

'The new relationships with the natural world ushered in by the development of the American city in the nineteenth and early twentieth centuries reveal the tensions between the rich and the poor, and between public and private interests.'
Discuss.

In the era of industrialization, American cities irrefutably developed new (bilateral) relationships with the natural world in the early nineteenth and twentieth centuries – from natural resources such as water as an input into the growth of cities, to air and noise pollution as some forms of output from urban life. However, I will argue that these processes were not confined to the urban-natural dialectic (which is in itself not as clear as it may appear), but were more “socioecological” (Swyngedouw and Heynen, 2004) in the sense that they also revealed tensions within society: between the rich and the poor, between public and private interests, as well as within and across the various socioeconomic groups. Also, the relationships between the city and the natural world were dynamic and highly interrelated, and hence it is useful to examine the changing relationships and tensions at different spatial and temporal scales. Furthermore, these new relationships did not only manifest in the physical or infrastructural world, but also in changing discourse and “urban consciousness” (Gandy, 2002) of urbanites.

Through examining the case studies of New York City, Boston and Seattle, this essay will push forth the argument that while the new relationships with the natural environment in these American cities provoked and highlighted tensions between various societal groups, these tensions were not always between cleanly-divided parties because of the multiple interests of individuals and their changing positions in relation to relationships with the environment.

At a more theoretical level, I will first examine the possible outcomes of socioecological relationships on tensions between the rich and poor, and between public and private interests. With rapid population growth in urban areas, the increased pressure on limited resources construct the city as “the centre of a society-environment dialectic” (Benton-Short & Short, 2008), and the distribution of these resources depends heavily on power geometries and political decisions within society. Often, what is beneficial to ‘private’ interests is also more beneficial to the rich, since those with the greatest bargaining power to exert their private interests are those with the most economic backing; conversely, what is beneficial to ‘public’ interests tends to be more equitable since the government is accountable for the provision of services to citizens regardless of socioeconomic status.

Also, due to distance decay theory, the quality of environment, as well as their corresponding costs of residence, fall with increasing distance from the city centre, making it very difficult for ‘public’ initiatives to benefit those living at the margins as much as those living in the centre. However, this is not always true, as sometimes, private interests may masquerade as ‘public’ ones, or private companies or individuals may usurp what was initially constructed for public good, so in fact, “most urban design resulted from the desires and decisions of a few powerful individuals” (Benton-Short & Short, 2008) as the later examples in this essay will show.

Nineteenth-century New York City and Boston, in their construction of modern municipal water supply systems, provide clear examples of how attempts to harness a natural resource (water) and make it more accessible to the public drove a divide between the rich and the poor, because of the way water turned into a commodity. In

early nineteenth-century NYC, even though there were vast improvements in urban infrastructure such as transportation networks, “squalid and insanitary conditions for the city’s poor persisted” (Gandy, 2002). This lack of access to sanitary water in an increasingly overcrowded city (mainly in the poorer areas, where wells became heavily polluted) became the background against which various epidemic outbreaks occurred, especially yellow fever and cholera. Thus, right from the beginning, the pressures of overpopulation on limited resources within an urban area created a social gap between those who could afford clean water and those who could not.

A 1798 proposal for the construction of a public waterworks was rejected due to authorities’ fears that financing public works programmes would significantly increase taxes, losing them popularity among the elite and richer residents. However, 36 years later, in 1834, when a law to give NYC its right to create its own municipally owned waterworks, uptown residents and those who still had clean water in their wells opposed the law, citing increased public expenditure and aesthetic destruction (due to the aqueducts) as reasons for doing so (ibid.). The power of these upper-class groups meant that construction of the waterworks was successfully delayed for two more years, although they were still eventually built, and the Croton Aqueduct opened in 1842. Thus, despite the power of the rich over the poor in urban planning, government intervention to reinstate public interest over private interest in a city guided by democratic principles may overrule opposition by a few elite individuals in order to improve living conditions for the working class and poor.

The new infrastructure then established a new set of relationships between NYC and nature – with nature entering into contemporary organic metaphors such as the “circulatory health” of rapidly expanding cities, and with water as components of NYC as a “space of flows” (ibid.). Water “gradually entered urban consciousness in a variety of ways, some public and some private” (ibid.), and in a sense actually united citizens through building up a common public imagination, thereby in some ways could have reduced tensions between socioeconomic groups within the city. In line with this argument, Gandy (2002) also posited that the water system “consolidated the emergence of a more sophisticated kind of urban society within which fragmentary and parochial perspectives were superseded by a more strategic urban vision”. The relationships between city and nature were dynamic and constantly changing, sometimes revealing the tensions between the rich and the poor but sometimes in fact covering it up.

On the other hand, some argue that this phase of a more united urban consciousness was a mere by-product of capitalist forces based on private interest, and was all but temporary. Modernisation of the municipal waterworks was not to “improve the conditions of the poor but to enhance the economic efficiency of urban space for capital investment” (ibid.), and furthermore the “water revolution” (ibid.) of advanced plumbing and bathing facilities was largely confined to the middle classes. Those with higher incomes were also able to import spring water and buy clean water through other means when pollution and sewage drainage issues in the Croton aqueduct arose. However, again, municipal authorities stepped in and put laws in place to ensure a basic standard of water hygiene and facilities in all new housing including tenement housing for the poor.

In a similar situation was Boston with the completion of its first municipal water system in 1848. Like NYC, it was urban reformers and working class¹⁸ supporters who wanted a

public system while the wealthy and tax-averse Bostonians opposed it, as illustrated by the four petitions for public water and four remonstrances against it in 1838. The average real estate tax contributed by petitioners was approximately 25% that paid by remonstrants (A Selfish Taxpayer, 1844, cited in Rawson, 2010), clearly showing how it was the less well-off who were in support of a public system whereby water could be delivered more equitably among citizens, versus a private system whereby water was a commodity and only sold to those who could afford it (Rawson, 2010). Even though the public system was eventually executed, the poor still had little access to running water in their apartments due to the unwillingness of landlords to install such facilities in tenement housing, and they were restricted to using new public hydrants installed throughout the city instead. Besides the tangible divide between rich and poor Bostonians in their ease of access to clean water, in terms of discourse and representation, the “image used to represent waterworks also reflected concerns of the rich” (ibid.), and government reports on the new system ignored those who continued to be denied access to running water, but focused on those who could afford up-to-date plumbing facilities.

Thus, the case studies of NYC and Boston and their public water systems highlight the changing physical and representational relationships between the city and the natural world in the nineteenth to early twentieth century, and their resultant effects on the dynamics between societal groups. While the rich were always advantaged vis-à-vis the poor, in NYC municipal authorities managed to implement laws to ensure a more equitable distribution of water-related resources, whereas in Boston the rich continued to dominate the public water system. There is also some irony in the fact that the motivations behind constructing a municipal water system in NYC were more private-oriented, whereas those in Boston were more public-oriented, with the city authorities offering to connect private buildings to water mains at public expense (ibid.), yet resulted in rather opposite outcomes.

Rapidly growing cities such as Boston and Seattle needed to maximize their land in order to accommodate population growth and new needs. In Seattle, this meant the construction of new transport network and investment in the waterfront commons; in Boston, this meant the literal growth of Boston through annexation and making land by building on tidal flats. Both these urban strategies required a careful assessment of public and private interests, as well as the effects of new relationships with the natural environment on the rich and the poor.

At its initial stages of growth, Seattle lacked a transport system that connected efficiently to the other parts of West America, and it also lacked investment because of the unclear boundary between water and land along the waterfront (Klinge, 2007). First, it undertook a renovation of the watershed to create a more distinct boundary so as to sell land off to investors, as “by changing geography, they believed they would conjure up real estate” (ibid.). The private investors, who wanted to develop this land as well as improve transportation infrastructure so that land value would appreciate, marketed such developments as for the sake of public interest, although opponents voiced their worries that private development of land would deprive citizens of once public space. However, due to capitalistic tendencies that guided the growth of American cities, the commodification of land was merely another step towards establishing new relationships with the natural world, and between groups within society.

To improve transportation links, the city used public funds to build railroads and a canal to link the tidelands to the central areas and surrounding cities. The first tideland grant was issued to build the Walla Walla Railroad, which gave investors the “choice point of entry into the city” (ibid.) in order to control the Seattle Waterfront. Companies and individuals then made use of the process of “adverse possession” (ibid.) i.e. gradually adding rocks and sediments to expand private property in order to create real estate that could be sold off for extra profits. This was done with the help of mostly lowly paid Chinese labourers, and this brought out a tension within the low-income group, as white labourers felt that such foreign labour was unfair competition and they were crowding out jobs. Yet, market forces compelled investors to continue using the cheapest forms of labour possible, so as to maximise private gain. The South Canal was built in order to increase accessibility of the waterfront and address flooding problems faced by the city (public interest), however, like the railroads, it was marketed as a system of public transportation yet “both were ultimately used to acquire and sell off real estate for private gain” (ibid.).

Similarly, Boston also had a harbour that was initially used by individual landowners to expand their land through pushing the boundary between land and water (Rawson, 2010). In this case, though, the tensions were not clearly between private and public interests, nor between the rich and the poor. Both harbour protection as well as continued land-making and resource extraction could be seen as beneficial to public interest; private interests were divided between the protection of the harbour (which could accommodate Boston’s increasing prominence as a commercial port), and the development of land which would benefit railroad and real estate investors. Instead of a private-public battle of interests, it was a changed paradigm towards the relationship between city and nature that determined the outcome of this dilemma. Newer ideas of nature as a resource requiring careful management had replaced ideas of nature as a set of resilient resources, and the theory of tidal scour that emerged from this debate was then used to protect the harbour.

“Across America, the building of cities promoted a complete restructuring of the natural world to accommodate larger populations and to fulfil new social and economic goals” (Rawson, 2010). In American cities such as Boston, Seattle and NYC in the nineteenth to early twentieth centuries, the new relationships between the city and nature brought about by rapid development, and that between these relationships and societal tensions, were far from being unilateral. Changing relationships between city and the natural environment did reveal certain tensions between groups within society (with divides drawn along class, private-public, and other lines, but more importantly one should note that the urban process itself “fundamentally constitutes a political-ecological process, one that shapes the process of production of urban natures” (Swyngedouw and Heynen, 2004). The tensions within urban society were themselves fundamental in constructing new relationships between cities and the natural world, as the different outcomes in each city despite similar circumstances clearly reveal.

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