Disease infrastructure : haunting legacy and self-procreating mortgage in the NYMR

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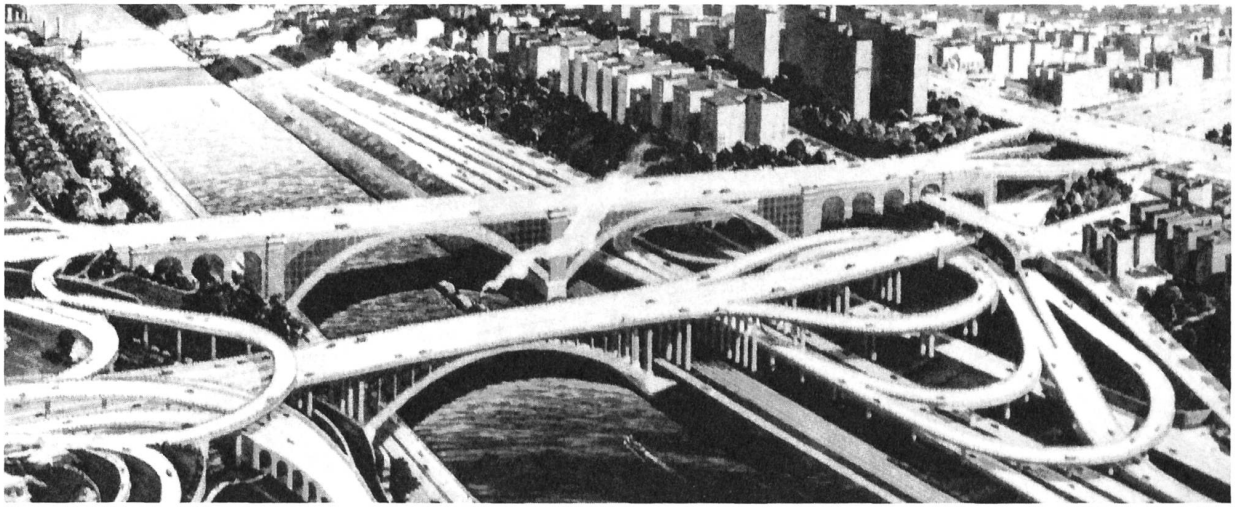

Michael Güller

Disease Infrastructure

Haunting Legacy and Self-Procreating Mortgage in the NYMR[1]

IMPLEMENTING THE DISEASE ...

The economic activities of the New York Metropolitan Region NYMR have always been the motor for major infrastructural developments. The first striking manifestation of this influence is probably the grid of Manhattan: the streets, linking East Side to West Side, were conceived as multiple connections between the piers, in order to facilitate the transportation of the maritime trade merchandise from the main harbor location on the East Side and Brooklyn to the mainland in New Jersey. On the other hand the avenues, running North-South, were to provide easy and ordered accesses for the railway lines entering Manhattan across Harlem River to guarantee an unconstrained distribution without the necessity of additional barging in the congested harbor waters.

Both intentions were never fully exploited; too soon the East River location was given up in favor of the Hudson River harbor developments, and the goods were moved from Manhattan to the mainland across the Hudson by barges, which saved them the detour via Selkirk up North. On the Jersey side of the Hudson the railroads gathered in an impressive way, occupying the whole waterfront. (fig.1 and 2)

The dominance of the railroad companies in the market of landside cargo transportation was so overwhelming at the last turn of the century, that they failed to recognize the threat of automobiles and trucks emerging at the very same time, and wasted their energy in fighting each other. When they finally realized the damage they were doing to themselves it was too late for regaining a substantial share of the transportation business.

Instead, highway systems evolved, backed up by the triumphs of bridge construction that changed the face of the city and the region. At first, the highways too were solely designed to accomodate commercial traffic. Nevertheless, the public importance of individual transportation was on the rise and decisive for some of the major projects, as e.g. the highway ring around Manhattan, which was developed as a mixture of commercial and public interests, or the highways and parkways of Robert Moses in the thirties, fourties and fifties. In addition, the federal government attempted to establish a complete nationwide interstate network for military reasons. The US East Coast got densely packed with these infrastructures for being the area with the highest strategic importance at that time. (fig. 3)

Meanwhile transit systems like the subway and the regional railways were trying to provide a comprehensive service for the daily movement of the workforces flowing into Manhattan's packed industrial districts and also into its Central Business District CBD in downtown which was soon to experience its relocation to midtown Manhattan and was even expected to jump across Central Park into uptown.

Not exactly helpful in straightening out the evolving mess of congested and obsolete infrastructures was also the way the three major airfields Newark, LaGuardia and JFK were inserted into the region and connected to its transportation networks. For example, the integration of JFK into the transit networks is absolutely insufficient, with no subway running through or even close to the terminals.

All of these onedimensionally motivated, designed and oriented infrastructural developments, each one of them setting up whole new systems without taking advantage of the existing ones, and without coordinating amongst the different modes of transportation, have led to an abundance of underutilized and obsolete facilities, fallow-lying potentials that cover the whole region and occupy much of its land.

Abb.: rendering of the Alexander Hamilton bridge - highway-euphoria ...

1 NYMR = New York Metropolitan Region
2 TEU = Twenty Foot Equivalent Unit, i.e. one container unit
3 mainly South-East Asia, lying closer to New York than to the West coast

New Jersey for example, has the highest infrastructural density of all states - a heritage that now turns into an insurmountable problem. The available money from federal and state programs covers but half of the maintenance costs of the most important elements of the networks. New construction is practically impossible. Slumbering and abandoned potentials like the former extensive rail network decay and disappear. Without money there are no incentives to revitalize them.

... AND FURTHER NOURISHING IT?

Yet there is no time to lean back and thoroughly contemplate the situation. Once more major changes are forthcoming. Network needs have changed considerably over the last couple of years, with newly evolving foci and concentrations in the region, following the trend of suburbanisation. Huge shifts in the regional distribution and equilibrium have taken place without the infrastructure being able to respond to them. Yet these developments are dwarved by what will have to happen if the port of New York and New Jersey is to aspire to and get the status of a hub port on the US Atlantic coast. The question isn't where to locate the new harbor and container handling facilities but rather how to link these to the hinterland, when within 40 years the volume of handled containers jumps from currently 2.3 to ten (or even more) million TEUs[2], and when the mentioned hinterland covers double its current radius, serving even Canada and handling some of the trade with Asia[3] which is expected to be diverted from the main destinations on the US West coast, Long Beach and Los Angeles.

To provide the necessary facilities in the NYMR and thus capture the maritime market shares of the other Atlantic coast ports aspiring for hub port status (Halifax, Baltimore and Norfolk/Hampton Roads), the port facilities will once more have to be relocated. The new shift will bring the main port activities back to New York, either to Brooklyn or to Staten Island, as only there the new container carrying vessels of the post-panamax type (more than 4000 TEU capacity) find channels fitting their drafts of close to 50 ft.

Theoretically, the channels leading to the current facilities at Newark could be dredged, but as they meet bedrock at some 35 ft the cost would be astronomically high. Besides that another problem would arise: the sediments in the channels are highly contaminated; any attempt to extract

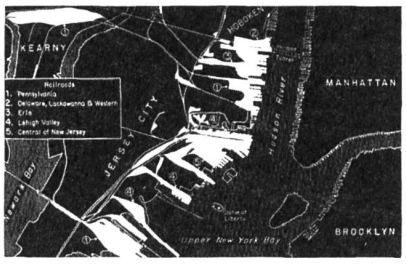

Abb. oben: *... when Manhattan's West Side was still the main port location*
Abb. unten: *Railroad freight terminals dominating the New Jersey side of the Hudson ...*

4 *such an approach was elaborated in an award-winning entry (project title: 'NYMR estuary') to the competition 'ideas afloat' for Davids Island in Long Island Sound in 1997: NY's harbor can be relocated only after a vital environment and a system of estuarine survey outposts has been established, in which the port is to be carefully inserted and integrated. A radical reversal of current strategies, too radical perhaps. A more practicable proposal was presented in the competition 'ZAL - logistic activity zone - port of Barcelona' at the UIA 1996 (project title: 'moments of transition'), where the design of the process of extension of the harbor was used to foster urgent environmental transformations.*

or remove them would inevitably stir up so many toxic substances that the waterbodies of the NYMR estuary, including the bays, Long Island Sound, Hudson and East River, and Long Island's South coast, would after some relief during the past twenty years once more be dead, the toxic levels far exceeding the federally allowed.

Container ports are a matter of huge surfaces for the storage and handling of the units. Neither Brooklyn nor Staten Island dispose of adequate surfaces at this point; in Brooklyn there seem to be means to at least get hold of former port installations and industrial facilities and to possibly gain land from the bay at a reasonable cost.

But Brooklyn has in no way the appropriate infrastructure to move the cargo, neither by rail nor by truck. Its roads are already heavily congested, active rail lines do not exist. Possible solutions to the problem are a revitalization of the barging activity in the port or, more convenient, a tunnel under the Narrows linking Brooklyn to Staten Island and from there to the mainland via Goethals bridge. The barging solution is a low inversion scenario, yet coupled with time loss due to the additional loading and unloading of the barges. The tunnel solution would cost approximately one billion dollars, but result in a time-gain and foster the urgently needed shift from roadbound to intermodal transportation in order to relieve the regional networks at least from the long-distance distribution. This is particularly interesting if one is aware of the growth of the amount of merchandise handled.

What still remains unanswered in the feasibility studies of the hub port development is the roadside connection to Brooklyn. It is hard to imagine all the truck traffic passing through the city, on the existing network as much as on possible extensions of it. There seems to be no other solution than to build another link across the Narrows to Staten Island reserved for cargo-handling traffic, or a conveyor belt moving the containers from the piers to landside distriparks either in Staten Island or even further West in New Jersey.

Strange enough the hub port studies and the tunnel/link evaluations are being developed independently up to now. Again there is a clear lack of coordination; network alternatives are considered on a non-comprehensive basis, the best solutions for each element when highlighted separately may turn out to be counterproductive once the parts are combined to form a whole.

There can be no more experimentation in structures as delicate as the NYMR. Not only are the region's economic development and viability at stake, but in addition planning approaches as they are currently practiced jeopardize urban and ecological sustainability. An environment as hampered as the one in the NYMR can't take any more stress without suffering further irreversible deterioration. Strategies have to be checked and changed: infrastructural shifts as e.g. the relocation of the port should not only fullfill economic requirements, but additionally have to back up other interests such as the region's overall environmental quality.[4]