

River Projects Exhibition - Van Alen Institute for Public Architecture

(Introductory Speech delivered at the opening of The River Projects Exhibition delivered at the Van Alen Institute of Public Architecture in NYC Fall 1998. Also included are the texts accompanying 3 Hudson River Projects from the Exhibition)

In her book, *The Death of Nature*, the environmental historian, Carolyn Merchant, suggests that the top down view of traditional history has presented a misleading picture of the "natural" environment. In this view, Culture is understood to be dynamic and primary with its' own conventionally studied sources of change - demographic, economic, political, or ideological, while, on the other hand, Nature is rendered passive and secondary - Nature is simply "the space wherein cultural change takes place".

As an alternative perspective, Merchant suggests a re-visioning of history from the *ground up*. This view encompasses two key points. Firstly, it presumes that human and natural environments form an interrelated system, and so, at this systemic level, it is not particularly useful to talk about one without the other. Secondly, and by virtue of the first, it presumes that cultural history is inextricably linked to the history of how land is used. In Merchant's words:

such a perspective does not take the natural environment for granted, as does traditional history. Instead of dichotomizing nature and culture as a structural dualism, it sees natural and cultural subsystems in dynamic interaction.

While one might subscribe to this strategy, a problem arises when the dynamic interaction between natural and cultural subsystems, of which Merchant speaks, becomes so acute that our capacity to identify each subsystem much less *disentangle* them from one another becomes extremely difficult. This, in my mind, is the thorniest problem facing anyone interested in environmentalism and/or responsible urban/landscape planning today and I would add that no where is this problem more apparent than here in the configuration of this late 20th century urban waterfront of New York and the estuarial/riparian ecosystem within which it finds itself.

Is it meaningful to speak of the Lower Hudson River in opposition to the adjacent New York/New Jersey Metropolis as if they can be conceived as two independently defined and structurally autonomous entities? At best, it would seem that this distinction provides convenient terminology. At worst, it represents a discontinuity in our thinking which shores up the destructive battle lines between Nature and Culture, pitting environmentalists on one side against corporate and/or politically co-opted state planners on the other. (I mention these two groups, environmentalists and planners, since they best represent the conventional antagonists and whose reconciliation is inferred by the *River Projects* in this exhibition).

Much of environmental discourse has demonstrated a failure to identify its' core issues in relationship to the culture in which it operates. It is a confusion that has produced both the radical ecology of groups like *Earth First* and *Green Peace* along side of the

reactionary Nature-as-managed-resource environmentalism of the *Wise Use* movement so beloved by conservative Western Republicans. It has pitted, as well, alternative energy ideologues against the U.S. Fish and Wildlife Service, whose mandate to protect a species of raptors fatally attracted to the wind turbines threatens to force enlightened utility companies back on to the conventional energy grid. And here on our own waterfront, environmentalists are still trying to calibrate the rights of the striped bass spawning under our piers with their own rights to recreate on top of them (while, incidentally, relying heavily on the environmental expertise of the same U.S. Army Corps of Engineers who were lambasted by environmentalists for their part in the Mississippi floods of 1993). When all is said and done, however, there seems to be little disagreement about what kind of Nature we all want; rather it is a disagreement over what kind of Culture we all want, and further what role the non-human biota will play in this culture.

In order to restore or recover the river's' natural systems, it is often suggested that we push the urban fabric back from the river's edge. Besides the displacement of parochial interests which this would entail, it is difficult to determine how far the city must retreat in an eco-system that operates at the scale of regions rather than river banks. But, more importantly, how does one locate the line that delineates the boundary between the "natural" river and civilization given over 300 years of their mutual mediation? While the biotic differences remain clear between, say, a salt marsh and concrete sea walls or a spawning ground and a marina, the processes which have made each possible or impossible are less apparent.

The River which cuts through the lower Hudson Valley into the Estuary is no longer the languid flowing waterway whose figure meandered with the flooded back waters, salt marshes and seasonal wetlands of 300 years ago. In point of fact, the Lower Hudson has not been a "natural river" in the pure, unregulated, biotic sense for hundreds of years. For better or worse, its' system of backwaters, saltmarshes and wetlands have been replaced by the New York, New Jersey Metropolitan Area - a system, as it were, of a very different nature. Today, the Lower Hudson is an "urban river," and while one could argue that this might represent an oxymoron, there is little doubt that its' present hydrology and biotic texture are produced as much by the river's' interactivity with human factors as they are by the pre- human geologic events that set them in motion.

Its' shorelines today are artificially constricted for miles by landfill, seawalls, an impervious rail system, and waterfront developments. These constrictions produce a particular hydrology with faster water flow, greater tidal rises and falls, and longer sedimentary ranges. Its' aquatic texture, introduced by northern aquifers and tributary outlets, mingles with run-off from impermeable urban surfaces and storm sewer overflows, agricultural leachates, recreational boating and municipal waste. Although much of the destructive toxicity has become regulated since the Clean Water Act of 1972, certain of the benign chemicals which are introduced during the practice of everyday riverside-community life actually *contribute* to the adaptive processes of a number of new aquatic and shoreline species...species which are not indigenous perhaps but certainly as *natural* as their predecessors. Clearly, human artifice is already deeply immersed in the eco-system of the Lower Hudson at its' most basic level. And while

some of the consequences of this new system are obviously problematic and do not need another recitation here, other consequences are simply *differences* in a similar sense that all ecosystems undergo *change* at the hand of natural disturbances (wildfires, earth quakes, floods, for example) to form new biotic configurations and communities over time.

What I am suggesting by all of this is an ecological perspective which situates us and our cities within its' sights. It is irrefutable that what we term the natural environment can be understood as an independent eco-system with its own physical and biological components. However, to reiterate Merchant's point, when humanity is included a more complete and relevant picture emerges. After all, our view of the Hudson river, natural or urban, has always been one of our own making.

And so, I come to the *River Projects Exhibition* with a question... Do the deleterious effects which most urban waterfronts seem to have on their estuarial or riparian ecosystems mean that urban configurations are *unnatural*? Or are they simply *unnaturally* planned? The student work here represents a modest attempt to answer this question. The strategies employed by both the students and their critics differ in program, site, and technique. Some proposals are concrete and ready for ground-breaking others are less concerned with specific solutions than with ways of considering the problem.

What they do share is a public or civic dimension which is motivated less by the conventional requirements of social amenities than by the desire for a didactic space wherein a shared comprehension of life at the Riverfront is more fully attained. Rather than proposing architectures of resistance to and/or subordination of natural processes, these are projects which aspire to compliance and accommodation with the River. They are less examples of fixed forms than iterations of a nonhierarchical systematic interaction between the artifice of humanity and the surface of the earth.

In this sense, they attempt to avoid the cultural dilemma which Heidegger identifies in his essay, *The Origin of the Work of Art*. This dilemma, Heidegger notes, resides in the difference we impute to our definitions of the World and the Earth. We speak of different spaces when we say that we live in the World and that we live on the Earth. Furthermore, it is in this disjuncture that Heidegger sees the root of technological humanity's schism with the natural environment. A *World* is produced by a culture, by its' institutions and belief systems. The *Earth*, for many of us, is perceived as something other, something outside of ourselves... something a culture controls or whose resources it exploits.

It is the hope of this work here that we begin to recognize that we and the worlds we build are not simply *on* the earth but are, rather, *of* it.

Introduction:

The three projects represented here are situated on three river sites: *Spuysten Duyvil*, located at the confluence of the Hudson and Harlem Rivers in northern Manhattan, *Roosevelt Island* which produces the East and West Channels of the East River distributary, and lastly, the *Gowanus Canal*, a constructed link whose waters were originally flushed by the tides from Gowanus Bay and later artificially connected the Buttermilk Channel with the Bay.

Each site has been formed by the vicissitudes of its' presence firstly in the Hudson-Raritan Estuary system and secondly in the metropolitan system of New York and New Jersey. They are remarkable in the difference which each demonstrates. Their histories reflect as much about our culture's attitudes to the river as they do about river's besieged eco-system. But it is in the study of the intersection between the two that the most revealing stories lie. These are stories about how some of our most dynamic and beautiful landscapes were co-opted to accommodate our rail infra-structures - as much to meet our 19th century technological imagination as to minimize urban disruption and cost; how islands hold a mythic *otherness* for us on the "mainland" and so become the sites for prisons, quarantine facilities, and military boot camps; and how exploited waterways quickly die (and local communities along with them) when their vital hydrologic and biotic ebb and flow are ignored.

The student projects here are tentative in their propositions but ambitious in their aspirations. They attempt to excavate the underlying conditions which produced these river related sites and re-think them from an ecological perspective. They do not attempt a nostalgic return to a Nature embodied in stylistic romanticism nor do they accept the indifferent forms of modernism. An ecological perspective is not one which concerns itself with how things *appear* in the land but rather what they *do* in the land.

PROJECT I:

Program Statement: Roosevelt Island

Islands retain the mystery of naturalism in a curious dialectic between science and nescience. In modern thought, Darwin's Galapagos Islands reveal the mechanisms of natural selection and, consequently, set the stage for modernism's highest scientific achievement: evolutionary theory. From this achievement stems virtually all 20th century understanding of Nature as an ecological entity and, particularly, humanity's place within it. Yet, reflecting modernism's' unspoken hold on the myths and metaphors of our past, the Galapagos story also spawned a literary history of fantastic creatures and cthonic landscapes evolved in isolation from the rest of the world (The Island of Dr. Moreau, Lord of the Flies, King Kong, Jurassic Park, etc.). These were islands where wild nature with its organic primitivism and bestiality escaped the rational ordering of Scientific Method.... In short, it was Nature without Reason.

The (Un)Natural/Historical Site:

The Island Nobody Knows - Philip Johnson, 1969
Roosevelt Island Master Plan

The European settlement of Roosevelt Island has a rich sedimentary history, a history closely linked to conceptions and properties of islands mentioned above. With its' isolated, yet easily surveyed location, Blackwell's Island, as it was known from the end of the 17th century, provided the site for numerous disciplining structures: contagion hospitals, prisons, lunatic asylums, detention centers for aliens/outcasts, alms and workhouses, etc. By the end of the 19th century, the island accommodated 26 hospitals and a dozen more "charity" institutions for the sick, insane, and destitute, precipitating a name change to Welfare Island in 1921. Today, only a few remains of these institutions are left, ruins among the fabric of urban renewal.

These structures offer us a glimpse of its' history. They also suggest that any new community that may arise on this island will have tangible symbols of the past upon which to build its future - Philip Johnson, 1969 Roosevelt Island Master Plan

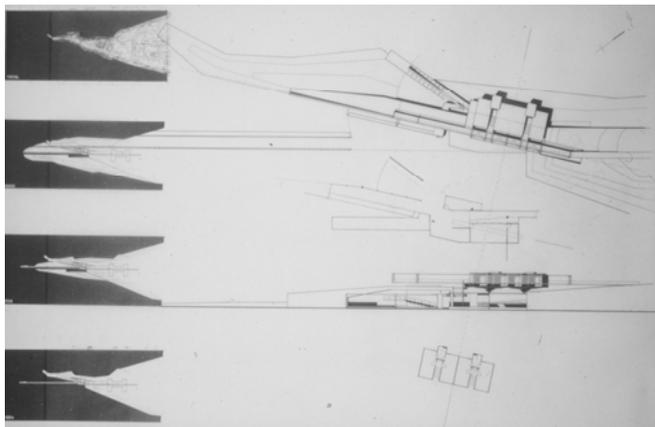
The (Un)Historical/Natural Site:

It's Nice to Be on the Island - Translation of Canarsie Indian, "Minnahannock"

There is another history often overlooked. Pre-European and equally as vital, Roosevelt Island was known as Minnahannock by the Canarsie Indians who lived, fished, and hunted on the island. Minnahannock impressed the Dutch settlers with its' "crystal waters" and extraordinary mussels and estuary abundance. This was another version of Nature, an island that was not exclusionary but co-extensive with its inhabitants. Abundant and dynamic, this island represented an integrated ecology of which humanity was a key member.

Agreeably situated...about four miles from the city. It is without exception one of the most healthy situations in this State. It is remarkable for the number of fish and fowl that is caught there in the different seasons. - Real Estate ad for Blackwell Island, 1780

Project: Becoming Architecture



The seawalls around the southern tip of Roosevelt Island are removed and an axial channel (canal) is cut northward to the new Facility. This canal allows boat traffic within but acts as a new "landwall" which delineates the limits of the future erosion of the southern tip. Working in conjunction with another set of "landwalls" (also connected to the Facility) which inscribe the original (*pre-landfilled*) southern tip, the eventual erosion and ecological re-habitation of the site returns the area to a former condition.

In this future condition, the Facility is also re-formed. The boat channel's obsolescence provides an aquatic habitat while the Facility, no longer centered within the island, now establishes the water's edge. Its' central hub becomes a "tidal hinge" which swings to close off the new/"old" tip of the island and to secure the local biota therein.

The provision of certain spatial sequences (e.g., entry procession through the landmark Small-pox Hospital) as well as the accession to contingent temporal sequences provide the conditions for an architecture to actively participates in it's own history.

Students: Po-Wen Hsiao- Project Model/Drawing
Angel Burgos - Historical Model

PROJECT II

Program Statement: Spuyten Duyvil

*The ontological primacy of **objects** and the ontological subordination of **relationships** in classical western science is, in fact, reversed in ecology...Ecological relationships determine the nature of organisms rather than the other way around...The whole, the system itself, thus, literally and quite straightforwardly shapes and forms its component parts.*

J.Baird Callicott

In New York City, the area known as Spuyten Duyvil has been the site of a convergence of multiple and diverse systems. While maintaining vestiges of its pre-colonial natural ecology, the waterway has undergone a number of transformations as the requirements of New York's cultural ecology , underwritten by its' infrastructure, has evolved.

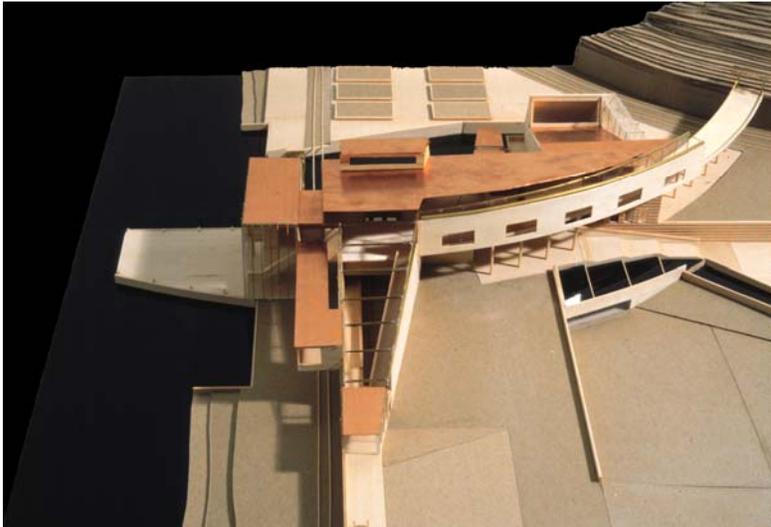
Dredged, straightened, bridged, embanked, in-filled, Spuyten Duyvil Creek today joins the Hudson with the Harlem River as a navigable channel. Along its south shore between the Hudson and Marble Hill, Inwood Hill Park (referred to as "the city's only primeval park" - Blue Guide) maintains the memory of its geological and pre-colonial histories and initiates a loose park system consisting of Riverside, Fort Tryon, Isham and Highbridge. On the other hand, its northern shore has been reconstructed to accommodate shipping, rail transportation, and high-rise housing. The effect of these systemic intersections has been to transform Spuyten Duyvil into a line which demarcates differences rather than a threshold that seams them.

Can "natural" and "technological" ecologies cooperate? While we must acknowledge their different effects, is there a certain congruence in their systemic forms? Can one re-configure the infrastructure north of Spuyten Duyvil in a manner which beneficially amends and conjoins the landscape to the south?

As we attempt to lessen our dependence on the auto, and as single-use zoning becomes a thing of the past, urban and transportation planners today are encouraging "multinodalism" or "intermodalism" - the convergence of a broad range of transit and other activities at a single location. This strategy has partly grown out of necessity, for cities must squeeze their ever-shrinking budgets, and partly from the recognition that there is a real link between traffic congestion and the way land is used. Multi-nodalism is also aimed at building strong communities, optimizing the potential of transit nodes to inspire and centralize social interaction...(In 1991), the Intermodal Surface Transportation Efficiency Act (ISTEA) was signed into federal law, earmarking \$152 billion for transportation enhancements. One of the most innovative features of the new law is that it considers environmental and energy issues as integral to the country's infrastructure, signifying an important shift in transportation planning...

(Cathy Lang Ho, Metropolis, 7-8/96).

Project: Spuyten Duyvil Link Facility



The sedimentary history of the northern peninsula at the juncture of the Hudson and Harlem Rivers reveals a number of formal and material re-configurations culminating in the present day land-fill site. The triangular shape of the site is inscribed by rails on two sides. One set of rails is constrained by the Fordham gneiss cliffs of Riverdale, the other set of rails, on the other hand, constrains the tidal flow of the river. This compromise between land and infra-structure provides the theme for the Spuyten Duyvil Link Facility.

Located on a small land-fill peninsula at the northern edge of the mouth of the Harlem River at Spuyten Duyvil, the SDLF accommodates a set of facilities (*systems*) that link local and regional travel with local and regional land use activities. Primary tenants are

the Metropolitan Transit Authority with secondary participation from Amtrak and local commuter/tourist ferry services (*System 1*), the NYC Parks Dept. (*System 2*) and approximately 10,000 s.f. for commuter-based amenities to be determined (*System 3*).

The formal arc of the main building (whose epicenter is situated at the convergence of the Metro-North and Amtrak lines) both surveys its' site while also acting as another artifactual inscription that rather than constraining the land, addresses and activates the formerly derelict tidal beach on the peninsula's third side. The flow of the river is locally diverted through the Facility's tidal power turbines to a series of stepped and pumped pools and channels combining observable energy production with a restorative "link" to the formerly wetland site.

Students: Joshua Harper - project model
 Elizabeth Barnes - local site model
 Stephany Gonzalez - regional model

PROJECT III

Program Statement: Gowanus Canal

A fetid dead body of water since 1960, the Gowanus Canal has had a peculiar history. In 1847, a Brooklyn real estate developer proposed to the Common Council of Brooklyn an idea for creating more habitable land. His proposal was based on draining the mudflats and saltmarshes of the Gowanus Bay estuary, a roughly 1700 acre bowl surrounded by the hills of South Brooklyn (Carroll Gardens, Red Hook) to the west, Boerum Hill to the North and Park Slope to the East. Rising "like an amphitheater" about an area of land suitable only for hunting and clamming, the surrounding neighborhoods were developing at a rapid pace. Recognizing the natural drainage and tidal flushing which occurred in the estuary as it received the gravity flow of waste and storm water from the overlooking communities, the plan called for augmenting this "natural" system by directing and channeling the flow out to the Bay. In his scheme, the absorptive lands adjacent to the channel would dry up and become suitable for farming, commercial and residential life. A US Army Corps of Engineers Major, David Douglas, was hired to propose a course of action.

Built in 1867-69, the canal was soon controlled by a few wealthy corporate landowners and small "smoke stack" industries (coal, lime, cement, dye, bricks, etc.). Taking advantage of the booming port activity in the Bay itself and further along the Brooklyn waterfront, the canal's commercial success was immediate. However, there was also another immediate effect. The canal was being polluted by industrial refuse and effluent waste.

Dubbed the "Lavender Lake" by local residents only 20 years after its completion (a reference to ink dumped into the canal), the canal constantly required dredging and became both an eye and nose sore. It was evident that the natural tidal action from

Gowanus Bay was not substantial enough to flush the extensive flow of waste draining into the canal. In 1911, a pumping Station located at Douglas Street was built along with an underground channel westward to the Buttermilk Channel. Augmented by the pumps, tidal flow began to flush the canal and for the next 40 years, the canal operated both as a commercial waterway and an open sewer. In 1960, the pumps failed, commercial activity was displaced by overland trucking, and the adjacent lands abandoned. This is the present state of the Gowanus Canal.

What is missing from this account requires a re-reading of Major Douglas' Gowanus Canal proposal. His actual proposal demonstrated a clear understanding of the estuary's ecology and its compromise by commercial/political interests is a familiar story in environmental lore.

In a society that takes the separation of Nature and Culture as a given, the relationship between natural systems and technological systems is an antagonistic one. While the physics and chemistry of water flow, erosion, sedimentation and other hydrological processes are the same physics and chemistry operating within the infrastructural systems of our communities, the connection is rarely recognized because their systemic forms are so different. The situation is exacerbated by virtue of the fact that instrumental technology has always interfered with natural systems and disrupted the ecological status quo. In the cases where interference has been deleterious, it has usually been the result of either intentionally ignoring, overlooking, or simply forgetting how natural systems work.

This studio will re-visit Major Douglas' plan for the Gowanus Canal as a thematic structure for re-thinking its future.

Project: Gowanus Canal, Mixed Use Waterfronts

An initial study of the *mechanisms* both natural and technological that adhere to the edge of the Canal became a resource for the project. Three distinct types of "landscapes" in conjunction with specific uses are constructed along the canal to underscore the history as well as a reconsideration of the interface between land, water, and artifact.

1. The "Urban" surface: The site for new commercial and work space sets upon the impermeable surface of the "plaza. Highly constructed and resistant to natural processes, this "landscape" utilizes a range of technological devices for handling non-point source run-off and framing the canal's edge to provide both a scopic relationship (the promenade) to the re-vitalized canal and boat access.
2. The "Olmstedian" surface: Also, highly constructed but reliant on natural systems, this park land situates the local residence. It emerges from within the frame of the housing and is constituted by a series of landscape/water events which meander to the canal's edge. Like all "parkland" it is a managed land.

3. The "Natural" surface: A re-constructed tidal marsh, this area to the east of the Canal provides the site for a community environmental laboratory which monitors and provides information about both the natural and urban (air pollution, waste, noise, etc.) ecology of the area. The land is allowed to operate with minimal interference providing both intertidal habitat, urban run-off cleansing, and a recovered memory of the Gowanus Estuary.

Students: Tony Tai - Project model, computer images, edge mechanism study
Priya Varadachary - Project model, edge mechanism model study
Soshu Hayashi - Project model