

Subtraction

Columbia GSAPP Advanced Studio IV, Spring 2015
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Introduction

This studio will explore subtraction as a design practice operating at different scales— from the city to the building. Although architects typically concern themselves with making, expanding, and addition, subtraction may also be considered a technique with architectural and urban consequences. According to Keller Easterling, “the discipline has not yet institutionalized special studies of subtraction. In fact, for architects, building is the customary answer to most problems.”¹ Subtraction will be explored in terms of its urban possibilities, spatial implications and potential effects on technical and environmental systems.

Differing from the Modernist notion of tabula rasa, the studio will investigate subtraction not solely as an erasure of history or a prerequisite for further constructive activity, but rather a design practice with the potential to generate new effects. Although subtraction at the scale of the city may be associated with the destructive and sometimes violent practices of urban renewal, gentrification, and other man-made and natural disasters, the intention of the studio is to explore the productive and creative potential of subtraction.

The Rockaway Peninsula, in Queens, New York, a barrier “island” eleven miles in length and current occupied by a population of 130,000, will serve as a test site. Given sea level rise, climate change, and increasing climate instability, Rockaway appears to be precariously positioned. Might envisioning the future of Rockaway not involve further growth, but rather subtraction?

Picking up on the themes in the broader context of “Scales of Environment: Design for Uncertainty” (eight sections of Advanced Studio IV sharing a common discussion while exploring unique ideas and approaches), the studio will explore the issue of subtraction through a sequence of different scales, developing compound relationships between urbanism and architecture. Design proposals will also be elaborated at an architectural level within sub-sites identified during the semester. As all of Rockaway’s K-12 schools were affected during Hurricane Sandy and may still be venerable, design proposals will involve adaptation or modification of existing schools and/or new education infrastructure within a reconfigured Rockaway. It is intended that subtraction is used as a device to rethink not only the city, but also the specific typology of the school.

Coastal Context

In the context of climate change and instability, the design of our cities and buildings require a radically new paradigm. New York City is typical of many large urban areas in that a significant amount of its land, infrastructure, and population will be increasingly vulnerable to effects of climate change. Two documents, the Vision 2020: New York City Comprehensive Waterfront Plan (2011) and PlaNYC: A Stronger, More Resilient New York (2013) outline policy actions and planning steps towards protecting New York City against future events such as Hurricane Sandy. The latter document is far-reaching in terms of proposed construction of portable flood walls and berms, levees and flood walls, local surge barriers, multipurpose levees, tide gates, bulkheads, stone revetments, offshore breakwaters and jetties, restoration of dunes and wetlands, and rebuilding beaches. Notably absent is any mention of adjustment to the coastline. The former Mayor Bloomberg summarizes this defensive mentality, saying, “New Yorkers... cannot and will

¹ Easterling, Keller. Critical Spatial Practice 4: Subtraction. Berlin: Sternberg Press, 2014.

not abandon our waterfront. It's one of our greatest assets. We must protect it, not retreat from it."²

In fact, New York City's coastline has been a historically evolving boundary shaped by layers of subsequent land reclamation and man-made adjustment, both intention and unintentional. The coastline is not a fixed, natural condition, but rather a changing, artificial construct. In light of the ongoing change, expansion, and reclamation of land, can we think in reverse? How might we creatively re-envision the city with a more compact footprint?

The Rockaway Peninsula, in Queens County, is a linear strip of land that shields the Jamaica Bay from the Atlantic Ocean. Lenape (Delaware) Native Americans first occupied the peninsula, and from the 1830s it became a summer destination for wealthy New Yorkers. Historic maps reveal that over the past 150 years, the landmass of Rockaway has dramatically grown, partially due to deliberate land reclamation and partially due to the effects of jetties and other artificial interventions producing longshore drift and sedimentation. Rockaway demonstrates the mutability of the coastline.

Towards the end of the 19th century, access to Rockaway via railroad facilitated development such as amusement parks, resort hotels, and summer bungalows for a broader range of people. In the 1930's, Robert Moses planned and built additional connectivity via two bridges, which spurred further development. Moses was also responsible for the design and construction of a massive art deco bathhouse, completed in 1932, which was intended to serve the adjacent Jacob Riis "People's Beach."

Rockaway, especially towards its Eastern edge, experienced a severe economic decline in the 1950's, and soon transitioned into what has been called a "dumping ground" for the marginal population of the city. Yael Friedman writes that, "In the decades after World War II, Rockaway—mostly known in New York for its summer bungalows and public beaches— began to transform into the borough's capital of public housing. Although it made up an almost negligible part of Queens' overall population in its early days, Rockaway came to claim over 50% of the borough's housing projects. A similar concentration of nursing facilities and group homes for the mentally infirm also developed."³

By the late 1969, under the Arverne Urban Renewal Authority, a massive "slum clearing" effort was undertaken, and nearly 308 acres of housing were subtracted. 6,500 new housing units were planned but never came to fruition, and by 2000 the area had become an inadvertent nature preserve. In fact, Rockaway's larger history might be characterized as a series of erasures; replacement of not only built substance but also people, caused by fires, storms, and shifting economic and social circumstances. Most recently, in 2012, Rockaway experienced significant damage from Hurricane Sandy.

Various efforts have been undertaken to re-envision Rockaway. A competition, organized by the Architectural League in 2000, examined a 120-acre area where, by 2013, a developer-led initiative had constructed a new planned community known as Arverne by the Sea. Most recently, the redevelopment of Rockaway has been focused on Arverne East, which was the subject of the 2013 design competition FAR ROC, organized by the AIA-NY, NYC HPD, and a consortium of

² New York City Office of the Mayor Press Release. "Mayor Bloomberg Presents The City's Long-term Plan To Further Prepare For The Impacts Of A Changing Climate." June 11, 2013

³ Friedman, Yael. "Lessons from Rockaway: What to Save from the Flood" Urban Omnibus. <http://urbanomnibus.net/2013/03/lessons-from-rockaway-what-to-save-from-the-flood/>. Accessed 01/03/2015.

developers. The implementation of the winning scheme by White Arkitekter remains uncertain, however. Despite New York City's critical need for affordable housing, readjustment of flood maps and insurance rates after Hurricane Sandy makes further development on Rockaway more challenging.

Design Process

The studio will operate upon a speculative mechanism to test the potential of subtraction at the urban scale. By transferring development rights from flood areas to upland or protected areas, government authorities and policy makers might choreograph a "coastal buyout." The flood areas would be converted to wetland or green buffers, while adjacent upland areas would be intensified with new development framing or bounding new coastal territories. In effect, policies of down-zoning and up-zoning would guide a strategic adjustment of the coastline.

The studio's focus will be not only a broader urban strategy, but also the specific landscape and architecture corollaries and consequences of the speculative mechanism. In addition to the subtracted territory, the studio will also involve a reciprocal intensification site. The intensification site may be above, adjacent, or proximate to the subtracted site.

The intensification site will be developed at an urban and architectural level and involve the proposal a new educational institution (or adaptation or re-use of any existing one). The architectural proposal must establish a position vis-à-vis the subtracted territory, and this could occur programmatically, formally, or through other building systems. Ideally, a strong relationship will be established through an architectural proposal that may define, frame, or delimit the larger territory of subtraction.

Additionally, subtraction may be explored through other means and at other scales. Artistic or aberrant architectural practices may suggest techniques. For instance, can the subtraction of mechanical systems, envelope, structure, or even program generate new potentials rather than just simply compromising functionality? How do such subtractions occur and what are their effects?

I. Shared Research (2 weeks)

Initially, the studio will work in teams to develop collective knowledge and insights involving, but not limited to, the following topics:

- Rockaway Existing Resources
- Subtraction Economies and Mechanisms
- Planning Subtraction (Precedents)
- Building Subtraction (Precedents)
- Educational Prototypes

Students will form clear arguments and insights that can be elaborated through graphic and visual means. Despite the range of different topics and scales explored, it is expected that students coordinate their work into a shared template, format, visual language, etc. so the knowledge can be presented coherently as a single body and eventually combined into a studio book.

II. Urban Strategies (3 weeks)

Identifying valuable collective insights from the first phase, students will continue to work in teams to propose urban strategies for Rockaway. Whether each team takes the entire peninsula or teams divide the peninsula into different parts remains to be determined. Urban proposals will be developed for the Midterm review, and should already anticipate the next phase of the studio, i.e.

an identification of an architectural site for educational facilities. The ambition for the Midterm will be large scale models, large scale drawings, and large scale thinking.

III. Architectural Proposals (7 weeks)

The overall structure and constraints of the second half of the semester will be defined further at the Midterm. In this second half, students may continue to work in teams, or work individually. Design proposals will involve adaptation or modification of existing schools and/or new education infrastructure within a reconfigured Rockaway. Subtraction will hopefully become a device to rethink the typology of the school. Given that students will be working across different sites, elaborating upon different insights and research, the formation of independent thinking and a thesis related to the work will be particularly important.

References: Subtraction

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