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Instructor Information:

[Marc J. Tsurumaki](#)

Architecture in the Altered Landscape

Center for Environmental Biotechnologies, the Meadowlands, NJ

Introduction

“Actually, the landscape was no landscape, but a ‘particular kind of heliotypy’, a kind of self-destroying postcard world of failed immortality and oppressive grandeur. I had been wandering in a moving picture that I couldn’t quite picture, but just as I became perplexed, I saw a green sign that explained everything:

Your Highway Taxes at Work...

New Jersey State Highway Dept.”

-Robert Smithson, Monuments of the Passaic

If Manhattan represents the triumph of the artificial over the natural, then the Meadowlands can be seen as the site of their perpetual and unresolved struggle. In contrast to the orderly density of the Manhattan grid where all evidence of previous terrestrial features have been erased - these 20,000 acres of urban wetlands just a few mile to the west, comprise a vast and unruly territory whose apparent vacancy belies its complex vitality. In the Meadowlands, transportation networks and salt marshes, industrial facilities and post-industrial brownfields, subterranean leachate fires and cyanide pools, waterfowl and ecological preserves, landfills and kayaking facilities coexist in surreal juxtaposition. Home to a diverse and persistent ecosystem, it is also one of the twentieth century’s most degraded landscapes - the reservoir of the toxic by-products of the region’s industrial transformation as well as the repository of its discarded remains.

However, if the Meadowlands seem to contradict the rational order of the city, they can nevertheless be understood as equally a product of human manipulation and intervention. Characterized by both the indeterminacy of land and water and by the blurring of industrial, infrastructural, and biotic systems, the Meadowlands present a terra incognita where conventional distinctions between the organic and the artificial are no longer possible or operationally significant. In it’s metamorphosis over the past three hundred years from pestilential swamp, to industrial dumping ground, to it’s recent recuperation as an aspiring ‘eco-destination’, the Meadowlands epitomizes the shifting nature of material, the fluidity of values, and the varying substance of ideas regarding the natural world.

Operating through the opportunistic exploitation of limits, the project will navigate the complexities of intervening in this profoundly altered landscape, cultivating the paradoxes found as a catalyst for architectural invention. The project will require the negotiation of a series of contradictory criteria - occupying the shifting zone between land and water, the organic and the constructed, the toxic and the pastoral - and necessitate the formulation of corresponding spatial, performative and programmatic logics. Analogous to the adaptations of biological organisms to extreme environmental conditions, inhabitation of such an insecure milieu will require imagination, agility, and a radical rethinking of commonplace notions of stability, permanence, structure, ground and enclosure.

The programmatic vehicle for these investigations will be a Center for Environmental Biotechnologies, conceived of as an extension of and counterpoint to the Meadowland’s history of human alteration. Encompassing the development, deployment and commercialization of practices such as phytoremediation, transgenic agriculture and biopharming, the program will be understood as simultaneously academic and corporate in character while engaging increasing patterns of public activity. Through this coupling of research and recreation - the industrial legacy of the Meadowlands will be combined with new forms of access and experimentation. Leveraging the unique qualities of this radically denatured terrain, the project

will require its integration as an active scientific and natural resource: both testing ground and productive landscape. New economies of bio-production and emergent ecologies of the post-industrial will be seen as potentially reciprocal conditions.

The studio - while focused on the precise articulation of an architectural proposal -will address broader notions regarding the politics of perception in post-industrial culture and the ways in which we experience and occupy such dramatically transformed environments, viewing these conditions as both an opportunity for the formation of new paradigms and as an increasingly pervasive problematic at the beginning of the 21st century.

I. Swamp

Long a contested terrain, the Hackensack Meadows were originally viewed by European settlers as an unhygienic swamp. From early on, the marshes were subject to draining, filling and deforestation, while plank roads began to crisscross the area beginning in the eighteenth century, prefiguring the eventual overlay of railroads and elevated highways. From the nineteenth century until little more than 50 years ago, the Meadowlands were subject to the “devastation of unregulated industrialization and waste disposal,” with more than 2,500 acres of garbage dumps leaching contaminants into the waters and marshes, causing wildlife and vegetation to disappear. Still pockmarked by contaminated sites and landfills the area has, since 1960, been undergoing a gradual transformation from ecological liability to erstwhile “nature destination.” Landfilling has been largely arrested, with large tracts of land, some former contaminated impoundments, being converted into public parks and recreational facilities. More than 8,400 acres have been set aside for open space and wetlands, and the region now hosts 265 species of birds, as well as extensive aquatic life. While environmental conditions have improved, development has met with more problematic and varied outcomes. Home to the Meadowlands Sports Complex, a collection of outlet malls, office parks and distribution centers, the recent failure of the ill-fated Xanadu complex has negatively impacted the perception of the site as a viable development zone. Nevertheless, the former Xanadu (reputably the ‘ugliest building in New Jersey’) was recently the recipient of massive financial subsidies by the state and is slated to become the home of a newly announced theme park dubbed American Dream, which will include an artificial beach and interior ski slopes - reproducing a sanitized nature domed off from the surrounding compromised landscape.

Rather than attempt to eradicate the troubled history of this marginal zone, the studio will explore means of recording and transmitting the legacies of human intervention, interrogating the relation between conflicting desires for access, the demands of a fragile ecosystem, and anxieties regarding the persistence of contamination. Moreover, we will address the shifting and amphibious nature of this terrain - its flows and accumulations, arrested matters and sedimentations. This paradoxical coupling of apparently contradictory entities - the fluid and dynamic material of the site in contrast to the typically static forms of architecture - will become the catalyst for provoking new tectonic, sectional and organizational logics. Deploying resilient approaches which take into consideration temporality and unpredictability as a precondition of the design, the studio will address both the material instability and experiential multiplicity of this overlooked and neglected terrain.

II. Testing Ground

Long the poster boy for the toxic, New Jersey has recently emerged as a national leader in the field of biotechnology. At the same time, the very contamination that has made the Meadowlands a historic liability is now proving a unique resource for environmental research and development. Groups like the Meadowlands Environmental Research Institute and the Biotechnology Center for Agriculture and the Environment at Rutgers University conduct extensive field work within the most contaminated areas of the site, taking advantage of extreme conditions that would be difficult to recreate in a laboratory setting and which could sponsor genetically unique, commercially-exploitable new species. Researchers from Rutgers, for example, in partnership with the biotech firm Diversa, are sampling toxic sites for divergent DNA, searching for microbes that can metabolize the chemically laden soils in the hopes that they may someday function as antibiotics, industrial enzymes or bioremediative agents. Other ongoing research involves genetically resistant agricultural strains and the utilization of invasive grasses as hyperaccumulators for the treatment of toxic soils. Our project will address these developments and the complex questions they raise about accelerating human manipulation of the environment, in a setting that represents both the devastating impacts of the recent past and provides an example of the vitality of natural systems in close proximity to

urban centers.

These issues suggest a reconceptualization of the relationship between our interventions in this territory and the site as an active agent in the formation of the architectural proposal. Rather than conventional strategies of positioning autonomous object buildings in secured zones neutered to resemble suburban lawns (the legacy of more than half a century of office park design), the conditions outlined above suggest a more dynamic relationship where building and site are conceived as contiguous and interrelated systems. Instead of the hermetic precincts of most research parks, our project implies a destabilization of normative modes of interiority and exteriority, new forms of environmental intelligence, and the integration of the site as a performative component of the design. Moreover we will consider how the resulting hybridizations of architecture and landscape might become agents in the regeneration of the larger biophysical system of the Meadowlands -providing a source of remediation, an active habitat and an interface for renewed human activity.

III. Epilogue

In Andrei Tarkovsky's 1979 science fiction film 'Stalker', three figures, guided by the title character, move through a vast depopulated terrain filled with unseen terrors. Based loosely on the novel, 'Roadside Picnic' the action is set in a literal zone of alienation, a precinct rendered lethal by extraterrestrial visitation. Critics have cited the apparent prescience of the film in prefiguring real world sites like the Chernobyl exclusion zone where all too human activity has resulted in lasting environmental devastation and long-term effects on human health. The film's use of post-industrial locations, actually found near Tallinn, Estonia, are simultaneously compelling and foreboding - conveying a sense of both menace and otherworldly beauty. Similar human-altered landscapes figure in the work of photographers like Edward Burtynsky and David Hanson, work that has been categorized as the 'Toxic Sublime' - a coinage that in turn builds upon David Nye's notion of the Technological Sublime as a specifically American mutation of the Romantic aesthetic category. In these post-Burkean visions of contaminated rivers, strip mines and garbage dumps, the image "produces dissonance by simultaneously showing beauty and ugliness, the magnitude of the projects and the insignificance of humans, illustrating what is known of production and unknown of effect... while simultaneously eliciting the feelings of security and risk, power and powerlessness.(Peeples)"

While it's recent history may be one of ecological resurgence, the Meadowlands remains a site of striking ambiguities - both a rich and varied ecosystem and a toxic zone- one that elicits contradictory responses and affects. Our projects will emerge from a critical re-interpretation of the social, temporal, and material logics of the site -slipping into the gaps in existing systems and exploiting emergent formations, as well as telegraphing the desires and anxieties that this highly ambivalent terrain evokes. Ultimately, the studio will seek to cultivate and hold in productive tension these paradoxical conditions, engaging questions of how we perceive, inhabit and intervene in radically denatured landscapes and the position of the contemporary subject in an irrevocably altered world