Introduction to "Political ecologies of urban waterfront transformations" ☆

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The papers in this special issue focus on the political ecology of waterfronts in selected cities in Europe, North America and the Caribbean. The papers incorporate emphases on the myriad inOuences that different scales of social and environmental policy development and implementation, planning decisions, infrastructure funding, investment and ownership practices, and public engagement, for example, have on the social and ecological processes that occur on urban waterfronts. We posit that urban waterfronts are interesting and complex spatial locations that, when studied with attention to broader transformative processes as well as the changes that occur within the scale of the urban waterfront, allow for new insights into the production of nature, patterns of social entanglement, and political-economic configurations in cities.

Keywords: Waterfronts, political ecology, urban planning, social construction of nature, urban policy

Introduction

Urban waterfronts, once again, are generating considerable debate about their role as spaces of promise where struggles for the city are enacted. While waterfronts have always been special places where land and water meet, they have recently become sites where urban restructuring processes are doing battle (Basset et aI., 2002; Moulaert et aI., 2003). Contemporary urban waterfront transformations both reflect and constitute changes in governance, economic regulation, and societal imaginaries of the non-human environment. The study of the current wave of urban waterfront transformations is especially important at this time not only because of the role of urban waterfronts in economic restruc-

turing, but also because intense changes are occurring in port cities that involve major human interventions in the non-human environment. In this special issue, these transformations are examined by scholars concerned with the regulation of urban political economies and the re-structuring of governance practices (Hagerman, O'Callaghan & Linehan, Laidley), urban ecological issues and societal relationships with nature (Kear, Laidley, Wakefield, Hagerman), theories and practices of urban planning (Dodman, Hagerman, Kear), and cultural politics and civil society actions (O'Callaghan & Linehan).

The papers in this issue carry forward earlier research by addressing current debates on the politics of place and space and by acknowledging a fundamental need to recognize spatially demarcated processes and institutions. They also recognize that waterfront change is constant and has a long history that predates the well-known and highly publicized commercial success of developments in Boston and Baltimore. Those developments were part of a wave of development that was sparked by economic restructuring and technological innovations, and is generally understood to have begun in the 1970s.

During that decade and the 1980s, many North American and European port-cities reported that decaying piers and expanding inter-city blight were associated with social pathologies and the subject of much concern among urban residents and local, regional and national governments. Waterfront lands were frequently characterized as an underutilized resource.

In 1979, for example, a group of scholars, planners and politicians met in Cambridge, Massachusetts under the auspicious of the US National Academy of Sciences and its Urban Waterfront Group to consider problems and opportunities associated with urban waterfronts. The conveners of this group noted that rapidly changing shipping technology for handling of cargo (e.g., containerization) had "created major changes to the use of waterfront lands," and that there is a "cycle of development, deterioration, neglect, and reuse of urban waterfront lands and the range of environmental issues inherent in the cycle (Committee on Urban Waterfront Lands, 1980, p. 4). The cases presented and the follow-up discussions focused on many North American cities that were suffering from the consequences of closed-down or relocated waterfront related industry and shipping facilities.

Following in this tradition, the Department of Geography, University of Southampton, UK hosted a major international conference in 1987 on port cities and their waterfront developments. The conference and subsequent edited volumes (Hoyle et aI., 1988; Hoyle, 1990) examined a growing obsolesce of once vibrant waterfronts as economic restructuring, new shipping technologies, and the closing down and moving out of industrial establishments took hold. There were reports of sailor-towns, which once provided rough and bawdy services for a transient workforce badly in need of shore leave, 'drying-up' as large gangs of powerful longshoremen were replaced by capital intensive equipment. Hoyle et al.'s (1988) framework for understanding historical-geographical patterns of city-port relations identified successive stages of waterfront development (primitive city-port, expanding city-port, industrial city-port, retreat from the waterfront, and redevelopment). According to his model, changes in patterns of economic activities and new technological developments were the primary forces that gave rise to new spatial and functional relations between the port and its city. Also at that conference the term 'water-frontier' was introduced (Desfor et aI., 1988). According to its authors, the term was not meant to evoke an image of the city where rugged, self-sufficient pioneers opened up wilderness regions. Rather it was intended to remind us of North America's preoccupation with spatial expansion and social displacement in cities, and to indicate that growth of a space economy was achieved by the actions of financial institutions, land-development corporations and the state and its agencies.

In the two decades since that conference, change on urban waterfronts has proliferated. There have been major development projects from Oslo to Hong Kong, from Dubai to Glasgow, and from Rio de Janeiro to Vancouver. We argue that the current wave of urban waterfront developments should be analysed with conceptual frameworks that recognize a particular territory as a place with networks of interwoven non-territorial and socio-natural processes, which operate simultaneously at a variety of scales. The once intensely strained relations between port management organizations and interests representing non- industrial uses have entered a new phase. Recently published work has argued that once again waterfronts are being re-configured in light of port consolidations and world trading patterns (Schubert, 2001), new tensions from post 9/11 anti-terror port security initiatives (Cowen and Bunce, 2006), and the complexities associated with globalized urban spaces (Basset et aI., 2002; Desfor and Jørgensen, 2004). In many port cities, though, industrial and shipping agencies have reformulated their positions with non-port-related interests in their struggles to determine primary land uses on the waterfront. It appears those earlier battles have been largely won by proponents for residential, entertainment, leisure and mixed-used commercial developments.

Waterfronts matter

Essential to our argument about the usefulness of studying urban waterfronts is a need to distinguish between the waterfront as a geographic territory and the waterfront as an abstract space. Lefebvre's opening hypothesis in *The Urban Revolution* speaks to this distinction. He suggested that "(S)ociety has been completely urbanized" (Lefebvre, 2003, p. 1). The force of Lefebvre's hypothesis is its recognition that the urban extends far beyond cities' administrative boundaries and encompasses relationships with the entire world, thus creating an urbanized society. This process of urbanization is constructed through a diverse set of historically contingent trans-territorial relations that exist on a global scale. Recognizing this vast network of material, discursive and virtual linkages through which urbanization operates, we accept that using a geographically bounded territory fetters our understanding of the dynamics of change. Nevertheless, territorially defined cities and waterfronts do exist and we seek to reconcile the rich and varied everyday experiences we have with them with more abstract space-relations.

As the starting point, then, we accept the conventional notion that urban waterfronts can be thought of as geographical territories with their particular ecologies, economic systems and identities. Our experiences with these physical places may be remembered in a whole host of ways: working in a

water-related industry, strolling at the water's edge, viewing departing or arriving ships, swimming, sailing, and seeing grain elevators rising on the horizon, or longshoremen loading and unloading freighters.

Although these are frequently deep and enduring images, we also believe that the dynamics of urban waterfront change needs to be analyzed and interpreted with non-territorial spaces in mind. Amin (2004) challenges the completeness of territorially defined zones. He suggests that the integrity of territorial place is confronted by myriad implications of global networks of organizations and institutions with their "variegated processes of spatial stretching and territorial perforation" that bring a "world of heterogeneous spatial arrangements in terms of geographical shape, reach, influence and duration". In addition to the material perforations, many virtual flows of varying duration and length puncture conventional notions of place. Not the least of these non-territorial forces are those associated with the non-human and bio-physical. And this leads us to our interest in political ecology.

Political ecologies of waterfront transformations

The study of urban waterfronts is enhanced by a political ecological approach because it allows for a sifting through of myriad social-natural 'productions' in the historical transformations of these urban spaces. We find this approach allows for a conceptualization of waterfront transformations that: (1) incorporates analyses of the complex and fluid connections in society and nature, and further, the inseparability of society and nature in the production of these landscapes; (2) includes relationships between urbanization, scale, and policy in urban waterfront planning and development; and (3) provides for analyses that view urban waterfronts as subjective, open, and constantly changing areas for research rather than static and insular sites of investigation.

Research in political ecology has grown in relevance since the 1980s, often considered the decade that sparked intensive scholarly work on the state of the natural environment, environmental degradation, and insights into the production of nature. During the 1990s, political ecology research connected with growing debates on scale and social constructivism and focused on case studies in localized contexts. As a result, political ecology has now become not only a way of conceptualizing the many relationships between ecological spheres and patterns of political decision-making, but also an approach for understanding how representations of nature are socially constructed. An important contribution of political ecology research has been the dismantling of scholarly boundaries between historical-materialist analyses of the production of nature and representational

analyses of these contexts. Swyngedouw notes that, "the production of nature includes both the material processes, as well as the proliferation of discursive and symbolic representations of nature" (Swyngedou\v, 2004b, p. 20). The general turn towards synthesizing material and symbolic or representational analyses of ecological contexts has been assisted by a scholarly blending of thought between cultural studies research on such topics as social-natural cyborgs (Haraway, 1991) and cultural hybridity (Al Sayyad, 2001; Bhabha, 1994; Canclini, 1995), and scholars utilizing a Marxist framework to analyze the role of nature in capitalist production (Altvater, 1993; Benton, 1996; Harvey, 1996; O'Connor, 1998; Smith, 1984, 1996). Many of these scholars, along with those working specifically on political ecology research such as Braun (2002), Castree (1995), Gandy (2002), Kaika (2005), Keil (2003, 2005), and Swyngedouw (1996, 1999, 2004b), have encouraged the coalescence between these theoretical and methodological approaches. As a result, a robust and diverse political--ecological scholarship has emerged which applies both material and representational analyses to the impacts of local policy-making on ecological systems (Brownlow, 2006; Desfor and Keil, 2004; Keil and Graham, 1998); focuses on the impacts of neo-liberal de-regulation on the production of natural resources (Bakker, 2003; Braun, 2002; McCarthy and Prudham, 2004; Prudham, 2005) and examines the relationship between geographic and political-economic scale and social, spatial and ecological processes (Kaika, 2005; Paulson and Gezon, 2005; Swyngedouw'l 2004a).

Social production of nature on urban waterfronts

Urban waterfronts are places where material components of nature such as large bodies of water and land formations, and ecosystems such as woodlands and marshes, intersect with each other with great fluidity. The human manipulations of these material forms of nature have not left urban waterfronts as pristine natural places, but, indeed, have heavily influenced their transformation over time. The historical development of urban waterfronts has shown the intricacies of the inter-relationship between society and nature, but more importantly, how material forms of nature are constantly re-produced through social processes. Nature is an integral component of the history of power relations and economic production on urban waterfronts. During the development of mercantilist colonial cities, waterfronts served as port areas where the complex and highly political intersections between the sale of incarcerated African and indigenous slaves, the trade of natural resources, the development of trade cartels, and the institutionalization of colonial power took place. In the period of heavy industrialization in the mid- to late-nineteenth century, industrial

practices were institutionalized in port, canal and railway infrastructure development as well in land-fill procedures and the construction of factories adjacent to port sites.

The history of urban waterfront development provides examples of the ways material forms of nature have been transformed by a wide range of socio-political decisions. Indeed, in many cities in North America, South America and the Caribbean, the manipulation of natural urban-waterfront formations into spaces for industrial production and large-scale planning projects has defined notions of post-colonial nation building. We note, for instance, that the construction of large urban ports with extensive docks and piers on both the eastern and western seaboards of North America assisted the mass immigration processes of the late-nineteenth to mid-twentieth century that in turn fuelled economic production in both Canada and the United States. Another use of urban waterfronts was for 20th century wartime ship building and naval docking that augmented the development of military-industrial complexes in both Canada and the United States. In a different way from North America, the development of urban waterfronts in the West Indies helped to shape the identities of countries dominated by centuries of colonial rule. David Dodman explains in his contribution to this issue that the re-development of the waterfront of Kingston, Jamaica during the 1960s was meant to illustrate a marked departure from the colonial past in the form of new urban infrastructure. Dodman shows how the re-development of Kingston's waterfront was a modernist planning experiment designed to symbolize a new future for Jamaica's post-colonial independence.

While techno-economic innovations such as containerization greatly influenced the rationalization and consolidation of ports in the late twentieth century, industrial uses can still be seen on urban waterfronts despite a shift toward de-industrialization, globalization and suburban expansion. We now see a re-configuration of new kinds of industrial land uses such as media facilities, film production, advanced technology and knowledge-based industries that are more compatible with residential and leisure-based uses. In association with these altered economic activities, new approaches in the social production of nature have been undertaken and include: remediation of contaminated soil and ground water from earlier industrial practices, encouragement of more 'environmentally friendly' industrial enterprises, and the restoration of ecological spaces. These approaches, while apparently less invasive than those of earlier periods of heavy industrial production remain, nevertheless, new ways by which society re-produces nature.

Scholarly contributions on the social production of nature recognize the difficulties of making a separation between nature and society and have instead attempted to dismantle this modernist divide.

Castree (2001, p. 3) notes that "the social and natural are seen to intertwine in ways that make their separation - in either thought or practice - impossible". Swyngedou\v (1996. 1999) uses the concept of 'socio-nature' to describe inextricable relationships between society and nature and also to define socio-ecological products, which are themselves created as part of the social production of nature. Other terms that are used to describe produced nature are hybrids, cyborgs, or quasi-objects (Haraway, 1991; Gandy, 2002; Latour, 2004; Swyngedouw. 1996, 1999, 2004b). These 'things' denote products that consist of assemblages of inseparable social processes and material forms of nature. These products can be used to better understand situations in everyday life. For instance, a filtration plant that is located on a waterfront might be seen as a hybrid product of material nature (water) and socially produced nature (labor, waste products, policies, and political decisions that enter into the operation of the plant). Swyngedouw (1996, 2004b) points out that while hybrid entities are the products of "socio-nature", 'hybridization' is the process of socio-natural transformation. His work emphasizes that nature-society inter-relationships are continually re-made; they are not static but rather are instead fluid, complex and highly fluctuating. We consider this an important point for the analysis of the myriad processes of socially produced nature on urban waterfronts. The changing configurations of material nature and representations of nature on urban waterfronts are historically complex and inter-connected with different influences from varied scales of governance, policy and decision-making.

Urbanization, scale and urban policy

Analyses of socially produced nature have a particular resonance for urban waterfront locations. The burgeoning literature on urban political ecology illustrates how changes in the production of nature are concomitant with urbanization processes (Brand and Thomas, 2005; Brownlow, 2006; Desfor and Keil, 2004; Gandy, 2002; Heynen, 2006; Heynen et aI., 2006; Kaika, 2005; Keil, 2003, 2005; Swyngedouw. 1996; Heynen and Swyngedouw, 2003). Much of this literature uses scale as both a theory and method to assess the production of nature in cities and considers the urban scale to be a constantly transforming and inter-connected network of social, ecological and political processes. Transformations that occur at the urban scale are thus understood as processes that occur at scales other than the scale of the city, such as scales of human and non-human perception, the household, community, policy and planning, different levels of government, and so forth. This conceptualization of scalar inter-connectedness helps our understanding of socially produced nature and urban waterfront transformations. It assists in developing a profile of changes in governance

re-structuring, transformations in industrial practices as a result of globalized production systems, and shifts in spatial patterns of social inequalities from the constant re-shaping of land use and socio-economic stratification. We consider all of these processes to be highly influential in current urban waterfront transformations.

Literature on scale does not rest solely within the terrain of political ecology but it complements the development of political-ecological approaches. Recent discussions on scale begin from the position that social representations of power need to be spatially characterized (Brenner, 1998, 2000; *lessop,* 2000; Marston, 2000; Martin et aI., 2003; McCann, 2003; Sheppard and McMaster, 2004; Marston and Smith, 2001; Swyngedouw, 1999). Scale, as contemplated in the trajectory of levels from local to national to global, and the relationships and networks built within these levels, has become an important aspect of contemporary urban theory. McCann (2003, p. 160) summarizes the importance of scale for urban analysis by concluding that, "the politics surrounding changes in contemporary urban policy-making is a politics of scale". A proliferation of scales and scalar complexity, particularly as a result of global influences, is, as we have introduced, central to our concerns with urban waterfronts.

Globalization processes are processes of scale. Jessop writes of globalization as the "creation and! or restructuring of scales as a social relation" and "the stretching of social relations over time and space so that relations can be controlled or coordinated over longer periods of time…and over longer distances"(lessop, 2000, pp. 340-341). Reflecting on Jessop's discussion, Amin (2002, p. 387) suggests globalization would then entail a "jostling between spatialities" and this represents a condition with which he is not comfortable. Rather, he prefers a conceptualization in which "demarcations between spatial and territorial forms of organization might be blurring" (Amin, 2002, p. 387). Amin suggests a conceptualization of scale as being relational across networks rather than relative to other distinctive scales. While the terms "glurbanization" (see lessop and Sum, 2000) and "glocalization" (Swyngedouw, 2004a) describe the intersections between global and local spheres that connect at the urban scale, a relational definition of scale emphasizes the relationships of networks and actors found within scales (see Marston, 2000). By viewing urban practices as relational processes within a certain scale as well as being connected to and constitutive of other scales from the local up to the global, we can better conceptualize social and ecological transformations on urban waterfronts as scalar processes.

Analyses of ideological norms and values that are evident in these scalar intersections help us to explore different patterns of current urban waterfront change. First, ideological constructs are particularly evident in re-scaling of governance structures and

in creating policy at different scales. Urban waterfronts can be understood in terms of what Brenner (1998) has called the scalar fix; the way in which circuits of capital are successively territorialized, de-territorialized and re-territorialized at multiple scales. These processes thus create a fixed, hierarchical infrastructure for capital accumulation. In the current period of urban waterfront transformation we see complex levels of involvement from many public sector and private sector interests.

These many levels work in fairly complex ways but with a general view towards ameliorating conditions for investment and accumulation by revalorizing abandoned, contaminated or underutilized sites and developing new residential communities, commercial spaces, and recreational parks. The re-territorialization of urban waterfronts is also done through the creation of new government policies, for example the de-regulation and re-configuration of planning legislation, which creates a smoother terrain for investment practices. Importantly, the new scalar configurations of ownership, investment, and governmental policy on urban waterfronts are highly localized in their manifestations as each waterfront and each city has its own context-specific complexities. Urban waterfront planning and development is informed by public policies from a variety of levels of government from the local to regional and national-all operating simultaneously. McCann (2003), in his work on policy and scale, has noted that new forms of organizational stability or scalar fix are needed when previous strategies have not worked or are considered to be redundant by policy-makers.

We see that the introduction of new waterfront planning and development policies brings new complexity to the scale of the urban waterfront. The creation of new policy is a political attempt at creating organizational coherence and stability for a new cycle of development on urban waterfronts, largely inspired by a need for 'pump-priming' from private investment. New urban waterfront policies can be large and comprehensive in scale, vision and political cliental, such as the Toronto Olympic bid plans and the City of Cork's European City of Culture title for 2005 as respectively described in Jennefer Laidley's and Cian O'Callaghan and Denis Linehan's papers in this issue. These policies can also be relatively small in geographic scope but still have connections to other scales of political, cultural and environmental influence. Chris Hagerman's and Mark Kear's contributions to this issue both describe the fluid connections of neighborhood-Ievel policy and planning practices to city-wide governance objectives and municipal actors. Chris Hagerman observes the ways in which the City of Portland's manufactured profile of being an exceptional and livable city creates stark divisions in the planning of local neighborhood spaces. Mark Kear notes the role of the City of Vancouver's planning policy for

the small waterfront neighbourhood of South-East False Creek, and the connection of this policy to the City of Vancouver's Property Endowment Fund. Sarah Wakefield also illustrates this point in her assessment of the localized implications of the development of a recreational Harbour Waterfront Trail in Hamilton, Ontario and its connections to broader issues of environmental quality of life in the region.

The creation of new urban waterfront policy is augmented by discourses that legitimize and normalize political motivations. We note that the development of policy discourse at different scales and directed at urban waterfronts is a way of constructing a new social and environmental 'reality' that stimulates a re-thinking of political values and spatial uses. Rein and Schon (1997) consider this through the concept of "policy frames". They observe that policy frames are a means by which "facts, values, theories and interests are integrated," that, in turn, normalizes a certain and distinctive social narrative. Policy frames are ways by which different actors interpret rationales for development in different, similar or competing ways. This concept benefits new research on urban waterfronts because it shows how different actors or groups of actors, from and within various scalar contexts, inform the intent and objectives of policies. It also allows for an illustration of the discourses that course through different policies and plans pertaining to urban waterfronts.

Grand visions for a new waterfront are frequently invoked in discursive struggles over the future of new urban waterfront spaces. These discourses, which are often rhetorical in formation, are increasingly built upon a linking of social and environmental issues. This is noticeable in policy language that espouses a general desire for 'clean, green and healthy' waterfront environments, such as illustrated in Sarah Wakefield's study of Hamilton's waterfront trail. The more distinctive concept of sustainability, as outlined in Mark Kear's study of South East False Creek in Vancouver, for example, is now commonplace in new urban waterfront development policies and initiatives, including those occurring in Toronto, Canada (Bunce, 2006), and London, England (Raco, 2005). The discourse of livability, often compatible with tenets of sustainability, is also prevalent in new policies for urban waterfronts. Chris Hagerman's article discusses in great detail the impacts of the City of Portland's livability discourse on planning practices in the River and MacAdam neighbourhood districts of Portland.

Another common policy discourse is that of the 'global city', which outlines the development of large-scale urban waterfront projects based on the creation of healthy and clean waterfront communities as well as specific built-form spectacles that attract tourists and investors alike. Here, policy discourse centering on global city development accentuates an ostensible connection between these spectacular waterfront projects and increased economic prosperity and global recognition for the city. The 'global city' focus is highlighted by Jennefer Laidley in her discussion of the rationales for the 2008 Olympic bid in Toronto, and Cian O'Callaghan and Denis Linehan in their observations about the intent and repercussions of Cork's European City of Culture titie.

Political ecology and urban waterfront research

As with all relatively small geographic areas where research is conducted, there is a methodological concern about essentializing urban waterfronts as places where 'everything happens'. We are aware of the problems that focusing on a microcosm can cause in terms of research analysis, and wish to avoid an understanding of urban waterfronts as static or essential spaces for scholarly inspection. In our approach, urban waterfronts are not objects of study where research attention is focused solely on what occurs within the terrain of urban waterfront areas. Rather, we view urban waterfronts as one scale out of many scales and as places that are inextricably connected with decisions and phenomena that occur at varied scales. By researching transformations on urban waterfronts we can trace the way urban waterfronts are constituted by different and variable scales, such as levels of governmental social and environmental policy or private investment practices. New political-ecological approaches that incorporate scalar analyses offer a solution to the dilemma of making conclusive observations about social and ecological occurrences within single geographical areas. Instead, an emphasis on the relational and fluid connections between and within scales of analysis provides a new method by which to analyze the re-production of spatial areas. Moreover, political ecology research has embraced the complexities found in these relationships and fluidities, which offers an alternative to research that focuses solely on 'cause and effect' analyses. Paulson and Gezon (2005, p. 14), in their recent and significant edited volume on political ecology and scale, note that new political ecology research approaches "challenge conventional notions of linear time, proximal space, and causal chains" through an embracement of complex scalar analyses. In sum, we find that political ecology offers a new and innovative theoretical and methodological approach to the study of urban waterfronts that differs from previous analyses of urban waterfronts.

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