YEAR IN REVIEW 2014–2015

It is an honor and pleasure for me to once again introduce the work of the faculty and students of the School of Architecture through this publication that coincides with The Cooper Union’s End of Year Show. Here are texts of the projects for each of the studios of the five year design sequence that provide both a narrative structure for the design curriculum as a whole, and an understanding of the conceptual emphasis of each individual studio and teaching team.

The Master of Architecture II program marked its fifth year of teaching with an exhibition in September of the thesis projects of the class of 2014. Nine projects were presented that examined and revealed the potential for architecture to elucidate a breadth of physical and conceptual conditions. The degree program, no longer “new,” is continually evolving, having now brought 40 young architects and scholars from around the world to the school to clarify and challenge the disciplinary boundaries of architecture through an emphasis on its fundamental tools: rigorous observation and research, drawing and model making (of all kinds), photography and film.

The Cooper Union Institute of Sustainable Design also formally marks its fifth year of work. The CUISD has become a vital resource for all Cooper Union faculty and students, as well as the broader academic and professional communities, sponsoring lectures, partnering with other New York City institutions on major symposia, and this year hosting its first invited educators’ workshop. Following a competitive process, the CUISD will award its first summer fellowships to three student teams who will address “Visualizing Climate Change.”

The School of Architecture Archive installed an exceptional sequence of exhibitions this year that each addressed teaching and making architecture. Following the Master of Architecture II thesis exhibition, the School of Architecture Archive presented its first exhibition in the planned series Drawing from the Archive. Two years in the making, Drawing from the Archive: Analysis as Design presented 47 student projects produced at the school between 1967 and 2014, as well as a 45 year timeline of images drawn from the Archive that demonstrated the evolution of “analysis” as a fundamental part of the school’s pedagogy: a didactic, structural and abstract discipline in itself. This historic exhibition included over 100 original drawings and almost fifty models; works in all media presented analysis as a creative, synthetic process, as well as a dissection and close reading of an existing work of architecture. The Kyrgyz cemeteries as photographed by School of Art professor Margaret Morton in the exhibition Cities of the Dead: The Ancestral Cemeteries of Kyrgyzstan, are constructions of an almost evanescent physical quality. Bearing witness to memory, history and culture, they are works of architecture in the most essential sense. Three Views of Oman: the Photography of Wilfred Thesiger, Charles Butt and Edward Grazda, 1945-2006 revealed a young nation through the eyes of the West as its contours and identity emerged in the last 60 years. Architecture students, who in the future will likely seek and find work in unfamiliar cultures and geographies, must learn the importance of patient study and observation, and understand the relationship between maker and subject, if they are to create works of beauty and meaning.

This has been a consequential year in the history of The Cooper Union. Even as structural change has come to the institution, debate continues on its impact, both to the historic mission and values of the school, and to the question of higher education as a public good. In this year, as we anticipate the successful conclusion of the Dean Search, the School has recommitted itself to architecture as a social, intellectual and creative project. The historic ethos of The Cooper Union informs the school at every level, and the design studio is, more than ever, a place of community and debate, of analysis, experimentation, precision, hard work and risk-taking. Projects seek to clarify what is fundamant to the discipline of architecture while drawing in questions of urgency and consequence for the individual and humanity.

It has been my great honor to be a part of this noble, optimistic and joyful venture.

Elizabeth O’Donnell
Acting Dean and Professor
This building has scarcely been absent from my thoughts a single day, for nearly thirty years. I have labored for it by night and by day with an intensity of desire that can never be explained.” —Peter Cooper

This has been a wonderfully difficult year, a complex year, a hinge year in the long life of the institution. We set out with two basic gestures. First, we recognized and embraced this class, this group of people, as the continuation of the 155-year project of The Cooper Union. We placed the weight of the school in their hands, we asked them to measure, draw and build the school itself, to care for the school in the most profound sense of ‘building it.’ We built a model of The Cooper Union while acknowledging that The Cooper Union is itself a model of education.

Scale-less: Fields vs. Fragments

Scale is a fundamental principle of architecture and one of the most crucial challenges every young architect should begin to examine and understand through basic observations in proportions, measures, constructions, assemblies and most importantly, archetypical conditions in space. These become key studies in creating new inventive typologies in form and structure.

FULL SCALE: DETAILS [1:1]: Windows, Doors, Skylights, Columns, Floors, Walls, Stairs

Inhabitation Scale: Objects [1/8” - 1’-0”]

Scale-less: Fields vs. Fragments

In the last phase of the studio, students are encouraged to identify the next critical scale of their project, where they can choose between two extreme scales: field vs. fragment scale. For the projects which chose a reduced FIELD condition scale, it becomes critical to invent a sequence of site marks that could generate a new SITE DOMAIN. Students scale down their unique objects, cut into their TABULA RASA sites to begin to test how they could work in parallel with either the remainder of the projects generated by the entire studio as well as their own individual project syntax. Explicit and implicit projection of grids, details, objects and vectors sets the underlying basis of construction towards a new invented site armature. For the projects which chose an enlarged architectural FRAGMENT scale, it becomes critical to select a key crop of the project that describes a specific programmatic function, for example, one showing an entry condition. This fragment re-introduced how each project and their prospective element have trans-formed during the semester in the conceptual categorization and active engagement in the larger dialogue on the FUNDAMENTAL ELEMENTS of architecture.

Second year studens were produced by the development of a series of readings exploring pertinent concepts focusing on formal and sequential organization, activities and narrative.

The second part of the semester was a project for 'An archive of New York City.'

Process: The design process was organized in 6 steps indicated below, issued progressively each one followed by a review. A pertinent scale for the drawings and models was indicated for each step in the process.

1. Definition of a type of archive of New York City in terms of Activities and Narrative and constitutive elements through operations of Selection and Combination.
2. Creation of a Typological Inventory. Based on the examples of archives provided covering a vast range of archive typologies and organizational systems, a typological inventory of all the different types of archival systems was created through diagrammatic drawings that best describe each.
3. Production of a Generic Archive: Based on archive typologies, a generic archive was created within a volume of 30’ x 30’ x 90’ identifiable modules following a mathematical series were to be used.
4. Transformation: The generic archive was transformed incorporating each narrative and relating to type of users through operations of subtraction and addition.
5. Sequential Organization: Taking into consideration the concepts of Sequence: movement in time through space and Threshold: transitional conditions, a further transformation was produced developing sequences of spaces in relation to Activities implied in each narrative. Sequences were organized through the following oppositions: Public/Private, Interior/Exterior, Classified/Open to the Public.
6. Volumetric Organization: Considering the site, a volumetric organization was developed defining the Entry sequence and the Entry itself.

Projects of Archives developed in studio in teams of two students included: Archive of Immigration contributions to NYC; Archive of Counter-Culture in the Lower East Side; Archive of Light of New York City; Archive of Urban Legends; Archive of the Undocumented; Archive of the Spoken and the Written Language; Archive of Surveillance; Archive of Everyday Life objects and its Financial counterpart; Archive of The City as Theater and Theater in the City; Archive of Jewish New York; Archive of Violence.

Selected Reference Texts: Archive Fever, Jacques Derrida; The Order of Discourse, Michel Foucault; The Order of Things, Michel Foucault; The Wall and the Books, Jorge Luis Borges.

DESIGN II: SPRING SEMESTER

Assistant Professor James Lowder
Instructor Donit Avivi
Instructor Will Shapiro
Instructor Lydia Xynogala

The Distributed Urban Zoo—An Architectural Menagerie in the West Village

First conceived as “cabinets of curiosity,” the earliest notions of the zoo could be found in the collection of small pavilions or pagodas, strategically placed within the expansive and picturesque gardens of royalty. While perhaps the contemporary zoo has evolved past these cultural models of mere spectacle and object fascination, architecture has had a limited role in redefining this evolving relationship. Under the pretense of designing a menagerie of individual animal houses, which in turn will produce a larger distributed “zoo” network throughout the urban context of the West Village, the students were asked to locate a site from which they would cultivate their proposals.

Not defined by the normative parceling of land, property lines or zoning envelopes, students chose liminal urban spaces for their latent qualities and potentialities that were then, in turn, developed with equal amounts of conceptual rigor and imagination into highly abstracted landscapes, transcending their origins in order to achieve a new conceptual and spatial status. Each student then had to introduce an intervention that responded to and engaged with the constellation of forces, vectors and elements of the site. In tandem with this exercise, the students chose an animal to study in relation to the human body: comparative analysis of their morphology, studies of their range of movement and locomotion, research on various mediums/ phases of matter in which the animal moves not only in relation to abstracted notions of their natural habitats but also to the surface areas and volumes equivalent to those found on the site. This information was then put into conflict with the site intervention in order to structure and mediate the relationship between the two subjects. Due to the vast array of non-anthropomorphic criteria put into conflict with the architectonic elements, many of the assumptions upon which the discipline of architecture is predicated are now forced to be reimagined. The stable relationships that architecture has with human bodies, due to the human body’s relationship towards matter, geometry, gravity and scale, has unmoored the underlying principles that govern architectural form and necessitate a radical re-engagement with the motivations of an architectural language.
The tectonic idea and the articulation of a building’s assembly is never as simple as it once was a century ago. The understanding of the role and influence of the scenarios of imagined narratives. An architectural site consists of an urban environment that range in use, scale, material, lighting, furnishing, and acoustics. The spring semester of Design III builds off of the analytical work of the fall semester by synthesizing the analytical concepts of movement, structure, program, and environment.

During the first half of the semester students interrogated their references directly. They worked individually, spending a month intensively considering the building in terms of four general categories of analysis: movement, structure, program, environment. Underlying all four of these categories of investigation was the question of site. One of the questions provoked by the analysis of historical references is the nature of the pre-existing condition, and how the architect has transformed it through the process of design. The explorations of the last weeks of the semester were conceived as a disciplined speculation on an ‘original’ site condition that could be discerned or uncovered, even after the building’s construction. Seen in these terms, analysis works progressively towards a gradual comprehension of site and the preconditions for design.

The spring semester of Design III builds off of the analytical work of the fall semester by synthesizing the analytical concepts of movement, structure, program, and environment into a design proposal. The typology that the studio addressed this semester was that of an educational building, specifically a New York City public high school. The program of an educational environment includes multiple spaces that range in use, scale, material, lighting, furnishing, and acoustics. This semester looked for a developed and articulated resolution of programmatic, constructive, structural, environmental, and lighting ideas integrated into the student’s conceptual and aesthetic arguments. Each student worked individually and was held responsible for resolving all of the factors that condition architectural design. Program, site, material, and tectonics are crucial elements in the development of architectural form and the means by which they structure human experience.

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Assistant Professor Rosalyne Shieh
Assistant Professor Michael Young
Visiting Assistant Professor Daniel Sherer
Instructor Teddy Kofman

FOURTH YEAR

DESIGN IV: SPRING SEMESTER

Professor Diane Lewis
Professor Peter Schubert
Instructor Daniel Meridor
Visiting Assistant Professor Daniel Sherer

CUTOUTS 2015

The Matisse Cutout exhibition was at the Museum of Modern Art in January of 2015. Having been given the position of continuing the Cutouts course in 1982, a course that was initiated by John Hejduk in 1975, the presence of the Matisse Cutouts in New York was clearly an opportunity for a new exploration on the essence of this studio approach at the outset of this semester. The entire studio teaching team agreed that the provocative cutouts in the exhibition carry an architectural character that also confronts color, sculptural form, iconography and the challenge of penetrating form with the act of cutting and ripping painted paper elements on paper grounds or fields. We wished to find out how the Cutouts inform the notational nuances of architectural language, to imbue a structure with the spirit, thought and hand of its individual author. We also wanted to discuss the nature of a religious or sacred building in the terms of contemporary art and abstraction, and the tradition of figural and iconographic imagery imbedded in the plans and sections of the church over centuries, as well as other religions and pagan structures.

The knowledge of how sacred buildings are and were sited by the architect in many civilizations, and the challenge of the abstract aspect of architectural language and its ability to carry these intentions and decisions was necessary to the project. All of the studio participants and faculty began with a trip to the Museum of Modern Art to see the Matisse Cutouts exhibition to begin the studio semester. The exhibition included the Chapel at Venice that Matisse designed from the inspiration of the Cutouts he created.

The first Cutouts Project of 1974 as given by John Hejduk was a list of the artists Matisse, Cezanne, Picasso, Braques, Gris, Leger, Ingres, and the word HOUSE. The perception of the Matisse Cutouts exhibition revealed the potential of the new component of study now—the CHAPEL as the program to be the outcome of the CUTOUTS.

With the challenge of this new component, the chapel, the studio was structured in three phases:

Select a Matisse Cutout as inspiration.

Phase One: STILL LIFE/CUTOUT STUDY

Phase Two: RAISON D’ETRE FOR SITING A CHAPEL—SITE SELECTION AND SCALING

Phase Three: THE CUTOUTS OF THE CHAPEL FROM THE INSIDE OUT
STUDIO COURSES

FIFTH YEAR

THESIS: FALL AND SPRING SEMESTER

Professor David Turnbull
Assistant Professor Hayley Eber
Assistant Professor Pep Aviles
Instructor Teddy Kolman
Visiting Professor Elisabetta Terragni

The Cooper Union is a place where the Fundamentals of Architecture have been cherished for more than 150 years. A decade of work and careful curriculum design lead to a definitive account in the 1980s of ‘fundamentals’ in relation to the Education of an Architect, upper-case E, upper-case A. Both reified, almost sacred and with hind-sight, perhaps, rather ostentatious and more than a little bit ‘grand’. This account that was exhibited, published and discussed, crept consciously or unconsciously into almost every architecture school’s curriculum. Problems that had not really been problematic became the ‘problems’ that an enormous number of young architectural students discovered, addressed and resolved in some way in a project or two—typically somewhere in the middle of their architectural education. Everyone learnt something about architecture and for that we should be grateful.

There is nothing like a bit of plausible close scrutiny to confirm the status of the overlooked as looked over... allowing the already excessively visible to remain preeminent. While a few years ago many of us felt that The Cooper Union should look outward, be less self-conscious, and more public; the publicity that we have seen emerge in the past few weeks, cultivated over the past few years, is not exactly what we had in mind. This affects everyone. The School of Architecture is literally ‘interregnum’, in between, in many ways. But as is often the case in such periods, it is more vital, and more speculative than it has been for a while. Like inter-personal conflict, institutional struggle can produce somewhere, somehow, enough calm, quiet-time and reflexive, preeminent. While a few years ago many of us felt that The Cooper Union should look outward, be less self-conscious, and more public; the publicity that we have seen emerge in the past few weeks, cultivated over the past few years, is not exactly what we had in mind. This affects everyone. The School of Architecture is literally ‘interregnum’, in between, in many ways. But as is often the case in such periods, it is more vital, and more speculative than it has been for a while. Like inter-personal conflict, institutional struggle can produce somewhere, somehow, enough calm, quiet-time and reflexive, empathetic responsiveness that real growth is possible toward an emotional, philosophically cogent and ethical architectural maturity—redefining architectural practice. This is an extraordinary moment for the School. It is not a ‘tipping-point’, not a symptom of ‘reinvention’, but, rather precisely, involves the careful, patient practice. This is an extraordinary moment for the School. It is not a ‘tipping-point’, but, rather precisely, involves the careful, patient practice.

THESIS PROPOSALS

The Esteros Plan of Manila. Restoring the esteros of Manila will recover the relationship between the city and its waterways by alleviating flooding and exploring their potential as an armature for shelter, dwelling, urban mobility and public open space.

In Flux: A Remedial Ecology. This thesis explores the idea that the human body can be sustained through a composition of functioning organisms. The proposal incorporates botanical knowledge into architecture and provides a space for rehabilitation for (those affected by) an ailment.

Theater of Inversions: the public puppet. Within the theater, the use of puppets or other performing objects can perform an inversion that redefines the relationship between actor and audience. A theater puppet will be used as an urban-scale performing object in New York City.

Two Tubes: A Ring around the Rockaways. By articulating interior leisure space, the proposed ring redefines the existing exterior leisure space of the Far Rockaways by shielding it from the damaging effects of hurricanes, protecting and redefining leisure space for New York City.

Barriers, Bollards and Buffers: Making Monumental of the ‘Mundane.’ This project takes the form of a set of installations, their permanence undefined, posited into the existing political strip of Whitehall in Westminster, London.

Learning from Googletown: Reinventing San Francisco’s techsuburbs. This proposal integrates the tech campus back into suburbia, taking cues from where many of these companies originally started—the suburban garage.

The Renewal of Baths as Public Institutions for Urban Stress. Referencing the Roman thermae, this thesis seeks to develop urban bath typologies, which would allow a person to slow down from the demands of urban life and to distance himself or herself from the stress of the city.

Game Space Video Drawing. I am creating a game that is a piece of architecture. The object of the game is access. The space is accessed through the intersection between the house and the labyrinth.

The Identity of Fragmented Architecture. This thesis investigates the possibilities of an incomplete architecture for the construction of identity. The architecture has minimum enclosure, which allows maximum freedom.

Moving-landscapes. This proposal is for a building type that is located on moving landscapes (hot springs) but does not erase the marks that the hot springs leave on the surface.
Ice Age Bridge. This thesis is drawn from a prehistoric landscape, sculpted by ice. The city and the landscape appear to be at odds, but the city was born from the lake, the lake was born from the ice, and the ice sculpted the landscape.

Relationships and Adjacencies: A Space for a Ritual. This thesis is a performance of a dialogue between subject and objects through the design of a ritual. In this system, there are three characters: a pair of shoes, a bowl and an apple.

Bluerange. A “kaleidoscope” installation generates the arbitrary and symmetrical patterns with multiple fragmented reflections of the viewer’s body. The proposal focuses on how this “kaleidoscope” offers a tool to create camouflage for architecture, sharing attributes of a mirror: sameness, symmetry, repetition.

Reliquary/Aquarium/Water Temple. This thesis explores the phenomenology of biomorphic forms and colors through the lens of painting as a tool for generating architectural landscapes engaging water and light as temporal material.

Refugium: constructing walls to remove barriers—a city of refuge in Malmö. The thesis investigates issues of migration on a geo-political level as well as its direct impact on the individual person that seeks asylum.

A Playroom For Child Development. A room that constantly changes from day to day will engage a child’s spatial awareness. The room can be manipulated by children as they inhabit it. The architecture of the room will promote creativity, critical thinking, social skills and physical health.

It is architecture’s destiny to be weathered, dissolved and demolished. This thesis incorporates the complexity of forces of nature in design so that ever-changing qualities of decay can be anticipated and built into spatial and surface conditions of architecture as nature refinishes them every moment.

Industry and Identity: The Preservation of Flint, Michigan. This project introduces a new mineral industry on the site of the now demolished Buick factory. Extracted brine from beneath the site is absorbed by the building and effloresced on its surface, creating a field of continuously growing architectures.

Infrastructure for a meal. Grilled Maaji, Yokohama, Japan. The four proposed pieces of infrastructure monumentalize the ritual of eating. The objective is to elicit recognition of the bay as a precious urban food source and to empower the people with knowledge and capability to control the entire chain of actions from ocean to mouth.

Racination: “to root” or “to re-root.” The refugee, as a (non)citizen of Beirut, occupies a position of cultural and political illegitimacy and requires a new presence within the city: an architectural racination. A series of water-collection towers define the beginnings of an architectural vision, which will act to re-define the refugees’ status in Beirut.

The Forever City. With a recording process based in light and shadow, the Forever City has been rewritten and removed from its context to develop a new spatial character. Ultimately, the records of the city can be rewritten into the place they were originally found to exist as intimate architectural moments of memory within the Forever City.

Connections. The Japanese tradition of timber joinery is an example of a comprehensive and visceral understanding of a material reinforcing a craft. To move toward perfection one needs to rely on the senses, a trust in the hand and an ability to slow down.

White Sands National Monument, New Mexico. This architecture seeks to provide opportunities for care and psychic healing at multiple scales through multiple methods, all of which ultimately seek to establish a symbiotic relationship between human, architecture and site ecology.

The Walking School: A Peripatetic Exploration of Cultural and Environmental Landscapes. The peripatetic school unites the student with the world on a number of scales. At its core is the fundamental necessity of the freedom to wander and explore as a way of learning.

Sustainable Rural Autarky. Through applied systems of technological automation in agriculture and renewable resources this thesis demonstrates an autarkic sustainable model that maintains human health, living standards and well being in the absence of available fossil fuels.

Returning to the Womb. A series of experiments with inflatable structures constructed from a thin translucent membrane documented the effects that this membrane had on the inhabitant’s perception of space. These relationships turn the inflatable into a prophylactic architecture, creating a sense of immunity and sterilization.

Fear, architecture. Architecture is used as an instrument to decipher and encipher the intrinsic properties of fear. The work processes psychological space into physical envelopment through four dimensions of fear—memory, perception, disposition and displacement.
We may have surpassed the point of irreparable damage to our planet, as science confirms that an ecological balance may only be achievable now by artificial means. Anthropocene defines our geological era, understanding the environment as mostly affected by artificial human action. While the environment is understood as a large dynamic self-regulated ecosystem without borders, the causes and effects can be traced everywhere. But the consequence of the ecological crisis is mostly politically measured in cities where large economic interests are concentrated. While the ecological crisis draws attention back to the center, it cannot disregard the regional periphery where ecological forces may emerge. This problem presents a reciprocal continuous project as opposed to the separation between city/environment, city/landscape and center/periphery.

Slavoj Žižek’s recent statement “Nature does not exist” has questioned several assumptions and implies many concepts. One such assumption questions the environmental stability of our planet as ‘natural’ processes reconfigure landscapes out of crisis, such as earthquakes, volcano eruptions or hurricanes. One implication of his statement is the artificially projected signification of the word ‘Nature’ in our language to the object of study. But in the context of this studio, another implication may also be extended to computer languages and the simulation of environments through fluid dynamics, projecting another layer of signification.

The urban and landscape strategies of the studio were guided by the following principles: Fluid Dynamic Representation, Space-Environment, Re-coding the City-Environment.