

Toward an infrastructural critique of urban change

Obsolescence and changing perceptions of New York City's waterfront

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This paper examines the interlinkages between changing infrastructural regimes on a macro-level and changing cultural imaginaries, stagings and experiences of cities. New York City's waterfront serves as a case study to examine how the transition from the Fordist era to a so-called post-industrial era has fundamentally been a large-scale infrastructural realignment to facilitate global production networks which has brought with it new understandings and experiences of the city. This analysis puts a particular emphasis on the unevenness of these transformations and argues that the functional specialization of spaces has reinforced and rendered invisible social inequalities in multiple ways: through the displacement of work, the attribution of value through discourses of sustainability, and the relocation of environmental and social costs. In lieu of a conclusion, this paper makes the case for an infrastructural critique of urbanization processes.

Key words: New York City, post-industrial cities, waterfront developments, global production networks, logistics infrastructure

Introduction

The rise of the post-industrial waterfront on Manhattan's shorelines as a safer and more sustainable space has been hailed by many as a story of progress. While municipal officials, city-branders and some urbanists have imagined these waterfront spaces as the birthplace of a new public sphere, however, others point to the ways in which shoreline revitalization projects have led to gentrification processes. I argue that both these accounts miss important aspects of what has been going on in global port cities over the past four decades. While I am generally sympathetic with the

critique of gentrification as one of a naturalized process of displacement, I believe that an infrastructural perspective can help us draw larger scale dynamics into our critical analyses of urban spaces.

New York City's 1975 fiscal crisis—which David Harvey (2006, xxii) has called the 'opening shot in the [...] restoration of class power'—was a symptom of a larger systemic change in the way that goods are produced, distributed and consumed. The containerization of trade was an important, albeit often neglected aspect of these larger changes and has facilitated global production networks that depend on frictionless supply chains and efficient container ports. In turn,

the relocation of container port activities downstream to Brooklyn and, more importantly, to Newark and Elizabeth, New Jersey, opened up former industrial port spaces in downtown Manhattan for redevelopment, regeneration and the branding of a new image of the city that would reflect the ascent of the new service and knowledge-based economy. A change in economic regimes has resulted in a changed use of the waterfront from a place of production to one of cultural consumption.

Using the example of New York City, this paper explores the shift from Fordist industrialism to global production networks through changes in its primary infrastructure: the waterfront. By looking at infrastructure I will show the erasures and spatial reconfigurations that come along with a new regime of accumulation. I explore (1) how these complicate critical accounts of deindustrialization and (2) the changes across the city and world, as well as the politics of who wins and who loses, which are obscured by the ‘improvements’ of the post-industrial waterfront. By way of conclusion, I seek to briefly systematize three venues of an infrastructural critique that both add to a critical analysis of gentrification and go beyond its uni-spatial purview to raise questions of legitimacy and justice.

Overcoming the industrial era

In his book *Triumph of the City*, Edward Glaeser (2011, 56) links New York City’s ‘rebirth’ after 1975 to the city’s ‘entrepreneurial’ elites in high-end service industries. This renaissance, in Glaeser and others’ accounts (e.g. Gastil 2002; Butzel 2007), has brought a permanent solution to the ailing city; it has turned around and revitalized inner-city neighborhoods—and has led Manhattan to rise like a phoenix from the ashes over the past four decades. This story of progress is one epitomized by and enacted on Manhattan’s post-industrial waterfront, where the entrance into the

post-industrial era has been both facilitated and staged.

The waterfront served as a particularly strong backdrop for deindustrialization processes and imaginaries of a better future, because its increasing state of dereliction in the 1960s and 1970s came to be regarded as a symbol of a broken Fordist system, upon which a more sustainable urban fortune could be built. As eminent port city scholar Brian S. Hoyle (2000, 397) put it, the downstream movement of the container port resulted in a ‘vacuum, an abandoned doorstep, a problematic planning zone [...] and a zone of pronounced dereliction and decay where once all had been bustle and interchange and activity’. The disappearance of industries and port activities, in turn, sharpened an acute sense of crisis and an urge for redevelopment. As I argue elsewhere, the institutions and socio-spatial arrangements of the Fordist era were viewed in public discourses, for instance, in comment sections and articles of local newspapers, as the main culprits for the derelict state of the waterfront (Vormann 2015).

In addition to a critique of what was, the mid-1970s crisis presented an opportunity for new coalitions of actors, starting with the Koch administration, to reimagine what Manhattan’s waterfront had been and might be. After 1975, new branding campaigns were devised that represented, above all, a look into the glorious pre-Fordist past. In the new context of pro-business restructuring, where locations close to the central business district (CBD) were redeveloped, the push for already existing, but stagnating redevelopment projects on Manhattan’s shorelines was based both on the premise of New York City’s glorious past as a mercantile global city as well as a harbinger of a post-industrial future (Greenberg 2008).

South Street Seaport, for instance, which imitates a pre- to early industrial 19th-century neighborhood, and which was completed as a project in the 1980s, unites this binary fiction. By at the same time pointing toward a glorious past and a time yet to



Figure 1 Pier 17 before its latest, 2013 redevelopment (Photo: B. Vormann).

come as a site of new white-collar work in a service-oriented future, this double move, so dominant in many of the revitalization campaigns of waterfronts on the North American continent, has served to render Fordist industrialism into an illegitimate intermezzo (Vormann 2014, 2015).

A common trope in discourses on post-industrial waterfronts has been its distinction as a counter-development to the industrial era. On the post-industrial waterfront, work is no longer as back-breaking as it used to be; white-collar occupations in commercial offices and service jobs in boutiques, maritime museums and restaurants dominate the laborscapes of the redeveloped shorelines of North America. It is certainly a sign of progress, argues Marc Levinson (2008, 2), that the ‘armies of ill-paid, ill-treated workers who once made their living loading and unloading ships in every port are no more’. This notion of progress reverberates in public representations of South Street Seaport, where information boards and commemoration plates narrate a mythical history of ‘rare 18th- and early 19th-century

buildings from New York’s golden age of shipping’ to visitors of the district (Downtown Alliance 2010). The ‘strikingly restored and revitalized [...] huge marketplace of shops and restaurants’, such as Pier 17 (Figure 1), are presented in stark contrast to the ‘life led by 19th century seamen’, defined by ‘[d]angerous working conditions, brutal treatment, low and uncertain wages, and isolation from the rest of society’, as one of the signs reads (Downtown Alliance 2010).

These allusions to the past help us commemorate what seems to have been overcome. Consider as further examples the redevelopments of Battery Park City, the revitalization of a former dock facility in the Gantry Plaza State Park in Queens or, for that matter, Brooklyn Bridge Park, where old industrial piers have been turned into playgrounds and esplanades. What had been perceived in the local media and in the discourses of local politicians as blighted and polluted landscapes during the 1960s and 1970s, as derelict infrastructure, as unsafe sites of hard work, have been turned

into spaces that are said to be more sustainable, more accessible and inclusive, safer and leisure-oriented.

At the core of this rebranding process, in other words, lie the promise of a new quality of life and the notion of the rise of a new public sphere. To use the President of the Friends of Hudson River Park Albert K. Butzel's (2007) words:

[w]here the piers splayed out into the River to greet arriving ships, piers splay out again, but this time they are park spaces rather than loading docks and gantries. They are [...] places where people come to get close to the water, lie in the sun, listen to currents, and wonder at the passing vessels.' (5–6)

In a similar vein, urban designer Raymond W. Gastil (2002, 19) insists that, in the 21st century, inner-city waterfronts around the world 'serve as front yard and service alley, cultural stage and civic space, playground and profit center'. 'In short,' Gastil concludes, the waterfront is 'the paradigmatic site for the future of public life' (19).

The notion of a new public sphere emerging on New York City and other cities' post-industrial waterfronts and trickling down to other urban areas has been criticized on various grounds. One problem with this discourse of progress on New York City's post-industrial waterfront is that the putative new public sphere is very exclusive. It is clearly determined along class and race lines. With port facilities and industrial work disappearing from the inner-city waterfront, the 'tight-knit' communities of the industrial era (Levinson 2008) have been replaced by highly mobile and wealthier white-collar workers and tourists. In Battery Park City, for instance, 75% of all residents are white (17.9% Asian), their education is above average (42% have a graduate or professional degree) and they earn an income that is twice as high as Manhattan's average (Pries 2008, 194). One important critique of post-industrial waterfront developments that has been articulated thus focuses

on processes of displacement (see also Vormann and Schillings 2013).

A perhaps more subtle, second type of critique pertains to the depoliticized perception of urban change as inexorable and natural. The main argument is that post-industrial waterfronts have become consumerist spectacles (e.g. Boyer 1996) and that this development is presented to us by urban planners as inevitable. As Neil Smith (2008) has argued more generally, we need to be cautious of the language of 'revitalization' and 'regeneration', so often used also in the context of waterfront developments, because it naturalizes urban processes and 'sugarcoats gentrification' so that 'the advocacy of regeneration strategies disguises the quintessentially social origins and goals of urban change and erases the politics of winners and losers out of which such policies emerge' (98). In a similar vein, Tom Slater (2006) has diagnosed the 'eviction of critical perspectives from gentrification research', a discourse that has instead been 'appropriated by those intent on finding and recommending quick-fix "solutions" to complex urban problems' (752). From this perspective, spectacular urban developments and discourses of revitalization on urban waterfronts are symptoms of an increasingly undemocratic society. Discussions about urban futures have been removed from an (assumed) public sphere and relegated to technocrats and experts.

Both types of critique—that of displacement and that of the spectacle—are important, but insufficient. Doubtless, the naturalization of urban change and the festivalization of urban spaces have served as a way to obfuscate and depoliticize the underlying social relations that drive urbanization processes, and New York City's post-industrial waterfront is no exception. However, if we stopped at a critique of gentrification processes, as important as it certainly is, the shifting of costs within the city as a whole will remain invisible to us. The notion of improvement on the waterfront is itself misleading because it obscures production and decline elsewhere, rather than engaging in a

critique. As I argue in the remainder of this paper, a focus on large-scale infrastructures helps us to rearticulate the terrain on which we pose certain questions about urban change and formulate such a critique.

Cost-shifting in a new infrastructural regime

By using an infrastructural perspective, we draw into the picture different levels of analysis that overdetermine social relations in a given space, but that we ignore if we examine face-to-face interactions and built environments in that space only. Once we broaden our perspective we realize that the spatial realignment of New York City was a correlate of the transition from Fordist mass production—where industrial activity was located in the inner city for technological and political reasons—to flexible accumulation and just-in-time production in a new international division of labor (NIDL). The spatial unbundling of production processes was facilitated precisely through a new infrastructural regime—a historically and geographically specific set of networked mobility infrastructures—based, essentially, on containerization and the rise of new IT (information technology) systems as well as on political reforms on scales other than the local that provided the necessary legal and regulatory frameworks. In this transition to facilitate global production networks, the costs of producing, distributing and consuming goods have been redistributed. While the post-industrial waterfront has risen as the site of a questionable new public sphere and promises of the good life, costs have been relocated both within and beyond the global port city.

Perhaps counter-intuitively, post-industrial consumer society rests on a globalized model of manufacturing production. Concurrent with an increased exploitation of global unevenness to link sites of cheap labor with consumers at the point of sale, sea traffic has skyrocketed—and has reshaped

the face of urban logistics. On a global scale, the movement of shipping containers more than tripled from 1970 to 2007, and in the two decades following 1990, world container throughput has increased sixfold (UNCTAD 2011, 86). In this process, a new systemic logic of frictionless circulation has come to dominate urban and regional planning. This has led to uneven development patterns that are not just the result of technological change, but of active political will and persistent state action. Given the uneven distribution of costs produced by the new systemic logic of global production networks and the role of the state in facilitating such networks, important questions of legitimacy remain unasked if we focus on individual urban spaces.

Cost-shifting in the transition from Fordism to neoliberalism has taken on multiple dimensions. Some costs have been shifted immediately at the moment of transition in the 1970s, others have been externalized more permanently and passively over the decades to follow. For one, the new infrastructural regime has led to a displacement of waterfront workers: both physically, from the inner-city waterfront to the container port on the edge of the city, and numerically, having been reduced by 60% as compared to pre-1975 numbers through automatization. More metaphorically, formerly decently paid and protected jobs in the transportation industries have been replaced by highly flexible, ‘independent’ jobs (Bensman 2009; Smith, Bensman, and Marvy 2010). In this process, to which we will return shortly, costs and risks of the supply chain have been shifted down to transportation workers. It is worth noting in parentheses that through the subsequent decreases in transportation costs, processes of economic restructuring and deindustrialization have been reinforced, equally undermining the leverage of unions in other industries and thereby extending the externalization of costs to other spheres of society.

The organization of production in a NIDL that has been established over the course of

the past four decades is also predicated on other forms of cost-shifting within global port cities. A decisive way to reduce transportation costs has been the deregulation of transportation industries. This included the privatization of ports as well as the deregulation of trucking, shipping and the railroad industries. While the number of longshoremen and railroad workers has decreased significantly since the 1980s, and while the occupations of seafarers have to a large extent been offshored to crews from foreign countries with lower labor standards, the number of truck drivers has steadily risen due to deregulation and a series of advantages of road transportation vis-à-vis rail freight, most notably speed, flexibility and price (Madar 2000, 3; Rodrigue, Comtois, and Slack 2009).

All these measures to reduce transportation costs and facilitate seamless circulation were implemented by the state in a series of legislative changes in the 1970s and 1980s and constitute a complementary set of policies to the free trade agreements that followed in

subsequent years. The port trucking industry is a particularly blatant example of the deliberate relocation of costs within the supply chain that has occurred in this process (Belzer 2000). Deregulation policies in the USA have lowered entry barriers, fragmented the labor force of the port trucking industries, and have led to risky, contingent and low-paid work for independent contractors. By infusing competition and shifting responsibilities after the Motor Carrier Act of 1980, the fluctuations of the shipping business—and risks of overcapacity or shortages associated with it—have been relegated to the workers through the establishment of per-load, short-term contracts (Figure 2).

If, on the post-industrial waterfront, the hard work of the pre-container breakbulk era seems to have faded into the past, working conditions in the container ports and the deregulated transportation industries do not speak of a better present, and hardly foreshadow a brighter future.

One might argue that these examples of cost-shifting are overly specific. One might equally



Figure 2 Truck traffic at the Port Newark–Elizabeth Marine Terminal (Photo: B. Vormann).

be tempted to argue that the negative impacts of the logistics revolution on manufacturing industries in the USA belong to the past and are not worthy of scholarly and public attention today. However, the impacts of the logistics revolution go deeper than that—and they shape the politics of the present.

On a more abstract level, the bottlenecks of trade have been realms of contestation and historical strongholds of union activism (Mitchell 2011). It is not a coincidence, then, that the breaking up of resistance on the industrial waterfront by means of containerization resulted in the breakdown of labor organizations in the transportation industries and had repercussions in other sectors and industries. This trajectory shapes the political conjuncture in the USA today, in that it buttresses the dominance of capital over labor. In addition, state action might seem more passive today than it was in the formative decades of the 1970s and 1980s, but its consistent non-regulation of environmental and social externalities from the transportation industries are essential to the functioning of global production networks.

Moreover, non-regulation by the state has led to some very tangible consequences that affect some more than others. With the tripling of trade and traffic since the mid-1970s, port-adjacent communities and those communities who live near major transportation corridors of New York City (Newark, NJ and Elizabeth, NJ) have become hot spots of unregulated environmental pollution. As on the post-industrial waterfront, residents from certain class and ethnic backgrounds are disproportionately represented in these neighborhoods. Inhabitants from Newark and Elizabeth, NJ who live in census tracts in direct spatial proximity to port infrastructures and are exposed to carcinogenic diesel fumes are largely non-white populations and earn less than a fifth of the incomes of residents on the post-industrial waterfronts of Lower Manhattan (Bloch, Carter, and McLean 2010; WHO 2012). In this sense, Elizabeth could be seen as Battery Park and South Street Seaport's

'twin'; the changes in these places are both related effects of deindustrialization, but while Battery Park received investment due to its proximity to Wall Street, Elizabeth has suffered disinvestment and decline.

The post-industrial islands on the waterfront are built on seas of infrastructure and externalized costs. We can identify New York City's metropolitan area as a clear case in which segments of the population near the container ports had to carry the double burden of socio-economic as well as ecological deprivation and vulnerability: for some, one might even add, the triple burden of being recruited in increasingly flexible port drayage jobs with poor working conditions. If on the post-industrial waterfront, '[t]he armies of ill-paid, ill-treated workers who once made their living loading and unloading ships in every port are no more' (Levinson 2008, 2), this is not because 'armies of ill-paid, ill-treated workers' no longer exist, but because they have been displaced. This also means that the notion of a spatial trickle-down effect so dominant in triumphant urban planning discourses is misplaced, because what progress we see in the sustainable city depends on material sets of infrastructure that are much less sustainable. These two spaces—the container port and the post-industrial waterfront—are two sides of the same coin. Their emergence as unequal twins is not a matter of technological determinism and external flows of globalization, however, but of deliberate state action and inaction.

Contours of an infrastructural critique

According to the present analysis, there is a clear mismatch between the narrative of progress and the realities of New York City as a node in global production networks—one that is even missed by more critical accounts. While processes of marketization have led to seemingly more sustainable, leisurely and safe places on the post-industrial waterfront—sites of high visibility that have come to be

regarded as representative of the city as a whole—this questionable utopian discourse obfuscates the infrastructures and networked mobility spaces that are necessary to maintain these sites and makes it easy to forget the unevenness of urbanization processes.

Given sizable environmental and social externalities, the notion of having arrived in a post-industrial era, a utopia of a leisurely, secure and sustainable system is a misrepresentation of social relations. Rather than resolving the pathologies, the risks and liabilities of the industrial age, the costs of the new accumulation regime have simply been relocated in a new infrastructural regime. Poverty and pollution have been relegated away from the urban waterfront to other places within and outside the city.

While the waterfront has become the emblematic trademark of the city, its logistics spaces fell into oblivion and became highly functional spaces realigned in order to facilitate reliable, flexible and cost-efficient trade. Examining urbanization processes through the prism of large-scale infrastructure, then, helps us to link processes that seem unrelated—the rise of the container port and of the post-industrial waterfront—from a more general perspective as they are linked through a specific infrastructural regime that articulates political and economic struggles on various scales. In a move from the Fordist regime of accumulation toward global production networks, city spaces have been recast to suit the logic of seamless supply chains and just-in-time production. Functional urban elements may well be reorganized in the transition from one economic order to another but they do not simply vanish. In other words, one particular strength of an infrastructural critique is that it provides us with a strong basis for a dialectical critique of urbanization processes.

A second advantage of emphasizing the importance of infrastructure in urban research is that it helps us link micro- and macro-scales without jumping from methodological individualism and localism into systemic functionalism. An infrastructural reading of

urbanization processes overcomes the problems posed by actor–network and structure–agency dichotomies in that it bridges micro-level analyses on the neighborhood scale with the examination of social change on other scales. In this paper, the focus on infrastructure has helped us view globalization processes in international trade not as apolitical, universal processes, external to the city, but as historically specific, geographically situated and produced on the ground. This complements the attempt of the global cities literature to ground globalization processes in urban practices, but extends the purview of such research to material flows.

Finally, an infrastructural critique allows us to examine the enabling conditions of social relations with a specific view to who wins and who loses. The questions that we can pose from an infrastructural perspective, and that have been posed in this paper, are fundamentally questions of legitimacy and accountability. In the new context of global production networks, a small number of actors have been able to externalize their costs and impose them on wide sections of society, particularly on its lower strata, with the help of the state. Not only are some better off—those who are ‘Richer, Smarter, Greener, Healthier, and Happier’ (Glaeser 2011)—but some are actually losing. In this sense, decisions about which types of social relations should be enabled through infrastructure and supported by the state should be subject to democratic, not technocratic debate.

Disclosure statement

No potential conflict of interest was reported by the author.

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