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**Waterfronts: A New
Urban Frontier**

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WATERFRONTS: A NEW URBAN FRONTIER

Peter Hall

1.0 The Impact of Technical Change

Technology made and then broke the traditional urban waterfront. During the 19th century, huge waterfront systems came into existence in all the great ports of both the old and the New World: enclosed dock basins supplemented traditional riverside wharves, though the technology -- simple cranes and tackle -- represented no great advance on methods that had been known in the Middle Ages. What was then new was the scale of activity; the movement of freight and passengers attracted a whole conglomeration of related activities such as warehousing and trading functions. But the waterfront also acted to repel other kinds of activities -- non-port manufacturing, especially the lighter kind, and servicing -- which retreated as far away as possible, into the land-side hinterland of the city (Chaline 1988, 696-7).

This system began to fall apart in American ports in the late 1950s, to be followed in the 1960s and 1970s by the rest of the world. Several factors, all economic in character but technological in origin, were responsible. Passenger traffic rapidly disappeared after the arrival of the first generation of transcontinental jet aircraft in the late 1950s, and liner berths and terminals became redundant. Almost simultaneously, freight was containerized, and ports migrated to estuary sites with plenty of land, making most existing docks and warehouses suddenly superfluous. Much of the world's fishing industry suffered catastrophic change with the arrival of new fishing methods, leading to the closure or drastic contraction of many established fishing ports. Tankers

increased hugely in size from the 1950s, placing a premium on deep-water locations; while the increasing use of ro-ro ships for dual freight and passenger services concentrated traffic in places with good access to national highway systems. These technological changes had profound spatial consequences: 2,000 hectares were abandoned in London, 300 hectares in Liverpool. And, by a strange historical irony, in the 1970s these changes were followed quite coincidentally by the great deindustrialization of the inner cities, as industry moved out to new motorway systems; and this further turn of the screw brought an almost irreversible loss of dynamism of certain ports (Chaline 1988, 697-8; Riley and Shurmer-Smith 1988, 40).

1.1 The Impact of Containerization

Each of these changes was significant, but one stands out: the impact of containerization. 80 percent or more of general cargo is now containerized (Mayer 1988, 88). Before containerization, a vessel would typically spend approximately half its life in port, representing pure overhead cost to the owner (Chilcote 1988, 127). Containerization reduced cargo-handling time from 55 to 21 per cent of the total shipping schedule (Chilcote 1988, 130).

The old way of handling restricted the size of ships, since a large ship would take a disproportionately long time to handle (Chilcote 1988, 127). Containerization has brought a fourfold increase in typical ship sizes, with a likely further doubling by the early 1990s (Chilcote 1988, 131). During the 1970s and 1980s, this spectacular increase in the size and draught of ships has in itself made many older ports unusable (Hayuth 1988, 52).

With containerization came the development of specialized cellular vessels and new cargo-handling facilities; large high-speed gantry cranes, with a lifting capacity of 30 tons or more, replaced the old gear that could only lift 3-5 tons

(Hayuth 1988, 53). Containerization made possible the rapid movement of huge volumes without break of bulk, making the old cargo facilities redundant; the port now functioned as a link in a transportation chain rather than as an abrupt or lengthy stop in the process (Hayuth 1988, 53). In the 1980s this reached its apogee with "intermodal transport," conveying goods in a continuous flow from origin to destination in the most time- and cost-effective way (Hayuth 1988, 53).

The first impact of containerization was fierce competition among ports, because cargo began to follow the ship, not the other way round. Some ports -- Oakland, Tacoma, Charleston, Savannah -- succeeded, while others -- Boston, Philadelphia, San Francisco, and Portland, Oregon -- did not. Intermodal services, with ship-rail integration, have been concentrated at some ports such as Seattle. This competition has led to huge shifts, such as the transfer within half a decade of San Francisco's trade to neighboring Oakland during the 1970s (Chilcote 1988, 132, 136-7, 141).

But containerization has had equally significant impacts on internal port layout. The physical layout and land-use configuration of the old general cargo terminal are totally inadequate for container handling. In those older harbors, such as Boston, New York, Philadelphia, San Francisco, and Seattle, the need was to maximize the linear extent of the water-land contact, through a series of piers and slips; but in container ports the need is rather for extensive backup areas for fast rail and highway access and the staging of containers, typically 12-16 hectares per ship berth, ten-fold and more that required for the conventional cargo terminal. Thus the ratio between the length of a berth and the amount of back-up land needed for cargo has changed dramatically; while one- or two-hectare terminals had to be replaced by facilities of 10-15 hectares and more, at the same time large amounts of harborfront land were being released for reuse (Hayuth 1988, 55; Mayer 1988, 88-89).

Most ports could not find this space within their old boundaries. The result has been a very general relocation of port terminals throughout the world: the relocation of port functions to "bluecoast sites," producing a "retreat from the waterfront" (Hoyle 1988, 12-13). Tilbury, Bremerhaven, and the new Rotterdam and Antwerp terminals are all essentially new facilities; the Port of New York Authority created an entirely new terminal in Port Elizabeth, New Jersey, to replace the finger piers of Manhattan; Marseille in effect moved to Fos; other ports -- Seattle, Kobe -- reclaimed land (Hayuth 1988, 55-56). Containerization and intermodality also required that railheads be brought directly on to the waterfront, as at Long Beach and Seattle (Hayuth 1988, 56). All this left large amounts of land for redevelopment, as at Seattle, San Francisco, Boston, Savannah, and Baltimore and (more belatedly) in European ports (Hayuth 1988, 57). The process created a uniquely valuable opportunity for city planners, somewhat complicated by the fact that often the land is not all released at once (Hayuth 1988, 63).

1.2 The Movement of Industry

Parallel with the movement of port functions came the movement of port-based industries. No longer dependent on the break-bulk function or on labor concentration, they have migrated to other parts of the metropolis or to green-field sites (Hoyle 1988, 13). The retreat from the waterfront thus produced the phenomenon of the "abandoned doorstep," the original land-sea interface zone which emerges as a spatial and functional vacuum (Hoyle 1988, 14).

But this was not all. The recession of the late 1970s and early 1980s brought into sharp relief the structural problems of manufacturing industries in many of the great port cities. Established at about the same time as the port facilities themselves, these industries suffered from a combination of

outmoded buildings and plant, lack of access to national highway systems, high labor costs, and inflexible labor practices. In city after city across the western world, there were plant closures on a huge scale as firms either relocated to greenfield sites or even to other regions and countries, rationalized their production systems, or simply went bankrupt (Bluestone and Harrison 1983, Massey and Meegan 1982). The relationship between deindustrialization and port restructuring is a complex one; but the two phenomena share some underlying structural causes, and the impacts of each reverberated on the other, bringing a cycle of downtown for troubled urban economies which the upturn of the mid-1980s failed entirely to rectify.

2.0 The Impetus to Re-Use

But the scene was not all negative: at the same time, there was a big growth in disposable income for leisure and prestigious maritime living, which was accompanied by a change in public attitudes toward coastal areas in general and waterfront areas in particular (Hayuth 1988, 52). Thus, as waterfront sites become available, competition arose for the redevelopment of at least some of the most advantageous locations, both from land-based concerns such as housing, restaurants, and shopping complexes, as well as from maritime interests like marinas and recreation and water-based facilities. This represents what has been called the return to the waterfront: the use of the abandoned doorstep for other uses (Hoyle 1988, 13-15). Virtually every North American waterfront city has taken some steps to rediscover and reuse this zone: in Europe, London, Liverpool, and Bristol have transformed their docks, while Marseille has converted its entire Vieux Port into water-based recreational navigation (Hoyle 1988, 15).

This is no easy task. As one development expert has put it: "In comparison with other forms of urban development -- by almost any measure you wish to choose -- the waterfront is the most difficult and complex area to develop. It is "the tough stuff" (Samperi 1986, 47). Yet there is huge interest, because of three obvious major factors: the availability of large, underutilized land areas in the heart of cities; the tremendous surge in the service sector of the economy; and the near-magnetic relationship between the waterfront and people, which could at last be re-established (Samperi 1986, 47-48). This poses a huge challenge to local city authorities (Riley and Shurmer-Smith 1988, 43-44, 46-50).

The problems are partly physical, partly financial, partly organizational. In the first place, waterfront sites are the very reverse of new suburban development: each has its special characteristics and special problems. Boston's Quincy Market is one-third of a mile from the water, while Seattle's waterfront zone is only 100 yards away; San Francisco, Boston, and New York have long linear shorelines which give no single obvious focus to development, while Baltimore has an enclosed harbor which proved highly propitious for the sort of development that was put there (Wrenn 1983, 25, 27). Previous heritage, in the form of old buildings, varies widely from site to site; where they exist, plans invariably provide for their restoration, but the economics may be very difficult, as was claimed at London's St Katherine Dock, where a notable warehouse complex was demolished. Waterfront access, a critical factor, is often poor because of highways, bridges, or railroad tracks (Wrenn 1983, 32). There are very often institutional barriers in the form of military or other restricted land, incompatible land uses, fragmented ownership, inaccessibility, and poor soil conditions (Wrenn 1983, 32-33, 40).

The institutional and political context is at least equally difficult. Different groups have different perceptions of the ideal waterfront: the

former dock workers want to see a return to the old economy, some community activists want to see non-profit uses such as parks and community centers, while commercial developers and local treasurers are interested in maximizing commercial potential. Thus, in Baltimore, one group opposed the development of Harborplace, the festival marketplace (Wrenn 1983, 30).

3.0 Strategies and Agencies

In North America, it is claimed that virtually every water city has had some degree of revitalization, even when there was minimal previous waterfront activity; in Western Europe the move came a little later (Pinder, Hoyle, and Husain 1988, 247). Generally the initiative has not come from the port authority, which prefers to respond by concentrating on areas with port potential; most port authorities do not focus on problems of reuse, and their perception becomes that their older port areas should be abandoned (Pinder, Hoyle, and Husain 1988, 250).

Perhaps as a result of this perceptual gap, redevelopment did not automatically follow; in most ports, there was some delay in problem recognition (Pinder, Hoyle, and Husain 1988, 252). The first steps were taken in Boston (Union Wharf) and Baltimore at the end of the 1950s. From then to the end of the 1960s, the idea of reviving the waterfront was based only on opening up the waterfront physically through public parks, as in New Orleans, Boston, and Toronto. Then came two key concepts which are a remarkable instance of the global diffusion of innovations: the idea of rehabilitating older areas, first in Boston at the end of the 1950s, then in a few older British cities, and the idea of pedestrian streets, starting in Europe in the 1960s.

During the mid-1970s, as the world recession gave first priority to the creation of new urban activities, these waterfront operations were progressively

integrated into multifunctional projects, as in Boston and Baltimore; these projects were widely reported and much visited, and so became models for similar development almost everywhere. Other early examples which served as models were San Antonio, started as long ago as 1929, and Fisherman's Wharf and Ghiradelli Square in San Francisco in the 1960s. The 1980s have seen an extension into a variety of strategies to revive decayed areas around city centers, with new institutional actors: HUD (Department of Housing and Urban Development) financing in the USA, the Urban Development Corporations in Britain. Such operations commonly cover a wide area, at least an entire neighborhood, and sometimes -- as in London Docklands -- an entire sector of a city (Chaline 1988, 699-703). All involve complex public-private partnerships. Invariably, because of their scale, they involve a wide variety of land uses and activities -- commercial, retail, industrial, residential, and leisure -- amounting in the biggest cases to the creation of a "new town in town."

City authorities were normally in the forefront of the process, though not always; in Baltimore and Toronto, other interests took the lead. Cities learned consciously from each other, and tended to imitate models of success they found in operation elsewhere. City authorities then tended to take the early initiative in land clearance, particularly since they felt they had a responsibility to provide the basis for redevelopment. But then, there was a strong tendency for the commercial input and influence to increase over time, as these commercial interests appreciate that a critical market potential has been reached; they overcome a perception barrier. Specialized companies have emerged, and emulation has been important. Commercial developers have been strongly placed because the supply of developable land has generally exceeded demand, and developers may be able to offer an apparently attractive deal based on their track record

elsewhere. Public expenditure limits have also aided this process (Pinder, Hoyle, and Husain 1988, 252-255).

Because of the scale and complexity of the redevelopment, waterfront regeneration has been peculiarly associated with a new generation of mega-developers who began to arise in the 1970s. Olympia and York, who started in Toronto and are completing the massive Canary Wharf scheme in Docklands, are the archetype; another very different model is presented by James Rouse, who earlier worked on new towns but who then pioneered the concept of the festival marketplace. But even they cannot work alone. A characteristic of waterfront redevelopment is that, in almost every case, it demands a public-private partnership involving at least the city and the developer (often, more than one), but often including also one or more special-purpose agencies. We return to this question below.

So, though public-private partnership is the usual description, demand-led planning may be more accurate. Revitalization with a strong social content is rare, though Rotterdam provides an exception. Pure private commercial developments are equally rare, though here Hong Kong is an example. Rather, the usual model is public-private involvement in a stereotypical development that includes marinas, other water-based leisure, museums, heritage buildings, restaurants, desirable housing, perhaps a hotel and a conference center in a large scheme. But the model is not invariable, and there has been a tendency to shift to more commercial content over time as success seemed assured; interestingly, local community groups have proved to have singularly little impact. Equally interesting is the tendency of all developments to converge toward a norm, which may be due to the presence of a small group of developers, or to imitation (Pinder, Hoyle, and Husain 1988, 255-257).

Also notable is the fact that the nature of the agency tends to vary somewhat from country to country: in the USA there is the emergence of a particular kind of property company specializing in this work, notably Rouse; in Canada the federal government has played a role; in Britain the UDCs; in France responsibility has been very divided among the city, the port, and (in Paris) the regional authority, and private capital has not shown the same interest (Chaline 1988, 704-706).

4.0 Design and Implementation

An interesting point is that detailed plans are rather rare. For this, apart from the general anti-planning ideology in many countries during the 1980s, there seem to be several special reasons. Higher-level, strategic regional plans seldom devoted much attention to the shoreline, not seldom even failing to predict the scale of the reconstruction that was imminent. Reconstruction was given to *ad hoc* agencies -- Harbourfront in Toronto, the London Docklands Development Corporation -- who interpreted their brief as the encouragement of private capital and the fastest possible revalorization of the land, which entailed a very pragmatic, flexible approach. In London Docklands, for instance, the LDDC was at first so doubtful about the prospects for the commercial area in the Enterprise Zone that it encouraged low-density, low-rise, low-rent unit development; within five years some of these were being demolished for major office schemes. But each city tends to have its own special approach, ranging from the formal plan (as in Amsterdam), through planning by simple objectives but with no detail (London), to a successive series of changes, an "empirical urbanism," or blow-by-blow reconversion (New Orleans) (Chaline 1988, 710-711). Nevertheless, some features seem common to many of the schemes: encouragement of tertiarization, or the shift to services; reinforcement and extension of the existing CBD; gentri-

fication, sometimes against local opposition; restoration of old buildings to new uses, generally commercial; and a financial revalorization that sometimes, initially, involves a very large element of risk (Chaline 1988, 713-714).

This, perhaps, is why so many of the schemes prove to look alike. Main land uses are a wide variety of residential, recreational, and associated retail and service activities. Recreational uses include marinas, museums, many commercial facilities related to the water amenity and open space both natural and developed; retail and service uses are typically "festival market," i.e. recreation-oriented. Competing for space are "post-industrial" activities such as high-tech industries but especially service-oriented offices. An ancillary element is a renewed emphasis on waterfront transportation in order to attract or reinforce commercial redevelopment. Waterfront revitalization has been associated with re-use of abandoned rail tracks in many cases (Tunbridge 1988, 69-70). These processes are remarkably similar all over the western world.

Though the resulting complex of uses may -- and indeed should -- have an organic feeling, the achievement is by no means easy. The project needs to be planned in discrete stages, to avoid the construction-camp appearance; maximum use needs to be made of existing buildings and structures, and of the neighboring street pattern; new and old structures need to be carefully combined into streetscapes; careful attention needs to be given to encouraging a high level of street activity, at least on commercial streets; public open space should be fairly minimal, as in traditional urban areas, both to maintain profitability and keep architectural texture (Eckstut 1986, 54-56). All these in combination amount to a formidable design brief.

In the actual process of revitalization, Samperi (1986, 49-52) identifies six crucial hurdles to be overcome:

- (1) Land Acquisition: this is the toughest initial obstacle, involving extensive negotiation and perhaps protracted condemnation proceedings. Public participation often reveals developers' intentions and triggers land value escalation, yet there is no alternative.
- (2) Environmental Review: this is essential, because the projects tend to have great sensitivity. It proves better to move slowly rather than get it wrong.
- (3) Construction Complexities, including complex construction methods and necessary infrastructure. These complexities are present at almost all waterfront sites.
- (4) Transportation Access: typically, these areas are highly inaccessible because of location and artificial obstacles such as old railways, and remedying them needs government involvement which may be very time-consuming.
- (5) Master Plan Development: this is the essential ingredient that leads to both public and private approval. This stage involves a great deal of give-and-take, involving community involvement which is essential.
- (6) Community/Business Acceptance: this involves the complex negotiations after Master Plan stage between the developers and the community, who almost inevitably have opposite interests.

As Samperi concludes, "Getting it started is not easy": most of the great waterfront projects -- Toronto, Boston, Baltimore -- took as long as ten years from development of a plan to start of construction, and another ten from this point to completion. This time factor, then, must not be underestimated (Samperi 1986, 53).

5.0 Interests and Controversies

Waterfront development has engendered controversy: in some places (Bordeaux, Montreal) the port has tried to maintain traditional port activities;

there is a conflict between the aim of profit and the idea of opening up to the public (Chaline 1988, 706). There are several kinds and levels of friction: between governmental agencies with different powers and responsibilities (including the federal-provincial split in Canada, particular where the federal government owns the land. The City of Vancouver and the Province of British Columbia were initially at loggerheads over BC's "megaproject" approach to Expo 86; BC aimed at profitability and it was largely immune from planning control by the city. In Montreal, conversely, the federal government commission has held up redevelopment. Even within any one level of government, a whole set of departments may have overlapping jurisdictions (Tunbridge 1988, 77-78).

Another conflict is social versus commercial motivation, most visible in the largest cities. In 1987 the alleged commercial overdevelopment in Toronto became a national political issue. Growing pressure for high-income condominium redevelopment is at the core of this controversy here, as in Boston and Halifax. Public access, both physical and visual, recreational open space, and lower-income housing are often at risk. Since these areas are among the few remaining to house the displacees of the gentrification process, this risk may be extreme (Tunbridge 1988, 80).

Toronto Harbourfront was originally intended to be recreation-oriented, but then the federal Harbourfront Corporation was given a target of profitability by 1987, leading to a plan to concentrate high-rise condos there. The federal government froze further development in February 1987 pending a review of Harbourfront's policy, despite the fact that prior guarantees had been given to developers. After much tension, high-level collaboration between all three levels produced a compromise plan (Tunbridge 1988, 80-81).

Conservation versus redevelopment is an associated issue; generally the conservation element has become stronger but not in all cases, for instance

grain silos in Buffalo or Toronto. National parks organizations have recently been active in Quebec, Boston, and Lowell. Generally, revitalization participants have come to realize that conservation and profit are compatible, particularly where (as in the United States since the 1980s) tax incentives are available (Tunbridge 1988, 82-3).

6.0 Case Studies

Boston

If any city deserves credit for being first in the waterfront revitalization stakes, it is probably Boston. Boston rehabilitated its Scollay Square, a run-down "sailortown," for a new City Hall and government complex, in the 1950s; then Quincy Market was refurbished as Faneuil Hall Marketplace in the mid-1970s, with a link to the landfilled waterfront via the Walkway to the Sea which terminates in a park on the site of demolished fishing sheds. The Marketplace, subsequently augmented by Marketplace Center, built over the Walkway, was the prototype "Festival Marketplace," the first Rouse Corporation waterfront enterprise, and it remains one of America's biggest tourist attractions. The adjacent waterfront warehouses of the North End were contemporaneously refurbished into expensive condominium apartments, marinas, and associated amenities. In the 1980s, within a planning concept called "Harborpark," revitalization has proceeded north, south, and recently east of the historic core, with the Fort Point Channel's warehouses being re-used as offices, museums, et al. The former decaying piers of South Boston now have a cruise terminal/world trade center, commercial elements including restaurants, and a contentious high-density mini-city proposal called Fan Pier. There is now growing conflict with East Boston communities and with Massport, the state-owned port authority (Tunbridge 1988, 72-74).

Baltimore

Baltimore is commonly coupled with Boston as the outstanding case of waterfront revitalization in the United States, and has provided a model for such schemes worldwide. In fact, it has long been a city with severe problems of population and economic decline: while the metropolitan population nearly doubled between 1940 and 1980, that of the city declined from 950,000 in 1950 to 787,000 in 1980. The city has lower incomes and higher unemployment than the rest of the metropolitan area. Redevelopment was also helped by the strong-mayor system with long terms in office, of which the most notable was that of Donald Shaeffer between 1972 and 1986. It is suggested also that Baltimore's nearness to Washington helped it get federal grants (Law 1988, 151).

The first development was the Charles Center, which arose from private initiative: in 1955 the Committee for Downtown began to work, producing a redevelopment plan which was accepted in 1959 with the establishment by the city of the Charles Center project. The city bought the land, cleared it, and sold plots to developers according to the plan. Over 200,000 square meters of offices, 40,000 square meters of retail, plus hotel, theater, and 300 apartments were provided. The early success of the scheme, plus the state of the Inner Harbor and the availability of finance, caused the Greater Baltimore Committee to propose redevelopment in 1964. It included 22 hectares of park, offices, housing, and public and tourist buildings. The city accepted the plan in 1965 and established the Charles Center-Inner Harbor Management Inc. to manage both projects. But it was not until the late 1970s that things came together, by which time the leisure, entertainment, and tourist element was increased (Law 1988, 151-153).

The result was Harborplace, controversial at first but agreed in 1978. Rouse carefully vetted Harborplace tenants, choosing 140 from over 2,000. The mix is 12 restaurants and cafes, 40.7 per cent gross leasable area; 20 market

and other foods, 13.7 per cent; 37 small eating places, 10.6 per cent; 36 specialty shops, 25.0 per cent; 35 pushcarts and kiosks, 5.3 per cent; and 2 flowers and produce, 4.2 per cent (Wrenn 1983, 100).

The complexity of the arrangements can be illustrated by the financing of the Hyatt Hotel on Baltimore Inner Harbor, which cost \$40 million: \$20 million through a first mortgage from an S&L, \$12 million second mortgage by the city, mostly through UDAG, \$4 million a garage by the city, \$1 million up-front by Hyatt, and \$3 million additional loan by Hyatt. Hyatt manages the property under an agreement for which it receives a percentage of the gross revenue plus an incentive fee; the profit is one-third to the hotel and two-thirds to the city; the hotel opened in October 1981 and all partners are very enthusiastic (Wrenn 1983, 98-99).

Harborplace proved a great success, putting the city into the top tourist league: within 2-3 years of opening, it had 18 million visitors a year, more than Disneyland; summer visitors to the city's central area from outside the city increased from 2.25 million in 1980 to 7.5 million in 1986, and their expenditures from \$125 million to \$650 million. Between 1981 and 1987, seven new hotels added 22,874 bedrooms. Big public money was involved here: the Hyatt Regency (1981) required a \$10 million Urban Development Grant, but then private money poured in: in 1983-87, 95 per cent of all investment was from private funds as against 55 per cent 1968-83. In turn this has impacted upon the CBD generally, with 205,000 additional square meters of office space 1984-6 alone. Yet, immediately around the center, poverty persisted (Law 1988, 156-157).

St. Louis

Laclede's Landing is a nine-square-block historic district marking the place where Pierre Laclede and Auguste Chouteau established a trading post in

1763. It is the only remaining portion of the street pattern of the city that is laid out in the original survey for the French village, with narrow rectangular street blocks separated by narrow 32-foot streets. The area was rebuilt in the mid-19th century after a fire, but decayed towards the end of the century because the railroads destroyed the river trade. By the mid-1960s, it was a zone of abandonment; at that point the city planning commission discovered that it would qualify under Chapter 353 of the Missouri Urban Redevelopment Law, which provides for a 25-year property tax relief for selected projects in blighted areas and for special eminent-domain powers. Early attempts broke down, and by 1974 the area was 75 per cent vacant. At this point a group of businessmen, property owners, and government officials met and resolved on a development corporation. By the end of 1975, the Laclede's Landing Redevelopment Corporation was designated. This included a development plan which guided subsequent redevelopment. Property owners get the tax concessions provided their plan is approved by the Corporation. The entire project has to follow Urban Guidelines as to exterior and interior design issues. In August 1976, the area was placed on the national register of Historic Places, thus making federal grants available to owners. Also, under the Economic Recovery Act of 1981, developers can obtain accelerated depreciation for projects that include the rehabilitation of significant historic buildings. By end-1979, over \$38 million had been committed by private investors to acquire and rehabilitate 30 buildings; this means that of the 93,000 square meters to be rehabilitated, over 56,000 square meters has been financed and 47,000 square meters has been leased, including over 37,000 square meters of office space. The history shows the value of establishing a Redevelopment Corporation which avoided most traditional obstacles to the redevelopment process, and also the value of incremental improvements that build one upon the other, as well as the value of a develop-

ment plan. The city's investment was only \$1 million as against private investment of \$30 million (Wrenn 1983, 139-145).

Toronto

The Toronto council from 1972 was controlled by a reform group whose central-area plan of 1978 was designed to stop CBD expansion into residential neighborhoods. However, the plan had the effect of opening development possibilities on that side of the central area which had no neighborhoods or organized interest groups; that is, the waterfront or southern side. The plan virtually ignored the redevelopment potential of this vast tract. Yet Toronto was fast becoming the dominant high-level service city of Canada, with two-thirds of the entire metro area employment in services, 55 per cent of which are information-processing. One result is an affluent labor force and extensive gentrification in the inner city (Desfor et al. 1988, 99-101).

The Toronto Harbour Commission began to run into debt in the mid-1960s and early 1970s, with the decline of traffic through the St Lawrence Seaway by more than half between 1969 and 1974 and the out-movement of industry. So the Commission began to promote residential and commercial uses next to the downtown instead. The first such agreement occurred in 1964, but, during the 1970s, reform-minded commissioners held a majority and stopped further redevelopment, until another change in the 1980s. Harbourfront was established in 1972 when the government set aside 35 hectares as an urban park, claiming that its aim was to stop high-rise redevelopment. After an indecisive few years, the Harbourplace Corporation was established in 1978 to permit more effective redevelopment, and produced a plan with commercial and residential development set amidst parkland. But continuing public service burdens caused Harbourfront to propose a self-sufficient strategy (Desfor et al. 1988, 103-106).

Two other actors were the rail systems, CPR and CNR, which together controlled some 80 hectares of rail yards between the Central Area and Harbourfront, whose value for rail operations had declined sharply; in 1968 they proposed a huge redevelopment called Metro Centre, first approved and then abandoned in 1975. But in the early 1980s the railways returned with another scheme, the largest in North America at that time. The commercial content was equal to half the entire central area financial core. Controversy caused the promoters to offer free land for the Skydrome. The scheme got approved partly because, in the redevelopment boom of the mid-1980s, the plan was not threatening deconcentration policies. The story demonstrates the way in which the market-driven redevelopment of the waterfront is mediated by the peculiarities of the local political system and the corporate interests of local proprietary institutions -- in this case the Toronto Harbour Commission, Harbourfront, and the railways, together with a more sympathetic council and the use of the Skydrome as bargaining chip (Desfor et al. 1988, 107-111).

Vancouver

Vancouver is the most spectacular Canadian case of waterfront revitalization so far, with large-scale redevelopment at a number of locations, through different agencies and with different outcomes. Granville Island was revitalized through the 1970s by the Federal government, while during the 1980s the railroad yards on False Creek have been entirely redeveloped by BC Place, a British Columbia provincial corporation, initially for the 1986 Expo 86 World Fair. This has left 64 hectares of prime development land, recently open to bids from private developers into a mixed commercial-residential area. This is the largest urban renewal scheme in North America. The Federal government contributed

Canada Place on Burrard Inlet, including a conventional center, cruise-ship terminal, hotel, and world trade center (Tunbridge 1988, 74-75).

London

The London Docklands Development Corporation was established in 1981 by the Secretary of State for the Environment, using the powers in the Local Government Planning and Land Act 1980. The Corporation is broadly directed to promote physical, economic, and social regeneration in the area, and is given a strong combination of power, incentives, and money. The intention was to use public/private-sector investment, a less bureaucratic planning system, and incentives to attract large private investment, using a planned leverage ratio of 1.5:1. It has wide powers of land acquisition through vesting orders, compulsory purchase orders, and purchase by agreement, which it has used to build up a substantial land bank. Its Chief Executive claimed that it used these powers to become an "unbureaucratic, fast-moving operation . . . with a flexible development plan" (Church 1988, 204, q. Ward 1986). It has been able to ignore statutory planning powers and offer a flexible planning regime, backed by substantial Treasury money. Between 1981 and 1986, it spent 77 per cent of its budget on land acquisition, reclamation, and treatment. Economic and job-creation objectives have not featured in its general objectives, being seen as a by-product of the regeneration process (Church 1988, 203-206).

Church concludes that the LDDC has been successful in terms of some of its own broad objectives: it has successfully disposed of 270 hectares of land, and 80,000 square meters of office and industrial space have been created, the majority in the Enterprise Zone. The £1.2 billion of private investment between 1981 and 1986 gives a leverage ratio of 1:6.4, or 1:9 including net expenditure, though this entirely excludes non-LDDC public investment, for instance on main

roads. Some 5,677 jobs were created by 1985, the majority in sectors that the LDDC had been trying to attract. But the best figures suggest that 64 per cent of the new jobs were transfers while only 36 per cent were new. But other figures suggest that lost jobs almost equalled the new ones. These figures exclude Canary Wharf's projected impact. The Roger Tym figures suggest that 19 per cent of firms in the EZ were attracted by financial incentives, 18 per cent by availability of premises (Church 1988, 207-212).

But, in any case, the LDDC has quite deliberately and opportunistically exploited forces in the wider economy, for instance the relocation of Fleet Street. Behind this were the major restructuring forces which made London one of the few true global service centers. But some jobs were deliberately squeezed out by the LDDC, because they conflicted with development opportunities. More significantly, the jobs that are being provided offer few opportunities for local labor; official monitoring by both LDDC and Tym suggests that only 28-29 per cent of employees in the Isle of Dogs were local, and as much as 60 per cent may come from outside East London (Church 1988, 212-217).

Rotterdam

Rotterdam's approach is unusual among major waterfront revitalization schemes, because it is dominated by non-commercial concerns. Outside the central port area or Waterstad, the two strategies are to rehabilitate substandard older housing and to built new low-income housing on vacated docks and other redundant areas (Pinder and Rosing 1988, 119-120).

Here there are two radically different outcomes, one outside the Waterstad and the other within it. Outside, social concerns have dominated every detail of the process, while inside there is a private-public coalition very like those found elsewhere. But even here, demand-led planning has not

dominated. The city itself has been a heavy investor, no commercial leisure functions have been given a high profile, and change has reflected the planners' preferences. Also, redevelopment here has not displaced a low-income population; that happened in 1940. Thus it can be argued that Rotterdam has got the best of both worlds (Pinder and Rosing 1988, 125-126).

7.0 Conclusion

It would hardly be an exaggeration to say that waterfront revitalization was the major event in urban planning and development during the last decade. It symbolized the 1980s in the same way that motorway construction and new town-building characterized the 1950s and 1960s. For this, there were very good reasons. Technological change brought unprecedented pressures on large areas of land around major city centers. Suddenly stripped of their previous port or industrial functions, they were suddenly valueless yet with huge potential value. But realizing this value demanded a sudden once-for-all shift from the manufacturing and goods-handling economy and into the informational and personal-service economy, especially that part related to leisure, recreation, and tourism. It inevitably took time for developers to react to the new opportunities, and sometimes longer for local city administrations and political leaders to adjust to the new reality. A lead came from a few American cities which were early affected by these changes, and which had strong political-business coalitions; in two of these, Boston and Baltimore, a new type of developer later played a crucial role by correctly sensing that there were new and valuable leases for derelict waterfront land. Global imitation for the most part did the rest. But it is by no means clear that every place can benefit to the same degree, and in the same way, as the early pioneering examples. The final verdict is not yet in, and certainly must await the passage of the current global recession.

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