998. "Ecological Processes and Social mechanisms for Building Resilience and Sustainability." *Linking Social and Ecological System: Management Practices and Social Mechanisms for Building Resilience*, edited by Fikret Berkes and Carl Folke. Cambridge: Cambridge University Press.
- Fried, Charles. 1990. "Protecting Property – Law and Politics." *Harvard Journal of Law and Public Policy*, 13.
- Gibson, Clark C., Margaret A. McKean and Elinor Ostrom. 2000. editors. *People and Forests: Communities, Institutions, and Governance*. Cambridge: MIT Press.
- Gibson, Clark C., Margaret A. McKean and Elinor Ostrom. 2000. "Explaining Deforestation: The Role of Local Institutions." *People and Forests: Communities, Institutions, and Governance*. Cambridge: MIT Press.
- Greider, William. 2001. "The Right and US Trade Law: Invalidating the 20th Century" in *The Nation*.
- Hanna, Susan, Carl Folke and Karl-Goran Maler. 1996. *Rights to Nature: Ecological, Economic, Cultural and Political Principles of Institutions for the Environment*. Washington: Island Press.
- Harris, Cole. 2002. *Making Native Space: Colonialism, Resistance and Reserves in British Columbia*.
- Henderson, James (Sakej) Youngblood. 2000. *Aboriginal Tenure in the Constitution of Canada*. Toronto: Carswell.
- Holling, C.S., Fikret Berkes & Carl Folke. 1998. "Science, Sustainability, and Resource Mangement". *Linking Social and Ecological Systems: Management Practices and Social Mechanisms for Building Resistance*. Cambridge: Cambridge University Press.
- Home, Robert. 2003. "'Squatters or Settlers?': Adverse Possession and Colonial Land Settlement" Paper to Irish Legal History Conference, University College, Dublin.
- Islamoglu, Huri. 2000. "Property as a Contested Domain: A Reevaluation of the Ottoman Land Code of 1858". *New Perspectives on Property and Land in the Middle East*, edited by Roger Owen. Cambridge: Harvard University Press.
- Jackson, Peter. 2003. "Mapping Culture." *The Student's Companion to Geography, 2nd edition* edited by Alisdair Rogers and Heather A. Viles. Oxford: Blackwell Publishing.
- Leeuwis, Cees. 2000. "Reconceptualizing Participation for Sustainable Rural Development: Towards a Negotiation Approach." *Development and Change*, 31.
- Magnusson, Warren and Karena Shaw, eds. 2002. *A Political Space: Reading the Global through Clayoquot Sound*. Montreal & Kingston: McGill-Queen's University Press.
- Maine, Henry Sumner. 1917. *Ancient Law*. London, Toronto: J.M. Dent & Sons, Ltd.; New York, E.P. Dutton & Co.
- Marzulla, Nanci. 2001. "Property Rights Movement: Where it began and where it is headed." *The Legal Geographies Reader: Law, Power and Space*. Oxford: Blackwell Publishers.
- McKean, Margaret. 2000. "Common Property: What Is It, What Is It Good for, and What Makes It Work?" *People and Forests: Communities, Institutions, and Governance*. Cambridge: MIT Press.
- Nadasdy, Paul. 2003. *Hunters and bureaucrats: Power, Knowledge, and Aboriginal-State Relations in the Southwest Yukon*. Vancouver and Toronto: UBC Press.
- Nedelsky, Jennifer. 1990. *Private Property and the Limits of American Constitutionalism: the Madison Framework and its Legacy*. Chicago: Chicago University Press.
- Ostrom, Elinor and Edella Schlager. 1996. "The Formation of Property Rights". *Rights to Nature: Ecological, Economic, Cultural, and Political Principles of Institutions for the Environment*, edited by Susan Hanna, Carl Folke and Karl-Goran Maler. Washington: Island Press.
- Palsson, Gisli. 1998. "Learning by fishing: practical engagement and environmental concerns." *Linking Social and Economic Systems: Management Practices and Social Mechanisms for Building Resilience*. Cambridge: Cambridge University Press.
- Pinkerton, Evelyn. 1998. "Integrated management of a temperate montane forest ecosystem through wholistic forestry: a British Columbia example." *Linking Social and Economic Systems: Management Practices and Social Mechanisms for Building Resilience*. Cambridge: Cambridge University Press.

- , 1999. "Factors in Overcoming Barriers to Implementing Co-management in British Columbia Salmon Fisheries." *Conservation Ecology* 3(2). <http://www.consecol.org/vol3/iss2/art2>
- Pipes, Richard. 1999. *Property and Freedom*. New York: Vintage Books.
- Reardon, Jenny. 2001. "The Human Genome Diversity Project: A Case Study in Coproduction". *Social Studies of Science*, 31/3.
- Reeve, Ian. 1999. "Tiptoeing Round the Slumbering Dragon: Property Rights and Environmental Discourse in Rural Australia." <http://www.ruralfutures.une.edu.au/resources/downloads/publications/dragon.pdf>
- Rose, Carol. 1994. *Property and Persuasion: Essays on the History, Theory, and Rhetoric of Ownership*. Boulder: Westview Press.
- , 2000. "Expanding the Choices for the Global Commons: Comparing Newfangled Tradable Allowance Schemes to Old-Fashioned Common Property Regimes." *Duke Environmental Law and Policy Forum* 10. 45-71.
- , 2002. "Common Property, Regulatory Property, and Environmental Protection: Comparing Community-Based Management to Tradable Environmental Allowances." *The Drama of the Commons*. Washington, DC: National Academy Press.
- Sahlins, P. 1994. *Forest Rites: The War of the Demoiselles in the Nineteenth-Century France*. Cambridge, MA: Harvard University Press.
- Sax, Joseph. 1993. "Property Rights and the Economy of Nature". *The Legal Geographies Reader: Law, Power and Space*. Oxford: Blackwell Publishers.
- Scott, James. 1998. *Seeing Like a State: How Certain Schemes to Improve the Human Condition Have Failed*. New Haven and London: Yale University Press.
- Shaw, Derek, 1996. *Owning the Natural World*. Doctoral Dissertation. University of Colorado: Boulder, Colorado.
- , 2001. "Restoring First Nations to the Land: Lessons from Clayoquot Sound." A Joint Report by the Nuuchahnulth Tribal Council and the Natural Resources Defence Council.
- Shaw, Karena. 2002. "Encountering Clayoquot, Reading the Political." *A Political Space: Reading the Global through Clayoquot Sound*. Montreal & Kingston: McGill-Queen's University Press.
- Stewart, Richard. 1990. "Privprop, Regprop and Beyond". *Harvard Journal of Law and Public Policy*, 13.
- Tsing, Anna Lowenhaupt. 2003. "Cultivating the Wild: Honey-hunting and Forest Management in Southeast Kalimantan." *Culture and the Question of Rights: Forests, Coasts and Seas in Southeast Asia*, edited by Charles Zerner. Durham and London: Duke University Press.
- UN Sub-Commission on Prevention of Discrimination and Protection of Minorities Forty-ninth session, 1997. *Human Rights of Indigenous Peoples: Indigenous people and their relationship to land: Preliminary working paper prepared by Mrs. Erica-Irene Daes, Special Rapporteur*. <http://www.unhchr.ch/Huridocda/Huridoca.nsf/TestFrame/6ffc00509cad96c980256659005047df?Opendocument>
- Washbrook, David. 2000. "Colonial Discourse Theory". *The Oxford History of the British Empire*, Wm. Roger Louis, editor-in-chief; Volume V: Historiography, edited by Robin W. Winks. Oxford: Oxford University Press.
- Weaver, John C. 2003. *The Great Land Rush and the Making of the Modern World: 1650-1900*. Montreal and Kingston: McGill-Queen's University Press.
- Worster, David. 1994. *Nature's Economy: A History of Ecological Ideas*. Cambridge: Cambridge University Press.