Rivers in urban history: tales of fear, harmony, destruction, and opportunity

Les fleuves dans l'histoire urbaine : contes de peur, d'harmonie, de destruction et de possibilité

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RÉSUMÉ

La présentation suivra la relation entre les villes et les fleuves à travers l'histoire, mettant en relève l'impact des représentations sociales et des attitudes envers les fleuves dans la transformation de la rive urbaine. De la vision mythologique du Dieu-fleuve, fournisseur et ravageur, jusqu'au harnachement des fleuves pour la protection et le développement de l'économie, suivant des cycles de destruction et de négligence, nous analyserons les changements dans le profil d'utilisation, dans l'échelle et dans la structure de la rive urbaine jusqu'à aujourd'hui, que nous considérons comme une ère de possibilités, marquée par une prise de conscience renouvelée de l'importance du fleuve comme un couloir de l'écosystème naturel et une composante majeure de la structure verte de n'importe quelle ville riveraine.

ABSTRACT

We trace the relationship between cities and rivers throughout history, following the evolving riverfront through the succession of shifting attitudes towards the river. From the early river-as-god, provider and destroyer, onto the harnessing of the river for economy and protection, through cycles of detruction and neglect, we analyse the shifts in uses, scale and structure of the waterfronts leading up to what we consider to be an era of opportunity, marked by a renewed awareness of the river's importance as a natural ecosystem corridor and as a major component of any riverine city's green structure.

KEYWORDS

Urban History; urban rivers, Urban riverfront, waterfront development, restoration

RIVERS IN URBAN HISTORY: TALES OF FEAR, HARMONY, DESTRUCTION, AND OPPORTUNITY

I do not know much about gods; but I think that the river
Is a strong brown god—sullen, untamed and intractable,
Patient to some degree, at first recognised as a frontier;
Useful, untrustworthy, as a conveyor of commerce;
Then only a problem confronting the builder of bridges.
The problem once solved, the brown god is almost forgotten
By the dwellers in cities—ever, however, implacable.
Keeping his seasons and rages, destroyer, reminder
Of what men choose to forget. Unhonoured, unpropitiated
By worshippers of the machine, but waiting, watching and waiting.

T.S. Elliot, The Dry Salvages, Nb. 3 of Four Quartets

The River Destroyer: Rivers are unpredictable. Which is a shame, as their valleys and floodplains provide the best soils for agriculture, fishing, readily accessible fresh water, and the easiest path on which to walk (the 'thalweg', the *Valley Way*); if one was to consider where to settle, certainly 'by the river' would be the most obvious choice. And yet, for a long time, permanent settlement near a river wasn't a reality. Rivers are as much the providers of bounty as destroyers. With their changing moods, rivers will shift course, flood, dry up; and, accordingly, settlements were, for long, kept ephemeral. The first permanent settlements were mostly confined to hilltops, as much as a protection against other tribes as from the raging river they usually overlooked.

The River Tamed: The first urban civilizations were intrinsically related to fertile river valleys. Mesopotamia, the Nile Valley or the Indus experienced comparable patterns of emergence of irrigation, settlement and, eventually, cities. In the early stages of Mesopotamian settlement, rather than attempting to control the river's moods, people adapted to them. As agriculture flourished and community started producing surplus, trading what it would not need ensued. Trade along the river corridor was initiated and, as the benefits of trade became apparent, protecting this newly-found economic activity became a concern, and cities on rivers the mainstays of this activity.

The River Conveyor: As trade grew in importance, so did the protection of trade routes. Cities grew as centers for their respective agricultural *hinterland*, as trade centers along the major trade routes – that is, the river – and, consequentially or not, as centers of power. Not all strategic locations gave rise to a city, but virtually all early cities occupied strategic locations along rivers. They were nodal points, usually crucial fording points, where land and fluvial routes converged, or points where trade along the rivers, the 'first highroads, moving belts of water' (Mumford 1961) could be controlled and economic stakes defended and reinforced. Trade became a major fuel for power, and competition for more power was as much centered on territorial domination as on the protection of this lifeline. As such, the elevated platforms over which Mesopotamian, Egyptian and Harappian cities were built served as much for protection against floods as for defense against armies.

The River Bridged: In stable empires, where defense ceased being a major concern, cities were able to occupy the 'prime' locations on the river valleys, where trade and agricultural production could best be controlled. The Roman Empire's strong administration and its *Pax Romana* allowed trade to flourish, fertile lands to be cultivated, and promoted advances in technology (bridge building, canals, roads…) that all combined to create the perfect conditions for the foundation of 'valley' cities. At times, this development indeed reached the point of imbalance with the natural systems: the ever-expanding capital of the Empire outgrew its river, with aquifers becoming exhausted, and the Tiber turned into the dumping ground for the city. The Empire eventually collapsed and the Dark Ages ensued (ca. 500 AD). As European societies slowly reorganized, especially after the 11th century, new authorities proceeded to restructure their lands so as to promote trade, authority, and tax collection and "(…) had castles posted on every coign of vantage, the important fords and bridges being especially guarded" (Vance 1980: 106). From the French *Bastides* to English *burghs*, virtually all of Europe experienced a boom in the establishment of new urban centers: "Town building itself was one of the major industrial enterprises of the early Middle Ages" (Mumford 1961: 264). "To make these towns prosperous (…) merchants would best engage in distant trade (…) [with towns therefore] tending to be located on the major rivers." (Vance 1990: 182). As long distance trade regained strength, so did the major ports along the coasts of Western Europe. Cities such as Venice or Naples ushered in the Mercantile City: Lisbon, Amsterdam, Antwerp, London, Seville, Naples, Palermo, Bordeaux, and a few other cities, became the control centers for maritime trade. This was reflected in deep changes to the morphology of these cities: "By 1550 the port functions dominated London Life" (Vance 1990: 221). The waterfront

widened, became more complex; embellishment of the waterfront and specialized structures slowly took over a growingly 'capitalist' waterfront.

The River Unhonoured: Industrialization gradually undermined the relation between city and river. Large industrial plants, powered by steam, then coal, steadily migrated to cities on rivers, where connections were better and cheap labor plentiful. The Industrial City was thus born. Manchester, for instance, increase its population 20-fold in less than a century. The rapidity, lax planning, and virtual inexistent social concerns led to an acute degradation of the environment and living standards. The river was "the cheapest and most convenient dumping ground for all soluble or suspendable forms of waste. The transformation of rivers into open sewers was a characteristic feat of the new economy." (Mumford 1961: 459). With the notable exception of those riverfronts that held ports, urban rivers were now reduced to a most undignified condition. Smelly, unnecessary, neglected, removed from sight, it is no wonder that urban rivers were mostly perceived as a nuisance during this period. Narrow rivers were culverted, wider rivers channelized, diverted, or even reversed (as with the Chicago River).

The River Forgotten: The railroad presented, after the second half of the 19th century, the first real challenge to the role rivers had always played as the principal communication routes across continents. For those riverfronts that still held important port activity (now increasingly limited to long distance shipping), changing technologies evolved so as to detach them further from the city. Larger ships, unloading directly onto docks, meant piers had to stretch out to deeper water and, as mechanized transport away from the riverfront demanded efficient access to the cargo, first railroads, then highways, were brought into the waterfront, reinforcing the detach between city and its water. The encroachment of the river frequently meant the obliteration of the river's former floodplain, but flooding was no longer something to avoid, but rather control. Consequentially, flood control was introduced to countless urban stretches of rivers, in the form of diversion canals, weirs, dams, or levees; this new paradigm of control was extended to the river basin, as hydropower and water storage dams became symbols of modernity in the first half of the 20th century. The deplorable condition of the rivers became too obvious to ignore, as societal values shifted with the first throws of the ecological movement.

The River Waiting: By the 1970s, the destruction of rivers was garnering widespread attention. Slowly, the water quality in Western Europe and North America began showing signs of improvement, through the enforcement of environmental legislation, changing societal values, or the relocation of industries. Rivers regained a place in people's imaginary as something desirable, rather than as the fowl sewers of a few generations' back. In port cities, the introduction of containerization liberated large swaths of the waterfront for redevelopment. Equally important, was the chance to remove some of the linear infrastructure, such as highways and railroads, that formed a continuous barrier along the shore. As technology and public support evolved, cities have garnered funds and courage to dismantle them. Brownfield redevelopment is, in several cities, now synonymous with the opportunity for waterfront redevelopment. This is perhaps the first time in history when vast stretches of the riverfront have been released systematically of their former use. Throughout the developed world, reimagining the waterfront has become a priority, as former wastelands have become prime real-estate: centrally located, typically well connected, dotted with exceptional views of the river; the riverfront is fast-becoming the alternative to ex-urban expansion. Rethinking the riverfront now offers the opportunity to reconsider the need for hard bank armoring. Throughout the developed world, a new awareness of the importance of preserving or restoring the ecological continuum along the river corridor, even as it passes through these urban sections, is pushing forward new standards of ecological restoration. Wherever setbacks allow it, several cities are now re-establishing riparian corridors, removing weirs, creating habitat. Increasingly, innovative projects are proposing the integrated management of river restoration, flood risk management, and habitat restoration. Several cities in Europe, North America and, growingly, even in developing countries, are approaching "passive" flood risk management strategies, restoring habitat, and improving social spaces along the banks. Having gone through unknowing *Fear*, then joyful *Harmony*, descended into *Control* and *Neglect*, mankind and river might finally reconcile; this most recent environmental paradigm of *Sustainability* provides at last the adequate framework over which to make reparations towards our strong brown god; and so, with its honor slowly but steadily restored, the river remains, as always, waiting, watching and waiting…

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