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# From Representation, to Design

Final Project made by Jingyan Ma

Cornell University

Candidate of M.S.AAD

May 2020

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For more information, please contact: [jm2666@cornell.edu](mailto:jm2666@cornell.edu)

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## ABSTRACT

My pursuance of advanced architectural design started from June, 2019. At the beginning, my territory of investigation was Architecture and Ecology. And the summer semester really offered me quite a lot of opportunities to discover the ecology topic with a variety of professors.

In the first studio project, led by Prof. O'Donnell, we were requested to pick a type of garbage to reuse as the material of a pavilion. In that case, I chose bubble wrap and researched how this kind of plastic material could be collected, classified, decomposed, and reused. Ultimately, I designed a pavilion that was constructed using the original bubble wrap and melted-bubble wrap made modular. Whereas in the second design project, I learned about how to make a design through steps of collecting data, investigating building systems, and making a proposal. So, in a group of four, we ultimately contributed to the design of a pavilion with heat-sensitive multilayer aluminum that we proposed to create based on the collected data. Besides, in the final urban design project, we zoomed out the scale and aimed to see how interactive facade projection affects consumer experience and the urban streetscape.



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However, after engaging in three topics—from Ecology, Discourse, and Urbanism—, along with technical support from the course “Computational Thinking as Design” and the multi-topic lecture series from “Arch Territories of Investigation,” I reconsidered my TI selection, having found that I was not only interested in Ecology, Urbanism, Discourse and Representation, which were all attractive to me. Therefore, I finally switched the TI to Architecture and Representation since that would allow me to further explore presentation skills and techniques that could prove useful for ecology and urban design.

Thus, in a series of Representation-relevant curriculums, I have studied not only methods of presenting the design, but also learned some new design logic through the representation of art pieces or architecture.

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## FROM PAINTING, TO PAINTING

Sand Castle Studio and Second Nature seminar are both based on the Naive Intention program, which led by Pezo von Ellrichshausen. Similarly, all these two courses started from a painting, and end with paintings as well.

As the central paradox of Naive Intention states: nature is unintentional; artefacts are not (Pezo Mauricio; Sofia Ellrichshausen). Sand Castle studio aims to extend PVE's paradoxical attempts of inhabiting nature, which is to make an unintentional architecture.

Thus, the studio began with a natural, free form acrylic painting—each member of the studio took turns to pour his or her unique color on each other's paper so that everyone could receive a different painting. By exploring and simplifying the texture or element created by the mixed color on the canvas, we have transform groups of geometries and their variation into houses.



So I finally focus on the specialty of the wave repetition in the painting—the complimentary.

One single wave repetition could introduce two different spaces. The first one I called it as bubble repetition that I have assign living programs here. All residential programs have been strand together and have ocean view openings. Residents will experience spacious and smooth recurrence while walking through the living unit.

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The second type is the concave repetition, which occupied by the library area. In opposite to the residential units' simple and spacious atmosphere, the library aims to have a more complex, slender, and enclosed experience.

Finally, by contrast to nowadays usual digital representation way, such as rendering and video, the studio lead us to visualize our design by a more primitive way— freehand painting. In this case, because of the tracing of views on our own hands, as well as the repetition of smear with different random colors, I was able to be keenly aware of the space, light, shadow, and sense of my house.



However, unlike the studio's final deliverable, which tried to express something through painting, Second Nature seminar allow us to explore and find our comprehension of notions (mimesis, originality, translation, picturesque, etc.) through carefully looking, reading and re-painting an assigned classical painting again and again.

Therefore, through my process of duplication, I acknowledged that construction and composition are the most significant element of a painting. At the same time, balance in painting is one of the basic principles of composition, along with contrast, movement, rhythm, emphasis, pattern, unity, and variety. Balance refers to how the elements of art (line, shape, color, value, space, form, texture) relate to each other within the

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composition in terms of their visual weight to create visual equilibrium. That is, one side does not seem heavier than another.

Take my painting as an example, "Classical Landscape with Figures and Sculpture" from Pierre-Henri de Valenciennes, this is a pretty typical painting based on the painter's imagination of a Mediterranean coastal view. The construction of this painting, like many paintings at that time, has trees on both side, a mountain at the left side, the cloud on top and the foreground land that framed the whole painting and put the brightest part—the sunshine through the cloud—, at the focal center point, so that the characters of the paintings are equalizing from left to right, top to bottom. Also, it is balanced from the view of the color. The outline of the mountain and the direction of the sunlight contribute to a typical diagonal composition, dividing the painting into two parts—the dark ground and light sky. Thus, the painting is visually balanced.



Therefore, the seminar is quite instructive for me and my future design and representation by enlightening me on the significance of balance, for it communicates so much about a work of art and can contribute to the overall effect, making a composition dynamic and lively or restful and calm.

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## FROM OBJECT, TO ARCHITECTURE

Architecture does not exist alone. Small elements such as stairs, windows, and chairs could have a considerable influence on the space.

The stair is not just a vertical connection, "when you enter a building, there is a moment when you come to a stair, and you have to stop. Then you must make the effort to position your feet, and then hold onto the handrail, otherwise, you will fall" (Alvaro Siza). Thus, it is a journey, a crucial episode in a building. In the seminar "The Stair," I have great opportunities to experience plenty of stair design from Prof. Dias's lectures and be able to finish a staircase design to connect Milstein Hall Studio and the Foundry across the street. By extending the central circulation of Milstein and Foundry, a twisting staircase has been introduced in the center of the Foundry studio area. Concrete material fence embraces the stair and blocks the passengers' view so that the passengers will be only direct by the skylight and commute between the two buildings unconsciously, which could reduce the sense of being back and forth from two different studio areas.



Similarly, in the seminar "Universum Carrousel Journey," we are able to take a look at another group of objects that do take part of the life of a house: a chair or a table, a window or an entrance, and a tree, as they suggest the life inside (culture), the threshold (in between) and the perspective (nature). After studying the modular chair—Low

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Resolution Chair (US) by MOS, European Oak (EU) and traditional 4-layered Japanese window (JP), I have been asked to situate these objects together. The 4-layered Japanese window, which contains paper layer, glazing, mesh and solid wood plate, could satisfy different season, time or weather using. And the same time, it could also offer many different sense or atmosphere with the lighting and the connection between inside and outside. This concept is kind of similar with the idea of the American Chair, since its modular flexible design allows users to modify the units to meet needs under different circumstance. So I made a series of collages with a daily timeline to show the shadow and the activities variation, which offer a simple love story of "One corner, two people, three meals, four seasons."



In conclusion, architecture is not only about a building. It is like a story. The building itself, to some extent, is only the frame of the story, the small elements in the architecture, no matter the stair, the chair, or the window, are the attractive descriptive words or plots to make the story luxuriant and vivid.

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## FROM ARCHITECTURE, TO ARCHITECTURE

The Universum Carrousel Journey Option Studio is organized similarly as the seminar, which contains two movements. In the first movement, me, in a team of two, have been assigned for three houses to study: Rene Magritte House (Belgium), Reversible Destiny Lofts (Japan), and House no.10 (America). The aim is to understand the relation between the making—construction, material and detail, and the meaning—context, culture, and tradition. Moreover, in the second movement, each group is requested to design for one of its case study house two neighboring houses. Of course, each time based on the ideas of other cultures. Like for example, around the Reversible Destiny Lofts, I have created a house based on the understandings built upon the American House no.10, and my partner did another house based on that of Belgium Rene Magritte House.

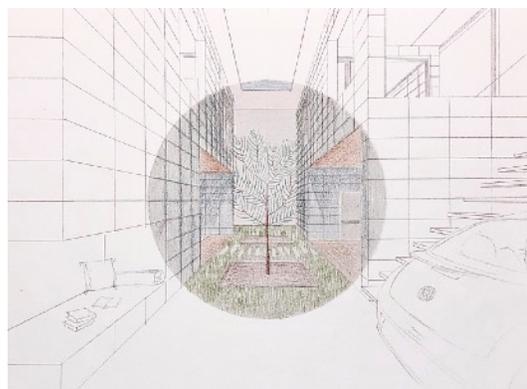
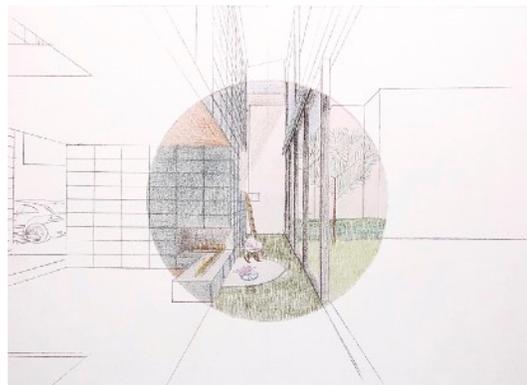
Since both reversible destiny lofts and house no.10 in the first movement have center areas that help direct the residents' movement. Furthermore, inspired by the center courtyard inserted in the whole volume, the unprogrammed activities, which situate along with the courtyard in house no.10 and its interesting sink detail/logic. I came up with the idea of bringing outside in and bring inside out, blurring the boundary between normal inside and outside.

At the beginning of the design process, unlike my previous studio design, which usually starts from an overall entity of the architecture and develops into a small scale step by step, in this studio, I was asked to think from a small corner. As Prof.Jan mentioned, a house is a place full of love and life pieces. So we should imagine how life

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happens in each corner of the house and what atmosphere the residents would like to have there. Therefore, besides of bring outside vegetation in, I made a series sketches of the tiny programs happen on the fake outside vegetation hallway or inside the exterior wall to bring inside activities out, for instance, the fireplace in the wall, nap corner, and musical area that inserted the wall.

Thus, after breaking the studying houses into pieces and getting understandings of them, I have transferred these pieces into my design pieces and finally contributed to a new house design. In conclusion, the making, meaning, meandering studio introduces me to a different thinking and design logic, which I have not attempted before, and provides me a new direction for my future design.



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