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TKNK

abstraction vs. representation



# TKTNK

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TKTNK (tectonic) is deeply interested in the conditions giving rise to new topics that benefit from the design imagination of undergraduate students across a range of disciplines. Founded by the Barnard + Columbia Architecture Society, TKTNK is published once a year to present undergraduate student work relating to architecture and the built environment.

This year's theme is "Juxtapositions: Abstractions vs Representation" based on the research of architectural historian Neil Levine. Levine argues that in paintings the difference between abstraction and literal representation is quite clear. However, in architecture Levine states that "the distinction between abstraction and representation is terribly muddled and rarely articulated." This year, we challenged the students to define what the difference between abstraction and representation in architecture is and to show that distinction with one of their projects.

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Geon Woo Lee and Alicia Schleifman

**Designers**

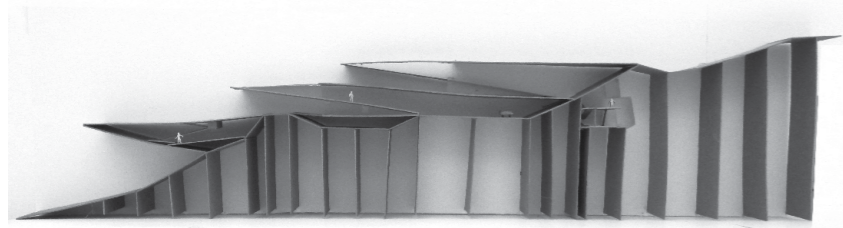
Sharel Liu and Isabel Narea

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## EXPERIENTIAL MAPPING

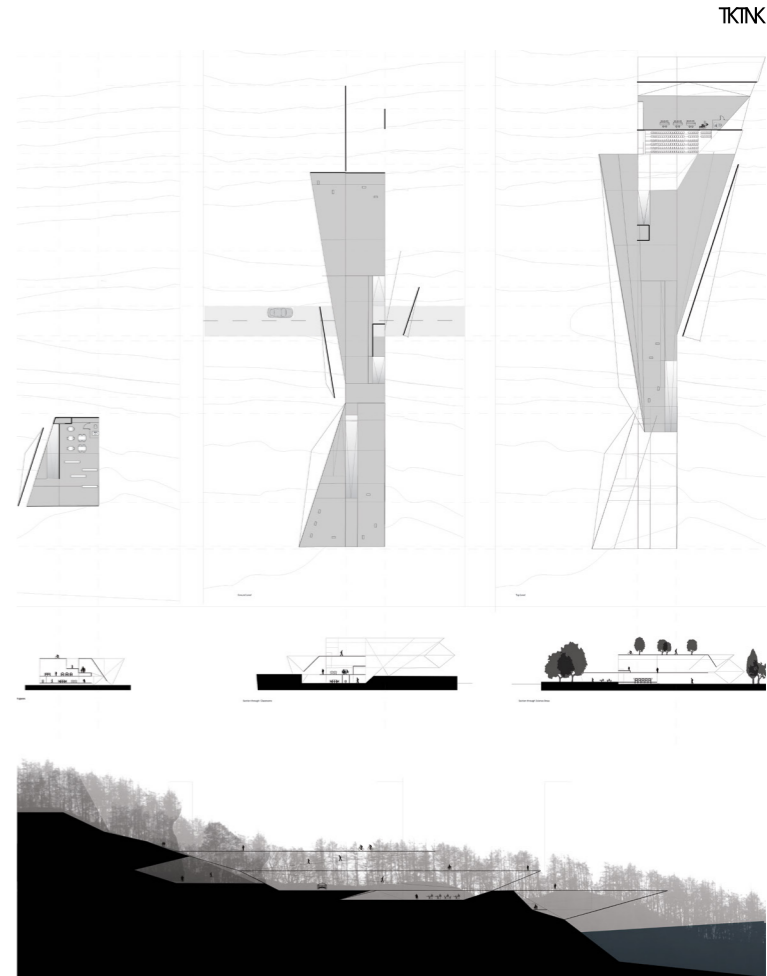
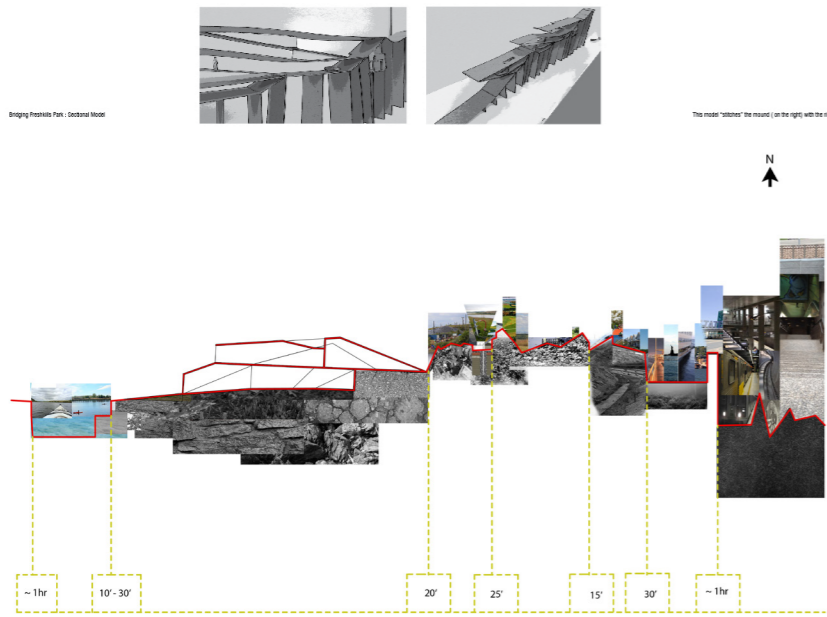
KONSTANTINA SARRIS

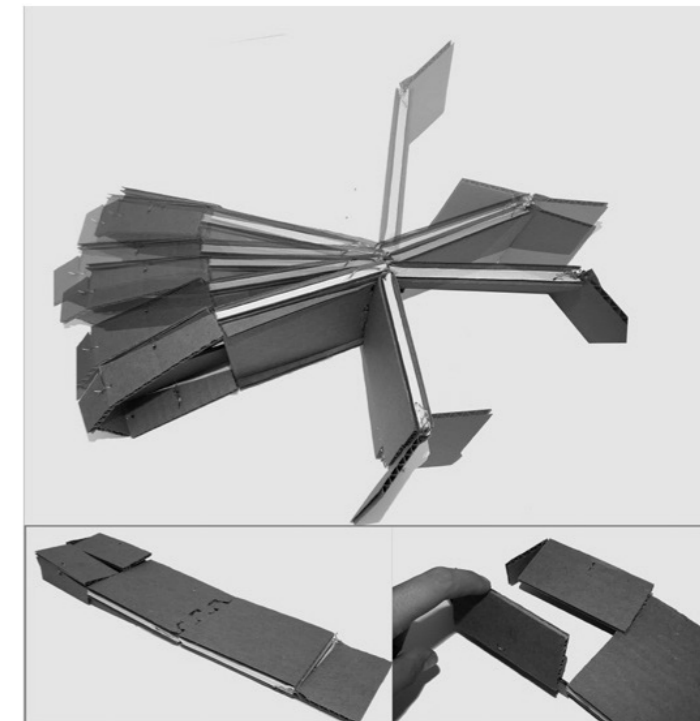
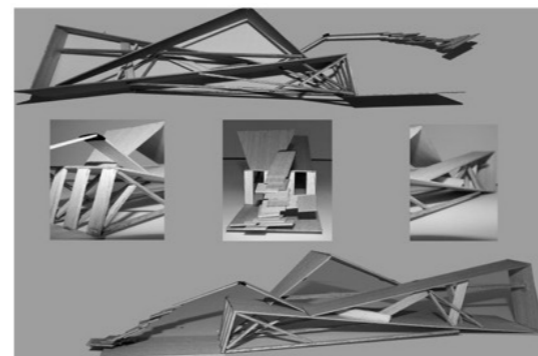
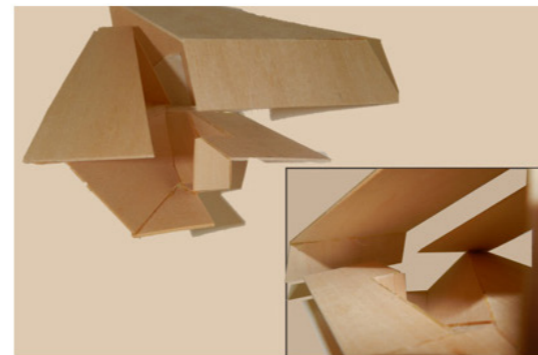
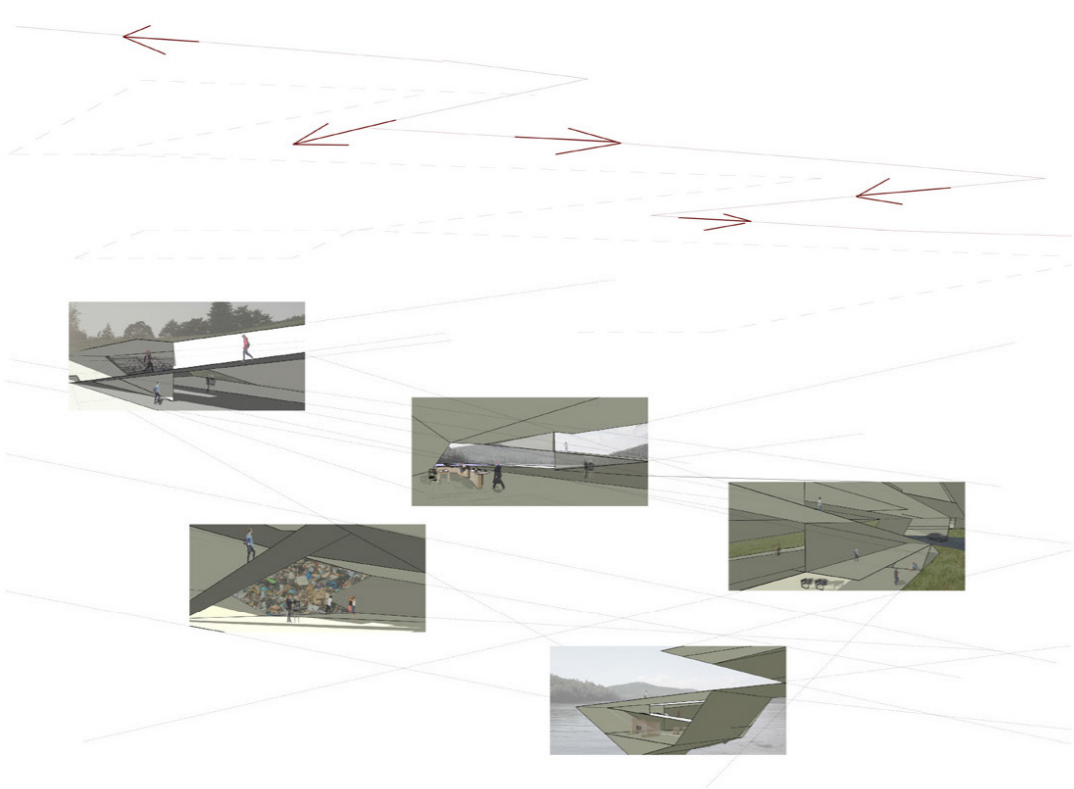
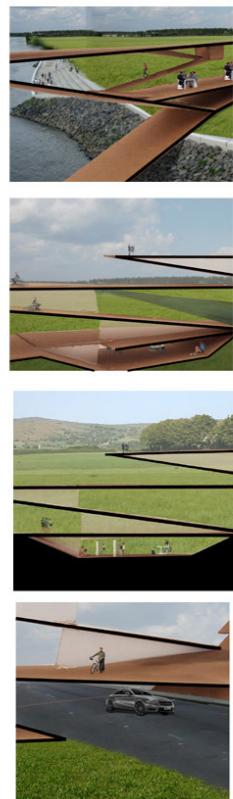
My experiential mapping represents the most significant sequence of events - from the subway ride to the boat house - drawing attention to the interplay of what is above and below ground. Inspired by the landfill and the way it is [being] fabricated, I explore the visible surfaces: accessible and/or observable versus underground areas, respectively. My study ends with the structure of the boat house, correlating to my approach, functioning as an amalgamation of surfaces and spaces of inhabitation. The spaces force the flow of the visitors to experience an endless journey of layers of ground.

Inspired by the landfill and the way it is [being] fabricated, the structure of the boathouse explores section as an amalgamation of surfaces and spaces of inhabitation. The spacial sequence guides the flow of the visitors through a journey of layers of "ground" and shifting "datums" including the changing level of the water.

The project aims to create a Field Station in Freshkills, which is the idea that both scientists and artists undertake their work in the form of "research". The final model is bridging the hill on the northern side of the

site on Freshkills and the water on the southern part, which is the confluence river. Bridge represents a segmentation of 3 vertical and 3 horizontal sections. The first of the horizontal sections - the upper part that connects on the hill - consists of science labs and studios for students. This segment also works as an active key to connect with the rest of the activities of the freshkills park that extend on the northern parts of the sites. The middle segment of the bridge represents the confluence occurring by the public, because it connects to the ground with ramps so people can walk up and spread throughout the spaces of the structure. The last horizontal segment of the bridge includes spaces for art installations and studios for students. This part works as a representation of art because of the way it is located above the water and the view it provides to the public. The vertical segments of the bridge also represent the science, confluence (common rooms) and art parts of the structure, separating but also bringing together (bridging) all the different spaces with ramps. The upper part of the structure also holds exhibitions of the recycling and leachate process of the freshkills park, including a cutout of the hill that it connects to, which is covered with glass for the visitors to see the real process and layers of leachate. Thus, the bridge is also a representation of the layers of the freshkills park - ground, insulation, garbage, leachate - since it is a connection and layering of three horizontal and vertical segments of the bridging structure.





Study Models: Exploring the visible surfaces, accessible and/or observable, in contrast to underground and hidden areas



## NEW NEW YORK CITY

SHAREL LIU

### Crystalized Mimesis

New York City is defined by the implied neighborhoods that arise culturally as it is by the grid system. As a method of organization, the grid system also delimits the vertical growth of the city, creating pockets of concentrated areas near the ground level. What results from this configuration is explosive but silent growth, similar to the way crystals appear but are in fact wrestling with the forces of explosive growth, growth which is noticed only in hindsight, as is the case with New York City, to the layperson.

Based on such observations, it was decided that a sustained metaphor for New York City's evolution can be a crystal. To the right, the 3D price map for New York City's real estate also visually mimics crystal growth. Whereas the top image presents a calmer bar-graph shape, the crystal's growth patterns more closely evoke the competitive spirit of capitalism, which balances out the cultural growth "crystallized" into the urban fabric, as is the case with Hearst Tower, which announces its presence with a prism-based facade sitting over a Neoclassical base--also speaking more broadly to the idea of architecture as a physical manifestation of cultural production.

### Viktor Shklovsky on Xu Bing

What previous projects boiled down to was the idea of piecing together modules to capitalize on the potential for dialogue among the different components, which would have followed the same construction rules. Coming, then, to Xu Bing's concept for the Phoenix Project, which employed a similar strategy but

pushed it further, I wished to introduce the idea of providing access to different ideas on different scales of the model--to enable the poetry of the concept to permeate at different scales. For the Phoenix Project, Xu Bing used construction debris as building materials and configured them to resemble parts of the mythical bird. Up close, the metal scraps are visible, yet afar the phoenix is elegantly outlined by LED and the trappings of luxury. The dichotomy is held in balance by the scale at which users view the object. The Book from the Sky, on the other hand, challenges the purpose of words by taking away its privilege of being containers of meaning, yet maintaining the characters' semblance to real Chinese characters. The self-re exivity questions whether written communication must be mediated by language. Backed by Shklovsky's idea of estrangement and defamiliarization, these were the frames of thoughts I wished to weave into my models to invent new processes of interpretation for the audience.

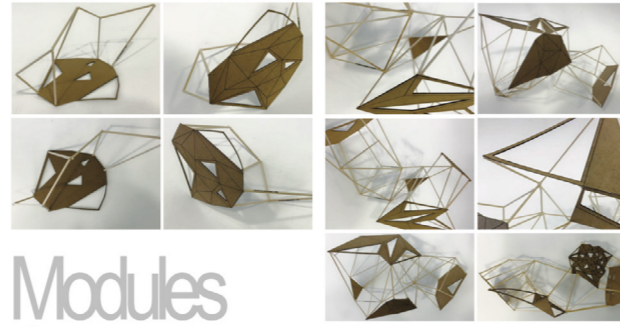
### Cycling through Past Projects and Cradle-to-Cradle Sustainability

One literal way of creating an overarching thesis for the models created before "N(EW) NEW YORK CITY" is to insert components from past projects into the current one. The laser-cut pieces from the triangulation project found a comfortable position for insertion into the project of designing a model of New York as a crystallized mimesis. In one way, the idea of recycling pieces spoke to the sustainability trend of creating cradle-to-cradle designs that recycle materials and invent designs that can later be recycled into future projects, or built upon further. Another reused material was the stubs of basswood from previous projects. The different thicknesses of basswood that could be used provided an opportunity to

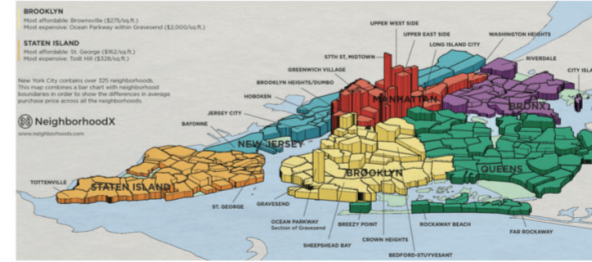
explore how materials could be manipulated to express different concepts based on the scale at which it is viewed: a common complaint in construction is that lesser materials are used if they can easily come off as the legitimate material to the untrained eye. Similarly, the materials used for the higher parts of the installation are not entirely faithful to the structural integrity of the base of the crystal, evoking the idea of current real estate developments that are aiming higher, seeking fame at the cost of safety. From afar, however, like Xu Bing's Phoenix Project, the lattice work will look consistent. This situation then begged the question: what kind of interaction should the installation invite to reveal these nuances?

**Jungle Gym**

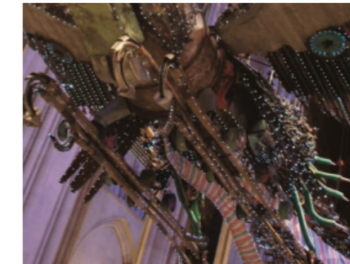
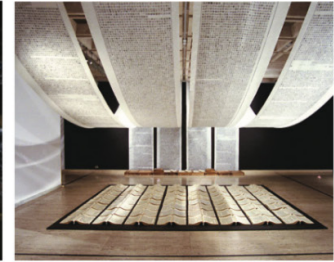
The Jungle Gym not only operates on the level of entertainment, but also advances the poiesis of the concept of the Crystallized Mimesis of New York City. Looking on the structure at the Burning Man, the crystallized latticework of the installation easily passes as a sculpture. Up close, it reveals itself to be easily scalable, at least on the ground level. Users will imagine themselves using some of the beams as monkey bars--they are free to interpret the use. As the more ambitious climbers make the ascent, they shall imagine the task to be more arduous and more demanding of their health, not unlike the marathon-like socioeconomic race present in the city. As they become more immersed in understanding the crystallized city, they will be able to see up-close the defects and inconsistencies of the materials--it presents the riskiness of continuing upwards (presenting the choice of compromising the safe assurance of non-risky situations in exchange for the possibilities for more reward. To the untrained eye, the range of the city's architecture can be easily glossed over, just as the minute details of the crystal structure are not easily gleaned in passing, but an intimate experience of immersion would reveal nuances



Modules  
Construction



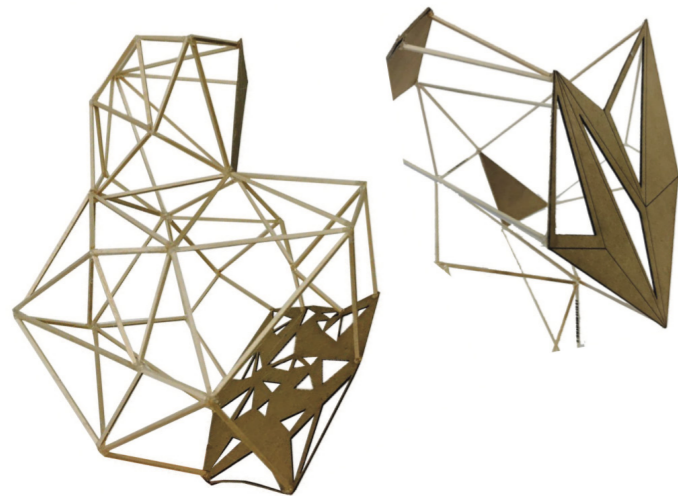
Explosive but Silent Growth - Crystals v. NYC / Source: 6Sqft



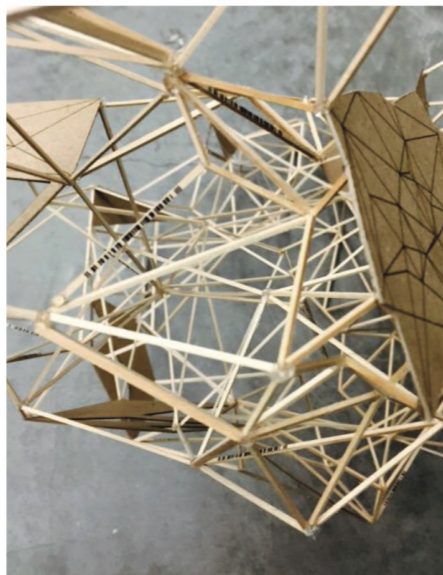
Phoenix Project, Book from the Sky / Xu Bing







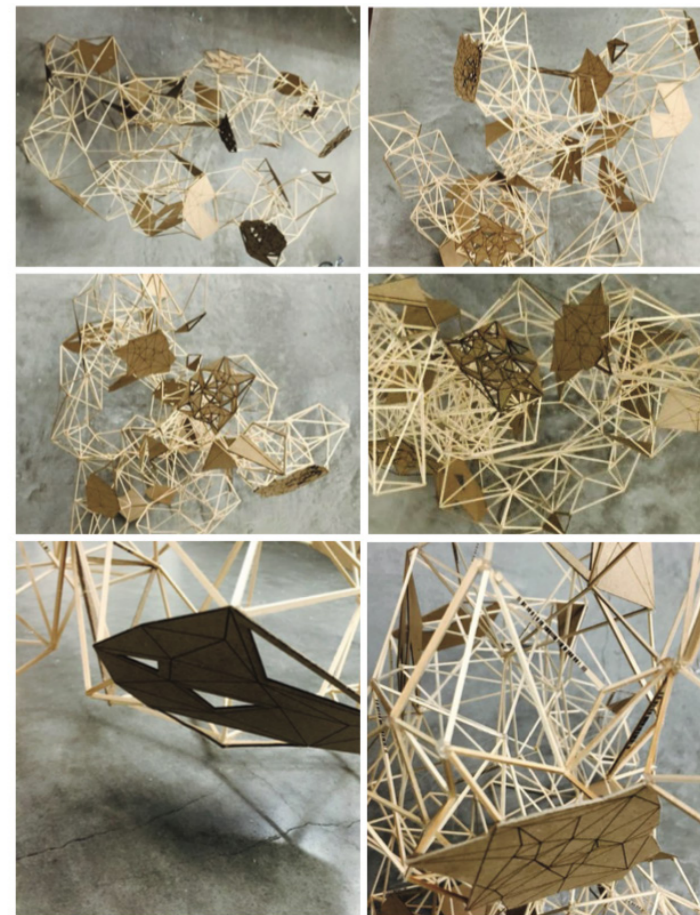
Units for the massing: opportunities to build on past projects



more conspicuously. The experiencing of climbing the crystallized structure mimics the experience of upward climb within the city.

**The Cost of Rapid Modernisation**

The use of technology in architecture is hotly debated for its ethical function. In the chase for fantastical effects, the more practical or long-term view for construction is often set aside for the possibilities for a faster turnover. While climbing the jungle gym, the participant notices that the most intricate details of the structure, namely the laser-cut pieces, are the least helpful to the experience of the climber and that it is, in fact, the more traditionally put together structure of the latticework that is conducive to scaling the structure effectively. In turn, the experience of climbing the structure is self-reflexive in questioning the extent to which technology is pursued for an aesthetic as opposed to practical effects. The user's frustration at the relatively slippery and deceiving cardboard surface should trigger an emotional answer as well. Ultimately, the higher one goes, the more effort climbing the latticework requires, and the more useless the aesthetic pieces are (except, perhaps, for the enjoyment of the users standing far away). The experience is also a reminder that the maintenance of one's health is important to the endeavor of climbing. Lying at the heart of this ekphrasis is the question, Where do our priorities, as today's users of the city, lie? Or will the desire for modernization be so strong as to continue the trend of building over problems? Yet, intimately experienced, our perception of it resembles the mirage of the collage to follow: the hope for the project is to plant the seeds for this kind of reflection.



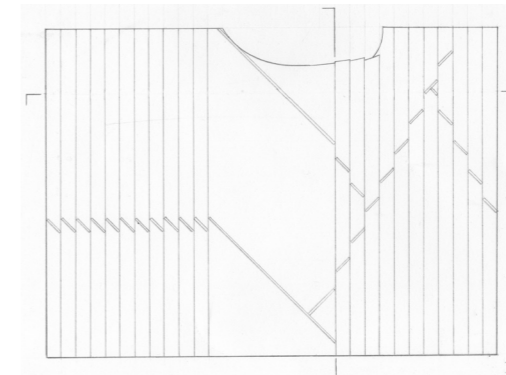
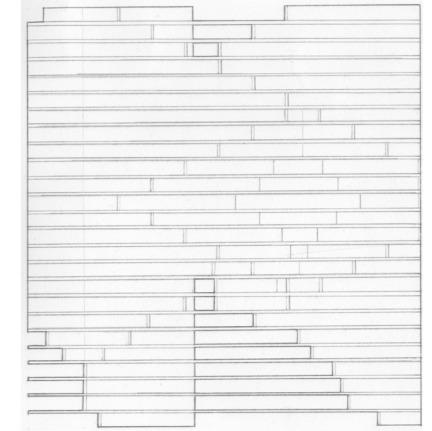
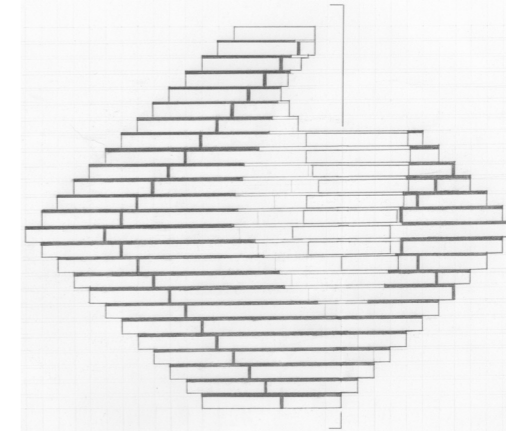
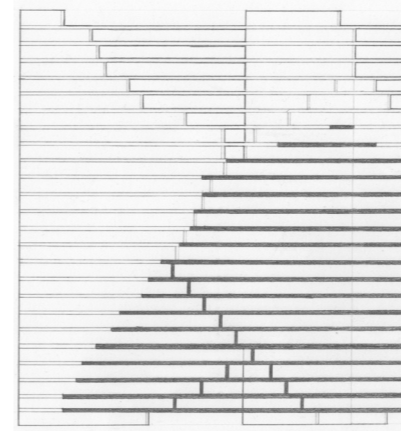
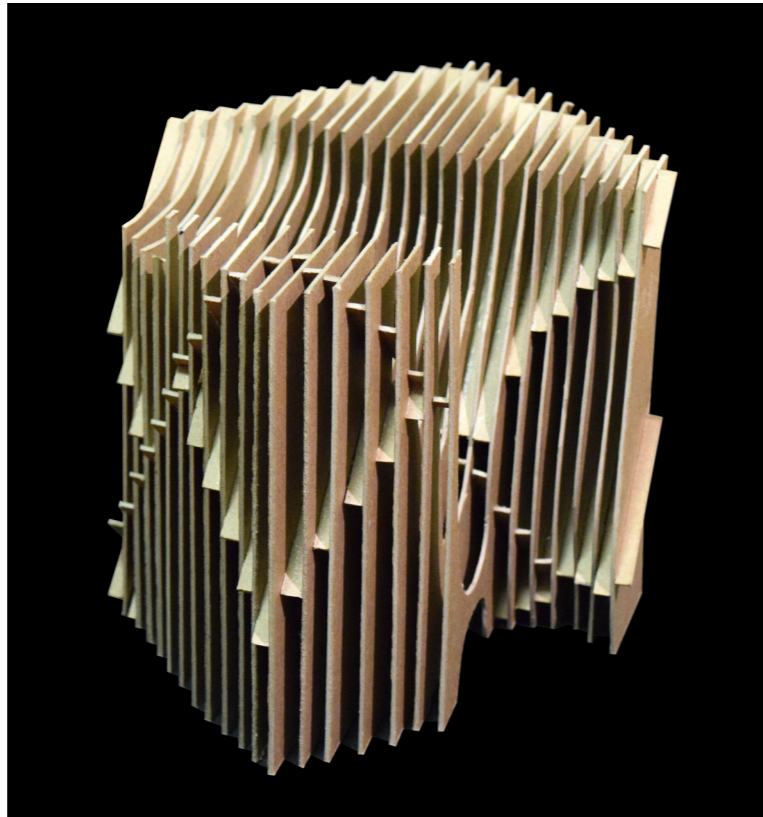
## AMORPHOUS

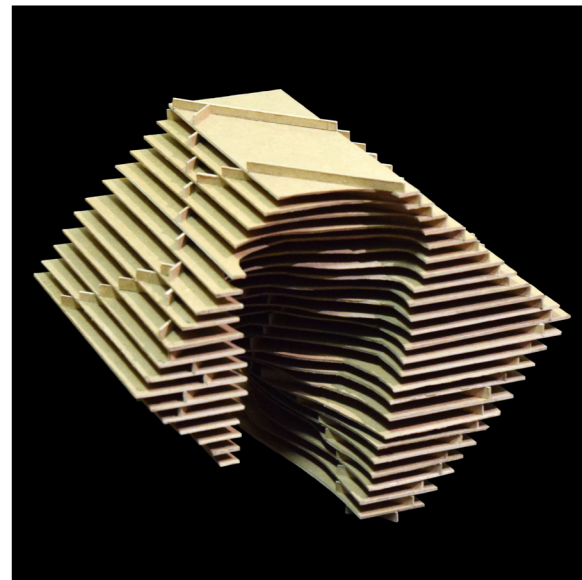
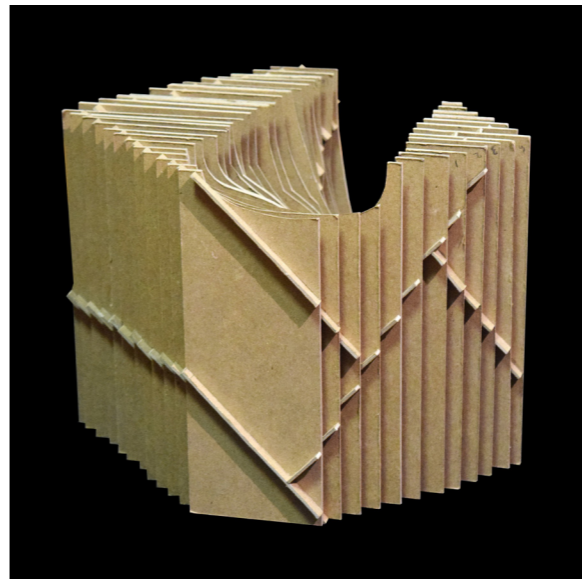
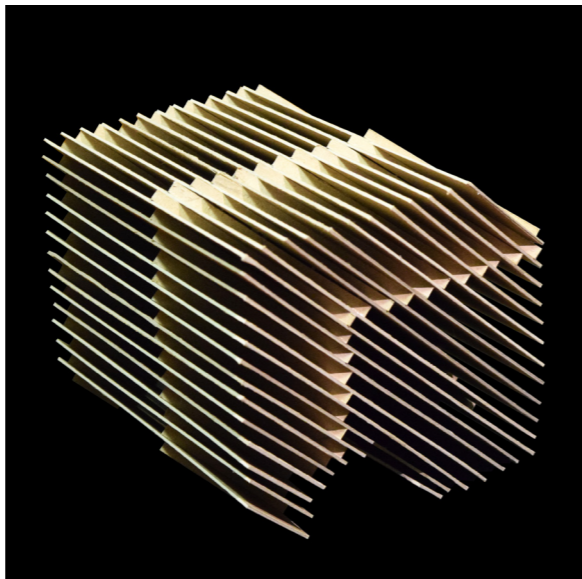
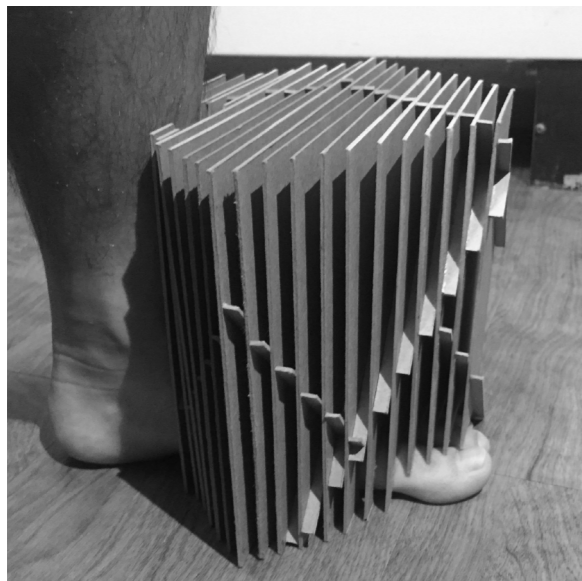
GEON WOO LEE

This object, Amorphous, has no correct sense of orientation. It is meant to be seen from multiple perspectives; each angle creates a radically different form. The objective of the project was to build the empty space surrounding my foot. Hence, the negative space became positive.

In order to represent empty space in a positive mass, I abstracted the qualities of an empty space as I built the object. I wanted to preserve the free flowing and orientation-less nature of an empty space. There is no way to literally represent empty space with something positive. Hence, my object is a result of abstraction. Amorphous represents my attempt to instill abstract qualities of emptiness into a positive object.

The difference between abstraction and literal representation in architecture is quite complex. Oftentimes, the two methods of representation collides and it is quite hard to distinguish. However, in my project Amorphous, I think one can easily conclude that my object is abstracted. Since I was trying to portray something that cannot be seen with our eyes (emptiness), I had to derive the form of the object through abstraction - trying to preserve spatial qualities that can take different architectural forms. Since a literal representation of emptiness would result in emptiness, abstraction was the only means by which this project could be completed.





## SENSORY RESTRICTIONS

VERA SAVOY

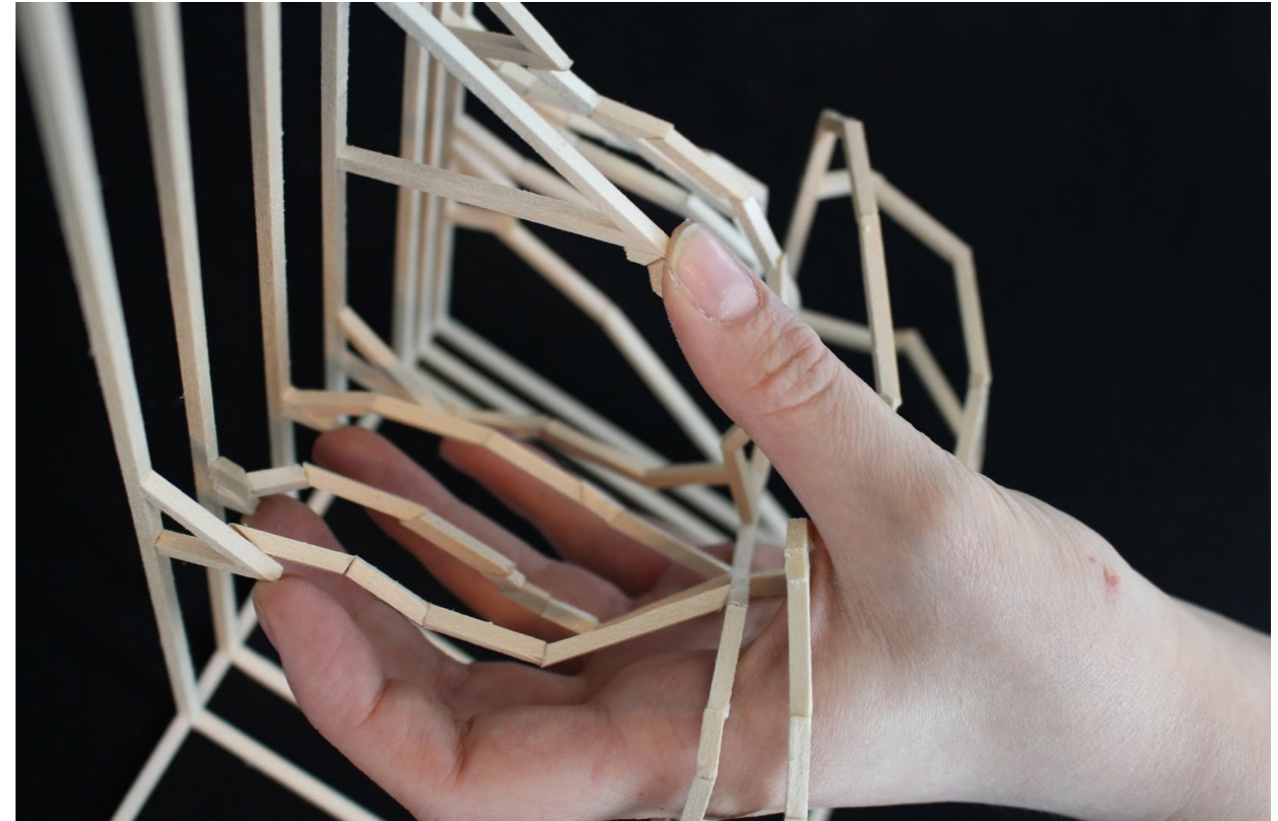
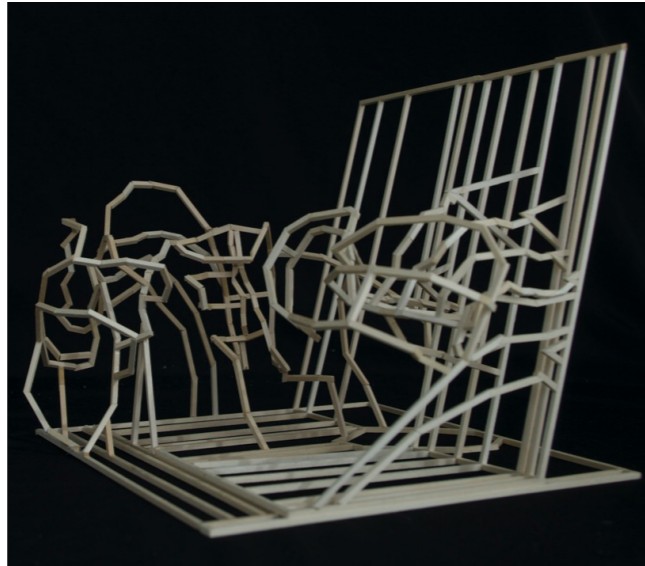
This project is an abstracted model derived from a study of sensation. In her Spring of 2015 studio, Madeline Schwartzman assigned this project to explore sensation and design restriction of a body part. I chose to analyze the areas and degrees of sensitivity on the hands with a focus on the fingertips. Working with my own hands, I discovered that the points of heightened sensitivity are on the fingertips.

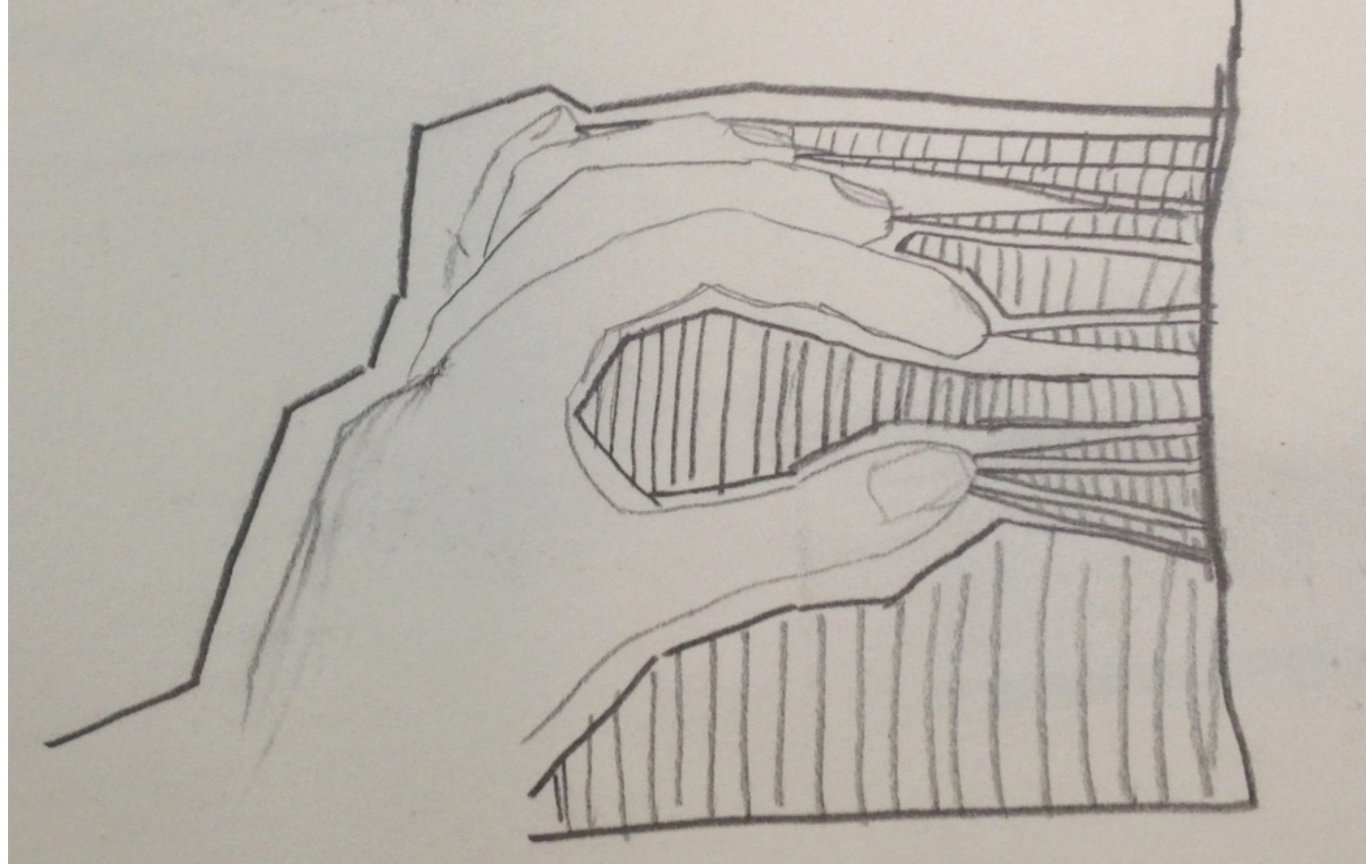
In the model, I traced the contours of my hands with basswood and allowed the hand to slip into the relief that it had created, where it would remain immobile. Once the hand is placed into the model, it cannot move except to exit the same way it entered.

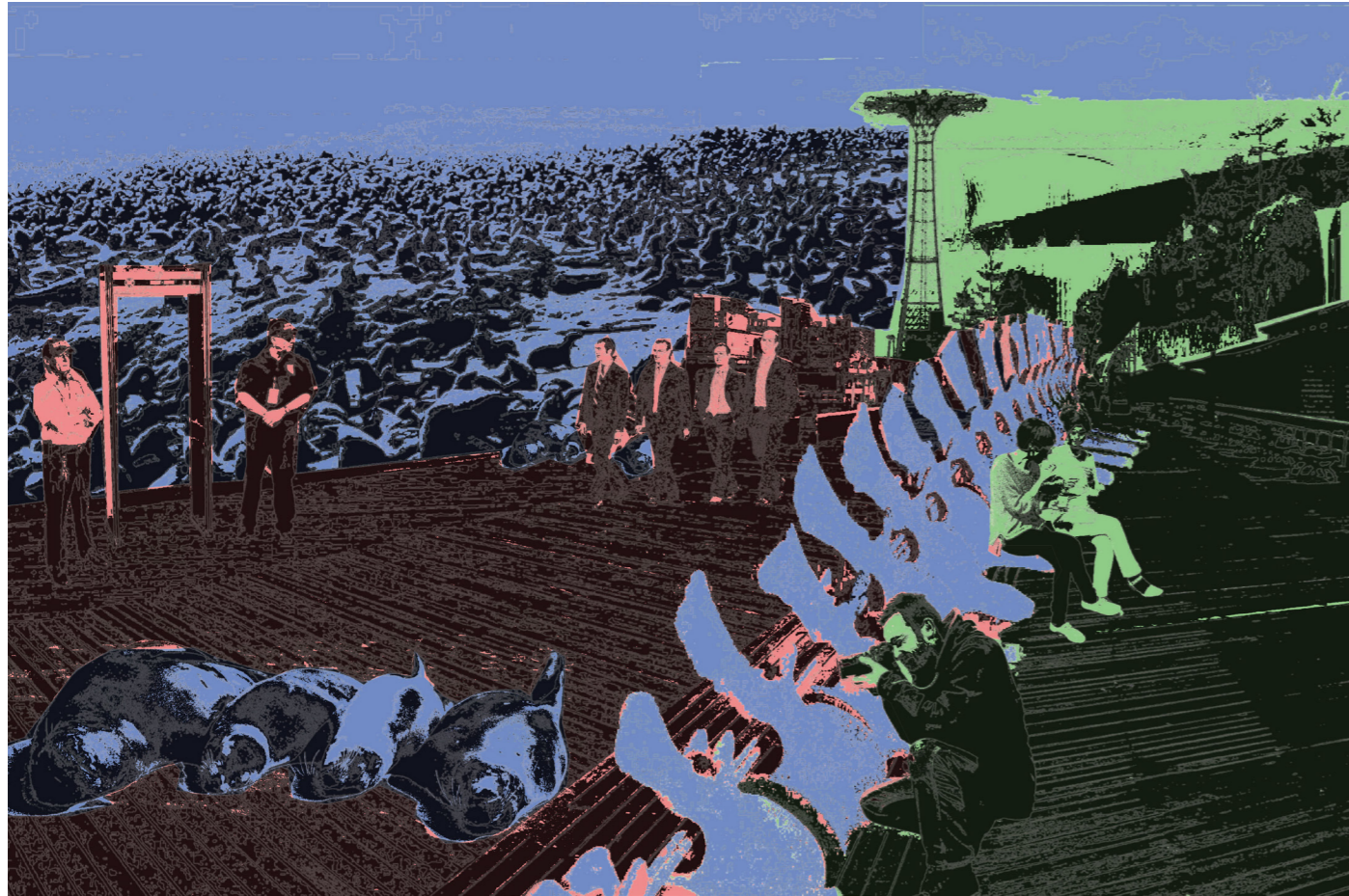
When the hand reaches its position in the basswood, the fingertips are met with sharp angles that trigger sensation.

There are four positions in the model for four different hands to experience: two for a left hand and two for a right hand. Each predetermined position contains the acute angles of basswood to prick the fingertips. The positions the inserted hands result in are derived from my research on how the hand moves in different states of urgency. This implementation of different positions created diversity in the contours of the basswood, allowing the model to be more dynamic, as a result.

In this model, the hand experiences a variety of constricting positions, fluidity in entering and exiting the model, and sensation on the fingertips, the site of maximum sensitivity.







## AN EMBASSY FOR INTERNATIONAL WATERS

SPENSER KRUT

For New Embassies for Environmental Diplomacy, a project for Design III, proposals were to reimagine the embassy typology—its role in international affairs; the scale and physicality of its structure; how it could be transformed into a platform to combat climate change.

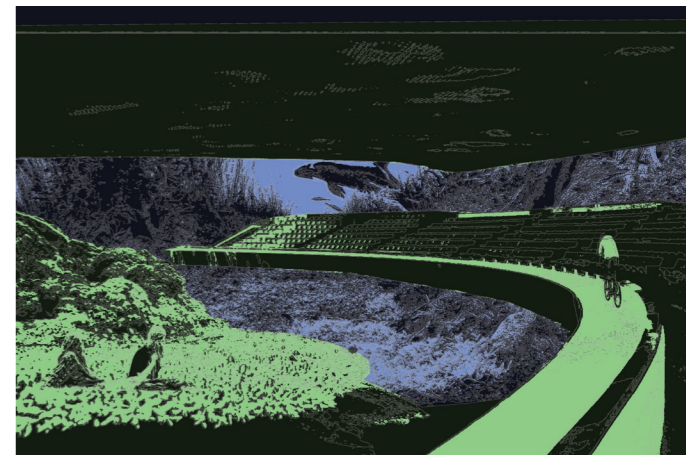
“Conflicting priorities of openness and security, nation branding and cultural contextualism, war and peace, education and commerce, etc., have perhaps muddled the architecture as well as the original mission of embassies... What new models of embassies can promote environmental diplomacy? ...How might embassies function as ambassadors of transboundary environmental stewardship?”

International waters, also referred to as the high seas, constitute the largest unregulated portion of our planet. Its borders begin 12 nautical miles from every coast (continents and islands) and also include the centers of designated internal waters (ex. the Mediterranean Sea). My proposal seeks to construct a reality where the rights of international waters are equivalent to that of a nation—deserving of an embassy within another nation’s borders. Currently, this “no-man’s land” is suffering greatly at the hands of other nations without the means to voice its concerns and pleas for aid. The mission of a global ocean nation’s embassy would be to grant a space for discussion and deliberation by diplomats, policy makers, and other parties on ocean-centric issues like acidification, pollution, and piracy.

To convey this proposal, I generated a series of color-coded collages that depict various scenarios in which I juxtapose

expected embassy infrastructure and programs with marine life and oceanographic research facilities. Parts of the images that are red signify diplomatic elements; yellow highlights scientists at work; green comprises the public’s involvement; and blue shows all ocean-related components. Underwater bike paths in the amphitheater, sushi bars and sand castles in the boardroom, hammerheads greeting President Obama at the entrance: these collages are imaginative fictions designed to represent the un-representable. The collages serve to figuratively represent an imagined future because the problem they address cannot begin to be solved if those necessary to implement a solution cannot envision it.

The Embassy for International Waters as a representation of architecture performs two functions: (1) to visualize the jarring juxtapositions of oceanic elements and diplomatic programs and (2) to highlight the question of who ought serve as ambassador for a global ocean nation. The proposal seeks to bridge the gap among diplomats, researchers, and the public visually as one possible solution to the latter point. Because terrestrial beings have wreaked havoc on marine ecosystems, it is now our responsibility to rehabilitate those. Changes at this scale, that require supranational investment, have realistically only been able to be implemented through diplomatic action. It is one thing to entertain the notion of an octopus creeping into a meeting room, another to comprehend that the collage depicts a solution to an environmental and political crisis. The former is a figurative representation of a theory for the latter. The high seas will remain pure abstraction until the Embassy of International Waters is realized.

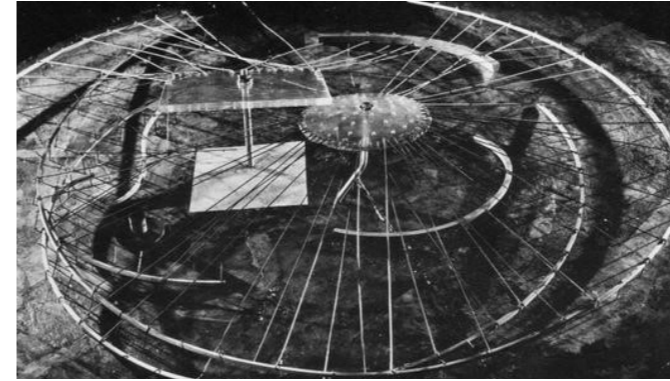


## WHO BUILDS THE WORLD? EXPLORING THE IDEAL URBAN REALM IN CONSTANT'S NEW BABYLON

ELSA HOOVER

How can we locate the architect in the architecture they produce? If an architect is defined as one who produces their projects—built or otherwise—through representation such as drawings, models, and writings, then the architect's understanding of their own role in the design process must be embedded in its products. Constant Nieuwenhuys's 1959–1974 project, *New Babylon*, is a rich body of work elaborated in models, drawings, collages, paint, and writing that offers the accumulation of one architect's thinking, theories, and reactions over a span of 15 years. The breadth of the project's theoretical aspirations and sheer bulk and complexity of its representation yield an architectural result as global and absolute as its intentions. At sweeping and minute scales and through decades, the project confronts its viewer as a world in itself, with all the time and space necessary for a full human experience of life. While *New Babylon's* mazelike physical representations tantalize their audience, it is not immediately clear how they should be received—is this project utopian, dystopian, or earthly? Should it be understood as a city of the future? A critique of the present? A fantastical landscape unmoored from the world inhabited by its architect and its viewers? The volume of work *New Babylon* provides through numerous media should allow significant insight into Constant's declared and withheld convictions on the nature of utopia, the possibilities of the city, and the role of the architect.

To trace this line from representation through utopia and the city to reach the architect, it is valuable to start at the birth of this project. The genesis of *New Babylon* begins in Constant's early writings and paintings, Situationist meanderings and maps, and profound frustration with the regimented, mechanized productivity of the postwar Western world. In 1959, Constant wrote, "What makes the architecture of today so infuriating is its primarily formal preoccupations...In all use of existing forms, in the creation of new forms, the architect's principle concern should be the effect that all this has on the behavior and existence of inhabitants." The implications of this attitude are revolutionary; Constant's rejection of modernist formal explorations as apparently too passive in their influence on users in favor of a more active, guiding architecture marks a philosophical break from the day's predominant sphere of thought. Can this shift in thinking, as it is based in the thought-trends of the Situationists and their contemporaries, be countercultural or is it simply a new—but mainstream—movement within architecture? Simon Sadler explores the nature of counterculture in this period. In examining Situationist collages—often abstracted maps and other drawn systems meant to comprehend the true life and activity of the city—he concludes that "those collages acted as perpetual missives that architecture imprisons as it frees, shores up the subject only by shoring up the territory." Constant's project, then, within this new line of pragmatic thought, is resisting modernism while also resisting



Constant, *Design for a Gypsy Camp*, 1956–1958

counterculture by acting within instead of without accepted architectural practice and urbanism. The change is in directing the attentions and goals of architecture toward "sublimating art into life," not in transforming architecture as a discipline.

Within this discipline, then, *New Babylon* emerges as a protest in architecture. If the project Constant is beginning in these early writings, paintings, and collages is motivated by human behavior as stated in the report to the Munich Conference above, how is it approached—studied, explored, and represented—by the architect? Constant's collages and paintings that abstract the city, especially by subverting maps and expanding systems of lines and circulation into three dimensions suggest a move away from isolated geometrical forms and toward broader urban thinking: unitary urbanism. The 1956–58 model, *Design for a Gypsy Camp* exemplifies this expansion into inhabitable space, bridging the gap between

abstract geometries and the profound behavioral effects that Constant theorizes they will have when derived as a livable environment. Early paintings and models that conceive the city in free-floating objects and planes in space give way to playground-like structures. As Vilém Flusser writes, "new types of models cannot really change our vision of the world. Only a new theory of knowledge can do this, a theory of which new models are only manifestations." Inspired in part by Aldo van Eyck, Constant moved toward ideals of connectivity, interaction, and engaging the human activity of the city to counteract the work-oriented motivations of mechanical production. For Constant, the machine is not the enemy of artistic production, just as modernist formal considerations are not incorrect, but both are misguided. Ultimately, shaping human behavior with the aim of utmost freedom of living and expression should motivate design and building according to the architect. To address this conviction, *New Babylon* needed to become more than individual painted studies and models exploring these concepts; it needed to exist and operate on a level of complexity and inhabitability consistent with the breadth of its philosophy and its desire to shape humanity. From this need emerge the intricate, rambling drawings and models that comprise the quintessential *New Babylon* of the 1960s and 1970s.

To understand the physical representations of *New Babylon's* conceptual mission it is valuable to locate Constant's project in relation to those of his contemporaries, especially those whose projects are conceptually opposed to Constant's thinking. Le Corbusier, the consummate high modernist, offers a useful comparison. The representation of Le Corbusier's productivity-driven projects that incorporate the separation



of different types of traffic, from simple descriptions in “Three Reminders to Architects: Plan” to elaborate designs for La Ville Radieuse, is derived from and administered by an ordered plan. The drawings and models for these projects read easily as one ordered project portrayed in different media and from different perspectives. The myriad representations of New Babylon, however, are not so easily understood together. Constant’s project, motivated by an ideal of human transformation on an existing landscape instead of top-down administration on a tabula rasa site, cannot be effectively represented in plan or counted as one uniform design in plan and section. Instead the project is portrayed as it is intended to come into being: in overwhelming, ensconced views of the city, stretching over the ground or open water, and ever-varied modules networked loosely together over global terrain. This city cannot be planned extensively by an architect with each road and high-rise mapped out. New Babylon is conceived as eminently possible and waiting to be adopted—not as a set

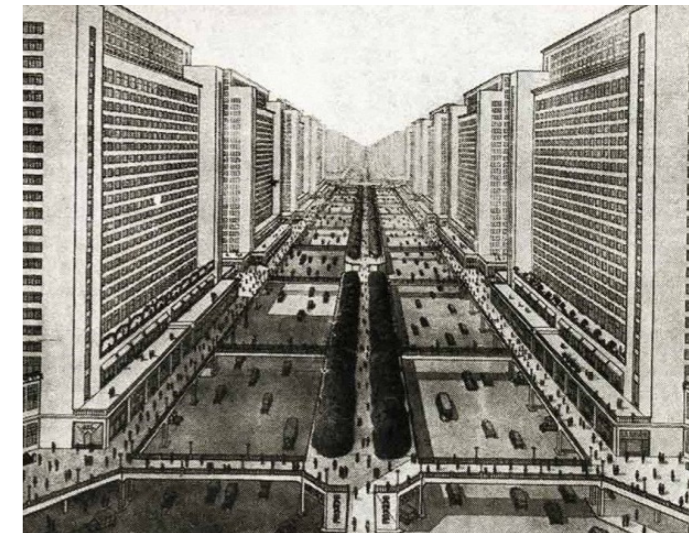
of architect’s plans for a site, but as an urban lifestyle that transforms the world.

Locating these projects in the world—and whether or not this is possible—reveals the architect’s thinking that generates them. Many of Le Corbusier’s projects drew inspiration and perspective from aerial photography of the city, which, as Anthony Vidler writes, is the “only means of generating a synthetic vision of its social space.” This distance allows the architect a perceived objectivity, especially by minimizing the unpredictable, independent action of individuals within the city. In Constant’s New Babylon, views that could be construed to employ this strategy are scarce; this project is inherently based on the unpredictable development of human living environments and psychogeography, making this somewhat authoritarian perspective both useless to the present conceptual mission and impossible to capture. This approach to conceiving space driven by people allows us to transition from Constant’s representations of New Babylon toward his understanding of the project as a non-utopian and realizable city.

In the same line of exploration, scale is of great significance, especially in the later works of New Babylon. Whereas earlier models and drawings offer either total abstraction of real space or ambiguity in their situation, the later works of New Babylon are explicit in addressing their viewers as inhabitable spaces. They are not, however, all of a similar or even an intelligible scale. Pieces like Secteur Jaune offer viewpoints that suggest a human perspective, situating the viewer as an occupant of the work with an intimacy not available in plans or sections. However, it is not possible to determine a true scale to this or other pieces from a subjective viewpoint—the

components of the model are not related to a part of the body or another discernable scale, making Secteur Jaune ambiguously large. As Flussér writes, “[Phenomenological vision] does not stand above, but within, the phenomenon to be understood and manipulated. Models projected from it do not show the phenomenon to be an object, but a living experience.” The effect of this choice in representation is a globalizing of perception: the model must be larger than the human body, but expands to a city or planetary scale without frame of reference. This thereby allows the viewer to locate themselves within the work not only by the perspective given, but by a scale that surely encompasses their body and most likely, their familiar urban landscapes. Situating the person viewing New Babylon not only as an observer, but as an occupant—and therefore a participant in the project—is essential to Constant’s mission.

Occupying New Babylon as a viewer is a deeply relevant act of understanding the project’s aim to transform society through human activity. Constant writes, “The culture of New Babylon does not result from isolated activities, from exceptional situations, but from the global activity of the whole world population, every human being being engaged in a dynamic relation with his surroundings.” To be engaged in the representation of this project is to be implicated in the project itself and its possibilities. From early abstract models to semi-imagined archetypes like the gypsy camp, Constant draws together the spatial manifestations of human behavior that he believes most conducive to an ideal society: that composed of the migratory, playful homo ludens of New Babylon. His architectural representation of this ideal locates his work abreast of the idealistic countercultural movements of the



Le Corbusier, La Ville Radieuse, 1930.

1960s-1970s, which, as Sadler writes, envisioned a world both “continuous and scaleless.” However, both the counterculture and Constant saw their sociopolitical projects as more than ideals or the representations thereof. While the perfect society and especially its physical environment are generally considered utopian notions, New Babylon thoroughly insists on its practicability. Constant’s guiding philosophy of human creative activity postulates that people form their environment through behavior; therefore, there must be real behavior and a real environment mutually conducive to this ideal.

New Babylon’s non-utopian nature is clearly expressed in its



Constant, Secteur Jaune (detail), 1958



Le Corbusier, La Ville Radieuse, 1924.

representation. The development and growing variety of the project through models, drawings, and writings illustrates the project's fundamental ability to come into being through real processes that the architect elaborates. Constant writes,

"A New Babylonian way of life then begins to be defined, which takes off when the regrouped sectors make up a network: a structure that can compete with the settlement structures, whose significance is progressively downgraded as man ceases to take part in the production process. The same phenomenon being produced in many places, one will see many sectors group together, unite and form a whole. From then on, fluctuation will increase."

This project is not situated in an ideal future either perfectly prepared for the development of such a landscape or a *tabula rasa*. Instead, Constant envisions New Babylon growing from his contemporary world outwards and onwards. The way of life is "defined" as the new structural paradigm supplants the old;

that is, new behavior and new mechanical and human creation develop in tandem with the expansion of a new environment above the familiar plane. This is the purpose of the elevated city. For a time, an infant New Babylon lives in tandem with the world to which Constant is reacting—and rejecting—in its design. It must supersede this world not through destruction, but in the practical replacement of the human/mechanical systems of life conducive to one paradigm or the other.

The city is the locus and driver of Constant's project. Like its Situationist roots, New Babylon is "avowedly urban, based in the traditional locale of revolution." Working within this framework of spatial and systemic interaction involves negotiating capitalism rather than rejecting it outright. As such, New Babylon shares the features of contemporary projects with entirely opposite ideals such as Le Corbusier's proposed system of corbelling the roads and paths of Paris to isolate different types of transportation. For Le Corbusier, isolating different forms of traffic by means of elevating new construction and designating the new underground for commercial vehicles yields a "geography independent of any obstruction due to the houses" and improves the efficiency



Constant, Gezicht op Sectoren, Perspectiva e colagem, 1971.

of all forms of traffic. This networked traffic has mechanical qualities and is motivated by the need Le Corbusier sees for architecture to adapt to new economic and social conditions. Similarly networked spaces of movement and production are evident in New Babylon, yet they are inspired not by capitalism, but an alternative conception of production and Constant's search for the psychogeography of the city.

In 1974, Constant designates four rough categories that together yield a designed space: architectural elements, spatial qualities, psychological elements, and environmental influences. These are soft categories that together encompass everything from building materials to temperature, movement, and visual perception. To design these elements in his city, Constant proposes to isolate all mechanical production (which will be increasingly automated) and raise the city above land and sea. The resulting human landscape is free from the humdrum daily routines and overvaluation of production that Constant rejects in his contemporary world. The ultimate freedom in constructing one's own landscape transforms people as well as place: Constant writes, "we can deduce the essentials of a structure that is no longer composed of nuclei, as in the traditional settlement, but is organized according to the individual and collective covering of distance, of errancy: a network of units, linked one to the other, and so forming chains that can develop, be extended in every direction." By developing systems of movement and habitation isolated from mechanical production, humans learn to produce according to their own initiative and in so doing, produce architecture that is responsive not to an economy or workforce, but to their humanity in each of the four categories of designed space. This new urban paradigm is Constant's vision for a

perfected, imperfect world.

In drawing a thread through this project from the architect's representations, its conceptual underpinnings, and its urban identity, we have arrived at the architect himself. While New Babylon is a fundamentally human-centered idea, relying on unpredictability, creativity, and intuition of a global population to generate a new social and physical world, the project itself is entirely conceived and elaborated by Constant himself. While Situationism and unitary urbanism are opposed to the authoritarian, studio-rooted role of the architect, they are movements of thought generated and disseminated through writings and projects like New Babylon by artists and architects enmeshed within the art world. Reconciling this role with the conceptual work it produces is fundamental to understanding the nature of the project as a whole and real body. We can conclude that for New Babylon, the architect's role is making public the deep thinking of the insular art and architecture world to allow the creative work within this field to break through these confines and utilize the inherent human creativity of the population at large to effect its goals. Constant sees an alternative to the capitalist world built by architects for the market in filling the role of architect with all humanity. His role is in liberating art and architecture and by so doing, liberating modern societies from the lofty thinking that shapes their present environments and ways of life. He understands New Babylon as an idea, but one that can in a sense be realized by training individuals to act on the theories he has brought forward through writing, drawing, and model-building. The project has no immediacy; it acts instead as a call for culture-change open to the people who would be its impetus, energy, and creators.

## COOPER HEWITT, SMITHSONIAN DESIGN MUSEUM: A CASE STUDY

TIFFANY KIM

The Cooper Hewitt, Smithsonian Design Museum was founded in 1897, by Amy, Eleanor, and Sarah Hewitt—the granddaughters of industrialist Peter Cooper—as part of The Cooper Union for the Advancement of Science and Art. The Hewitt sisters envisioned the Cooper Hewitt to be “a practical working laboratory,” where students and designers could be inspired by actual objects. A branch of the Smithsonian since 1967, the Cooper Hewitt is housed in the landmark Andrew Carnegie Mansion on Fifth Avenue in New York City. Today, the Cooper Hewitt is the only museum in the nation devoted exclusively to historic and contemporary design. It educates, inspires, and empowers people through design by presenting exhibition and educational programs and by maintaining active publications to advance the public understanding of design across thirty centuries of human creativity represented by the museum’s collection.

As a design museum, the Cooper Hewitt is already unlike most museums as it constantly questions where the boundaries of design are. Arguably, design is everywhere. The term design, in and of itself, embodies a lot, such as, but not limited to, the realization of a concept or idea into actualization. Yet, there are many issues around what the boundaries of design might be in regards to the physical environment and the virtual realm. Subsequently, this shift between the physical and the virtual causes there to be a shift in the experiencing of design, as well. As part of an increasingly technological society, the Cooper Hewitt shows, through its recent renovations, that

the virtual can function alongside the tangible not only to “modernize” the museum, but also to revive their historic collection while maintaining its integrity to its fullest. Thus, the Cooper Hewitt demonstrates, through its exhibitions and its own building, that tangible and digital design can be both part of our physical experiences and also increasingly part of our virtual experiences.

Design, at the Cooper Hewitt, begins with where it is housed—the Andrew Carnegie Mansion. Completed in 1901, the former home of industrial magnate Andrew Carnegie was designed as a Georgian country house by architectural firm Babb, Cook & Willard. It was the first private residence in the United States to have a structural steel frame and one of the first in New York to have a residential Otis passenger elevator. It also included both central heating and a precursor to air-conditioning. As an intriguing study in innovative design, the Andrew Carnegie Mansion received landmark status in 1974 and re-opened as the Cooper Hewitt, National Design Museum, Smithsonian Institution, the former name to today’s Cooper Hewitt, Smithsonian Design Museum, in 1976.

In 2011, the Cooper Hewitt closed for a \$91 million renovation to transform the Carnegie Mansion into a 21st century museum while still “[respecting] the spirit and character of the landmark building.” According to Leslie Wolke, from the Society for Experiential Graphic Design (SEGD), “Everything about the museum—from its brand identity to its exhibit

casework—was questioned and reimagined,” meaning that the changes to the museum were far from just cosmetic.

The renovation of the Cooper Hewitt exemplifies multiple design disciplines, of which include Architecture, Landscape Architecture, and Environmental Graphic Design. Director of the Cooper Hewitt, Smithsonian Design Museum, Caroline Baumann, states, “We are a museum of design, and we recruited a dream team of designers to develop the new Cooper Hewitt.” Thus, 13 design firms were involved in the renovation of the Cooper Hewitt, of which included, Gluckman Mayner Architects, Beyer Blinder Belle Architects & Planners, Diller Scofidio + Renfro, and Pentagram.

The collaboration between the 13 different design firms speaks to the breadth of design as a multidisciplinary discourse. Importantly, Gluckman Mayner Architects increased the museum’s total exhibition space from approximately 10,000 square feet to 17,000 square feet, improved circulation through the spaces, and designed unobtrusive mechanical, lighting, and electrical updates. Beyer Blinder Belle Architects & Planners restored key elements to the Cooper Hewitt’s original grandeur and helped integrate new technology without changing the character of the original Carnegie Mansion. Diller Scofidio + Renfro developed new modular displays for the first and second floor, designed a new entrance canopy on 90th Street, which allows for visitors to enter through the garden, illuminated the historical piers on Fifth Avenue, and appropriated the former Carnegie art gallery into a museum shop. Lastly, Pentagram created a visual identity “befitting an organization entering a new era” and updated signage throughout the museum, as well. As a



**Figure 1.** “Collecting” objects with the Pen. Source: Cooper Hewitt, Smithsonian Design Museum

result of the collaboration and expertise provided by multiple design firms, the Cooper Hewitt, Smithsonian Design Museum reopened within the newly renovated and revamped Carnegie Mansion on December 12, 2014.

But despite such renovations, the biggest renovation that the Cooper Hewitt went through was the addition of a suite of creative technology, which includes the Pen, touchscreen tables, the Immersion Room, and Gesture Match. According to the SEGD, “The new Cooper Hewitt, Smithsonian Design Museum invites visitors to engage with design by exploring, learning, and creating themselves.” Shaunacy Ferro, from Fast Company, explains, “In its new incarnation, the Cooper Hewitt taps into what distinguishes a design museum, which celebrates functional objects built with users in mind, from any other museum full of beautiful objects: It allows you to play with the collection, rather than look at it.” In other words, the Cooper Hewitt incorporates many interactive elements, heightened further with the addition of creative technologies, which warrants the Cooper Hewitt’s position as “the preeminent museum and educational authority for the study of design in the United States.”

The most notable creative technology that the Cooper Hewitt introduced in its recent renovation is its Pen. The Pen is a high-tech device that, according to the Cooper Hewitt, resembles the most basic tool of design—the pen. With the concept originating from Local Projects working with Diller Scofidio + Renfro, the new interactive Pen is a key part of the new Cooper Hewitt experience. According to the SEGD, “Local Projects worked for more than two years to create the interactive media in an all-new visitor experience, focusing on a suite of interactive experiences that move from design thinking into [the] visitors’ own world of creativity.”

The experience starts when a visitor receives the Pen with his or her admission ticket, which contains a dedicated web address corresponding to his or her visit. To “collect” objects, the visitor would simply press the end of the Pen to any museum label (FIGURE 1). A visitor can then transfer his or her collection to the interactive touchscreen tables to explore them in more detail or to add more objects from the vast Cooper Hewitt collection on display on the interactive tables. Once the visitor leaves and goes home, he or she can visit the web address printed on his or her ticket, and view everything that had been collected in person, online. An added benefit to this experience is being able to pick up where the visitor last left off in future visits, allowing the visitor to “[create] a virtual digital archive of their entire relationship with the museum for years to come.”

As seen, the addition of the Pen exemplifies the extension of design, as a discourse, from the tangible to the virtual. According to the Cooper Hewitt:

“[The Pen is] technology that emphasizes play and speaks to the specificities of a design museum. The Pen was pitched

as a way to invite visitors to learn about design by designing themselves. Beyond working as a tool for drawing, it would encourage visitors to engage with the works on view in the museum, rather than looking at them through the small screen of the more traditional approach of a “museum App”... Like so many of the objects in the museum’s galleries, [the Pen] is a product of a collaborative, international industrial design process, exemplifying how designers solve real-world problems.”

Undoubtedly, the Pen, itself, changes the experience of visiting a museum. It compels a visitor to want to look at everything on display because if an object stands out or is inspiring to the visitor, the visitor feels enthused to utilize the pen to “collect” the object to revisit later. This option of revisitation is not only unique, but also convenient, as the visitor does not feel the need to take a photograph of the object or feel pressured to remember everything about the object, as the information is accessible online. The Pen, in an enigmatic way, also discourages the use of the cellphone, which allows the visitor to fully enjoy not only the objects on display, but also his or her visit. Lastly, the satisfying, subtle vibration from the Pen when “collecting” an object makes the experience that much more enjoyable.

Statistically, nearly all visitors have chosen to use the Pen when offered it at the admissions desk. The Cooper Hewitt’s digital team, known as the Labs team, stated, “On average, visitors ‘collect’ about 30 objects and save one design that they created [and] about a third of [the] visitors have visited their personal collection online after their visit.” As for my visit, I collected 55 objects and saved five designs that I created.



Figure 2. “Playing designer” during my visit. Source: Cooper Hewitt, Smithsonian Design Museum

technology found in popular tablets and smart phones. According to the Cooper Hewitt, the touchscreen tables, developed by Ideum featuring specialized interactive software designed by Local Projects, were designed to work with both experts and novices to inspire design and to bring insight into design through the act of designing from a suite of 3D modeling tools. By using the front end of the Pen as a stylus, or even one’s fingers, visitors can “play designer” by creating lamps, tables, chairs, and hats, as well as buildings. Such technology, which illustrates digital design, exemplifies how one can be left with only a virtual design. That being said, the 3D modeling tools do not necessarily “teach” design per se, as one can draw a simple gestural line that will transform into a more complex, extruded three-dimensional rendering. An example of a simple gestural drawing being transformed into a “design” can be seen in FIGURE 2. As an architecture student,

Continuing onwards, the Pen works with the museum’s new 4K resolution 32, 55, and 84-inch touchscreen tables, which utilize projected capacitive touch technology, the same

myself, seeing a simple gestural line transform into a concrete design placed in a rendered setting, is somewhat perplexing, as, in reality, it takes more than just a gestural line to create design. The rendered setting can also lead one to believe that such a design, created by the visitor, could exist in reality. That being said, the Cooper Hewitt could simply be suggesting that such a gestural line could serve as an inspiration for design. As seen so far, the inspirational dimension of design, encouraged throughout the Cooper Hewitt in numerous ways, has the potential to push its visitors to try out or even pursue design outside the physical boundaries of the Cooper Hewitt, itself.

Additionally, the touchscreen tables allow visitors to “explore high resolution images of collection objects, select items from the ‘object river’ that flows down the center of each table, zoom in on object details, learn about its history, and related objects organized by design theme and motif.” The SEGD explains, “A custom algorithm developed by Local Projects allows users to draw gestural lines and pull collection objects with similar line work, underscoring that design is a formal pursuit, and that the shapes we draw have a legacy and meaning.” This is one feature of the interactive software that is not as obvious as the others, but equally as riveting. On my visit, I was unaware of this feature until I saw a museum guard gently swipe his hand across one of the touchscreen tables, resulting in curvy lines that transformed into images within the vast Cooper Hewitt collection. Although the gestural lines that I drew were quite specific, as I decided to draw animals, the lines were transformed into simplified geometric shapes, such as circles and squares, that matched with an image from the Cooper Hewitt collection. This feature is riveting not only because there is uncertainty that makes



Figure 3. A visitor utilizing the Immersion Room. Source: Tiffany Kim

one wonder what object or work their gestural lines will bring up, but also because this feature allows the Cooper Hewitt to showcase objects within their vast collection that are currently not on display. My only dissatisfaction with this feature is that its relatively profound intentions of underscoring design as a formal pursuit and imparting that the shapes we draw have a legacy and meaning are unclear to the visitors.

integration of tangible space with virtual space becomes particularly crucial, as it has a strong potential to create a larger audience for a new generation of museum-goers.

Another addition to the Cooper Hewitt after the renovation is the Immersion Room. Formerly Margaret Carnegie's bedroom, the Immersion Room is an interactive space that utilizes both the Pen and a touchscreen table, offering a unique experience: the ability to view the Cooper Hewitt's permanent collection of wallcoverings, "the largest and most significant in North America." Prior to the renovation, and therefore to the addition of the Immersion Room, the Cooper Hewitt's wallpaper collection, according to Wolke, had been "publicly derided as evidence that the institution had lost its relevance." Yet, during the renovation, this collection was viewed as a potential for interactivity. Now, the Immersion Room, in my opinion, is one of the most defining characteristics of the Cooper Hewitt, aside from the Pen.

Using the Pen, visitors can not only "browse hundreds of high-resolution digitized wallpapers and see them projected at full-scale, floor-to-ceiling on the surrounding walls," but they can also create their own wallpaper design and see them projected on the surrounding walls, as well (FIGURE 3). According to the Cooper Hewitt, the Immersion Room is "more than just entertainment" as it "provides the first opportunity to discover [the] Cooper Hewitt's wallcoverings as they were intended to be viewed." To complement the experience, a number of wallpapers are accompanied by audio clips, which give additional information about a particular design or designer. Ferro explains, "Though only one wallpaper can be projected at a time, two different people can use the software at once,

allowing people to use one side of the table for examining historic samples while drawing their own wallpaper on the other side, or to play off what the museum visitor alongside them is drawing." Wolke comments, "These playful activities spark impromptu conversations among strangers, augmenting the shared experience and mirroring the design process itself."

Ultimately, the vibrant, impactful, and immersive experience of the Immersion Room successfully revives and showcases one of the Cooper Hewitt's outstanding historic collections. The simplistic and intuitive nature of the room allows for visitors of any age to browse and project wallcoverings from the Cooper Hewitt's permanent collection, in addition to being able to create a pattern that gets repeated, then projected as "your own" wallcovering. In a sense, this creative process allows for a visitor to leave their legacy at the Cooper Hewitt through their creation, if only for a few minutes before another visitor utilizes the room and projects something else. Nevertheless, the Immersion Room, alongside the implementation of the Pen and the touchscreen tables, continues the Cooper Hewitt's unique experience as a design museum. The notion of design, in the case of the Immersion Room, extends beyond the tangible boundaries of the museum to the virtual space of social media. According to Wolke, visitors post selfies or photographs posing in the Immersion Room "dipped head to toe in the light of their own creations," showcasing their design, while inadvertently spreading awareness of design, as well.

The last of the creative technologies developed during the renovation is Gesture Match, "an interactive experience that helps visitors understand the relationship between the human

body and design." Gesture Match, designed by Jake Barton and Local Projects, was originally on display as part of the exhibition Beautiful Users, which explored the history and evolution of user-centered design and was on display from the re-opening of the Cooper Hewitt until April 26, 2015. Barton explains, "We wanted to...identify the shape of people's bodies along with the designs that they inspired, meaning physical form factors and how those things actually contributed to the design of actual objects." Gesture Match works by standing in front of a large digital screen that "cycles through life-sized silhouettes of human bodies in different positions" (FIGURE 4). Once a visitor strikes a pose in front of the motion sensors, Gesture Match will cycle through its catalog to connect the visitor's pose to a piece of design in relation to images sampled from the Cooper Hewitt's historic collection. Ferro explains, "Pretend to drink something, and it will bring up a set of cups. Raise one hand up to the ceiling, and a light bulb—the kind you might twist out of a fixture above your head—shows up."

Today, Gesture Match is featured on the first floor of the exhibition, How Posters Work. However, whether or



Figure 4. Gesture Match featured in How Posters Work. Source: Tiffany Kim

not it is because it was originally on display as part of another exhibition, *Gesture Match* seems out of place, as there is no explicit context or directions on how to interact with this digital screen besides an outline of two feet marked on the ground in front of the screen. Only when I went through *How Posters Work* a second time, did I decide to figure out what this screen did. Once I figured out, I felt slightly self-conscious striking poses at a digital screen, so I stuck to conservative poses. That being said, although the intentions behind *Gesture Match* is admirable, the installation, in my opinion, was not a success. Not only was its connection to *How Posters Work* weak, as the only connection seemed to be that both are under the broad umbrella of design, but also the design that resulted from striking a pose was not particularly engaging. In terms of its relationship to the notion of design, however, one can see, once again, how design is being pushed beyond the tangible into the virtual. The sheer fact that a visitor can interact with a digital screen through motion sensors is quite a big development in the discourse of design.

*How Posters Work*, curated by Senior Curator of Design, Ellen Lupton, features over 125 posters from the Cooper Hewitt's permanent collection, dating from the turn of the twentieth century to the present day. According to the Cooper Hewitt, the exhibition demonstrates how some of the world's most creative designers have employed design principles of composition, perception, and storytelling to produce powerful acts of visual communication, to convey ideas, and to construct experiences. On display since May 8, 2015, *How Posters Work* spans the first and second floor of the Carnegie Mansion. In addition, the exhibition is organized into 14 subsections, which include: focus the eye, overwhelm the eye,



**Figure 5.** *Herbstzeitlose (Autumn Crocus)* by Götz Gramlich featured in *How Posters Work*. Source: *Typographic Posters*

design discourse...As posters circulate through both print and social media, they continue to be a crucial medium for inventing and sharing new visual languages. *How Posters Work* uses the medium of the poster to explore principles of visual thinking that extend to many forms of design, including, branding, packaging, book covers, websites, and motion graphics."

In other words, *How Posters Work* speaks to the continuing relevancy of the tangible in the realm of design today. Yet,

use text as image, overlap, cut and paste, assault the surface, simplify, tell a story, amplify, double the meaning, manipulate the scale, activate the diagonal, make eye contact, and make a system.

Although *How Posters Work* is described as an exhibition about how designers see, the exhibition also speaks to the relevancy of posters today. According to the exhibition's information plaque:

"Over the last century, posters have served both as utilitarian communication and as

the exhibition also showcases two animated posters, one of which includes *Herbstzeitlose (Autumn Crocus)* by Götz Gramlich. Caitlin Condell explains, "Gramlich, who produced both a digital animation and a screen-printed poster around the same design concept, shows how the printed poster has taken on new roles in the realm of design as digital screens become increasingly prevalent." In the animation, the letters peel away one by one from the surface to which they have been affixed, revealing their black undersides, which reveal bits of information about the event the poster was designed around. The screen-printed poster features each letter partially turned down, with faint black dots forming shadows behind the full letterforms in reference to its digital counterpart (FIGURE 5). Such design augments a virtual design through a physical experience.

Overall, *How Posters Work* is more than just an exhibition about how designers see. Similar in intent to the creative technologies, such as the Pen, *How Posters Work* inspires design, as the exhibition is very informative and educational. Less a criterion for judgment, but more as an educational tool, as aesthetic judgment is highly subjective, each of the 14 subsections are accompanied by a detailed explanation, a graphic explanation, and posters from the Cooper Hewitt collection that exemplify each subsection. That being said, my only dissatisfaction about *How Posters Work* is its lack of ability to continue inspiring visitors to utilize what the exhibition entails after the visitor leaves the Cooper Hewitt. And this can be because the sheer amount of information is, frankly, quite overwhelming. 14 subsections showcasing over 125 posters from the Cooper Hewitt's permanent collection spanned throughout two floors of the Carnegie Mansion is

not a modest amount. Likewise, retaining this abundance of information is not an easy task, even if a visitor has "collected" some of the posters on display using the Pen. All this begs: How or what can the Cooper Hewitt do to foster this inspiration for those interested in utilizing the information that the exhibition has to offer once having left the museum?

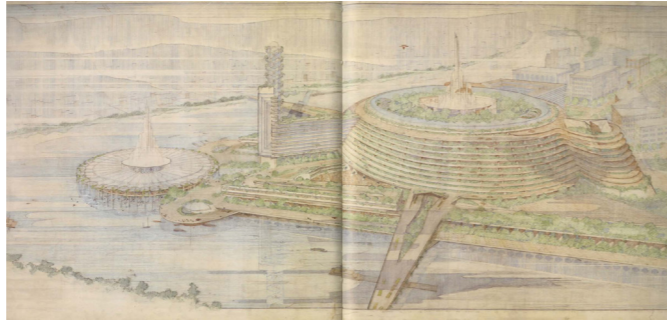
Ultimately, the Cooper Hewitt does not answer the lingering question: What are the boundaries of design? And, rightly so. My opinion that there is no definitive boundary for design was solidified even more so after visiting the Cooper Hewitt. That being said, the Cooper Hewitt is an exceptional example that constantly questions and pushes the idea of "boundaries" in design, as is seen through its employment of multiple design disciplines during its renovation, its suite of digital experiences, and its exhibitions; it embraces several channels of design spanning from the tangible to the virtual. As a design museum, the Cooper Hewitt, Smithsonian Design Museum continuously inspires design through every tangible, and also, virtual inch of the Carnegie Mansion, as it is evidently a design museum with an agenda. Wolke appropriately explains, "A 'design museum' sits between the art museum and the science museum. It can draw attention to the processes, choices, human decisions in the making, not just the finished object." Already, the Cooper Hewitt is successfully changing the experience of a museum, as it echoes the design process through its efforts. The museum is pleasurable, out of the ordinary, and serendipitous. The only question now is: How can the Cooper Hewitt inspire design outside the boundaries of its museum?

## FRANK LLOYD WRIGHT AND THE PITTSBURGH POINT PARK PROJECTS: REPRESENTING HISTORY IN ARCHITECTURE

GEON WOO LEE

The western tip of the Golden Triangle in nowadays Pittsburgh, where the Allegheny and the Monongahela Rivers join to form the Ohio River, offers one of the most spectacular settings for any American city. Commonly known as the Point, this site staged key roles throughout the European conquest of the American continent and also for Frank Lloyd Wright, who was commissioned by the Allegheny Conference on Community Development in 1947 to develop a civic center on this very Point. For Wright, this commission offered a chance to realize the decades-long explorations into his utopian vision of a city, driven by the automobile, such as the unbuilt Sugarloaf Mountain Automobile Objective Project for Gordon Strong in 1925 and the Broadacre City first presented to the public in 1930.

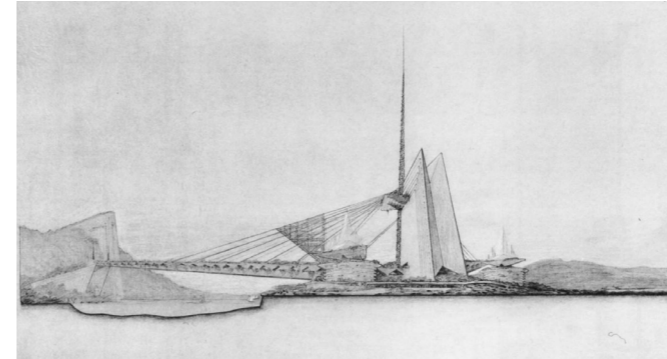
Wright prepared two schemes for Pittsburgh Point Park. He developed his first scheme (Fig. 1) by May 1947 and invited Edgar J. Kaufmann, Park Martin, and Wallace Richards, three Allegheny Conference members, to his workplace at Taliesin West in Arizona to inspect the drawings. However, the Allegheny Conference members were unsatisfied with Wright's work and Martin asked him to prepare "a very simple treatment of the area keeping in mind the historical value of the site." With further discussion, Wright prepared his second scheme (Fig. 2) by January 1948 and again invited Martin,



**Figure 1.** Pittsburgh Point Park Project. First Scheme (4821.03). Aerial perspective from the base of Mt. Washington looking north, 1947.

Richards, and George Richardson, a consulting engineer for the Allegheny Conference, to Taliesin West to inspect the drawings. Though Wright thought the trio were "really enthusiastic ... over Scheme II," the Allegheny Conference eventually decided not to work with Wright further on. They found Wright's two schemes for Pittsburgh Point Park too costly and disrespectful of their requests to build and preserve certain historical monuments of the site.

However, Wright did refer to the Point's history. In both of his schemes, Wright portrayed the ideology and symbolism of what happened on the Point instead of physically reconstructing what was originally present. The Allegheny Conference and Wright essentially had two different approaches on how to represent history in architecture. This paper will trace the important events that took place on the Pittsburgh Point from the European colonization of the Americas to the commission of Wright and examine how



**Figure 2.** Pittsburgh Point Park Project. Second Scheme (4836.04). Perspective from the Monongahela River looking west, 1947.

differently the Allegheny Conference and Wright sought to represent that history in architecture.

The Point, where the Ohio River begins and flows towards the Mississippi River, naturally served as a great starting point for westward conquest. The French took advantage of this site and began to exert influence over the Ohio River Valley in the late 1740s. The British colony of Virginia, who claimed this area, saw the French influence as a threat. In 1753, then-Governor of the Virginia Colony Robert Dinwiddie sent the twenty-one-year-old Adjutant General George Washington to inspect this area and choose a site for a British fort. The British soon began to build a small Fort Prince George at the site of the Point, but the French immediately seized the area and used the materials leftover by the British to build a bigger Fort Duquesne by 1754. Four years later, the British returned to destroy the French Fort Duquesne and built Fort Pitt on the

same site. Fort Duquesne and Fort Pitt served as key strategic locations for both armies during the French and Indian War to exert military influence and control trade over the Ohio River Valley stretching as far as the port of New Orleans.

The Point maintained an important role during the founding years of the United States. In 1778, during the Revolutionary War, General George Rogers Clark of the Virginia militia used the Point as a staging ground to lead an expedition against the British outposts north of the Ohio River. In the late summer of 1803, Meriwether Lewis departed from the Pittsburgh Point before meeting William Clark in October 1803 further along the Ohio River in Louisville, Kentucky. They travelled further down the Ohio and up the Mississippi to St. Louis before officially taking off in May 1804 on the Lewis and Clark Expedition across the entire American continent towards the Pacific Ocean. The Point, during the colonial and foundational years of the United States, deserved the title as the "Gateway to the West."

With the rise of the Industrial Revolution in the second half of the 19th century, Pittsburgh, with easy access to trade along the rivers, became an active site of industrial production. Pittsburgh manufactured steel, coal, iron, glass, aluminum, oil and processed foods and quickly became one of the most powerful cities in the U.S. fostering the growth of billionaires like Andrew Carnegie, Henry Frick, Henry J. Heinz, and Andrew Mellon. Numerous factories, warehouses, and railroads were soon built near the Point and multiple bridges spanned the three rivers of Pittsburgh. By the early 20th century, several entertainment facilities such as an exhibition hall and music hall were constructed from the Point along the Allegheny River and these grounds, which oversaw important military

campaigns a century earlier, became the “hub of Pittsburgh’s social and cultural life.”

Like many cities in the U.S., Pittsburgh fell hard during the Great Depression, but recovered during the surge of industrial production around World War II. As Pittsburgh rebuilt itself, civic leaders were concerned about the dilapidated conditions of the Point. By the 1940s, the Point “was occupied by a jumble of old rail yards, warehouses, an outdated exhibition building, and two highway bridges crossing the rivers.” The Allegheny Conference, a nonprofit organization which included important Pittsburgh civic leaders such as Edgar J. Kaufmann, department store owner who was influential to bring Wright to Pittsburgh, and Park Martin, engineer and executive director of the Allegheny Conference, led the initiative to “save the core” and “rebuild the City from the heart out.”

Though there were previous studies on how to restore the Point by various civic groups commissioning prominent designers, such as Frederick Law Olmsted in 1910, Robert Moses in 1939, and Ralph Griswold-Charles Stotz-Donald McNeil-George Richardson in 1945, Kaufmann still wanted “an architect worthy of the name genius” to redevelop the Point. Kaufmann knew Wright as early as 1934 and maintained a close relationship, most notably commissioning him to build a private residence in Bear Run, Pennsylvania, that became known as Fallingwater. Since 1934, Kaufmann had asked multiple times for Wright to come to Pittsburgh and acquaint himself with the city officials. The two shared mutual passions for art, architecture, and the automobile and Kaufmann’s “sustained efforts to realize Wright’s visions in Pittsburgh suggest that he, too, believed that architecture could play a

catalytic role in the betterment of contemporary society.” Eventually, Kaufmann succeeded in convincing Wright, and arranged for Wright to meet the members of the Allegheny Conference at the Duquesne Club in 1946. Here, Wright outlined three proposals for Pittsburgh: a large civic center on the Point, a housing area on the south side of the Monongahela River, and a tower next to Mount Washington overlooking the Point. The Allegheny Conference approved Wright’s proposals but also asked him to create a second simpler version of the civic center as well.

On April 21st, 1947, Wright wrote Kaufmann saying that he had finished the drawings for the first scheme of the civic center and asked Kaufmann to come visit Taliesin West. Wright enthusiastically noted that Kaufmann would see “the thrill of [his] life” during his visit. Wright’s first scheme (Fig. 1) titled “Point Park Coney Island in Automobile Scale” focused on a large circular civic center wrapped by a spiraling automobile ramp. This ramp connected to the multi-level cantilevered bridges spanning the two rivers. Two smaller circular shaped structures called the “fast ramp,” a 500-foot tower, a row of offices, and a circular pavilion at the very tip of the Point were also included (Fig. 3, 4). The circular civic center, with its

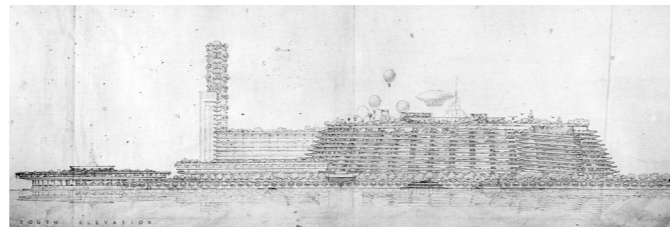


Figure 3. Point Park Project. First Scheme. South Elevation, 1947.

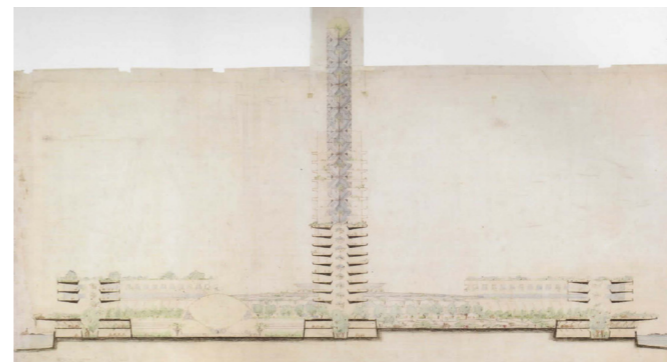


Figure 4. Pittsburgh Point Park Project. First Scheme. North-south section through lateral office buildings, tower, concert garden and zoo looking west, 1947.

ascending spiraling ramp, created a ring-like form and housed a convention hall, movie theater, planetarium, and a glass-domed sports arena at the top (Fig. 5).

Wright intended this first scheme to provide “entertainment for the citizen seated in his motor car.” The movement and circulation of the automobile largely influenced the design of the first scheme, which is not surprising considering Wright’s fascination with automobiles throughout his life. The spiraled ramp on the exterior rising to the top emphasized the automobile’s centrality to the project and it also gave the drivers a great view of the rivers and the surrounding landscape as they drove up the ramp. The cantilevered spiraled ramp would be “a testament to the needs of an automobile in motion as well, being a revision of the design that Wright had explored at Sugarloaf Mountain.” In both the Sugarloaf Mountain Automobile Objective Project in 1925 and

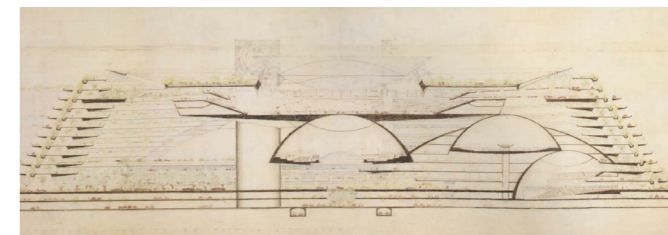


Figure 5. Pittsburgh Point Park Project. First Scheme. Longitudinal section of the main civic center along the east-west axis, 1947.

in the first scheme of the Pittsburgh Point Park Project, the movement of the automobiles would be the dominant visible aspect of this building from afar. And since the exterior of a building is one of the most easily identifiable characteristics of the building, Wright repurposed his vision of the automobile inspired aesthetic that he had explored more than a decade earlier onto the first scheme of Pittsburgh Point Park.

However, the first scheme was not well received by the members of the Allegheny Conference. The scheme was far more dramatic and costly than what they had imagined. Most importantly, the scheme conflicted with the Allegheny Conference’s intentions to create a historical park on the site. After visiting Wright with Kaufmann in early May, Martin mailed Wright on May 28th, 1947:

“You can therefore understand our position when, in fact, we are considerably ahead of ourselves in giving you the assignment which took place at a luncheon at the Duquesne Club which you attended, at which time you asked for a free hand for your conception of a plan and we asked, and you agreed, to prepare also for us a study of a very simple



treatment of the area keeping in mind the historical value of the site. We therefore hope as soon as you get adjusted by your moving back to Wisconsin, that you will concern yourself with this simple plan idea.”

Wright mailed Martin back on May 31st stating, “I am willing to go on investing more ‘libido’ in the same cause if only I can understand more clearly what you mean by the ‘historical value of the site.’ Do you mean a more conventional scheme? Or just what – for what – approximately?” Martin replied to Wright on June 9 referring him to the “Report of the Study Committee on The Historical Significance of the Point Park Project” prepared by the Allegheny Conference in the previous year. However, on June 15th Wright declared the report “fulsome” and stated “Pittsburgh needs no such Historian. Pittsburgh needs imaginative creative sympathy for the living and I am eager to do something constructive and joy-giving for Pittsburgh people.”

After further internal discussions with the Allegheny Conference members, Kaufmann mailed Wright on July 14th

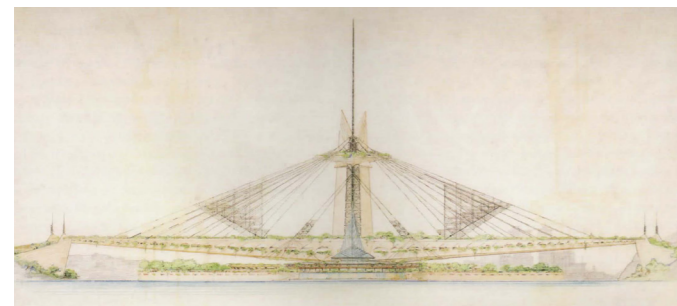


Figure 6. Point Park Project. Second Scheme. West elevation, 1947.

telling him not to work on the project designing a housing area on the south side of the Monongahela River and a tower next to Mount Washington, which were the remaining two of the three proposals that Wright outlined previously at the Duquesne Club, but to concentrate his efforts on designing a new simpler version of the civic center. Martin mailed Wright the following day reminding him again of the need to give recognition to the historical background of the Point. Wright replied to both Kaufmann and Martin on July 19th agreeing to create a second scheme for the Pittsburgh Point Park civic center soon.

By early December, Wright had informed Kaufmann that the drawings for the second scheme is now available (Fig. 2). This time, Kaufmann would not be able to make a visit because of his ill health, and instead, Martin with Wallace Richards, secretary of the Conference, and George Richardson, consulting engineer for the Conference, would visit Wright at Taliesin West on January 4th of the following year.

For the second scheme, Wright replaced the circular civic center with a 1,000-foot tower called the “Bastion” (Fig. 6) and reconfigured the cantilevered bridges from the first scheme as cable bridges. Though the second scheme delivered a very different skyline than the first scheme, the second scheme still maintained much of the elements from the first scheme. The “fast ramp” structures from the first scheme were reconfigured into offices but remained in the same position, the circular pavilion at the very tip of the Point was identical, and though the circular civic center was eliminated, Wright still maintained its circular footprint as a basis for traffic circulation, parking layout, and park promenade plan.

The second scheme was still not well received by the Allegheny Conference. Even though Wright called this scheme a “modest treatment,” Martin thought it was still “dramatic” and raised issues of costs. Contrary to Martin, Richards was very pleased with the aesthetics, however, agreed with Martin and raised concerns about the engineering and costs:

“Frankly, Project II is even more beautiful. There is one drawing of the two bridges at night that is as fine a rendering as I have ever seen (Fig. 7). Undoubtedly you [Kaufmann] will see Project II before you return to Pittsburgh, so there is no need to go into descriptive detail. The basic problem involved, of course, is cost. While it is true that George Richardson feels that the traffic problem in Project II is by no means solved in relationship to the requirements of the Triangle and the Penn-Lincoln Parkway, this is a minor handicap, when faced with the fact that Wright himself admits that Project II would cost not less than \$150,000,000. In turn, he feels that Project I would be in the neighborhood of \$400,000,000.”

The costs of the projects far outweighed the proposed budget of \$20,000,000, and Kaufmann, who received this letter, acknowledged the concerns that Richards raised. After recovering his health, Kaufmann paid a visit to Taliesin West in February 1948 to discuss potential revisions to make this project feasible. He suggested two possible solutions: either to convince the city officials to proceed with Wright’s designs in several stages, or to just build the outdoor arena component to house the Opera. However, these two suggestions failed and the other members of the Allegheny Conference were seemingly more interested to revive the 1945 Ralph Griswold-Charles Stotz-Donald McNeil-George Richardson plan for the Point (Fig. 8). The Richardson plan was not only financially reasonable, but also followed the recommendations laid

out in the “Report of the Study Committee on The Historical Significance of the Point Park Project.” On August 9, 1948, Martin officially informed Wright that the Point Park project was moving forward without him, stating that Richardson’s “highway interchange plan at the Point Park area has been completed and is now before the interested groups for study.”

The Allegheny Conference concluded Wright’s designs were too costly and did not sufficiently address the historic value of the site. The “Report of the Study Committee on The Historical Significance of the Point Park Project Presented at Third Meeting of Point Park Committee” in April 18, 1946 basically summarized the Allegheny Conference’s intentions on what and how to preserve the historical value of the Point. This report, which Wright received from Martin, outlined the basic history of Pittsburgh and emphasized the Point’s role in “the

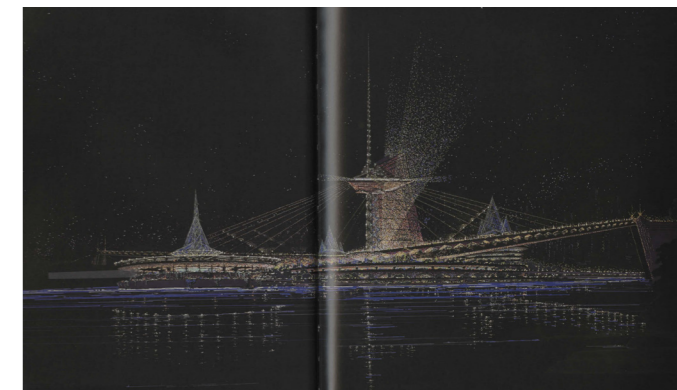
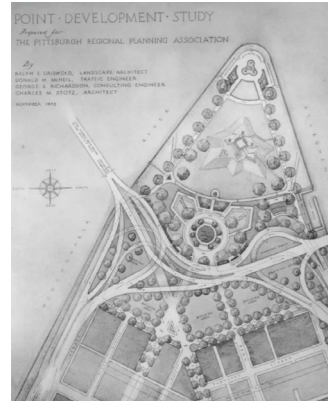
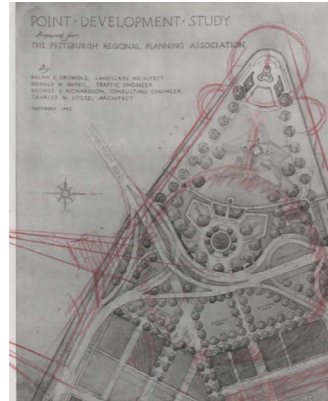


Figure 7. Pittsburgh Point Park Project. Second Scheme. Perspective at night from southwest, 1947.



**Figure 8.** Point Development Study, Scheme A. Plan, by Ralph Griswold, Charles Stotz, Donald McNeil, and George Richardson, 1945.



**Figure 9.** Pittsburgh Point Park Project, First Scheme. Sketch drawn over Griswold-Stotz-McNeil-Richardson plan by Frank Lloyd Wright, 1947.

Old Fort Pitt, but believe that the rotunda with its dioramas and the proposed restoration of two bastions will serve admirably as substitutes.”

The Allegheny Conference acknowledged that rebuilding all old structures would be difficult, but still wanted a partial reconstruction of the two Forts. The Allegheny Conference sought preserve historical values by literally representing what was present in history.

Wright’s two schemes for Pittsburgh Point Park clearly disregarded the report’s recommendations but did not disregard history. In his first scheme, Wright designed a “light-shaft memorial to Fort Duquesne,” which was a 500 foot glass tower on the top of the rows of offices (Fig. 4). An early sketch of the plan of the first scheme revealed that Wright positioned this tower to resemble the location of the westernmost bastion of Fort Duquesne (Fig. 9). Not only did the position coincide, the form of the Wright’s memorial and the bastion of the Fort Duquesne correspond to a diagonal. Wright used the original position and form of the westernmost bastion of Fort Duquesne to extrude the form of the memorial. Wright also wanted to establish an identity for Pittsburgh using the history of the city. In his description of the first scheme accompanying the final plans, Wright noted that steel, glass, and other modern materials were extensively used because they were “special Pittsburgh products,” signifying the thriving industrial economy of the city. By all means, Wright’s glass memorial to Fort Duquesne would have been a spectacular sight, which would, in the words of the prominent Pittsburgh pastor Clarence McCartney, “let the traveler know ... that this is Pittsburgh.”

The second scheme of the Pittsburgh Point Park Project

evoked historical symbolism as well. Wright cunningly labeled the central form of the second scheme, the sail-like tower, as a “bastion,” connoting the previous presence of the Forts on the site. Wright’s bastion also supported the bridges over the two rivers through cables (Fig. 6), and this form evoked a bird spreading its wings. No wonder the directionality of this bird-like form faces west, symbolizing Pittsburgh’s history as the “Gateway to the West.” Architectural historian Neil Levine illustrates this point exceedingly well:

“The ‘bastion’ is both frame and figure at once, something to look at, through, and from. It extrapolates a form of eighteenth century military defense in the guise of twentieth-century bridge technology on the very site where those two cultures come together in Pittsburgh’s history. And it announces that cross cultural marriage from afar in a symbolic form meant to broadcast and celebrate the city’s emergence from its blighted and depressed recent past. Seen from the east, or city side, it projects an image of industrial progress and movement forward. That sense of dynamism is amplified and restructured in the view from the west, where the design becomes the new icon for the city, different from but analogous to the St. Louis Arch or Paris’s Eiffel Tower.”

The comparison to a contemporary project of Pittsburgh Point Park, the Eero Saarinen’s St. Louis Gateway Arch (Fig. 10) finalizes the point. In St. Louis, Saarinen was tasked to design a monument



**Figure 10.** Jefferson National Expansion Memorial (Gateway Arch). Competition Design by Eero Saarinen, 1947.

commemorating the westward expansion of the United States. He did not sought to reconstruct a memorial conceived from past remains but sought to express the pioneering spirit of westward expansion through its timeless iconic form. Similar to Saarinen’s Arch, Wright’s bastion ignored the layout of historical remains but symbolized the American western expansion, industrial present, and a hope for a better future through its dynamic form.

Wright did not follow the recommendations of the report, however, conceived his own notion of representing history. Instead of literally rebuilding structures from the past, Wright was interested on what happened on the site and extrapolated its meaning into architectural form. Therefore, it is difficult to conclude that Wright completely disregarded history in the Pittsburgh Point Park Projects; he was still concerned about historical events and sought to represent the core values of events in an abstract architectural language.

The Allegheny Conference and Wright defined representing history in architecture differently. One took a more literal approach while the other took a more abstract approach. This difference in representing history in architecture largely explains why the Wright’s Pittsburgh Point Park Projects remain unbuilt. Wright dreamed of realizing his automobile inspired aesthetic with regard to real constraints, however, his vision failed. Ironically, the Allegheny Conference’s report on historical significance may have encouraged Wright to pursue his dreams. The report reminded to “Please remember that Pittsburgh was built by men who first dreamed dreams, then made them come true.”

