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**Institutional Design for the Co-Management of an Urban-Sited Port in New Zealand:
Local Implications of National Reforms ¹**

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"...each area of land or water has an intrinsic suitability for certain single or multiple land uses..." (McHarg 1969: 79)

INTRODUCTION

Our objective in this paper is to describe our current research on urban-port development conflicts in terms of common-pool management systems. This is an attempt to move the discussions of locational conflicts, and corporate social responsibility, into the discourse on common-pool resource management.

The commons discourse has hitherto tended to focus on the dynamics of managing resources in third world and traditional societies. We wish to argue the case for research into the management of common property resources in Western, capitalist societies. Our particular interest is in understanding how to design institutional frameworks for stakeholder co-management to promote sustainable outcomes for ports located in urban settings. We focus on ports because they are an important activity, and often the dominant activity, in urban harbours. In examining this research question, we characterise urban harbours as complex common property resource systems (CPRs). Complex CPRs differ from simple CPRs in being subject to multiple, overlapping and conflictual uses; volatility in use patterns and in the institutional context; and variances between statutory (*de jure*) and assumed (*de facto*) property rights (Selsky & Memon 1995). These characteristics highlight the need for, but also the difficulties of, integrated co-management which promotes sustainable outcomes for urban harbours and their ports. We draw on the literatures on corporate social responsibility, stakeholder management, and NIMBYs for insights that bear on this problem.

Our research draws on the New Zealand experience. Since 1984 institutional reforms in environmental management in New Zealand have sought a more integrated approach, as compared to previous statutes and practices. The Resource Management Act (1991) overturned decades of town and country planning statutes, and focused environmental management on the objective of sustainable outcomes. This was complemented by a major reform of central and local government activities during the same period. Both the environmental and the administrative reforms occurred in the context of a wide ranging restructuring of the New Zealand economy and society.

In our research we question whether these sweeping environmental reforms are able to achieve their stated policy objectives in local harbour/port contexts. This is because the national reforms appear to be general enough that they can be, already have been, and will continue to be implemented in local contexts in different ways which will be subject to local interpretations and local politics. This includes historic overhangs of past practices, entrenched positions, and weak political leadership. We suggest that since the ports in New Zealand are important to a variety of stakeholders, the control and management of them have their own logic which will be difficult to dislodge.

We begin by describing the long standing conflicts between Port Chalmers, a local community on the Otago harbour near Dunedin, and Port Otago Ltd., the port company which manages the port operations. This description is embedded in an examination of the current situation of harbour management. In New Zealand this is characterised by a strong

thrust toward corporatisation and privatisation of harbour management bodies, as well as by pressure from diverse stakeholders. Then we examine the qualities of community conflicts over port development, and ways that have been developed for addressing such conflicts. Then we introduce a new perspective on such problems, namely complex CPR systems and their management. We are then in a position to re-cast the port on the Otago Harbour as a case study in shifting institutional arrangements in a complex CPR. We analyse the development conflicts as a critical issue in understanding the new institutional arrangements for harbour and port management. We conclude with implications for the design of effective co-management arrangements for ports located in dynamic and diverse urban communities.

Methodologically, we conduct an institutional analysis (Ostrom 1990) of this case from 1989 to 1995. We examine the relationships, events and processes enacted by local actors around port development at Port Chalmers. We rely on various kinds of data to understand the Port Chalmers situation, such as company, local authority and interest group reports; coalitions formed; development activities proposed and litigated; court decisions, and media reports. The institutional analysis highlights tensions and compatibilities between economic and social interpretations of sustainability. The local data help us to understand how sustainability is interpreted and used in the local context.

PORT DEVELOPMENT AT PORT CHALMERS: SEVEN YEARS OF CONFLICTS

In this section we describe as dispassionately as possible the story of the conflicts from two apparently opposing perspectives: the local Port Chalmers community and the port company (Port Otago Limited, or POL). We then shift to a more holistic perspective in order to gain a better understanding of the local dynamics.

Port Chalmers is a small community of 1600 people located along the north shore of the Otago harbour. Its early origins can be traced back to Polynesian settlement in Otago and it was also the site of early European landings in the 19th century. The settlement is physically nestled on pockets of flat land between the port and the hills behind it. Until recently the port was socially and economically dominant in the life of this largely working class Dunedin suburb. Employment on the wharf and on the local fishing boats was the principal source of local livelihood.

The community was governed by a small borough council until the recent local government reforms in the late 1980s, which amalgamated Port Chalmers with the city of Dunedin urban area. Dunedin is the fourth largest city in New Zealand with a population of approximately 110,000 people. Until the local government reforms the port operations were managed by the Otago Harbour Board, a special-purpose, elected local authority that was quite paternalistic in its relations with the local territorial authorities around the Otago harbour. Although the mandate of the Board was to manage the entire harbour, it was principally concerned with operating the port as an outlet for the province's agricultural exports. These concerns included dredging and undertaking limited harbour reclamation works. These activities tended to be perceived by most of the Dunedin public and their elected local representatives as generally necessary for the economic well-being of the community and thus remained unquestioned for several generations.

"Successive borough councils saw the objectives of the Harbour Board as being synonymous with those of the Port Chalmers borough. Consequently, the borough council was sympathetic to the development requirements of the port. This port authority 'utopia' was destroyed in the late 1980s with the reform of local government and the implementation of the Port Companies Act 1988" (Boswell 1994: 65).

Nevertheless, controversy and conflicts have surrounded various developments of the port at least since the creation of the Otago Harbour Board by the provincial government of New Zealand in 1874 (McLean 1985). The local Dunedin situation, as portrayed here, was not unique by any means. Historically, the state has played a very dominant role as a developer of the country's resources.

In the early 1970s, the majority of the greater Dunedin community rallied in support of the central government's decision to site a container terminal at Port Chalmers (McLean 1985). This was the first of a number of factors that have altered this apparently harmonious relationship between the port authority and the local community. The technology of containerisation requires flat land. A consequence of this has been that port operations have physically expanded during the last two decades through the increased pace of reclamations on the harbour front coupled with displacement of residential land uses on the landward side. A related fact was that the round-the-clock container port loading operations increased local noise levels significantly.

We can trace the beginning of the recent conflicts to 1989; see the Appendix for a detailed chronology of key events. The Port Chalmers District Scheme of 1980 had permitted port works as of right without any controls or opportunity for public participation during the consents process. The Port Chalmers Borough Council reviewed this scheme just prior to its amalgamation into the Dunedin City Council (DCC) in 1989. The draft that was publicly notified was just as permissive, and included major new proposals by the port company for extensive excavations to enlarge its facility. However through the processes of public submissions, cross submissions and appeals to the Planning Tribunal, the Borough Council was forced to incorporate stricter controls on port development projects.

Soon after amalgamation the DCC reviewed the Port Chalmers District Scheme as it pertained to the port company's proposed developments. Following extensive public hearings and submissions, the DCC's attempt at a compromise decision failed when both the port company and a newly formed community opposition group appealed parts of the decision to the national-level Planning Tribunal. More than a year later, the Planning Tribunal found largely in favour of the port company in March 1993. Noisy protests occurred immediately afterward in the Dunedin town square. Additional litigation by a local ratepayers association followed in the wake of the decision and has continued for the past three years.

Meanwhile a mediation process between Port Chalmers residents and POL was initiated by the DCC in April 1993. In early 1994 a respected Dunedin community leader was asked to lead that effort. She convened and has chaired a formal committee of the three major parties, namely DCC, POL and local community representatives. Other stakeholders were later invited to participate in periodic meetings. She has put a lot of effort into building up trust initially among them, and in keeping the efforts out of the media spotlight. She has

also developed a framework for collecting information, especially monitoring incidents of excessive noise.

Thus during the past seven years a number of local residents and groups have taken cudgels over the proposed reclamation projects and the noise problem through the local government planning process. Initially this occurred within the framework of the Town and Country Planning Act, and after the 1993 Tribunal decision, under the Resource Management Act. Their arguments are based on a perceived invasion of their private property rights and the commons by the activities of the port company. POL has on some occasions ignored or denied these concerns, or taken steps to mitigate them when compelled to do so by the DCC and the Tribunal. POL management has argued that noise and traffic are an unavoidable aspect of its business operations and those living around the port have to tolerate such nuisances. There is a certain degree of resentment on the part of the port management and the Dunedin business elite at what they see as the disruptive attitude of a small vocal minority, some of whom have chosen to move their residence to Port Chalmers only recently. From the perspective of business interests and the port management, the economic viability of the port ought to override these concerns. In its 1993 decision the Tribunal agreed with this view.

A number of factors have contributed to the conflicts in the 1989-95 period. We examine them in three groups: port, community, and contextual factors.

Port factors. Port Otago Ltd. is a Local Authority Trading Enterprise (LATE), indicating that the old Otago Harbour Board was "corporatised" in 1988. Previously all port development proposals were decided centrally by the New Zealand Port Authority, and executed by the statutory Harbour Board. The Port Authority's "designating authority" absolved it from the need for public consultation. In the recent conflicts POL clearly acted as if it were the dominant stakeholder. It assumed an overriding right to use of land, water and associated amenity resources in its immediate locale. Some believe the POL management retains much of the designating-authority attitude of the old Otago Harbour Board, and has not bought into the new processes of public consultation and participation (Selsky & Memon 1995; Meikle 1993).

The port company is owned by the Otago Regional Council (ORC). In 1989 the regional councils acquired full ownership of the ports within their jurisdiction under the provisions of the Port Companies Act 1988. By that statute ports are to be managed as stand alone commercial enterprises with their own boards. POL forwards its annual dividend to the general fund of the ORC; in 1992 this was \$1.5 million, or 7% of the ORC's budget. The ORC chairperson believes the council's "regulatory and shareholder responsibilities did not conflict," and that regional exporters and farmers are in favour of public ownership of the port company (ODT 21/7/94). Some interests, including some Port Chalmers officials, are skeptical of this, and have suggested a conflict of interest. POL has clearer corporate responsibilities and fewer community obligations than the Harbour Board which preceded it, but it is also subject to new consultation provisions under the Resource Management Act. The ORC wants to maintain a healthy dividend from the port, while at the same time providing a competitive port to assist exporting industry based in Otago.

The port company has been forced to become more aggressive in its commercial pursuits due to growing competition with the ports in adjacent regions. A five-year comparison of performance statistics with the three ports nearest to Port Otago shows POL the lowest of the four in all indicators (see Table 1). Its container trade has been dropping at a steady rate, and it intends to make this up in log exports. POL wants to position itself to take advantage of the huge forest reserves in the Otago region. POL undertook a major restructuring for competitive purposes in 1993-94, sacking 25% of its employees and clearly demonstrating it feels no obligation to maintain high employment (ODT 17/7/94). Furthermore POL argues that if Otago is to prosper then the immediate port area must be regulated in such a way as to allow the company to go about its business as it wants - including noisy and reconstructive activities. During the research period the company appeared to enter sudden periods of negotiation with the community, but only when it thought its case in the courts was lost. Its persistent claims that it would lose trade to competitor ports if it lacked space or lost regulatory assent appeared to be efforts to pressure the other stakeholders.

**TABLE 1. PORT OTAGO LTD AND THREE COMPETITORS:
PERCENTAGE CHANGE IN PERFORMANCE INDICATORS (1991-95)**

	Revenue	Surplus (net after tax)	Total Assets	Return on Assets	Cargo Volume
<u>Otago</u>	(15.8)	6.0	34.4	(27.8)	11.4
Southport	499.3	115.7	158.4	(7.0)	0.5
Lyttleton	33.0	531.9	47.2	85.0	77.9
Timaru	24.3	216.8	43.4	129.6	(na)*

* Cargo Volume figures not disclosed by Port of Timaru
Source: All data supplied by port companies' accountants

Community factors. Port Chalmers is a settlement about 13km from Dunedin city with a distinctive and historic character. On average its residents are more stable than Dunedin's, its average wage is 90% of Dunedin's, and its unemployment rate (at 18.3%) is 50% higher than Dunedin's (1991 census). Relative ease of personal mobility has enabled local residents to seek employment further afield; about 25% of its working residents work in the town, and the rest commute into Dunedin. The town is undergoing major changes as its working class origins, largely associated with the port, are yielding to commercial, artistic and social-service employment. A number of newcomers have bought homes in the local community and do not necessarily share the same allegiance to the port as the old timers may do. These trends have created different kinds of community networks and influence patterns as compared to earlier eras.

POL employs 42% of all resident workers. Port employment has declined on account of increased mechanisation, competitive pressures, and de-unionisation. POL's employment

dropped 38% to 105 employees "overnight" when the Waterfront Industry Commission was abolished in late 1989 (NZ Business Roundtable, 1990). By 1996 POL's employment had risen to 162, about 35% of whom live in the Port Chalmers area.

Port Chalmers residents are portrayed in the local media as anti-development, but the community is not homogeneous. There is considerable disagreement in the town over port development plans; for example a petition in support of POL's excavation plans was signed by 104 mostly Port Chalmers residents in November 1993 (ODT 4/11/93). Nevertheless several community opposition groups have formed during the research period including:

- . Preserve Observation Point (PROP) to oppose the excavations at Observation Point
- . Careys Bay Ratepayers Association to oppose the reclamations at Boiler Point, and to litigate over high noise levels
- . Vision Port Chalmers, to promote lifestyle and artistic amenities in the town.

As noted above, Port Chalmers borough became part of Dunedin city in 1989. The Dunedin City Council has created an impression of regulatory detachment and procedural fairness in the Port Chalmers events. The DCC has acted as a facilitator and mediator between POL and the residents, identifying and clarifying options but not taking sides. This is anomalous in view of the DCC's historic emphasis on development and business interests. Its conciliatory role in recent events, especially the conflicts over noise, may be due to tensions between its economic and political constituencies; more solid explanations await further investigation.

A similar shift seemed to occur when the P.C. Borough Council ceased and the P.C. Community Board was born in 1989. The Board appeared to be more balanced in regards port developments than the Council, which had clearly favoured the port's objectives. It is likely the Community Board now wants to avoid being labelled as pro- or anti-development, and thus appears committed to a negotiated solution to the conflicts. However it is also possible the membership of the Board is split, thus effectively neutralising it as a partisan force.

Contextual factors. Changes in Otago's export economy have also impacted on the port community. The principal cause of this has been the growth in timber production and exports in Otago. A very large proportion of the timber output is exported as unprocessed logs or woodchips. The transportation of these commodities by road to the port creates adverse traffic and noise impacts and has increased demand for flat land to store these commodities awaiting shipment to overseas markets.

More broadly these conflicts have occurred during a period of dramatic social, economic and political change in New Zealand, dominated by wide ranging and radical institutional reforms. These include the rolling back of the welfare state and the ascendancy of New Right ideology in national politics and policies. In addition local government activities have been amalgamated and rationalised. Many central government functions have been devolved to local and regional bodies; many others have been corporatised or privatised, including port operations. Growing environmental concerns have been reflected in the recent reforms of environmental bureaucracy and planning legislation, including the landmark Resource Management Act 1991.

The current situation may be summed up as follows: Several specific kinds of conflicts have erupted in Port Chalmers during the past seven years, including reclamations/excavations, noise, traffic congestion, disruption of lifestyle, and uncertainty over proposed developments. The development conflicts have evolved in the minds of stakeholders in roughly that order, and has been carried out by different community opposition groups during different stages in that evolution.

Moreover the trade offs and conflicts in port management are relatively more transparent now compared to the situation prior to 1989. New institutional arrangements have upset the (falsely?) harmonious balance that existed previously. However those arrangements have been unable to satisfactorily resolve these conflicts to date.

Finally the environmental and social costs of the recent wide ranging economic and social reforms, based on New Right ideologies, are now becoming visible. One aspect of this has been disempowerment of local citizens in a more adversarial context and their assertion of local co-management rights. In the next section we examine this case in terms of several theoretical perspectives.

UNDERSTANDING COMMUNITY CONFLICTS AT URBAN-SITED PORTS

Ports are a part of the coastal zone where there is considerable pressure from diverse stakeholders. A variety of forces affect urban ports and therefore harbour management, including technological, economic, political and environmental (Hershman 1988; Hershman & Bittner 1988). These forces are sources of community conflicts.

We may conceptualise community conflicts around urban harbours and ports in several ways (Fleming 1988; Wessel & Hershman 1988). First, such conflicts may be viewed as locational conflicts, that is, oppositions by some interests in a community to corporate development initiatives. Second, such conflicts may also be seen as failures of corporate social responsibility. Third, such conflicts may be seen as the result of inadequate co-management arrangements in a common property resource. Each of these perspectives is described and assessed in turn for its bearing on the Port Chalmers case.

A NIMBY Perspective

Land use conflicts such as at Port Chalmers are at the centre of the dynamic geography of the city. Disputes typically emerge over such locational issues as the siting of locally unwanted land uses and the provision of public services. The literature on the study of locational conflict is situated within the context of modern capitalist societies. It highlights the significance of land and property rights within the capitalistic system of production and consumption, and the processes which generate exclusionary action by interest groups (Boswell 1994).

Geographers and other social researchers have analysed the specific locational effects (externalities) of capitalist production responsible for the creation of land use disputes and characteristics of community opposition to activities perceived as undesirable by local residents (Harvey 1973; Dear 1976, 1992; Plotkin 1987). "Externalities", external effects"

or "spillovers" are unpriced effects of an activity upon individuals or groups who are not directly involved in that activity (Dear 1976). Externalities are regarded as having a spatially limited "field" of incidence. The extent and configuration of an "externality field" will be influenced by several variables, amongst them the size and type of the externality source, and the nature and density of surrounding properties (Dear 1976: 154). Land uses or facilities which generate externalities which are perceived to be positive are called "salutary," and those associated with negative externalities are called "noxious". In a market economy, urban locational conflict arises due to competition for control of land suited to incompatible activities or where externalities associated with existing or proposed land uses come into conflict with existing interests (or property rights) in surrounding land (Boswell 1994). Often it is intangible amenity resources which are contended, such as silence or views. In addition residents (especially middle class) often consider the ephemeral quality of serenity, or the lack of urban congestion and disruption caused by reconstructive activities, an important part of the quality of their lives.

The NIMBY (Not-In-My-Back-Yard) and LULU (Locally-Undesirable-Land-Uses) syndromes are two of a growing number of acronyms to account for specific forms of locational conflict (Dear 1992). NIMBY conflicts typically involve community struggles to exclude undesirable land uses from residential neighbourhoods.⁴ Such land uses may offend people because of their intrinsic features and the externalities they generate, e.g. dirt, smell, noise and pollution (Dear 1976; Popper 1987). Community attitudes towards a land use are the product of two main factors: the nature of the land use (scale, type and the degree of noxiousness), and the characteristics of the host community (socio-economic status, strategy and motivation) (Dear 1976).

Just as there are numerous factors which can contribute to the generation of land use disputes, so are there a wide range of oppositional arguments and tactics which opposition groups can choose to adopt. The common arguments include perceived threat to property values, personal security and neighbourhood amenity. A number of instances can be adopted in defense of one's neighbourhood against such perceived threats, ranging from denying the necessity of the LULU altogether, through to accepting its existence but trying to force changes to its operation (Popper 1987; Dear 1990). Exposing weaknesses in procedural elements of a LULU's siting can be an effective tactic.

From a locational conflict perspective, local residents are often portrayed as reactionary and short sighted, whereas corporate and public planners are portrayed as proactive and forward looking. Thus an adversarial dynamic is engendered.

A Corporate Social Responsibility Perspective

The field of corporate social responsibility (CSR) (or performance) is situated within the study of business-society relations in organisation studies. Arguably CSR exists as a result

⁴ However competition among community groups to gain desirable "salutary" facilities certainly exists; such groups have inevitably been called YIMBYs (Yes-In-My-Backyard) (Scholssberg 1993).

of a structural deficiency in capitalism, namely the failure of "the market" (or private property rights) alone to provide sufficiently for the wellbeing of society or the natural environment; see Jones (1996). Within the capitalist ideology Wood (1991: 695) defines the scope of CSR in a recent review article as follows:

"The basic idea of corporate social responsibility is that business and society are interwoven rather than distinct entities; therefore, society has certain expectations for appropriate business behavior and outcomes."

These expectations are contentious, and often fail to distinguish among "expectations placed on all businesses because of their roles as economic institutions, expectations placed on particular firms because of what they are and what they do, and expectations placed on managers (and others) as moral actors within the firm" (ibid.). In the Port Chalmers case, it appears the second group of expectations, or POL's public responsibilities, are most at issue. Such responsibilities are for its direct activities and effects, as well as for its indirect effects and impacts of activities.

The active aspect of CSR involves issues and stakeholder management (Wood 1991). Progressive corporations are said to manage critical issues and key stakeholders "proactively" rather than "reactively." That is, they anticipate calls for consultation and participation by interests which are affected by corporate activities, and try to align those interests with corporate objectives. A corporation should manage its responses to social issues so as to minimise surprises (Wood 1991). When issues such as hostile public hearings on a development proposal do surprise, they are dealt with forthrightly, and criticism is acknowledged and responded to without defensiveness. Collaboration - including negotiation with stakeholders and public-private partnerships - is recognised as often more effective (in the long if not the short term) than conflict (Freeman & Gilbert 1988; Gray 1989). In this area the tactics suggested to corporate managers in the locational conflict and the CSR literatures converge.

The literature on corporate social responsibility has focused almost exclusively on single organisations and their stakeholder systems. We question the utility of this focus in situations where property rights are poorly defined, and are assumed (rather than designated) by diverse interest groups; where significant power imbalances exist among stakeholders; or where there is no central actor, or focal organisation, around which to array and manage stakeholders. Under these conditions we would argue for a more encompassing, total-system perspective.⁵

Researchers examining the Port Chalmers case would likely be inclined to explain behaviour in the case using either the approach of locational conflicts or the approach of corporate social responsibility. However we believe that doing so neglects or downplays some important institutional issues. These are:

⁵ In the organisational-ecology branch of organisation studies, this has been identified as a reversal of figure and ground, from a "focal organisation" perspective to an "ecological" perspective; see Trist (1977).

1. the complex, systemic nature of local problems: locational conflict theory and corporate social responsibility theory are not systemic, but instead pit one interest against another, or others. Local amenity resources are appropriated by one interest and defended, contended or bargained for by another interest.

2. the institutional context of local conflicts: often theories of locational conflict or corporate social responsibility are not embedded in an institutional context. That context is taken for granted. Although it may constrain solutions to the conflicts, little thought is given to the possible redesign of it. Solutions to conflicts are situated "within the box," and include litigation and various forms of negotiation (through political or planning systems; through mediators, ombudsmen, facilitators; through direct discussion and compromise).

We suggest that a newer perspective may be better able to highlight these issues, namely complex common property resource systems (Selsky & Memon 1995).

A Complex CPR/Co-management Perspective

As noted above, locational conflicts often relate to disagreements over amenity resources in a community. Such resources may be considered common-pool resources. Community members assume rights to privacy, quiet, good views and serenity in their residential neighbourhoods (Illich 1983). Corporations located in the neighbourhood assume rights to engage in activities consistent with corporate objectives. The need to make a profit leads them into efforts to minimise (externalise) costs. Thus such conflicts may be seen as a reflection of inadequate institutional arrangements for managing a commons.

Common pool resources share two key characteristics which are problematical from a management perspective: controlling the access of potential users is costly and, in some cases, virtually impossible (non-excludability); and joint use involves subtractibility (each user is capable of subtracting from the welfare of others). These resources are typically held in the four basic property rights regimes, namely private, state, communal, and the default, no-rights category of open access (Berkes et al, 1989). These four categories are ideal, analytical types. In practice, common pool resources are often held in overlapping combinations of these four regimes, and there are variations in each.

The most important findings regarding the emergence and consequences of property rights systems in field settings has been summarised as follows (Ostrom, 1994):

* Overuse, conflict and potential destruction of natural resources is likely to occur where those involved act independently due to lack of communication or incapacity to make credible commitments. However if those who directly benefit from using a resource can communicate, agree on norms, monitor each other, and sanction non-compliance to agreements, they can substantially reduce overuse, conflict and the destruction of natural resources.

* The variety of locally selected norms, rules and property rights systems used in field settings is immense, but can be characterised by general design principles (see below).

* Local systems of norms, rules and property rights that are not recognised by external authorities may collapse if their legitimacy is challenged or if large exogenous economic or physical shocks occur (Selsky & Memon 1995; Selsky & Creahan 1996).

* Control of natural resources by state authorities is effective in some settings but is frequently less effective and efficient than control by those directly affected especially in smaller-scale natural resource systems.

* Efforts to establish marketable property rights to natural resource systems have substantially increased efficiency in some cases and encountered difficulties of implementation in others.

Recently complex CPRs have been distinguished from simple CPRs (Selsky & Memon 1995; Selsky & Creahan 1996). In contexts characterised by multiple and conflicting uses, values and technologies, mixtures, inadequacies and failures of formal property rights regimes often create loosely organised, de facto common-property regimes. For example, the state may be unable to enforce environmental regulations on clever individuals or unscrupulous corporations. However when de facto complex CPRs emerge, the danger of open access looms behind a confusing mix of poorly understood, weakly managed institutional arrangements and ambiguous behavioural norms.

The institutional arrangements used to affirm and enforce property rights in successful simple CPRs may be found inadequate in complex CPRs. The complexity of the resource system makes community based regulations more difficult to formulate, to implement, and to maintain (Selsky & Memon 1995). In situations of rapid social change, the institutional arrangements bearing on a resource may shift substantially and quickly, depending on emergent patterns in its use and management. Thus a natural resource system may evolve through various formal and informal property regimes over time, or may be subject to a combination of these regimes at any particular time, perhaps with one type assuming a dominant role (Selsky & Memon 1995). Clearly, more complex institutional arrangements are needed when a CPR becomes complex, that is, when its uses increase, and/or become more diverse or more conflictual (Selsky & Creahan 1996).

The interdisciplinary research on self-organising resource regimes and local co-management systems has been recently reviewed by Ostrom (1994) and Pinkerton (1994). Co-management systems can take a number of different forms: self-management, government-community co-management and multiparty co-management arrangements. They constitute alternative institutional solutions to the management of common pool (or common property) resources and their success under varying conditions in different parts of the world has put to question the assumptions which underpin the tragedy of the commons scenario portrayed by Hardin (1968).

The configuration of community based co-management systems varies under different situations. Self-management is useful in placid social conditions, but has eroded as a possibility as many self-managing systems have either collapsed under pressure or evolved into some form of co-management. Complex CPRs often require such arrangements as joint community-government management. These forms range along a continuum from almost complete self-management (e.g. community based regimes; see Pinkerton (1994)) to total

state management. Finally multiparty co-management initiatives are particularly relevant to our case. Successful examples of self-regulating, multistakeholder resource users' associations have been documented among southern California groundwater users, Alaskan fishing interests, and among multiparty local committees for watershed planning in Washington state (Pinkerton 1994). Such institutional arrangements in general involve genuine power sharing between local stakeholders and government agencies, so that each can check the potential excesses of the other. Communities which are able to play a role in management have in many cases developed ways to prevent over-exploitation of local resources through using formal and informal mechanisms to regulate the activities of insiders and the access of outsiders. Such community based arrangements have shown promise in improving the management of fisheries, forests, wildlife and water in an ecologically and economically sustainable manner (Pinkerton 1993). Pinkerton (1994) emphasises the fundamental role of social learning among different stakeholders in getting the parties ~~off~~ beyond the "prisoners' dilemma" and learning how to work together.

Community-government co-management is manifested in provisions for public consultation and participation in decisions that have community impacts. In the Port Chalmers case, the development conflicts were evidenced in the formal consents and appeals processes. Prior to the changes that resulted in the creation of the new publicly owned and profit-making port company, there were no real mechanisms for recognising and dealing with viewpoints opposed to the port developments. Thus statutory public input provisions can significantly affect private corporations.

When one or more stakeholder groups argues persistently and/or successfully for a voice in the goal setting, design, practices or policies of an organisation, then the institutional context of that organisation has shifted from private property to a common-pool. Its traditional domain in terms of its goals and its markets is no longer solely its own (see Freeman & Gilbert 1988; Lohmann 1992). This occurs despite efforts by the organisation's management to defend its decision making autonomy, and despite its de jure property rights. Essentially the institutional arrangements have shifted: The stakeholder group(s) displaces its interest in the amenity resource onto the organisation which controls its production or distribution. This applies to directly produced goods or services, as well as to byproducts, consequences and externalities.

This external intrusion into corporate strategy or operations is of course not uncommon; institutions with high social legitimacy, including schools and public agencies, are accustomed to the public taking an active, if sometimes unwanted, interest in their affairs. Such organisations shape their goals and practices according to the pressures that external stakeholders are able to exert on them (Scott 1992). Businesses in the private sector have been slower to acknowledge this trend; some actively resist calls for greater accountability to "the public." Organisations are considered "socially responsive" if they work with, rather than against, legitimate external stakeholders (Wood 1991).

Thus from a complex CPR perspective, corporations need to take into account volatile community environments and emergent patterns in institutional arrangements in managing their resources, production processes, products and byproducts.

DISCUSSION

Our study is a facet of western capitalist society that has not been accorded much attention by CPR researchers. To move development conflicts like those at Port Chalmers into a commons discourse, it is necessary to take a holistic perspective rather than a firm or an interest perspective. Thus it is important to focus NOT on Port Otago or on the Port Chalmers residents, but on the total social system created by the interaction of those and other stakeholders. This is because commons are inherently systemic, or ecosystem focused (Selsky & Creahan 1996; King 1995).

A holistic perspective can highlight and give more legitimacy to the values of non-dominant actors. Whereas a firm perspective carries the danger of underrepresenting the values and perspectives of non-dominant actors, a holistic perspective "levels the playing field" and gives voice to minority viewpoints. Thus a holistic perspective is more conducive to environmental justice. Potentially very different outcomes for resource management can occur when a field perspective is taken. The method of institutional analysis is appropriate for such situations, because it accords equal truth value to the perspectives of all interest groups involved in enacting the local institutional arrangements which produce and regulate the use of a common-pool resource.

Citizen protest against corporate development proposals (The Ecologist 1993; Selsky & Memon 1995) is the converse of the phenomenon of localities competing for the siting of corporate facilities in order to attract jobs and tax revenue. In the "jungle law" world of globalised capital markets and powerful corporate actors (Peck & Tickell 1994), NIMBY-like citizen protests may be seen as an assertion of local autonomy and social solidarity in the face of impersonal or unresponsive corporate power. In the Port Chalmers case it could be argued that the new managerialist context in New Zealand has partly prompted the local community to challenge the assumed hegemony of the port authority to carry on its activities unchallenged. When local communities persistently bear the unintended negative consequences generated by businesses located nearby (Grootius & Miller 1994), it should come as no surprise that they might assert their rights to co-manage their commons.

Looking at a Western urban port as a commons has enabled us to uncover a deficiency in the conventional definitions of property rights. That is, property rights are presumed to be clearly defined in law, especially between private and common property. Yet in fact this is not always the case. For example amenity resources and property values in a desirable urban neighbourhood are interdependent, volatile and in context. Unless such de facto property rights systems are managed as a complex CPR, this ambiguity creates a situation where dominant actors like POL are able to impinge on rights of less dominant actors like Port Chalmers residents (Selsky & Memon 1995).

The port has existed at Port Chalmers for over 100 years, and noise was always part of the port. However in recent years community values have changed in response to several other changes: a changing relationship with the port as an employer; changes in the composition of the community; changing technology; and a changing mix of products flowing through the port (e.g. logs). Such widespread changes call for new institutional arrangements, such as the co-management regimes described above.

Silence

~~Noise~~ is a commons until it is invaded. Then it is recognised as having been an open access regime. Then steps are often taken to deal with the problem: privatisation, regulation, or communal arrangements are sought to restore the commons of quiet. In this case it appears a multiparty co-management system is needed, with a mix of arrangements.

The prospects for common pool management of the amenity commons in Port Chalmers are uncertain as at the end of the research period. A multiparty co-management mediation process has succeeded in establishing mutual trust amongst the various stakeholders. This potentially is a forum for exploring solutions to the noise problem and related conflicts at Port Chalmers. Yet adversarial positions were still evident as late as December 1995 (ODT 14/12/95 #551).

Moreover, arguably on account of the consultation provisions of the RMA, POL is operating in a more transparent context, and the DCC has come to a new awareness of the need for wider stakeholder involvement in decisions that affect local communities, such as resource consents for development projects. Hence there is more potential for power balancing because more legitimacy has been given to local community concerns. This empowers the local community to negotiate their claims with more powerful interests. As the leader of a Port Chalmers opposition group recently declaimed, the community and POL had entered "a new era of consultation" (ODT 14/11/95 #543).

Nevertheless, in the final analysis we believe the solution to the conflicts will come down to the willingness of the POL to compensate the local community - both individually and collectively - for the detrimental impacts of its activities. This might involve buying out properties, soundproofing properties, or offering monetary compensation. Whether POL is financially able and socially responsible to do so remains to be seen.

It is important to note that the Resource Management Act and the local government reforms only began to appear in the litigation, Planning Tribunal decisions and media reports after the March 1993 decision of the Tribunal allowing Observation Point excavations. The full implications of the recent reforms remain to be seen.

CONCLUSION

In this paper we have examined the implications of recent institutional reforms for corporate strategy and practice in harbor management in New Zealand. We reviewed the local response to these reforms in terms of locational conflicts, corporate social responsibility, and CPRs. From a theoretical perspective, the recent reforms in New Zealand were structurally innovative. But whether this translates into innovative practice, in the form of improved management of harbours and ports remains an open question (Selsky & Memon 1995: 287).

It is important to put this into a broad historical context.

"Ports have always been confronted with environmental challenges, but in the past they were caused by physical, not social, obstacles....Now, environmental laws and social and political pressures to protect water and land resources require Ports to revise their

goals. Demands for economic development must now be balanced with public concern for efficient use of existing facilities and the preservation of unexploited natural areas.

"... [e]nvironmental concern, public recreation, and nontraditional ventures are new issues for public ports. Yet they are strongly related to the past because...Ports have always been managing the physical environment and responding to the political and economic pressures that surround them" (Hershmann & Bittner 1988: 51-52).

This case shows that what is a "suitable" land use is socially and politically constructed, not intrinsic (McHarg 1969). These constructions are partly a function of the institutional context and partly a function of enactments of interests and objectives by stakeholders in a complex CPR system.

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Appendix: Chronology of development conflicts at Port Chalmers

- 3 Oct. 1988 Port Otago Ltd (POL) incorporated
- July-Oct. 1989 ownership of port transferred from Otago Harbour Board to Otago Regional Council; POL acquires port assets
- mid 1989 - POL proposals for Observation Point excavations approved by Borough Council in district scheme
- Preserve Observation Point (PROP) community opposition group formed
- early 1990 Port Chalmers Community Board recommends to DCC that Port Chalmers District Scheme be reviewed; DCC agrees to review component on port development proposals, and sets up Planning Hearing Committee
- Aug.-Oct. 1990 Planning Hearing Committee hearings; 113 public submissions received
- Nov. 1990 - Committee decision allows reclamations with changes and conditions; also requires POL to make conditional use application each time it wishes to proceed with its development
- POL and PROP promptly appeal parts of decision to Planning Tribunal
- mid 1991 - POL applies for DCC consent to proceed with developments at Back Beach, and gets most of what it wanted; PROP appeals to Tribunal
- 1 Oct. 1991 Resource Management Act comes into effect
- 1992 Planning Tribunal hears large number of submissions on appeals
- March 1993 Tribunal finds largely in favour of POL; PROP "profoundly disappointed"
- Apr.-June 1993 DCC initiates mediation process; residents "encouraged by progress made"; POL to draft a management plan for noise and lighting.
- July-Aug. 1993 Planning Tribunal decides not to further restrict uses of reclaimed land at Boiler Pt.; POL and Careys Bay Residents Assn. (CBRA) lodge appeals
- 10 Sep 1993 DCC halts ship loading due to excessive noise
- Oct-Nov 1993 POL asks DCC to acquire 2 private properties under Public Works Act so as to enable Observation Point excavation to begin; DCC delays; both landowners sell to POL.
- 16 Nov 1993 In High Court decision, POL loses appeal over noise ordinance, and residents lose appeal over "need" in the public interest.
- 1 Mar 1994 DCC to pursue court costs from CBRA over 7/93 appeal
- June-July 1994 CBRA petitions Tribunal over expiry of POL's coastal permit; Tribunal halts reclamations because of expired coastal permit; POL appeals in High Court; DCC also lodges appeal

- 18 Oct 1994 POL applies to DCC to take another "chunk" off Observation Point; rejected
- 24 Nov 1994 POL backs down on attempts to secure permit over Careys Bay and Back Beach at ORC Regulatory Committee meeting
- 9 Dec 1994 POL claims it cannot stop excessive noise levels
- 15 Feb 1995 POL claims planning reforms (especially RMA regime) have hindered port development
- April-May 1995 POL seeks to have enforcement order application lodged by residents over noise (Oct. '94 in Planning Tribunal) struck out; dismissed
 - Ministry of Health releases report over noise at Port Chalmers.
 - DCC receives complaints over noise levels during loading of woodchips
- 2 May 1995 High Court judge finds in favour of POL and against Planning Tribunal decision
- 9 May 1995 POL begins inner Boiler Point reclamation
- May-June 1995 Tribunal allows resident to seek a rehearing over Boiler Point reclamation on the grounds that circumstances have changed since approval was given
 - POL announces work on Boiler Point reclamation will start almost immediately despite previous undertaking to hold work until re-hearing matters had been settled; local MP urges delay
 - Resident has application heard in High Court for leave to appeal to Court of Appeal (including a stay of Boiler Pt. reclamation work); Court grants leave and halts work; POL, "tired of on-going court proceedings," seeks direct discussion with residents, and regrets any impressions that it may have acted unfairly
- 21 Aug 1995 Tribunal rejects resident's application for rehearing of Boiler Point reclamation case on the basis that previous evidence from POL established "need".
- 19 Sept 1995 Tribunal hears residents noise complaints; POL fails to have case dismissed
- 13 Nov 1995 Appeal Court action by resident against Boiler Point reclamation fails; judgement outlines problems caused by move to RMA
- 24 Nov 1995 Resident asks Minister of Conservation to stop reclamation until resource consents are extended
- Dec 1995 - POL, residents meet; residents claim POL seeking to reclaim the whole of Careys Bay; POL states it has no further reclamation plans
 - Careys Bay resident files application for a rehearing of the consent to reclaim the land at Boiler Point

Sources: Otago Daily Times articles; Meikle (1993)