

**\_PRINT SPECS**

Date 4/1/2019  
 Project Name Dimensions – Volume 32  
 Student Contact Hannah Cane, Karun Chughasrani,  
 Grace Hsu, Jordan Laurila  
 Austin Kronig, Nour Majzoub,  
 Rinika Prince, Jenny Scarborough  
 Arvinder Singh  
 Faculty Advisor Christian Unverzagt

Dimensions is the student produced journal of architecture at the University of Michigan.

Learn more at [taubmancollege.umich.edu/dimensions](http://taubmancollege.umich.edu/dimensions)

Quantity: 1000

**\_Text**

Printed by University Lithoprinters  
 4150 Varsity Dr, Ann Arbor, MI 48108

Pages: 192  
 Trim Size: 8.00" x 10.00" (portrait)  
 Bleeds: Yes  
 Paper: 80# Finch Opaque Smooth White Text  
 Ink: CMYK/CMYK on all signatures, with  
 full coverage on all signatures.

**\_Cover**

Page Size: 20" (+spine) x 10.00" (printer to  
 advise on final spine thickness)  
 Trim Size: 8.00" x 10.00" (portrait)  
 Bleeds: Yes  
 Paper: 100# Verso Anthem Plus Dull Cover  
 Ink: K/K  
 Finishing: Add aqueous coating to cover 1+4  
 Bindery: Perfect bound, hinge score front & rear covers  
 1/4" from spine.

**\_Cover Jacket**

Printed by Foresight Group  
 5204 Jackson Rd, Ann Arbor, MI 48103

Trim Size: 24.00" x 5.0" (portrait orientation)  
 Paper: 36# Radiant White, Translucent Papers, Mill  
 craft Paper Company , 24" (incl 8" covers + 3/4"  
 spine + 3-3/8" inside folds) x 5.00"  
 Ink: K/0  
 Bleeds: Yes  
 Bindery: Quote option to fold score jacket in two  
 locations along 5" side (approximately 4" from  
 each end)

(This will be manually installed on an 8x10 book – paper dummy provided for scoring set-up)



DIMENSIONS 32



# f o r e w o r d

Sharon Haar  
Professor and  
Chair of  
Architecture

How are we to account for the work of the architect?

This is a question the editors of *Dimensions 32* are asking themselves, their classmates, their critics, and just about every guest, who came to lecture or workshop at Taubman College. As such, we find multiple, overlapping but incongruent themes running through the curatorial and editorial project of this journal. This is not surprising given that its attempt to capture the labor of hundreds of students, faculty, fellows, guests, and interlocutors over this past year.

Throughout these pages you will find students accounting for their labor in an attempt to understand their work product and its associated costs: on the one hand measuring the value of the work in hours and dollars spent on materials and machine-time, while on the other hand arguing for the value of architecture and design in their social and cultural dimensions. More and more student projects are the result of collaborative efforts. Self-imposed briefs for research projects, theses, and fellowships question precedent and reproduction, while the collection and manipulation of data increasingly informs cities, architectural objects, and space as discussed in public lectures by WeWork and Sidewalk Labs. The architect's agency and her production's capacity as an agent of change weaves through the agenda of the Wallenberg Studio. One fellow creates an endless catalog of domestic spatial production and another one studies the spatial products of the logistics that make such consumerism possible. You will find this—and more—as you read *Dimensions 32*.

Craig Dykers states: "I always say that you should force yourself at some level to finish at a normalish time during the day," reminding us that, at the end of that day, whether working with historical precedent, data, or our robots, our labor and our agency are one and the same. Mabel O. Wilson takes us one step further in her interview demonstrating that there is no architecture without the laborers who construct it, placing the work of the architect and that of architecture's production on equal terms.

This is the last issue of *Dimensions* that will come out during my time as chair. Each year I read the draft version, looking for the ideas and themes that ran through our program's discourse and debate for the past twelve months. And each year writing the foreword presents the same dilemma: How to write a foreword to a document whose—like our program's—diversity of ideas and talents are its unifying theme? Our strengths are always apparent: a studio culture founded on representation and making, a community that tackles complex urban and environmental ideas through design, and a faculty that values research and creative practice in equal measure. The work of the chair in this sense is editorial and curatorial more than authorial. Over the past five years this is the currency I have been given to work with; collaborating with faculty to determine where and how to "spend" it such that its value grows rather than be consumed, has been an honor. At the end of the day, the result of our work should always be the production of meaning: in our designs, and in the creation of an equitable and just built environment.

\_TOTAL TIME\_LETTER FROM THE EDITORS

Text: =3 hours, 30 minutes

\_TOTAL TIME\_INTERVIEWS:

\_Text Editing: =25 hours

\_Layout: =17 hours, 30 minutes

\_TOTAL TIME\_WALLENBERG:

\_Text Editing: =7 hours, 30 minutes

\_Layout: =23 hours, 25 minutes

\_TOTAL TIME\_THESIS:

\_Text Editing: =11 hours, 30 minutes

\_Layout: =37 hours, 45 minutes

\_TOTAL TIME\_ASRG:

\_Text Editing: =4 hours

\_Layout: =13 hours, 15 minutes

\_TOTAL TIME\_FELLOWS

\_Text Editing:

\_Steven Lauritano: =1 hour

\_Laida Aguirre: =6 hours, 15 minutes

\_Brittany Utting: =1 hour

\_Total: =8 hours, 25 minutes

\_Layout: =15 hours, 45 minutes

\_TOTAL MEETING TIME:

=73 hours, 30 minutes

\_AMOUNT OF TIMES STAFF MET:

=27

# Letter from the editors

Rinika Prince  
Grace Hsu  
Hannah Cane  
Jordan Laurila  
Nour Majzoub  
Austin Kronig  
Arvinder Singh  
Jenny Scarborough  
Karun Chughasrani

*Dimensions* emerges from a long list of possible qualities, ambitions, and directions leading up to an April 1 deadline — no fooling! So that by commencement at the beginning of May, for the 32nd year in a row, we have a book that applauds the work conducted throughout the building.

*Dimensions* is a book of the ‘again.’ It presents projects seen previously, again. Each of the contributors had their presentation, their exhibition, their critique, their consumption. Here they are, ex post facto. We tackle two motivations: Our primary duty is the presentation of the most remarkable projects of the previous year at Taubman College, framed in such a way to evince you of a discursive narrative, or even discursive attitude of Taubman at a given moment in time. To track one project to the next, a cross section of disciplinary topics and stakes emerges, not in the culmination of a yearbook, but in a critically projective service. To re-present these works in this volume is to reassess their convictions and connections. To re-inscribe these works into a collected format is a deeply discursive act in search of a second discovery not previously found in a project’s initial presentation.

The second motivation arises from another complementary ambition: to elucidate the traces of labor required for much of this architectural work to exist. *Dimensions 32* seeks to make work more transparent.

Accompanying each project are statistics to frame the labor involved, where we define labor as the composition of three variables: time, money, and material. Projects across the book begin with a set of data, provided by the contributors at our request. Every image, render, or drawing to follow this letter is seductive—to be certain—and behind its thoughtful construction is a harder reality, that architecture requires a lot. So the reality produced by these statistics may not shock you, but let these numbers produce a sobering take on what architectural education asks of us. The *Dimensions 32* staff is not exempt in this endeavor. We likewise tabulated the time spent on various tasks (see opposite page for the time put into this letter.) Like any architectural project, the creation of a book such as *Dimensions* is a laborious endeavor. We hope this book invites multiple opportunities to review its content and the lengths of its constructions—beyond that first moment it is laid in your hands. We pour ourselves into our work. This book is evidence to that; *Dimensions 32* is a labor of love, and we hope that you love it as we have.

TABLE OF CONTENTS

\_FRONT MATTER:  
-----

- 002 Foreword
- 004 Letter from the Editors
- 006 Table of Contents

- \_INTERVIEW:  
-----
- 010 Justin Brown, Jeffrey Mansfield,  
and Michael Murphy  
\_MASS Design Group

- \_INTERVIEW:  
-----
- 050 Craig Dykers  
\_Snøhetta

- \_WALLENBERG:  
-----
- 018 Christopher Myefski  
\_The American Construct
  - 026 Kristina Dittrich,  
Cassandra Rota, and  
Mia Voevodsky  
\_Doom, Doom, Boom
  - 034 Julia Muntean and  
R. Michie Nimsombun  
\_CASH-FOR-DATA
  - 042 Ellis Wills-Begley and  
Nadim Hajj Ahmad  
\_Burkinabe International Center  
for Image Production (BICIP)

- \_THESIS:  
-----
- 060 Timothy McDonough  
\_Rendered Constructions
  - 068 Lauren Miller  
\_Tableaux Typologies
  - 076 Eileen Arcos and Kevin Sani  
\_Everything Must Go
  - 084 Bo Zou  
\_Figurative Theatre
  - 092 Lauren Lahr  
\_Re-Imaging Suburban Wasteland
  - 100 Karl Heckman  
\_Invasive Species: Cultivar
  - 108 Kimball Kaiser  
\_SuperLivery
  - 116 Feier Lan, Westley Burger, and  
Dongfang Xie  
\_Wanderweg

	_INTERVIEW: -----		_INTERVIEW: -----
124	Rachel Armstrong _Living Architecture Systems Group	154	Mabel O. Wilson _Studio &
	_ASRG: -----		_FELLOWS: -----
134	Lorraine Gemino, Alison Truwit, and Ben vanSchaayk _Fidelity	162	Brittany Utting Willard A. Oberdick Fellowship _138 MODEL HOMES
140	Megan Silverman and Jamie Johnson _Virtual Brandscapes	170	Steven Lauritano Walter B. Sanders Fellowship _Vase Dis-Order
146	Ibiayi Briggs and Matthew Shulman _Büro Bureau	180	Laida Aguirre William Muschenheim Fellowship _Careful Crates
			_BACK MATTER: -----
		190	Postscript
		192	Gratitude



\_FEATURE INTERVIEWS:

-----

Justin Brown, Jeffrey Mansfield,  
and Michael Murphy  
\_MASS Design Group

Craig Dykers  
\_Snøhetta

Rachel Armstrong  
\_Living Architecture  
Systems Group

Mabel Wilson  
\_Studio&

# I nterviews

Each year, Dimensions invites several guest lecturers to participate in an interview, published in the journal. Interviewing professionals in the field provides a glimpse into the other dimensions of architecture and the possibilities for future careers. Interviews are carefully curated and conducted by Dimensions staff during the interviewee's time visiting the school. The interviews have been spaced throughout the journal.

# \_MASS Design Group: Serve Your Community

**Dimensions 32:** What is the best piece of advice you have ever received?

**Jeffrey Mansfield:** I think for me the best piece of advice is control what I can control and don't try to control things that I can't control. That's helped me to focus on the immediate and what I can do today and to address challenges that are in front of me. What is outside of my control, to be able to let go and not dwell on.

**Michael Murphy:** I know the worst advice I ever got, which was that you're not ready to do what you want to do. I remember that when we had this opportunity to go to Rwanda and it was this sort of bold opportunity and there were a lot of people who said, "You don't know what you're doing. You should walk before you run." My uncle said, "I did that before and I regretted it, so try this different strategy."

**Justin Brown:** I think it wasn't anything that was spoken; it was more through observation of people that I admired that gave me advice without words, sort of unapologetic self-expression. That's not necessarily people I know personally, but something that always sticks with me whenever I witness it first-hand.

**D32:** The theme of *Dimensions 32* is labor in the architectural academic environment. Part of this conversation includes the infamous all-nighter; what is your definition?

**MM:** The technical definition is you stay up all night, obviously, but the deeper question is what does it take—what kind of architectural and intellectual labor does it take to produce architectural work and what kind of pressures are required in order for us to finish and make decisions. One of the challenges that we face as a profession is that so many decisions we have to make, have to be forced into a kind of pressure cooker in order for us to get through them. Often that leads to an abusive architectural labor for sure, which the all-nighter is an indication of the excess labor that's unvalued or not valued but forces decision-making, deadlining. So, I think it's a bigger structural issue within our discipline that is sometimes reinforced in the academic environment that we allow, or expect, or are okay with. The excess of labor to do things in which the time horizon allotted is impossible to complete.

**JB:** That's a structural interpretation of it. I would say that it's also an individual fear of taking full responsibility for your work product. That good planning and commitment would empower you to fit the impossible into an impossibly small box. So that combination, the impossibly small box is real but your acquiescence to the small box is also real. They both converge to make an all-nighter.

**MM:** What we learn and what's so difficult about screening architects and learning in architecture school is learning those parameters through which you make decisions about when to stop and when to move on. Learning how to iterate and learning how to make decisions is really the challenge of architectural decision-making and sometimes it requires that forced pressure of a deadline in order to force you to make the decisions that could have been made with training beforehand.

Justin Brown  
Jeffrey Mansfield  
Michael Murphy  
-----  
\_MASS Design Group, founded in 2008, is a non-profit architecture firm based out of Boston, Massachusetts. Their work has led them to also open offices in New York and Rwanda. Through their work, MASS aims to create architectures that promote justice and human dignity around the world. Some of their most recognized projects include the National Memorial for Peace and Justice in Montgomery, Alabama, the Butaro District Hospital in the Burera District of Northern Province of Rwanda, and a Maternity Waiting Village in Malawi. Michael Murphy is widely recognized for his 2016 TED Talk: Architecture That's Built to Heal.



\_MASS Design Group. Photo courtesy of *Architect Magazine*.

## INTERVIEW INFORMATION:

MAR26 '19 1:00PM  
Taubman College,  
ANN ARBOR

## ACKNOWLEDGMENTS:

\_Interview  
Jenny Scarborough  
Rinika Prince

\_Transcription  
Erin Peterson

\_Editing  
Jenny Scarborough

## TIME:

\_Interview  
=46 minutes,  
33 seconds

\_Transcription  
=2 hours,  
59 minutes

\_Editing  
=4 hours,  
30 minutes

\_Total Time  
=8 hours,  
3 minutes,  
33 seconds

## COST:

\_Transcription  
=\$70.00

\_TOTAL COST  
=\$70.00

**JB:** Design is infinite so you have to define the container. You let someone else define the container or you do. It's never done.; it's definitely a process that is never finished. So, it's best to embrace that. Staying up all night doesn't finish it.

**MM:** Your question is a bit tricky because it's hard to comment on a structural problem that's indicative of the culture of our industry. You can put terms and say, "No one works after 5:00pm. No one works after 6:00pm," which would be a position from a kind of a labor equity point of view. As we all know, that isn't always the case so you have to find the capabilities within ourselves to be able to make quick and effective decisions in the design space in order for us to feel like we're serving the communities we intend to serve. It's not enough for us to just say, "Well, I had five hours, and this is all we could do." We believe in ultimate service to the communities we serve; it requires our commitment to do what it takes and to find the solution that's the most effective and that's the most cost effective, but also meets the mission. It's kind of our responsibility as architects.

**JB:** Yeah, I also think that all-nighters in academia tend to be your most productive period of each project sometimes because you can get an amazing amount of work done. There's a message in that is how we, as architects, trigger that urgency in each phase, each person in the project. Not just at the end, but how we can trigger those moments of urgency throughout our project to make efficient decision making? I think that's the key to work efficiency and it prevents burnout as well. Michael says this all the time, we serve communities and in serving communities, we have to be well prepared. There has to be a structure there and we have to be ready mentally, spiritually, and emotionally to approach this type of work. If you only work under pressure, you're going to burn out much quicker.

**D32:** Michael, as a founding member of MASS Design Group, can you describe how MASS was conceived?

**MM:** I think, probably, architects from all time believe in the role that our future plays

in shaping, and guiding, and assisting in communities; we believe in building something better out there. Many of us today are curious why there's so much bad infrastructure that's built in the world and how you change that.

-----  
 "Service is core to what we believe we do as a discipline: we serve communities, we serve organizations, we serve the public. When we serve ourselves, we lose our way."  
 -----

MASS was not conceived first as an entity; we were first a group of students that went to serve another organization called Partners in Health. At first, we were really just working within this medical non-profit that was building things, but often not with the service of architects. It was in providing that service and trying to figure out how to do it, that shook us to realizing that an organizational entity was necessary to provide the full service, that it wasn't enough just to have an individual embedded within an organization in a community. We had to have an entity that could then lean on the broader discipline around us: the subcontractors, other designers to come on board and have something to hang their hat on. So the organization was sort of incubated within another entity, around their ideals. So in many ways, we were shaped first by not saying, "We want to be architects. We want to start our own firm and this is what we're going to do." We were shaped in an inverse way. We said, "How can we serve the communities or the organizations that need and value this service that we as designers can provide in the most effective way?" The organizational entity came after we found barriers for being able to provide the service that we hoped to provide in its most effective form.

**JB:** When we were listening to a doctor talk about building infrastructure without an architect, it was shocking. Just, "Haven't you thought about patient experience? Haven't you thought about building orientation?" Very basic things that every architecture student knows. To see it omitted in such important ways, I think, just kind of naively trusted what we knew to be a valuable contribution to that effort. In many ways, this sort of non-profit model of it was born, too, because it was out of necessity that other revenue sources be found in order to do the work that needed—that wasn't being done, that needed to be done.

**MM:** If we said, "We're an architecture firm. Here are our contract documents. This is our rate per hour. This is what we think you need," I mean we probably wouldn't have gotten a second call. But if you went in and were like, "We'll do whatever it takes to support your work. How can we be available to whatever you need?" and just be present, and be proximate, and make yourself useful, then that became a much different strategy for working with a community and working with an organization instead of positioning yourself as a vendor for them in a hope to get a project that would then fit a portfolio that you're building. It's a very different strategy about work, and service, and labor. MASS stands for a model of architecture that serves society, and service is core to what we believe we do as a discipline: we serve communities, we serve organizations, we serve the public. When we serve ourselves, we lose our way.

**D32:** Could you reflect on some of the advantages or disadvantages of being a non-profit organization.

**MM:** When we say that we're a non-profit to other architects, they usually say, "Oh, so are we." That's a joke, which I think reflects a deeper problem in our discipline, which is that our work and our labor is not actually adequately compensated. So, positioning ourselves as non-profit or for-profit can miss the point that we are more directly a for-purpose organization. We believe first in the purpose of the work, and the purpose of architecture, and second in how we figure out how that labor and that work is compensated through different structural strategies. Some architects think we are



**\_MASS Design Group. Photo courtesy of *Archinect*.**

reducing architectural fees in order to undercut revenue that they might be garnering, which is a laughable concept, in our opinion. But, I understand where it comes from: a kind of defensiveness about protecting the small market that architects are able to hold to.

So we think about it, we want to ask the question slightly differently, which is, “How is the architectural world subsidized by different streams of funding?” For example, a lot of small architectural offices’ principles who teach here at Michigan or at other colleges, their salaries are from the school. So, one could argue that a non-profit organization, the University of Michigan, is subsidizing for-profit practices in order to incubate new small, entrepreneurial ventures of great intelligence, and design, and skill, but with limited revenue. I think the question to ask, “Why are you a non-profit?” is an important question but we might also ask, “How is every other organization also being subsidized through different types of funding streams and how do we organize and be transparent about those funding streams and organize them in a way that most affects productive service to the public?”

Being a non-profit is one way to do that because it requires of us higher accountability. So one important accountability is that we have a board of directors. Even though we are founding members, we serve under a board of directors and that board of directors is responsible for the mission and for the fiduciary stewardship of the organization. If tomorrow I woke up and said, “The only way we’re going to survive financially is if we start designing prisons, and we start winning contracts of deep, ethical concern, and we start building towers,” I couldn’t do that because we would have to have it certified by our board. It’s what I would call an accountability check that other for-profit firms are not required to have.

**D32:** MASS uses justice and human dignity to describe the mission of your work. Why has it become to distinguish these qualities when architecture as a profession inherently is a humanitarian and social practice?



**\_GHESKIO Colera Treatment Center, MASS Design Group.**  
**Photo courtesy of *Architectural Record*.**

**MM:** We kind of reject the label that we are a social practice, or a humanitarian practice, or a charity. We don't think that's actually the right characterization of our organization. We think all architecture is social and it serves humanitarian and human needs at all times and it's always serving the public, regardless of whether we acknowledge it or not. Question of justice and human dignity is actually what I think architecture provides to the world. It provides dignity to people for those who both deserve it or feel like they deserve it or feel like they don't deserve it; it still is offering solutions for their everyday lives that they may not know they even deserved or could benefit from. For us, it's a catch-all to remind ourselves that health is to medicine, what justice is to law, what dignity is to design. What we've found in working for organizations, for communities, for clients that have never used designers before is they are kind of awakened to the possibility that they deserve more.

-----

“When we first addressed mass incarceration, we weren't sure that it was even ethical or moral to be involved in this body of work... is it possible to disrupt the system, to place our feet and our body of work in here?”

-----

**D32:** There are many situations that would benefit from your firm's work. How do you decide what deserves attention first or how do you choose your projects?

**JB:** We have an internal process that's collective, democratic, that begins sort of with the youngest part of our staff at retreats, in terms of areas of particular interest, or focus, or personal care. I think we're all there and working on these projects so hard because we have made that correlation and that leap between design and outcome. Then of course, there is more pragmatic financial constraints. Within that edited list, we will vote on how to allocate our discretionary resources. There is only a certain amount in a given year and so we do as much as we can within that.

**JM:** I think a great example of how we make these decisions is looking at incarceration. When we first addressed mass incarceration, we weren't sure that it was even ethical or moral to be involved in this body of work. I mean it's a great injustice systemically. It's broken. We have said this over and over. So as an architect, is it possible to disrupt the system, to place our feet and our body of work in here? Then, you think about the residents and you think about the people who are incarcerated; you think of officers and you think of other actors that are involved in this. It almost becomes a moral

abandonment to decide not to be involved. That is the origins of the conversation which led to more research, led to more work, that led to more opportunities to think about how we could intervene in a way that is ethical and to use our platform as architects to make sure that we are bringing in the voices that need to be at the table. Being in contact directly with change makers starts from an idea that we weren't sure that we wanted to make. But the collective effort is now—results in this class and it's one of the largest efforts to interrupt, to intervene in this mass incarceration. It gives you an idea of the decision-making process as we're guided. Incarceration work: yes or no? Right? And then you take those steps.

**D32:** How do you approach labor when your project is in its construction phase? Many of your projects seem to focus on community participation in trying to bring the project together. What are some of the challenges faced during this process?

**JM:** Decisions about labor and material sourcing have direct impacts on people's lives and the health of a community. Working in the healthcare context in Africa and Haiti, the delivery of architecture and health are frequently presented as something bestowed upon the community by international aid organizations and NGOs, often based on models that have little to do with the specificity of the local context. Through our design and construction processes, we try to push back against this norm with a design process that leverages local knowledge, participation, and expertise. Embedding local craftspeople and training opportunities leverages the building process to expand local capacity and invest capital back into the community.

Because we work with community members who may have limited background in architecture and construction workers who may arrive with a particular way of doing things, communicating the design intent becomes incredibly important. It isn't enough to simply show architectural drawings and say, this is how we want to do it; we spend a lot of time on site talking about the project with the builders, doing mockups, installing safe building practices, and learning about what works or doesn't. Getting everyone involved with the project to understand the intent and to see the value of what the building will bring to the community is an essential part of our process. As we continue to scale and work on larger and more complex projects, we're also spending more time getting the contractor to hire locally, to hire a high percentage of women, and to buy into our mission.

**D32:** Where do you see the profession of architecture going?

**JM:** When we first worked in Butaro, we found ourselves in the era of stararchitects, but lately we've been seeing architects deepening their investigations of the social and political implications their buildings produce. The result is a growing body of work that responds to the increased need for agency, accountability, and resilience. This era might be called the New Empowerment, for it acknowledges the power of architecture, but seeks to share that power with the constituents and communities it serves.

**D32:** What would be the next challenge for you?

**JM:** We're constantly growing and bringing in new voices. How do we continue to grow without losing sight of what is really important to us, and how do we grow into a global collective while being proximate in many locales?

-----  
 "How do we grow into a global collective while being proximate in many locales?"  
 -----



\_FEATURED WALLENBERG:

-----  
Christopher Myefski  
\_The American Construct

Kristina Dittrich, Cassandra Rota,  
and Mia Voevodsky  
\_Doom, Doom, Boom

Julia Muntean and  
R. Michie Nimsombun  
\_CASH-FOR-DATA

Ellis Wills-Begley and  
Nadim Hajj Ahmad  
\_Burkinabe International Center for  
Image Production (BICIP)

\_2018 WALLENBERG HONORS:

-----  
Christopher Myefski  
The American Construct  
\_Prize Winner

Ellis Wills-Begley and  
Nadim Hajj Ahmad  
Burkinabe International Center for  
Image Production (BICIP)  
\_Prize Winner

Willow Davis  
Cloaked Communications  
\_Prize Winner

Julia Muntean and  
R. Michie Nimsombun  
CASH-FOR-DATA  
\_Honorable Mention

# Wallenberg

The Wallenberg studio honors the legacy of Raoul Wallenberg through an overall studio theme focused on a broad humanitarian concern. Wallenberg, a 1935 graduate of the University of Michigan College of Architecture and Urban Planning, is credited for his heroic saving of more than 100,000 Jews during World War II. This is a critical moment for students to ask themselves and others “what is at stake?” Unsurprisingly, we find there to be a lot of answers, or perhaps just one: “a lot.”

Each year, Taubman College exhibits and juries the best work from this final undergraduate design studio. Awards, funded by the Raoul Wallenberg Endowment, are offered in the form of a stipend for international travel to a country of the student’s choosing. It is hoped that students who receive these travel awards would engage in the culture of the country they visited, explore architecture and culture, become acquainted with the people, and return with a broadened understanding of the world.

WALLENBERG\_MYEFSKI

\_PROJECT INFORMATION:

\_TITLE:

\_The American Construct

\_TEAM MEMBERS:

=1

\_TOTAL COST:

=approx. \$500

\_MATERIALS:

\_strathmore paper,  
chipboard, spray paint,  
sand, glass

\_TIME:

\_MODELS AND DRAWINGS:

=10 days

=20-50 hours per drawing

\_ALL NIGHTERS:

=0

PROGRAMS, TOOLS:

\_rhinoceros, photoshop,  
illustrator

PRODUCTION LOCATION:

\_DRAWINGS:

=studio

\_MODELS:

=studio, commons

ACKNOWLEDGMENTS:

\_Jacob Sanders



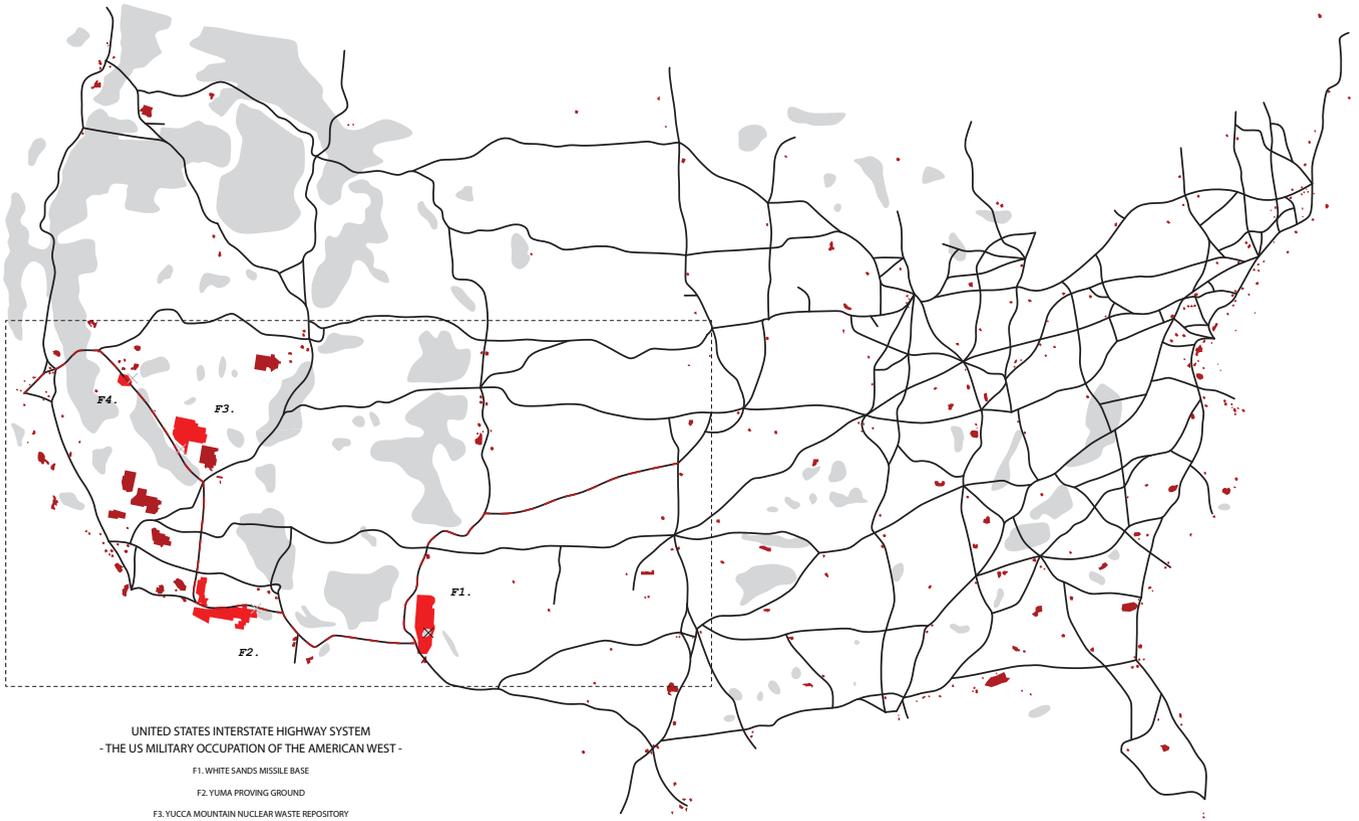
# The American Construct

\_Christopher Myefski

\_Wallenberg Critic: Neal Robinson

The American West captivates the imagination as a projective landscape of exploration and promise. Its vastness allows for vague scale, distended time, and clandestine programs. Raoul Wallenberg himself wrote of its pull and ideological agency when defining America to his grandfather. A road trip is its inevitable measure. Estranged, this landscape is also a proving ground; home to the nation's military arsenal, testing labs, and disposal sites. It is both obscured by, and made possible by, remoteness. It is a place to get away (with something). Sited between federal parkland and military territories, this project proposes a series of rest stops along a "western" drive that conflate the scenic with the scene. Like the nationalistic constructions of early US highway routes that attempted to produce a common American beauty via the windshield, these new stops inscribe the sublime with experiential infrastructures, overlooks, and marginal territories. You are brought up-close to the frameworks of magnanimity, and through both proximity and participation, the weaponized landscape is slowly humanized. It's a dangerous mix. Power and pleasure occupy the same ground. Suspicion and permission vie for dominance. Evidence and the evident conspire to re-mind and ultimately re-range the construction of "America."

"Are we there yet?"



UNITED STATES INTERSTATE HIGHWAY SYSTEM  
- THE US MILITARY OCCUPATION OF THE AMERICAN WEST -

- F1. WHITE SANDS MISSILE BASE
- F2. YUMA PROVING GROUND
- F3. YUCCA MOUNTAIN NUCLEAR WASTE REPOSITORY
- F4. HAWTHORNE MUNITIONS DEPOT



WHITE SANDS MISSILE BASE  
NEW MEXICO, USA  
- 10,700 km<sup>2</sup> -

White Sands National Monument is surrounded by White Sands Missile Base which is a premiere location for the US Military's testing of missiles and ordnances. Throughout the year, the National Monument is closed to visitors due to stray missiles becoming a hazard during testing. Created in 1945 for the testing of German and American rockets, seven days after its founding the Trinity Nuclear test was conducted at the base. The terrain is made up of vast gypsum sand dunes which is the largest amount of gypsum sand in one location.



YUMA PROVING GROUND  
ARIZONA, USA  
- 3,387.2 km<sup>2</sup> -

Yuma Proving Ground is used for the testing of military equipment and ordnances. Nearly all ground combat weapon systems are tested in YPG with over 500,000 artillery shells spent a year. From long-range artillery to combat drones and large scale of the site, the landscape is overloaded with debris from the military equipment. Its origin can be traced to Fort Yuma which protected the territory in the 1800's and was continually expanded after 1943 when the site became a location for the testing of combat bridges and amphibious vehicles.



YUCCA MTN NUCLEAR WASTE REPOSITORY  
NEVADA, USA  
- 70,000 metric tons -

Yucca Mountain Nuclear Waste Repository was created for the long-term storage of nuclear waste from the production of nuclear power and ordnances. Tunnels burrowing deep into the mountains surface allows for adequate shielding from the potential radiation. Located on the edge of Nellis Air Force Base and Death Valley National Park, the site has become highly controversial due to the publics fear of the effects of contamination on the landscape. With inadequate nuclear waste storage facilities, the expansion of the facility to construct more tunnels has been requested of congress.



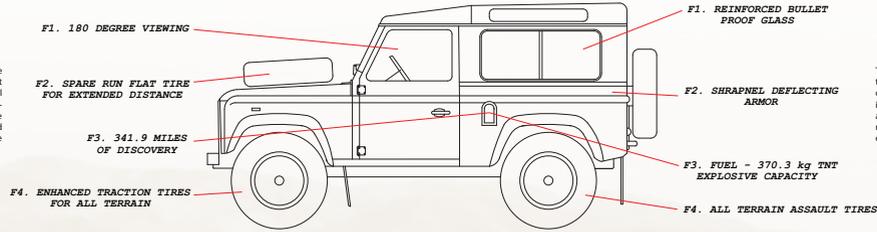
HAWTHORNE MUNITIONS DEPOT  
NEVADA, USA  
- 2,472 Bunkers -

Hawthorne Munitions Depot is the largest Munitions storage facility in the world. With over 56,000 m<sup>2</sup> of storage space for the military's ammunition and ordnances, the site covers a vast swath of territory. Entirely encompassing the city of Hawthorne, the Depot is run by a private company under contract with the Government. The munitions are intended for after the first 30 days of a major military conflict. In 2013, seven US Marines died from a mortar shell on site.

THE AMERICAN VEHICLE

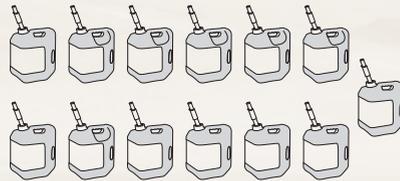
EXPLORATIVE

The standard American vehicle allows for the exploration of the vast picturesque land that makes up the American landscape. Speed, visual connection, and comfort all allow for the exploration and discovery of the countries expansive natural wonders. With heavy duty tires and equipment, a family can travel almost anywhere in the comfort and safety of their car.

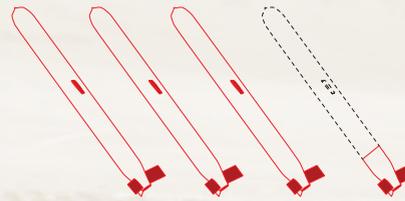


DESTRUCTIVE

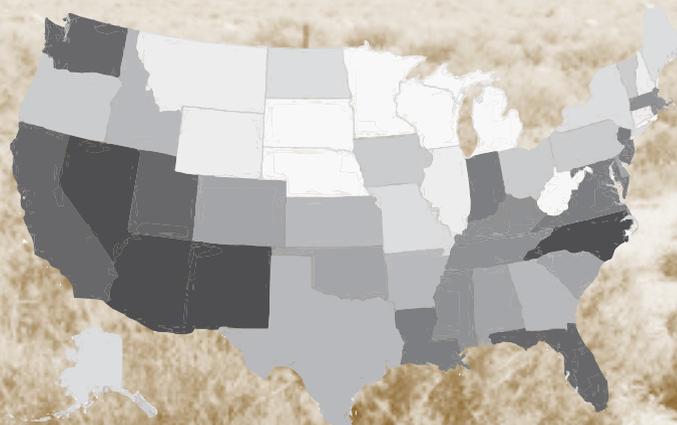
The standard military vehicle requires the ability to travel difficult terrain, quickly, while arriving in one piece. The vehicle must be able sustain hostilities natural or man-made without compromising agility or speed. In an offensive role, the vehicle must be able to provide aggressive pressure on the enemy all while keeping the inhabitants protected.



YEARS WORTH OF FAMILY TRIPS TO WHITE SAND NATIONAL MONUMENT  
 -13 GALLONS PER CAR AT \$2.63 A GALLON-  
 -524,522 YEARLY VISITORS-  
 -174,800 YEARLY CARS-  
 -\$5,977,802 SPENT ON FUEL-



TOMAHAWK CRUISE MISSILE FOR US MILITARY STRIKES  
 -1.87M US DOLLARS-  
 -5,977,802 / 1,870,000 = 3.18 MISSILES PER YEAR FROM YEARLY FUEL COST-  
 -103 MISSILES LAUNCHED IN 2018 SYRIAN MISSILE STRIKE-  
 -103 MISSILES COULD HAVE PROVIDED 32.22 YEARS OF FAMILY EXPLORATION-

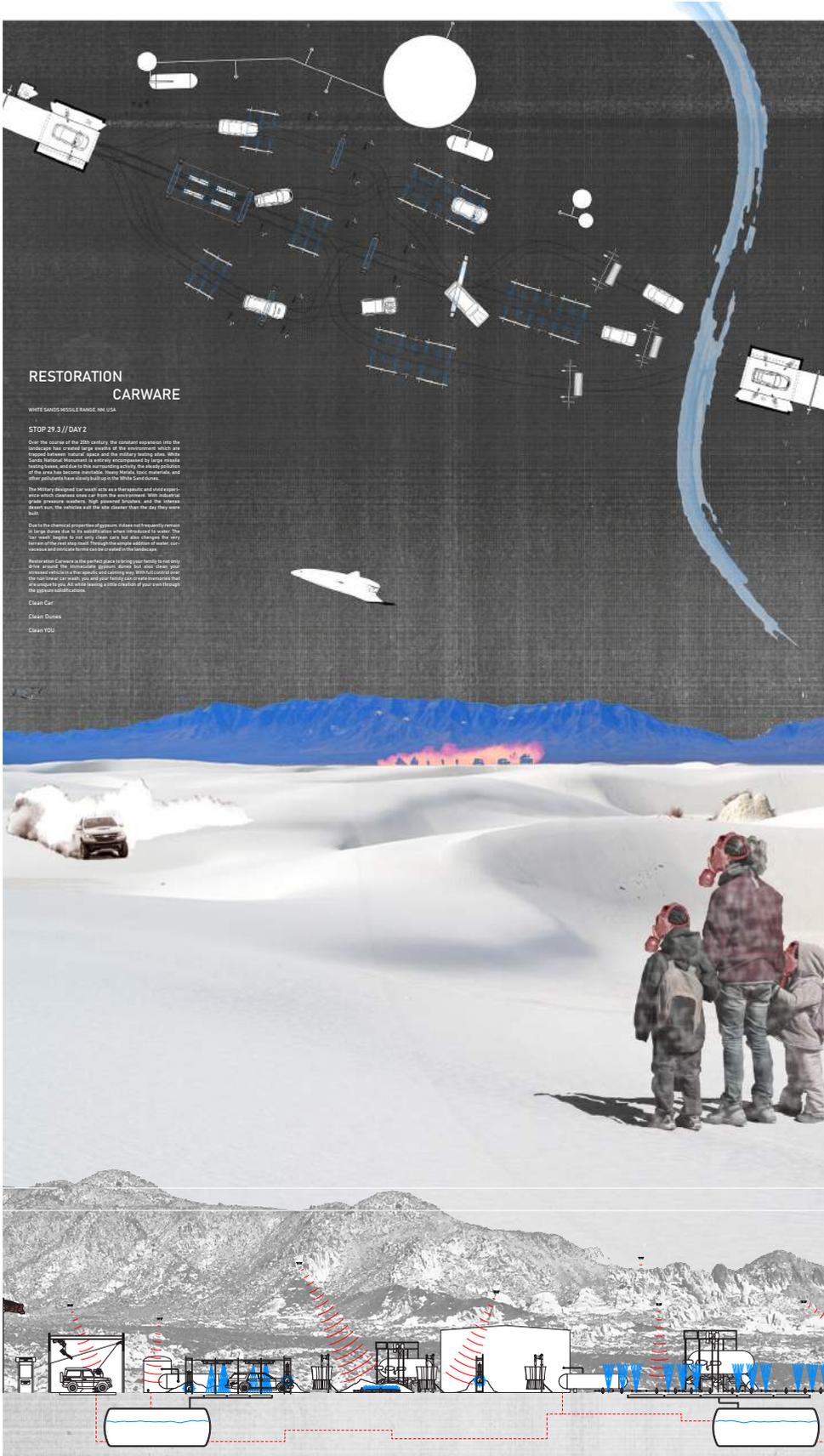


PERCENTAGE OF LAND AREA CONTAINED IN MILITARY TERRITORY

- 4 - 5.5%
- 1.5 - 4%
- .5 - 1.5%
- .25 - .5%
- .1 - .25%
- .05 - .1%

Road Trip

This project focuses on the territory of the American West, abstracted through a series of rest stops connected through the US interstate highway system. Each rest stop occupies a territory on or between a military base/test site and state/national parkland. Intended to be just a selection of these stops, the four designed rest stops focus on engaging the individual through the 'safety' of their vehicle with the hostility of the territory.



**\_RESTORATION CARWARE**

**WHITE SANDS MISSILE RANGE, NM, USA**

**Stop 29.3 // Day 2**

Over the course of the twentieth century, the constant expansion into the landscape has created large swaths of land trapped between 'natural' space and the military testing sites. White Sands National Monument is entirely encompassed by large missile testing bases, steadily generating pollution from heavy metals and toxic materials over time.

The military designed 'car wash' acts as a therapeutic and vivid experience which cleanses one's car from the environment. With industrial grade pressure washers, high powered brushes, and the intense desert sun, the vehicles exit the site cleaner than ever.

Through gypsum's chemical properties of solidifying when in contact with water, the 'car wash' begins to not only clean cars, but also changes the very terrain of the rest stop itself. The simple addition of water creates curvaceous and intricate forms in the landscape. Restoration Carware is the perfect place to bring your family to not only drive around the immaculate gypsum dunes, but also clean your stressed vehicle in a therapeutic and calming way. With full control over the car wash, you and your family can create memories that are unique to you. All while leaving a little creation of your own through the gypsum solidifications.

Clean Car

Clean Dunes

Clean YOU



**YUMA TUMBLE**

YUMA PROVING GROUND, ARIZONA, USA

STOP 46.7 // DAY 4

The American West is littered with landmarks which produce trash and waste. The main contributors to the landscape of trash throughout the landscape are the frequent tourist rest stops and the US Military test sites. Both of these locations come together at Stop 46.7, where the public gains access to the very terrain of the military tests. Covered with debris from past ordinance tests and littering tourists, the site acts as the perfect location for an active adventure the whole family can join.

The military designed 'tumble' was created with the intention of developing new and efficient equipment for the retrieval of past technology tests. Enspersed by blast proof acrylic, the vehicle can traverse the potentially hostile environment with little caution. Attached to the sphere are a multitude of needles, creating traction as well as capturing loose debris.

Imagine rolling around the desert at high speeds, moving as if guided by the wind with almost limitless expanse of desert to explore. The Yuma Proving Grounds, 'Yuma Tumble', provides the perfect place along your road trip of the American West to take a break from your vehicle and really let loose.

Fun for the Family  
Fun for the Kids  
And Fun for YOU

**\_YUMA TUMBLE**

**YUMA PROVING GROUND,  
ARIZONA, USA**

**Stop 46.7 // Day 4**

The American West is littered with locations which produce trash and waste. The main contributors for this trash are the frequent tourist rest stops and the US Military test sites. Both of these locations come together at Stop 46.7, where the public gains access to the very terrain of military tests. Covered with debris from past ordinance tests and littering tourists, the site acts as a the perfect location for an active adventure the whole family can join. The military designed 'tumble' was created with the intention of developing new and efficient equipment for the retrieval of past technology tests. Enspersed by blast proof acrylic, the vehicle can traverse the potentially hostile environment without caution. Attached to the sphere are a multitude of needles, creating traction as well as capturing loose debris.

Imagine rolling around the desert at high speeds, moving as if guided by the wind with almost limitless expanse of desert to explore. The Yuma Proving Grounds, 'Yuma Tumble', provides the perfect place along your road trip of the American West to take a break from your vehicle and really let loose.

Fun for the Family  
Fun for the Kids  
And Fun for YOU

\_YELLOWCAKE BAKERY

YUCCA MOUNTAIN NUCLEAR WASTE REPOSITORY, NEVADA, USA

Stop 71.9 // Day 5

The American West, being highly unpopulated and expansive, provides a perfect place for hazardous tests to occur. With a rigid and often hostile environment, the West has become a place for storing things not meant to be seen.

The military and the public have a tense and often differing view of nuclear energy. Nuclear waste and radiation have thus been hidden away in the confines of secret impenetrable storage sites such as the Yucca Mountain Waste Depository. With thick rigid walls of rock and earth, remoteness, and size, Yucca mountain acts as a perfect, secure location for nuclear waste. Neon glow from glow worms, steam from cooling rods, and anxiety from claustrophobia all work to give the physical experience of an invisible threat. While harrowing and solemn, the tunnel is a perfect place for a family to experience something that cannot be seen nor felt. With neon colors and encapsulating visuals, the 'tunnel' is great for kids and adults alike.

Pitches Squeezes and Water Hazards (No unnatural radiation)



YELLOWCAKE BAKERY

YUCCA MOUNTAIN NUCLEAR WASTE REPOSITORY, NEVADA, USA

STOP 71.9 // DAY 5

The American West is an expansive territory with large swaths of unpopulated areas and a general atmosphere of isolation. With the lack of populated areas, this landscape provides a perfect place for hazardous tests to occur. The rugged and hostile environment the West has become a place for storage of things that're not meant to be seen.

The military and the public have a tense and often differing view of nuclear energy. As a result of its potential for destruction, and fear of a new atomic bomb, nuclear waste and radiation have thus been hidden away in the confines of secret impenetrable storage sites such as the Yucca Mountain Waste Depository. With thick rigid walls of rock and earth, remoteness, and size, Yucca mountain acts as a perfect impenetrable location for nuclear waste.

The tunnel burrowing deep within the mountain acts as a place which physically the experience of radiation and water hazards, been given a glow from neon colors and a futuristic aesthetic. All work to give the physical experience of an invisible threat. While harrowing and solemn, the tunnel is a perfect place for a family to experience something that cannot be seen nor felt. With neon colors and encapsulating visuals, the 'tunnel' is great for kids and adults alike.

Pitches

Squeezes

and Water Hazards

(No unnatural radiation)

\_PROSPECTORY

HAWTHORNE MUNITIONS DEPOSITORY, NEVADA, USA

STOP 98.7 // DAY 7

Due to the remote and expansive territories in the American West, large fields of heavy military munitions are held in large storage facilities. These warehouses of munitions act as bunkers to not only keep enemies out, but also keep the explosives inside from getting out. The military designed 'Bunker Cinema' is constructed with blast resistant materials which protect and ensure a perfect viewing experience. Situating the bunkers on an overlook gives these viewing platforms the perfect site lines to observe the bunker explosions which occur from the over stockpiling of munitions. As the government invests further into the military budget, the munitions fill until critical mass is reached. The cinematic experience is truly breathtaking, and whether you are pulling into one of the premium private viewing suites or having an atomic cocktail at the Bunker Bar, you and your family will be safe, secure, and truly thrilled. How often can you take your family to something both visually and physically breathtaking?

Explosive

Safe

Thrilling



PROSPECTORY  
HAWTHORNE MUNITIONS DEPOSITORY, NEVADA, USA

STOP 98.7 // DAY 7

The Hawthorne Bunker is situated in the Great Basin of the western United States. Due to its remote and expansive territories, large fields of heavy military munitions are held in large storage facilities. These warehouses of munitions act as bunkers to not only keep enemies out, but also keep the explosives inside from getting out.

The military designed 'Bunker Cinema' is constructed with blast resistant materials which protect and ensure a perfect viewing experience. Situating the bunkers on an overlook gives these viewing platforms the perfect site lines to observe the bunker explosions which occur from the over stockpiling of munitions. As the government invests further into the military budget, the munitions fill until critical mass is reached.

The cinematic experience is truly breathtaking, and whether you are pulling into one of the premium private viewing suites or having an atomic cocktail at the Bunker Bar, you and your family will be safe, secure, and truly thrilled. How often can you take your family to something both visually and physically breathtaking?

Explosive  
Safe  
Thrilling

\_PROJECT INFORMATION:

\_TITLE:

\_Doom, Doom, Boom

\_TEAM MEMBERS:

=3

\_TOTAL COST:

=\$1,772

\_MATERIALS:

\_museum board, spackle,  
acrylic, foam core,  
spray paint

\_TIME:

\_MODELS AND DRAWINGS:

=14 days

\_ALL NIGHTERS:

=0

PROGRAM, TOOLS:

\_rhinoceros, laser cutter,  
zund

PRODUCTION LOCATION:

\_DRAWINGS:

=sweetwaters cafe

\_MODELS:

=studio, commons,  
glass rooms

ACKNOWLEDGMENTS:

\_Ali Truwit

\_Timothy James

(Fungi Consultant)



# Doom, Doom, Boom

\_Kristina Dittrich, Cassandra Rota, and Mia Voevodsky

\_Wallenberg Critic: Anya Sirota

Addressing architecture's contingency on power and capital, *Doom, Doom, Boom* explores ways the discipline might negotiate, hack, and divert assets in order to advocate for the common good: In an age of increased anxiety, a global phenomenon of doomsday preparation manifests in widespread investment in costly defense architecture, often underground. These luxury bunkers are being constructed at a multitude of scales, budgets, and foresights, all researched and arranged within a cartogram of anxiety. The most curious statistic that emerged from this research was the common thread of five-to-ten-year leases for escape bunkers, as though the apocalypse would be obsolete in less than a decade.

The existing routes of capital, and fear of these soon-to-be defunct bunkers, can be hijacked to produce more exuberant architecture for the long-term. By planning for the obsolescence of these bunkers, the immense resources they consume can be rerouted towards a reinvigoration of the cultural climate.

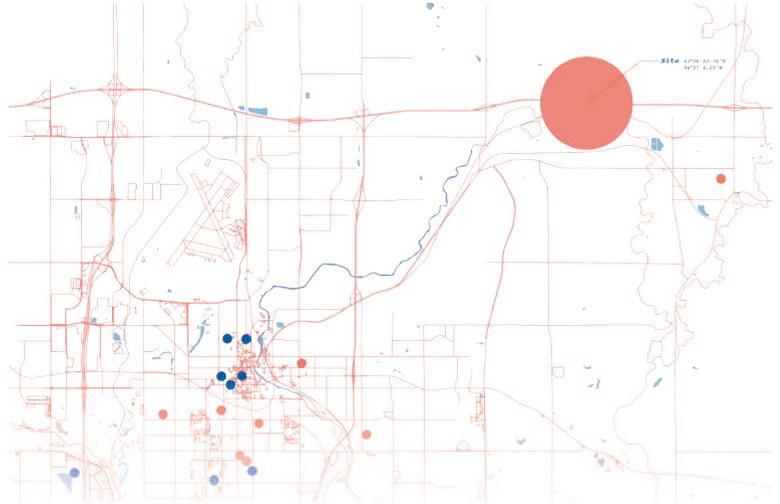
Strategically planned obsolescence and the use of erodible materials allow a secure, compartmentalized, and exclusionary compound to become an open-plan, collectively used cultural center, in a matter of a few years.

Navigating trends of fear-mongering, doomsday preparation, and planned obsolescence, the project offers a luxury escape bunker that degrades over a defined timespan to become a cultural center for Sioux Falls, South Dakota. In this scenario, architectural agency is situated in identifying and redirecting the flow of capital being invested in defense spaces with high costs, restrictive programs, and short lifespans. The proposal modifies these existing exclusionary typologies into spaces capable of benefiting a greater number of people.

*Doom, Doom, Boom* designs a building with the capacity to undergo eventually a phase change, allowing it to exist initially as an investment in personal security, and later as one working towards the community's greater good.







## ARTS FUNDING MINNEHAHA COUNTY, SOUTH DAKOTA

The South Dakota Arts Council received over \$845,000 from the National Endowment for the Arts in 2013, providing crucial funding to events such as JazzFest, Sioux Falls Sculpture Walk, the South Dakota Symphonic Orchestra, and numerous grants to organizations for the arts that contribute to a sense of community.

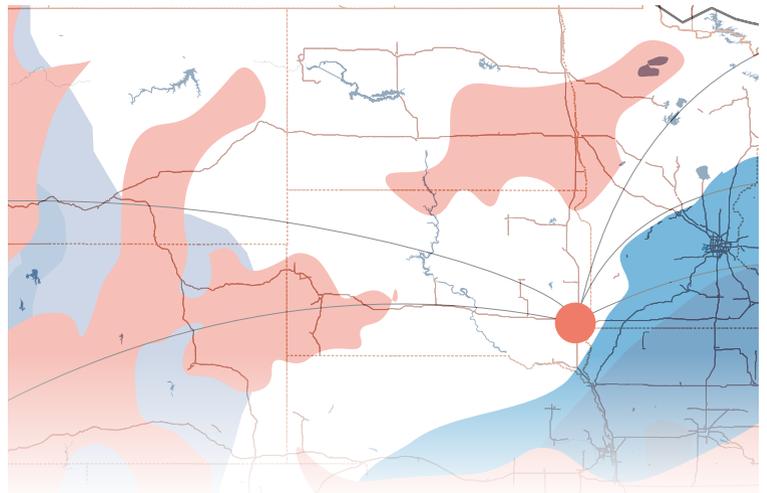
The National Endowment for the Arts is under threat of complete elimination by the Federal Government, which would essentially eradicate all funding of major arts programs in the state.

Mapped above are the programs in Minnehaha County that are currently under threat of losing funding.

Arts (scope) Working Funding	Schools Arts Programs Pending Funding
Outpost Theater..... \$8,700	Sioux Falls Mahani Ziajoo..... \$2,800
Sioux Falls Orchestra..... \$2,500	Sioux Falls Lutheran School..... \$1,800
Sioux Falls Playhouse..... \$6,500	Sioux Falls Christian Elementary... \$1,800
Flame and Flame..... \$4,000	Saint Mary School..... \$1,200
Hedge in the Mesquim..... \$4,000	A.P. Pettigrew Elementary..... \$1,200
Sioux Falls Arts..... \$27,800	LivVillage..... \$5,999
Signature Walk Sioux Falls..... \$17,619	John Harris Elementary..... \$1,200
Singing Boys of Sioux Falls..... \$2,718	Harvey Ross Elementary..... \$1,200
Sioux Empire Community Theater..... \$13,377	Kuiper Field Art Elementary..... \$1,200
Sioux Falls Jazz & Blues Society..... \$26,224	Arvids Valley Intermediate..... \$600
South Dakota Symphony Orchestra..... \$36,788	Robert Decker Elementary..... \$600
Dakota Chamber Orchestra, Dakota String Quartet, Dakota Wind Quintet, South Dakota Symphony Orchestra..... \$45,600	

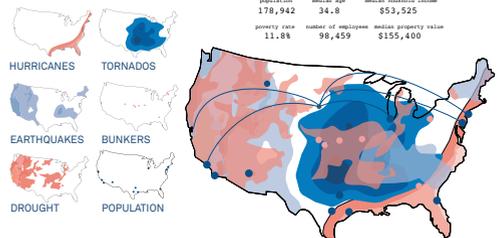
### \_Artfunding

An analysis of public arts funding in the vicinity of our site in South Dakota, to illustrate the dependencies of arts programs on public funding in the area and the devastation that would result if funding from the National Endowment for the Arts was pulled.



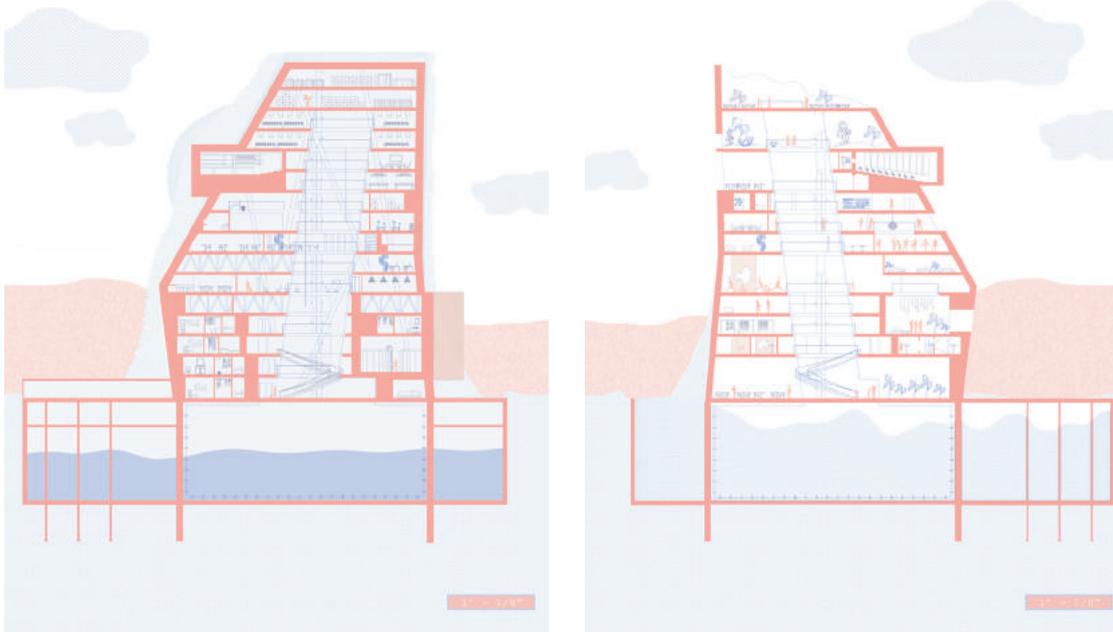
## SAFE ZONE MINNEHAHA COUNTY, SOUTH DAKOTA

Sioux Falls and its surrounding areas are situated in the center of one of the most secure regions on the continent. A supply of fresh water, fertile land, distance from major population centers, and isolation from many probable natural disasters makes this site one of the most optimal candidates for the construction of a secure complex.

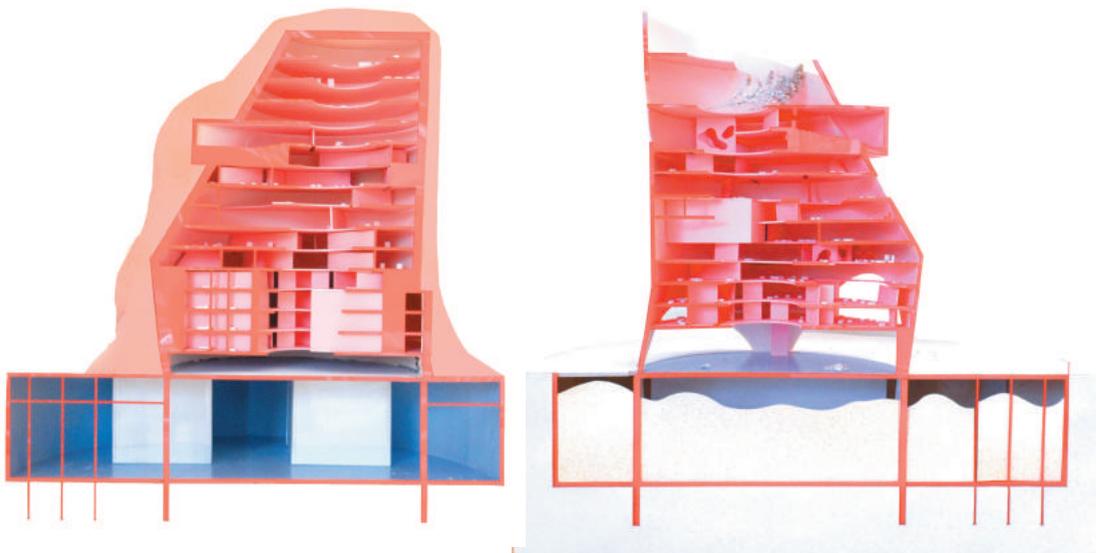


### \_Safezones

In conjunction with the map of public funding hot spots, this map illustrates the areas of the US that are viable for survival in a cataclysmic event, demonstrating that this area of South Dakota is a desirable area for investment for doomsday as well as alleviating the fallout of the lack of public funding for the arts.



\_Section drawings



\_Section model

## \_Sections

Technical drawings of the proposed sections of the construct, before and after its transformation from bunker to cultural center. In tandem with the constructed model, these drawings show the relative vibes and populations of the constructs in multiple phases of its lifespan.

# SAFE IN SIOUX FALLS



## SAFE IN SIOUX FALLS

AN INVESTMENT IN YOUR FAMILY'S SAFETY FOR TODAY AND TOMORROW

Only a few memberships remain to this groundbreaking and exclusive security complex outside of the safe haven of Sioux Falls, SD.

This shelter has been certified to the highest levels of fortification, blast-proofing, and longevity with its innovative re-life program. Already stocked with food, fuel, hygienic supplies, medications and survival gear, you and your family can easily shelter without returning to the surface for five years or more.

Don't miss your chance to make an investment in the most optimized model on the market today!



MEDICATION, SURVIVAL SUPPLY STORAGE

COLD STORAGE FOOD (5+ YEAR SUPPLY)

RECREATION CENTER WITH GYM AND SAUNAS  
INTENSIVE TRIPLE PROOFED STRUCTURE

LIGHT AND AIR CIRCULATION CORE

CONDO UNIT COUPLE OCCUPANCY

CONDO UNIT FAMILY OCCUPANCY

5+ YEAR, 6.15 ACRE FEET WATER SUPPLY  
2.2 MILLION GALLON

HYDROPONIC INFRA VEGETABLE CENTER

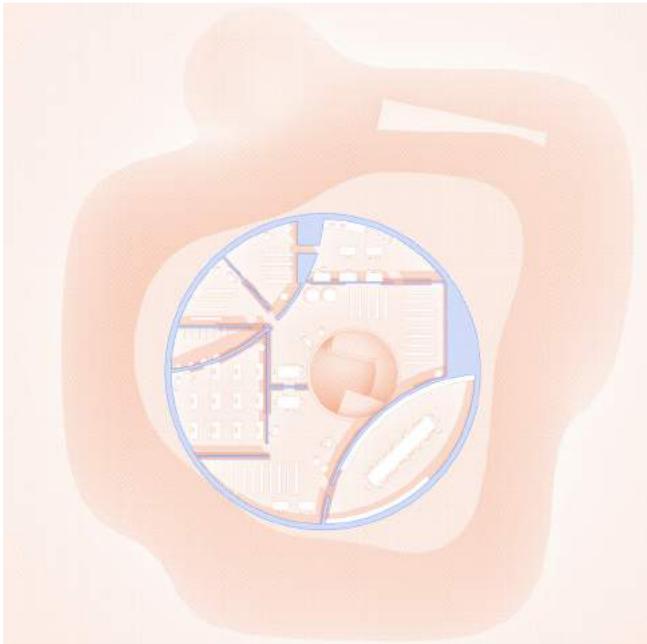
LEISURE CENTER WITH BILLIARDS ROOM

CYCLING CENTER & WEIGHT ROOM

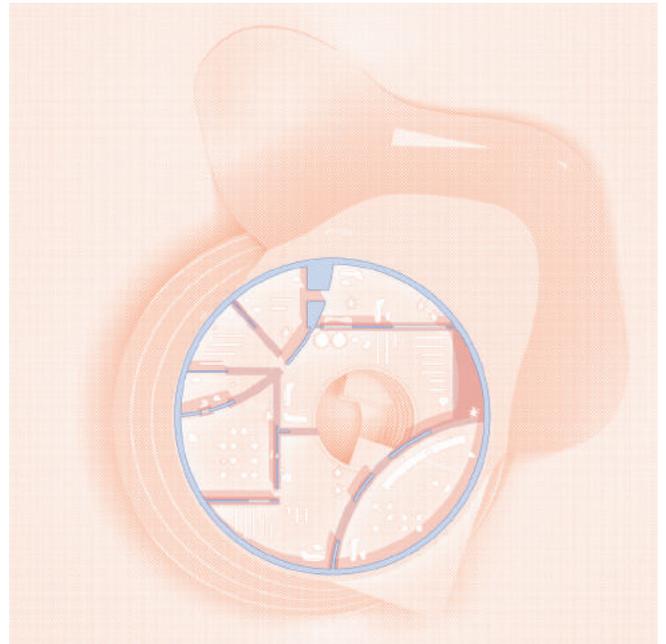
COMPUTER CENTER & CLASSROOMS

GRAIN STORAGE (5+ YEAR SUPPLY)

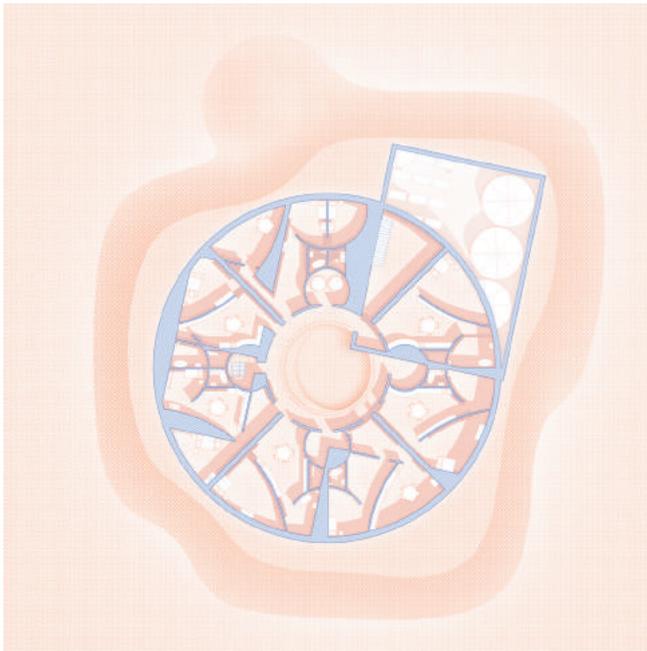
\*ALL UNITS SUPPLIED WITH A GUARANTEED 5 YEAR FOOD SUPPLY, TRIPLE FILTERED AIR CIRCULATION, TEMPERATURE CONTROL, CUSTOM INTERIORS AND SPA BATHUBS



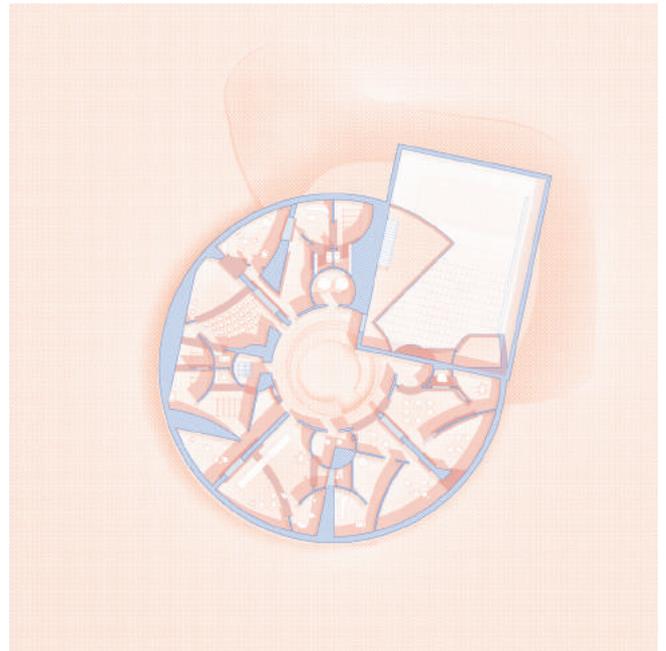
**\_Floor 10 in 2019**  
Secure meeting rooms, computer lab, and library to entertain and enrich residents during an enclosed existence



**\_Floor 10 in 2026**  
Cocktail bar, restaurant, printing rooms, and workspaces



**\_Floor 3 in 2019**  
Secure, luxurious two bedroom condominiums, and grain storage



**\_Floor 3 in 2026**  
Lounge, lecture hall, theatre balcony, and cafe

### **\_Floorplans**

Floorplans illustrating the degradation process of selective walls to open regimented programmed spaces in the bunker into open and collaborative spaces in the cultural center. Adjoining floorplans of before and after visually define the planned obsolescence of the original bunker space and its ability to transform into a more populated typology as an arts center.





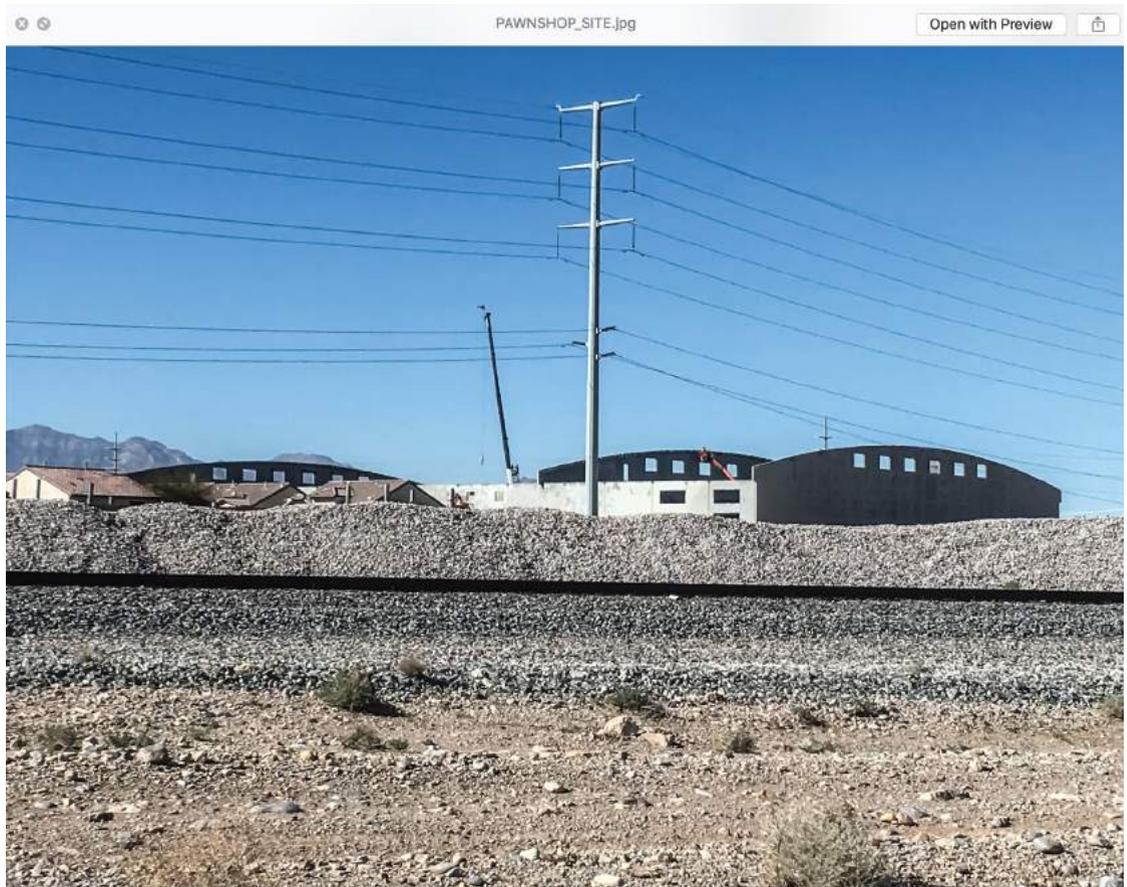
# CASH-4-DATA

\_Julia Muntean and R. Michie Nimsombun

\_Wallenberg Critic: Neal Robinson

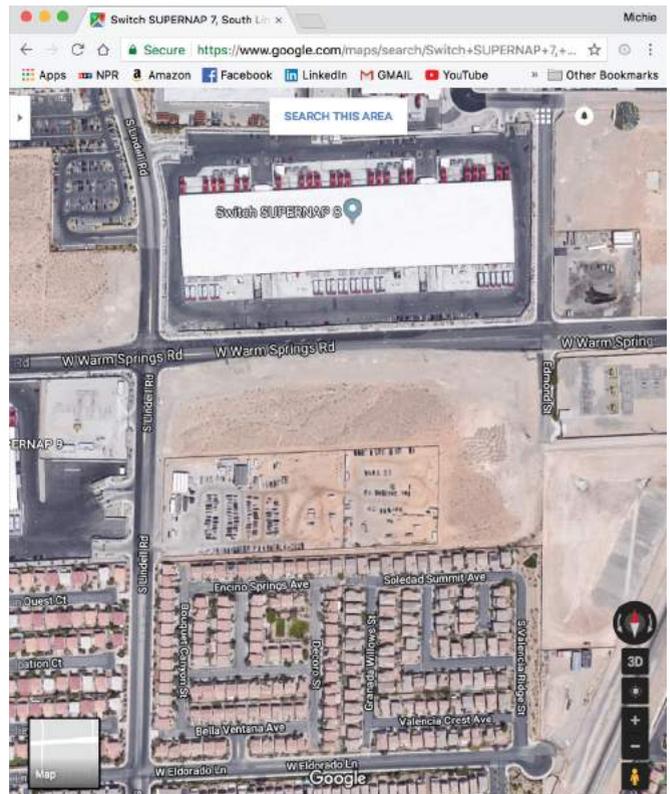
This pawnshop is staging an intervention for digital hoarding. Architecture is understood as a traditionally slow cultural medium, while data and technology are known as exceedingly fast ones—causing the gap between our physical and digital environments to widen at an increasing pace. Society’s understanding of cultural artifacts and events has shifted from physical encounters to digital experiences that take place in front of screens and over the Internet. Societies’ most sentimental objects no longer take up space in attics, garages, and basements, but are sent upwards and outwards into “the cloud”. This cloud resides in Las Vegas at the largest data center in the United States. Also home to the strip, vast suburban sprawl, and the largest landfill in the country, the city is an ideological beacon of excess that produces inevitably massive quantities of waste. Las Vegas simultaneously hosts the most extreme situations regarding the storage of waste, bodies, and information.

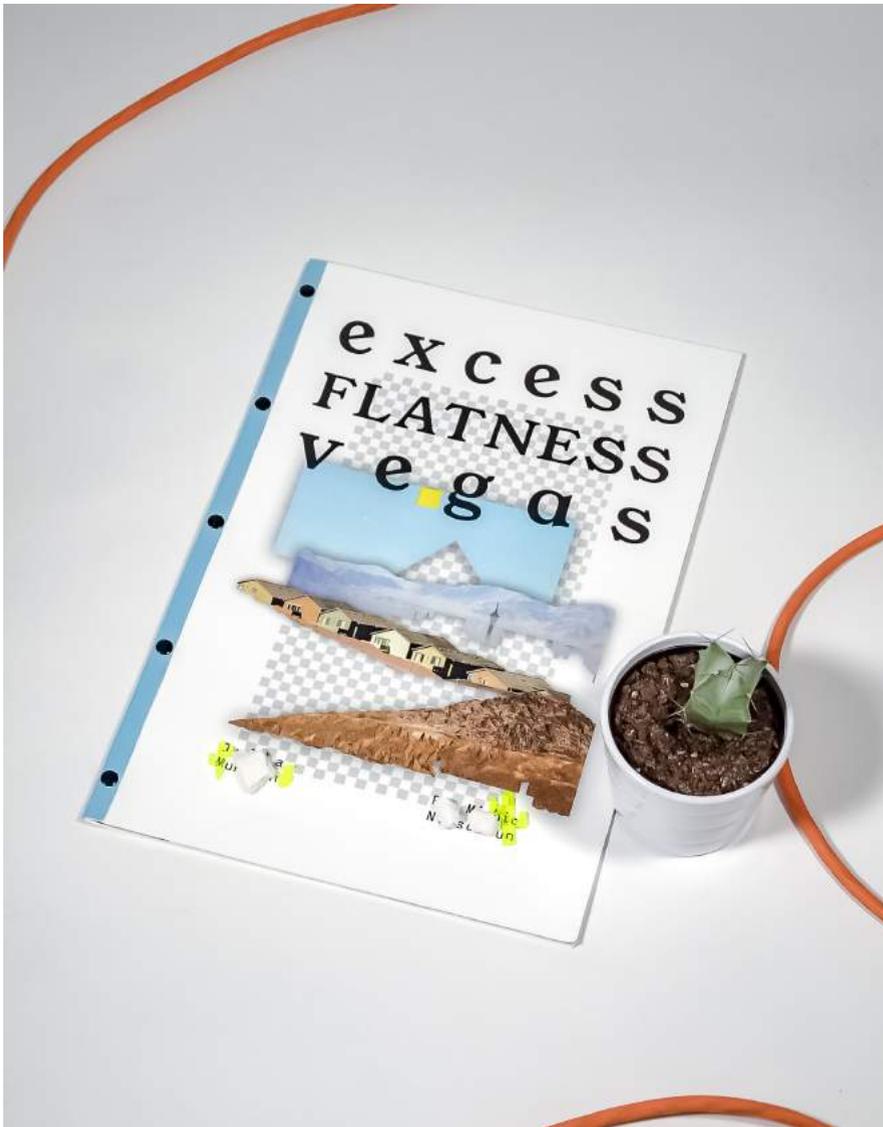
Digital Hoarding is the condition of excessively amassing forgotten, redundant, irresponsible, and even harmful digital information that ends up polluting personal hard drives, and public cloud servers by medium of passive data. We speculate that the trajectory of our digital hoarding will become unsustainable in a not-so-distant future, and inevitably collapse in on itself as the amount of content overwhelms the capacity of the vessel. By hijacking the intended space for the unfiltered cloud, the pawnshop stages a moment in time in which architecture has the agency to move faster than data. Once the cloud is physical, it can be parsed, ordered, and distilled. The Pawnshop becomes a space for physical and digital exchange, in which prized possessions are sold for likes on Facebook, or converted into Bitcoin. In the economy of trans-digital pawning, we can recognize data in the cloud to be as guilty as the items we hoard in our attics, garages, and basements.



**\_Site**

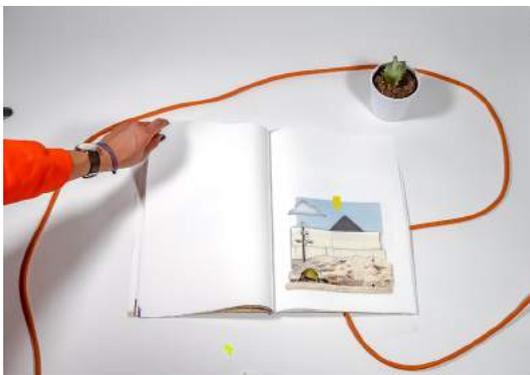
The project intervenes on a plot of land situated between a data center and an edge of the suburban sprawl. The open lot is currently under construction for another data center.

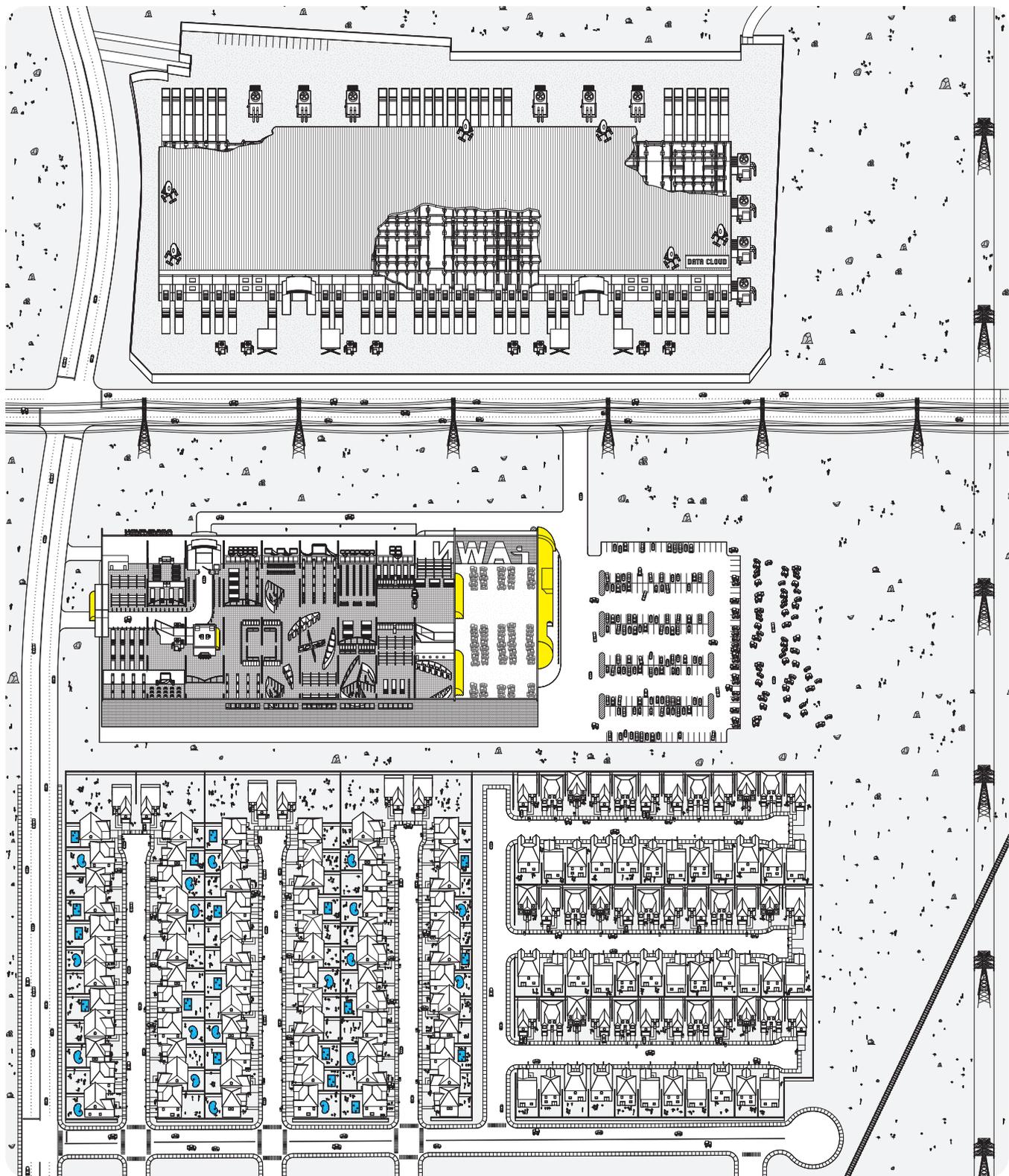


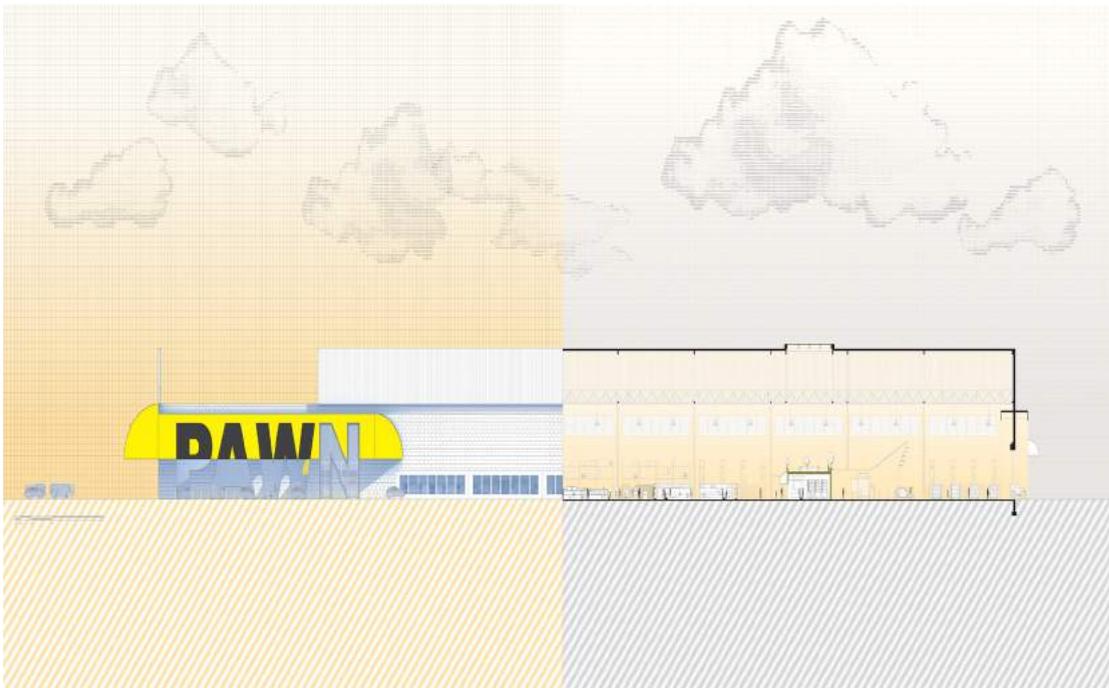
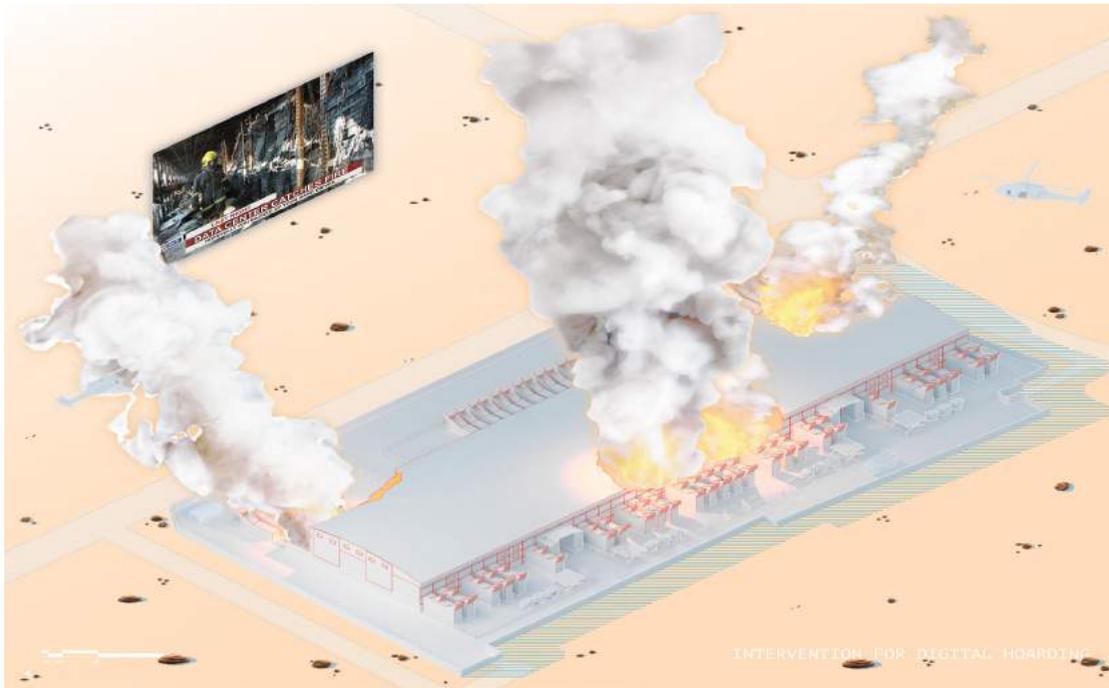


**\_Research**

Photographs, writing, and collages that document & theorize the scenographic flatness of the desert, the strip, and the sprawl.







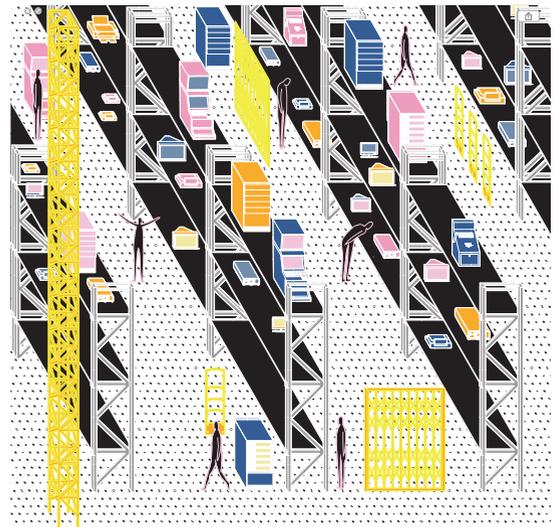
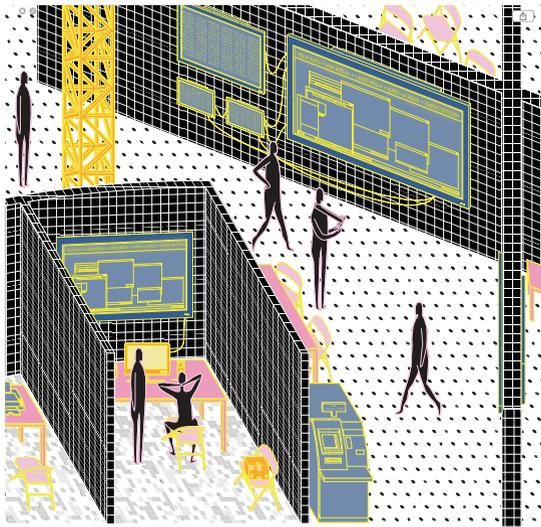
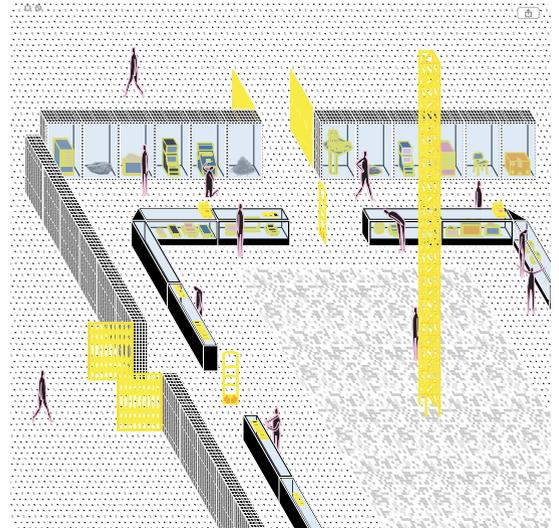
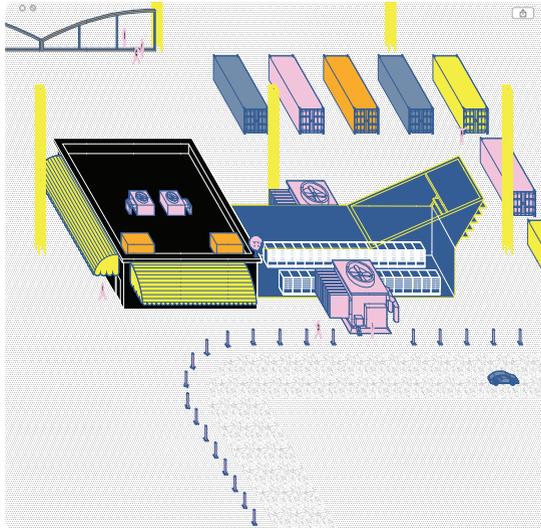
### **\_Pawnshop Hijack**

The pawnshop scraps material from the ruins of the fire and hijacks the shell of the live construction—making the space both pre-and post-architectural, as well as both digital and physical, with an inventory that is new and old.

### **\_Data on Fire**

The project speculates that sooner than later, the speed at which society digitally hoards will overwhelm its architecture. The pace at which we copy, backup, and save will outpace the capacity of our means to store—causing the servers to overheat and the data center to burn down. The digital community suffers a self-inflicted act of arson.

\_Model of proposed bunker as cultural center



### \_Inventory Interiors

Programmatically, pawnshops operate simultaneously as retail and storage. The inventory is entirely composed of the items pawned by its clientele. Much of the stock of a pawnshop is not for sale until the loan is terminated or defaults, therefore many of the objects must be presented as “storage-on-display”. Additionally, the pawnshop’s transactionary nature of buy/sell/loan allows for the economy of digital and physical artifacts, encouraging us to consider the exchange rates of physical, digital, and social currencies.



\_Exhibition  
model and de-  
tails



\_PROJECT INFORMATION:

\_TITLE:

\_Manifesto BICIP

\_TEAM MEMBERS:

=2

\_TOTAL COST:

=\$300

\_MATERIALS:

\_gloss paper, museum board,  
video, 3d printing, bass-  
wood, polystyrene

\_TIME:

\_MODELS AND DRAWINGS:

=30 days

=2 weeks on main model

\_ALL NIGHTERS:

=0

\_PROGRAMS, TOOLS:

\_rhinoceros, photoshop,  
illustrator, premiere pro,  
lumion

\_PRODUCTION LOCATION:

\_DRAWINGS:

=studio

\_MODELS:

=studio

\_ACKNOWLEDGMENTS:

\_Joe Chase

\_David Finquelievich



# Manifesto

# BICIP

\_Ellis Wills-Begley and Nadim Hajj Ahmad

\_Wallenberg Critic: Anya Sirota

If Modernism's mega-visions situated architectural agency in its capacity to create social order, then contemporaneity—more humble and wary—turns to people and program as agents of change. Rather than assuming the role of heroic dignitary, the architect in this situation serves as synergist, facilitator—even moderator between disparate ideologies. Here, appropriation, cultural alacrity, and social activation appropriately serve as standards of accomplishment and impact.

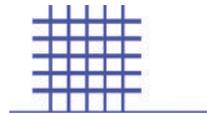
To test architecture's capacity to promote activity and collective enterprise, this project proposes a process by which to build a counter-institution, the Burkinabé International Center for Image Production. A space designed specifically for public accommodation, collective transformation, and self-mitigated image-making, BICIP is situated in Burkina Faso's capital city, Ouagadougou, West Africa's nexus for film production and dissemination. As counter-institution, the proposal explores ways that architecture can render explicit institutional and power structures, conceding how typical institutions are architecturalized through the façade. Occupying an existing vacant building in close proximity to the FESPACO film festival, BICIP's façade self-reflexively projects a set of symbols representative of the counter-institution's network of participants. At the same time, the lightweight façade holds the necessary bureaucratic, operative, and mechanical requirements, freeing up the bulk of the existing building for unmitigated public experimentation.



## PROGRAM OF POSSIBILITIES BICIP 2018 - 2020

### YEAR 0

2018



- 1.) Find vacant building Ouaga Center.
- 2.) Determine Emergent Program.
- 3.) Build relationships in surrounding area.
- 4.) Begin Testing Possibilities of site / occupation with new members of BICIP Network



Clockwise from top left:  
  
Wana Udobang  
Gaston Kaboré  
Yvan Perré  
Soré Sanlé  
Alain Gomis  
Edith Ouedraogo  
Theresa Traore Dahlberg  
Mohamed Challouf

### YEAR 1

2019



- 1.) Launch Call for Fellowship Program
- 2.) Test Possibility of Building New Large Scale Interventions
- 3.) Create Symbolic Archive: begin cataloging old and new symbols generated at BICIP.

**Fellowship Mission:**

Directed towards emerging scholars, activists, and artists whose current skills would benefit from immersion in the cultural environment of Ouagadougou, the BICFP offers a year of intensive study to up to three in-residence individuals from any country in the world invested in the production of novel images.

*Left: Mixed Media, Florence Ngala. 2018. Current Fellowship Curator.*

*Fellowships are offered through the Office of Fellowships and Internships, and are administered under the charter of the Institution, 20 B.F. Code section 41 et seq.*



### YEAR 2

2020



- 1.) Conclude Fellowship Application, Annouce Winners
- 2.) Determine Gourd + Fellow Residence Construction Process
- 3.) Begin planning for National Cabana.



Wanuri Kahiu

*Co-founder of AFROBUBBLEGUM, a media company that "commissions fun, fierce and frivolous African art."*



Yinka Shonibare, MBE

*Explores cultural identity, colonialism and post-colonialism within the contemporary context of globalisation.*



Ajuma Nasenyana

*Actress, Model, and Afrosartorialist, investigating alternative methods of breaking stereotypes.*

### YEAR 3

2021



- 1.) Develop Symbolic Archive
- 2.) Finalize Facade Design
- 3.) Begin Facade Construction
- 4.) National Cabana featuring new films.

*Symbolic Archive Leaders:*

*Facade Team Leaders:*



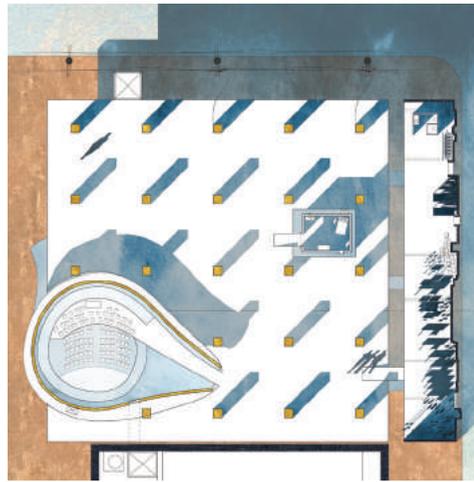
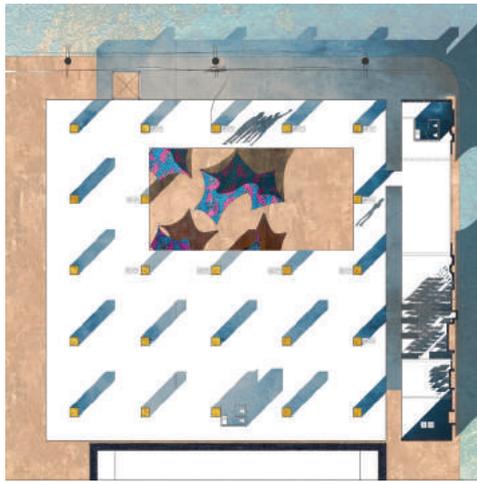
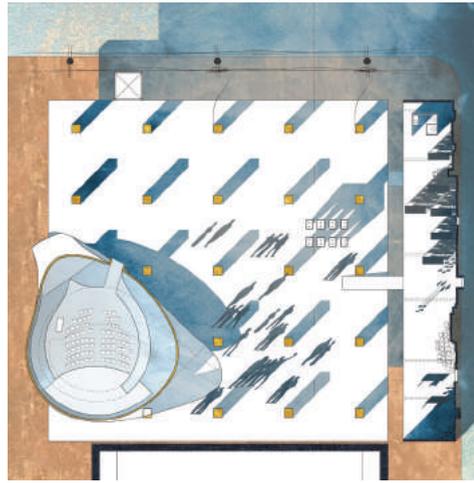
Trevor Stuurman, Manager



Kwena Baloyi, Director



Yinka Shonibare, Supervisor



### \_Floorplans

Plans of floors 1, 5,  
4, 0, respectively,  
clockwise.



\_Front façade  
of BICIP

### KEY OF SYMBOLS



*"I am independent of you"*  
Adinkra symbol



Central Monument  
*Place des Cineastes, 1987*



Commoration of 200th anniversary  
of J-J Audubon, 1785-1995



Medallion commemorating Revolution,  
*Place de La Revolution, 1984*



Ban (Great fortress)  
Seat of Government, Adinkra symbol



Owo Foro Adobe (Snake Climbing Palm),  
Ingenuity, Adinkra Symbol



Dunno Ntoaso (Talking Drum)  
Poetic Eloquence, Adinkra symbol



Odenkyem (Crocodile)  
Adaptability, Adinkra Symbol



Quilt patten, Traditional  
Used by Afrosartorialists



Epa (Handcuffs)  
Bondage, Adinkra Symbol



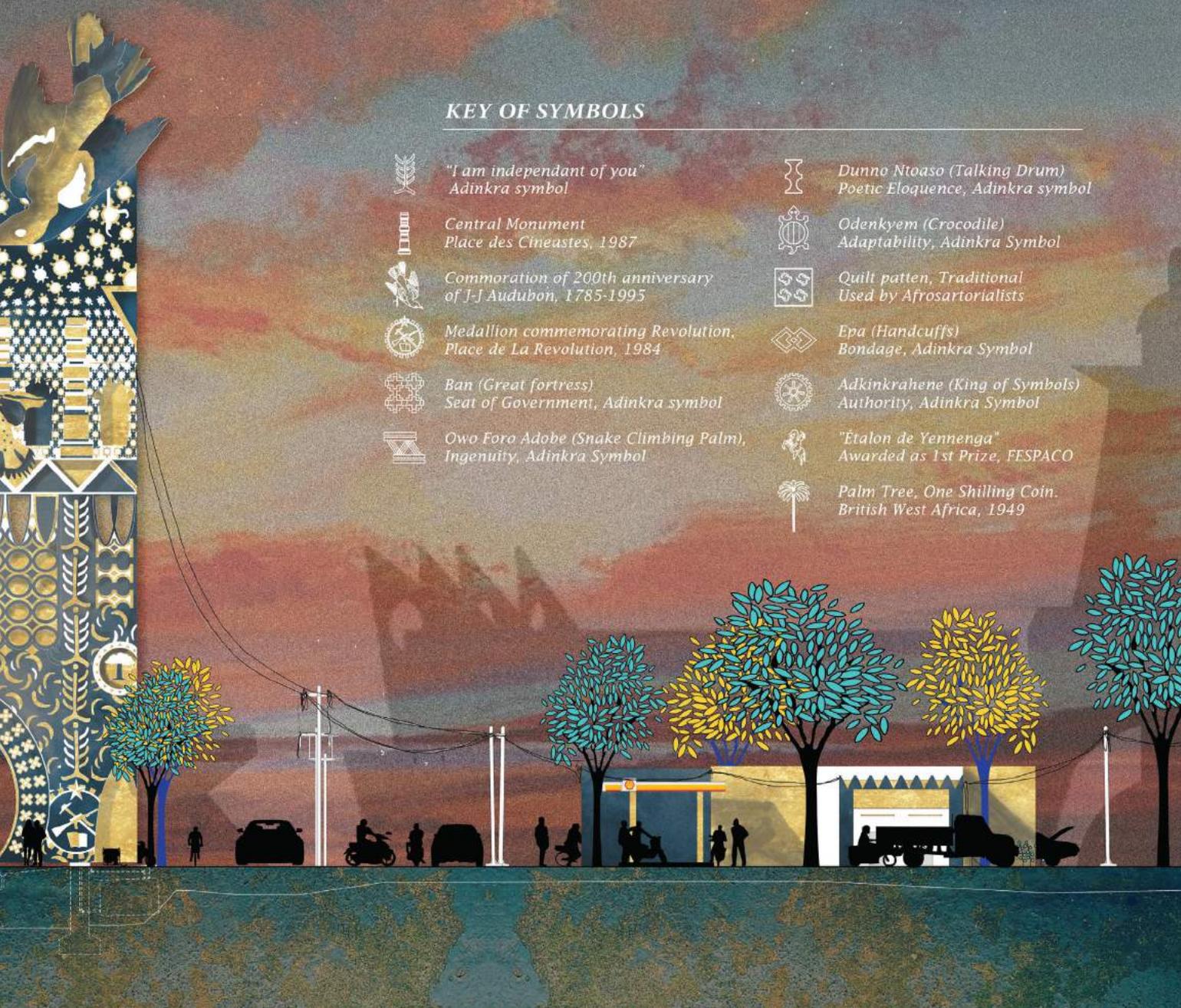
Adinkrahene (King of Symbols)  
Authority, Adinkra Symbol



*"Etalon de Yennenga"*  
Awarded as 1st Prize, FESPACO

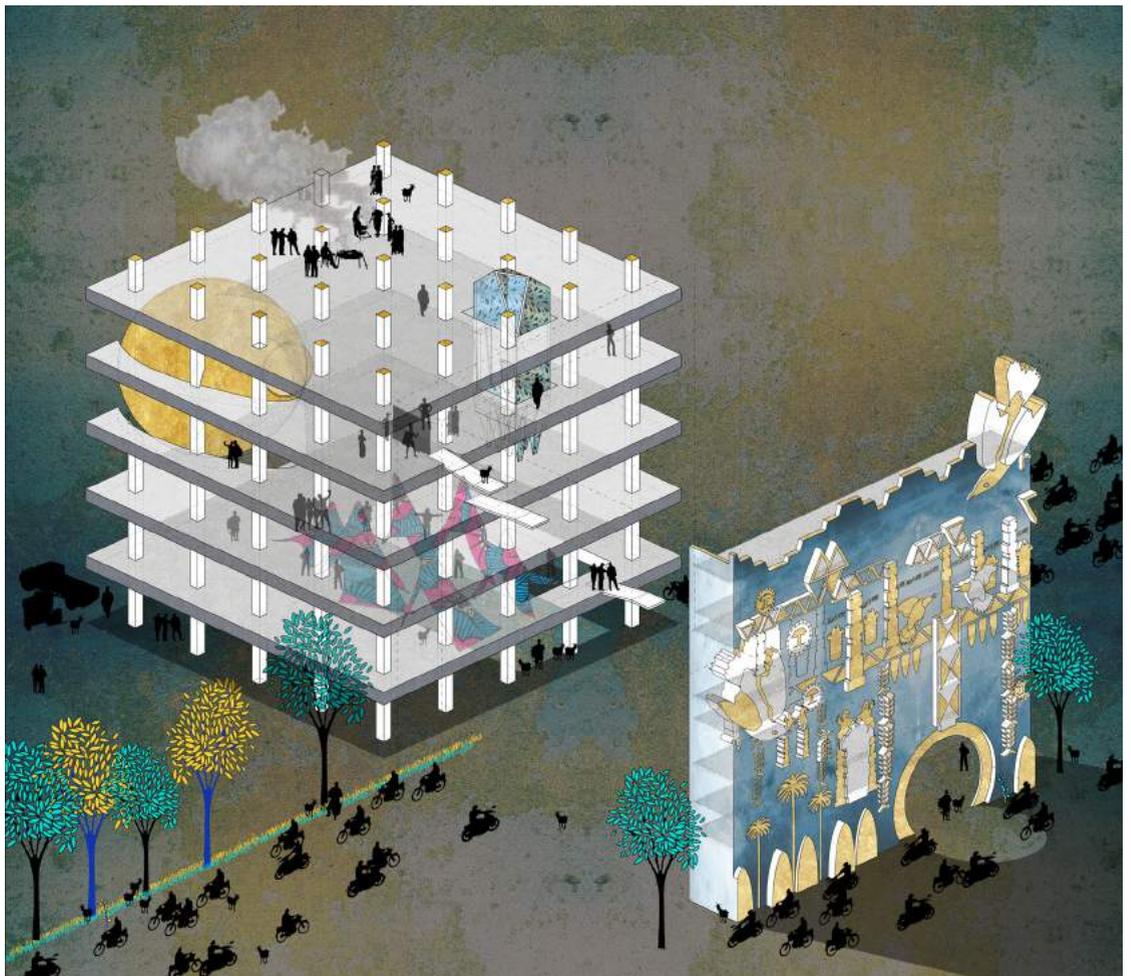


Palm Tree, One Shilling Coin,  
British West Africa, 1949



**\_Section of  
BICIP**

Describing  
experiments,  
and areas of self-  
mitigated image-  
making.





Market on Rez-de-chaussée



Projection Room



Golden Gourd Backdrop



Cabana on Amenity Deck



Interview with Gaston Kaboré



Evening bonfire on Roof



### **\_BICIP Film Archive**

An ongoing collection of film stills produced in collaboration with members of BICIP network.

### **\_BICIP Film Archive**

Stills constructed during initial building work and repair, April 2018, members preparing for initial Cabana.

# \_Craig Dykers: Be Ravenous

## Dimensions 32:

Is there a particular artifact that has been a significant influence for you?

**Craig Dykers:** When I was very young, I took a trip out to the desert in New Mexico, and I found a small cutting implement. It was an incisor sort of tool that you hold with your thumb on one piece and slide it along and cut hides. It was an extremely old object which had probably been tumbling around in the desert for quite some time so one would have expected it to have lost its usefulness and lost its ability to express what it did as it was just a rock amongst other rocks. But it was very clear what it was meant for. So I began to look at older Neolithic stone tools and stone implements to a time before tectonics existed in the way that we understand them today. Those tools are so wonderfully formed around what they need to do. The thought and the process that went into making those things is exceptional, especially since they were created at a time before we had logic and complex language. Those objects were quite influential to me because it expanded the realm of consciousness that I believe we all exist within and connected me to our deepest ancestors. Understanding them influenced my understanding of architecture from a very primitive sense.

## CRAIG DYKERS

-----  
\_Dykers has established offices in Norway, Egypt, England, and in the United States. His interest in design as a promoter of social and physical well-being is supported by ongoing observation and development of an innovative design process. As one of the Founding Partners of Snøhetta, he has led many of the office's prominent projects internationally, including the Alexandria Library in Egypt, and the San Francisco Museum of Modern Art Expansion in California, and the Ryerson University Student Learning Centre in Toronto, Canada. Craig's work has led to numerous international awards and recognitions including the Mies van der Rohe European Union Prize for Architecture, the World Architecture Award, and the Aga Khan Award for Architecture, among many others.

**D32:** What books are you reading right now?

**CD:** I just came from the library opening in Calgary and one of the books I recommend is *The Mind in the Cave*. It is related to what I just mentioned about Neolithic technological thinking and the creation of consciousness in art. Other books I like to read are from Temple Grandin. She is an anthropologist with autism who wrote a series of exceptional books on animal behavior. Her focus is on domestic livestock; however, it's clear to me when I read her books that if you replace the word "cow" with "human", it still makes perfect sense. So I read them to better understand how we act as animals, and that is once again, a recognition of the primitive character of our existence. I think by better understanding ourselves as animals, we're better able to design around our needs.

**D32:** Jumping from personal to professional, what is the one special quality or characteristic that distinguishes Snøhetta from its peers in the field?

**CD:** People who ask us to work with them often say that we understand the way people react to design. We look at both the creation and the anticipation, and the consequence of the things that we create. This is especially true with respect to the public realm. We understand the outside world as much as we understand the inside world. The second thing that's important is that we take great care of whole scale. We're just as comfortable working on a thimble as we are on an entire development in the city. We put the same amount of care in all of those types of thinking. We're also, I would say, an interesting mix of somewhat radical but also approachable design, so that we create things that challenge people, but not at their expense so they are able to approach our work on their own terms, even if the buildings we make sometimes are unfamiliar to them.



**\_Portrait of Craig Dykers.**

**D32:** What is a piece of important advice for architects and designers entering the professional world? And what was the most important piece of advice you received?

**CD:** Well, the advice I often give to young people entering the profession is that it is a profession that requires the widest range of understanding. If you limit yourself to purely architectonic, either imagery or literature, you might cut off a wider world of properties that help promote good design. Learning about science, philosophy, literature, dance, and culture are quite helpful on many levels because first of all, they fuel the architectural ideology you may have in a very powerful way. But also they get you to meet other people outside your profession who are not architects and who need you or would like to work with you. Entering those worlds gives you the potential to meet people that might be interested in what you have to say.

Be ravenous. When I was in school, I spent huge amounts of time in the art library and the music department, especially at night, even though I don't know how to play piano or read music. I would just like fooling around on the piano, but then I'd meet people in the music department hanging out at that time of night.

So advice given to me? My father steered me into architecture. I wanted to be an artist. I called him to tell him I wanted to be an artist and he said, "Any self-respecting artist would never care what his father had to say." And he said, "Since you did call me, that means you're sort of empathetic, so an architect would maybe be a better choice. They're kind of interested in art, but they're also working with larger groups, so it's a different frame of mind than being an artist." The notion of being empathetic came from him and that was good advice.

They were also times when it just seemed that everything was lost and it was all going to end. Just getting some reassurance that if you stick to what you believe in, you may have hard times and you may have to do garbage, but at some point, things will change. Things always change.

## INTERVIEW INFORMATION:

NOV06 '18 11:00PM  
Taubman College,  
ANN ARBOR

## ACKNOWLEDGMENTS:

\_Interview  
Karun Chughasrani  
Austin Kronig  
Jenny Scarborough

\_Transcription  
Erin Peterson

\_Editing  
Karun Chughasrani

## TIME:

\_Interview  
=51 minutes,  
43 seconds

\_Transcription  
=2 hours,  
59 minutes

\_Editing  
=7 hours,  
30 minutes

\_Total Time  
=10 hours,  
20 minutes,  
43 seconds

## COST:

\_Transcription  
=\$70.00

\_TOTAL COST  
=\$70.00

**D32:** As a trans-disciplinary office, can you identify a moment when this shift in practice occurred?

**CD:** We were that way from the very beginning. We were a group of young people, some of which were landscape architects and some were architects. We made the Alexandria Library together that way. So from the very start of the company, we were a mixed bag. We were too young to even be seriously focused on our own disciplines, so we had to rely on each other for insight.

**D32:** A large part of what makes Snøhetta a successful architecture practice stems from the culture within the workplace. But in educational studios around the world, it's commonly recognized that architecture requires an extraordinary amount of commitment and can lead to an unhealthy environment.

-----  
"I always say that you should  
force yourself at some level to  
finish at a normal time during  
the day."  
-----

**CD:** When I'm teaching, I always say that you should force yourself at some level to finish at a normal time during the day. If you make that a hard stop, it usually makes you more focused. I would also say that sometimes you want to stay up all night. There are times when I really am just so fascinated with what I am doing that I am just not going to go to sleep. That's an entirely different issue. If that's what you feel like doing, then you should do it. But if you feel that you're forced to work in extreme conditions, it will produce ineffective results; the final product will not be good because you, as a human being, are not functioning as a human being.

I also encourage people to redefine their productivity efforts. Do some rapid prototyping, which means just put together stuff as quickly as you can, get yourself a glue gun or something, and don't worry about what it looks like. Do this over, and over, and over again until you get more comfortable with it so you're not so frightened to make a drawing on a piece of paper with your hand.

Another thing I often say is that if you have a deadline approaching and it doesn't look like you're going to make it, then redefine the goal. Rededicate your resources to what you know you can finish well, finish that, and pull all the other stuff off the table. Then when it's time to present, say, "I miscalculated in my timing. I made these particular products. I am willing to talk about these other things, but I did not finish them, but I do have an opinion about them." Be honest and be direct.

**D32:** Snøhetta has an aesthetic, but each piece of architecture is uniquely its own. How does Snøhetta resist the tug of repetitiveness within each design?

**CD:** We struggle with the understanding of what our manifesto is and if we have a formal theory. Many academics complain, I think, about the idea that we don't have a representative formal theory. We don't even have a book that describes how we make things. This angers people who want to put you in a category. We, as human beings, like categories because they help us organize the world. But I'm not sure that categorization is the only way to enlightenment. Not everything has to fit so tightly into a category and not everything is necessarily to copy or to replicate.

On the other hand, we do have things and issues that we're interested in. We are always having a dialogue with place. This is not about merging landscape and architecture. That's a fallacy about our work; we're not trying to merge or create one and the same. We're just having simply a dialogue. I would say also that we don't segregate things that are visible from things that are invisible. So visible things are a hill, or a path, or a

stream, or a road, or a building across the street, whereas the invisible things are socioeconomic factors, issues related to politics, psychological attitudes towards a place that you can't see. We bring those things together so that the invisible and the visible create one ideology.

**D32:** The diversity of projects that Snøhetta has is remarkable and it seems like an important characteristic of your firm. How have you been able to attract such a diverse set of projects, both programmatically and in scale? How do you select your projects and attract new work?

**CD:** Some of the small projects we just made up on our own. If we waited for someone to ask us, it would probably never happen. Then people see them and talk to us about a different kind of project. Another way we manage a broad range of projects is by applying a manner of thinking across the large and small that's relevant to all those scales. As I said earlier, understanding the conditions of a project through what is observable and what must be understood can apply to a master plan as well as to a bank note. We are multiple groups of people, including graphic designers and product designers. We could be designing cutlery and glass jars, and that's the opposite of re-designing the Ford Motor Company in Dearborn. All of this happens in the same studio.

**D32:** You mentioned that fostering a deep appreciation of history is crucial. What role does research, maybe a historical precedent, play in Snøhetta's design process? Is it something that really catalyzes the beginning of the project or is it something that informs your process throughout?

**CD:** Well, it's an interesting challenge because we are geared in our education to look at other examples of similar things, and that presents several problems. First of all, it means that if you don't have a very deep understanding of history, you're only going to be finding things that are in the recent era of work, and they're going to be often limited to what was just slightly before them. You would be getting a very narrow view of that typology. The second challenge is that oftentimes things that have no relevance at all to the project at hand can have more value than things that do. You can find insight for a hospital from—I don't know—a gymnasium or a place where people do rock climbing, or a tea salon in Japan as much as you could from a hospital that was built down the street ten years ago.

Some typologies have had centuries of refinement and to just ignore this refinement over time is pure ignorance. Over 400 years of making an opera theater for example, we have made some very good choices. They may not look like what we think looks good because they've got little golden cherubs all over the place. On the other hand, there were reasons why they had those golden cupids. They diffused sound, the metallic finish reflected sound, and their strange shapes helped to create acoustic diffusion. The velvet curtains helped absorb sound. If you put all of that together, it makes a sound machine that took 400 years to develop. Maybe you don't do cupids, but you need something that takes their place. There are also reasons why those horseshoe shapes exist. They allow people to see the stage well and see other people around them. Now that's not to say that all theaters must be horseshoe shapes or have the same kind of reverberation, absorption, and diffusion as a great theater from the past because there are new types of music and new types of drama today that didn't exist in that period. On the other hand, that kind of music hasn't disappeared either so you just can't pretend that it has no value.

-----  
"Some of the small projects we just made up on our own. If we waited for someone to ask us, it would probably never happen."  
-----



\_Craig Dykers leading a workshop at Taubman College.

**D32:** Do you think the Europeans understand that better than Americans?

**CD:** Oh, yes, of course. There are major differences between the U.S. and Europe, but it's not that people in the U.S. and Europe are wildly isolated or different. It's just that we have very different ways of thinking.

In Europe, most towns would likely have a core to the town that has a four, five, or six hundred year old cathedral—one that was magnificently created and that was awe-inspiring, whether you were Catholic, or Lutheran, or even Muslim, now as an immigrant into Europe. You'd be inspired by that architecture and that would tell you and the population at large that architecture has value in our world. In the United States, we don't have those things. They're not as old. They're relatively new. The population generally sees things like Walmarts or strip malls. So actually the truth is in America, we have replaced the cathedral with something else because we all need something that we dedicate our lives to. In the U.S. particularly, we have transferred that feeling to the automobile because we spend almost all of our time in a car. Almost all of our association with the world is by seeing it through a windshield or stopping at a stoplight. Even our interaction with others is primarily guided by how we move in traffic. So acoustically we can see huge differences in that world. In a cathedral, which is generally a tall, very open, very empty space, the acoustics come from above and they trickle down over your head, and it's very heavenly. In a car, everything is side to side; it's all horizontal. Your whole state of being is moving from side to side in a car, whereas in a cathedral it's about moving up and down, praying and looking up to heaven.

We see things in a strange and slightly differently way. In a car you need to react quickly, but with God, you react slowly. We have replaced God with the car. I think we have not found a way to moderate our lives. As long as we allow technology to overcome our sense of humanity, we have lost. We need to be able to manage our technology and allow our humanity to guide our presence and not the other way round, where the things we make support our sense of humanity.

**D32:** You mentioned previously that architecture is considered a luxury profession. Architects used to be recognized by society and held in high regard. However, today it seems that architects have kind of moved down this list, being replaced with engineers, doctors, and technology developers. How can architects regain their relevance and be recognized for the work they do to shape society?

**CD:** Well, that's a very loaded question because first of all I am not necessarily sure that architects were always held in a high regard. We have gone through a number of phases in which we have fallen in and out of favor. Furthermore, during the period in history you're referring to where it seemed like architects were held in high regard, the profession of architecture was not really a profession. You just became a builder or a creator of buildings. You weren't going to school to learn to be an architect and then create a cathedral. It was always a kind of master-apprentice ideology, which was very similar to sculptors and that's why many sculptors at that time were also architects: Michelangelo, Bernini. They were working in that same identity. Michelangelo would not have called himself an architect.

So the profession of architecture is a relatively new phenomenon. There are various reasons why it was developed. I have my own theories, one of them being that it was a patriarchal move to gain control of the profession, leading it to very quickly become dominated by men. I think there were gender politics related to the birth of the profession certainly in this country and in other countries. So this is a challenge. Furthermore, we have created other barriers that have only recently been broken in terms of racial and ethnic make-up of architecture schools. The huge disparity in the number of women in architecture school compared to professional workspaces is also another thing that has weakened our profession.

Another thing that weakened our profession is that we took away our access to building and construction, but captured our ability to control it. As architects, we set up a system where we manage—it's called construction administration because everyone's afraid to say it's actually construction manipulation—and we are seen as one of the overseers of the construction process, yet our educational system and our professional system disconnects us from direct knowledge of that. So we seem like we're very important and smart, but we have very little intellectual capacity to manage what we say we're going to manage. We don't actually have the professional skills to acquire the dominance that those early professional builder artist/sculptor/architects had. There are some schools that try to teach that, but then the problem there is once you start teaching construction directly, all that everybody wants to talk about is how a nail goes into a piece of wood or what type of new technology you can use to manipulate some kind of thing. They don't teach design anymore. We haven't found the right balance yet, but I think we will. We have a long way to go before we get into a place where we really are dominating, in a professional way, the things that we say we would like to create for people.

-----  
"As architects, we set up a system where we manage—it's called construction administration because everyone's afraid to say it's actually construction manipulation—and we are seen as one of the overseers of the construction process, yet our educational system and our professional system disconnects us from direct knowledge of that."  
-----

Here is just another very short story. If you look at the near history, it's only been about 150 years that you could say we practiced as architects, in our contemporary definition of the profession; that schools have existed that teach architecture and that you get a degree, and then you go out and find a professional knowledge base. Over that time-frame even, we have seen radical ups and downs.

World War II is a huge turning point in our profession. Most of the world was in shambles, most of Europe was destroyed, and there were millions of people that needed residences and places to work. Nobody could build it fast enough for all those people. So engineers came in and took over everything, built as fast as they could, and created at least a stabilization for those massive micro-populations. But then people realized that, since it wasn't aesthetically designed, it looked awful, so the pendulum shifted back to the architects.

Architects took over and then they got greedy. They started to pretend that they could change the world, that they were going to fix everything, that they were going to create a Utopia, that they were going to knock everything down and put these beautiful, little forms in the middle of huge grass fields and redirect the coastlines. Of course they couldn't because it's stupid to think that you can. They miss-stepped and things started to fall apart. They lost track of their skills and crafts. The buildings which were really beautiful to look at were leaking like sieves, falling down, the materials were falling off, and people hated living in them. People lost their faith in architects.

Next, we invented project managers. Project managers are a relatively recent invention and it was to manage the balance between engineering and architecture. Everybody thought it was a good idea because it was a way of merging the two professions. The project manager became the overseer, directing operations and telling people what to do. Everything got slightly more efficient but then people realized that the product became ugly again.

-----  
"The pendulum has shifted, and then it's shifted again. Then starchitects emerged, making iconic projects that look amazing. That was kind of cool for a while because it gave architects some media attention and got us back on top again."  
-----

The pendulum has shifted, and then it's shifted again. Then starchitects emerged, making iconic projects that look amazing. That was kind of cool for a while because it gave architects some media attention and got us back on top again. But the truth is that underneath it all, we were also losing ground with climate change and other issues, and those people that were professing to design with sensitive environmental concerns ended up making ugly buildings that looked like machines to save the world. Who wants to live in that? We don't live inside toilets even though we need plumbing. I think we still haven't found that balance yet. In order to put us back on top, I believe we need to take a step back, start looking at things more pragmatically, working with more adaptive reuse, saving buildings that we might think are ugly and crappy because they don't look good in magazines and try and deal with that, try and find out some things that people really need in life. We must try to find a language that allows other people to understand what we're talking about, and come to terms with communication, and then we might find ourselves in a good position again. But I'm afraid if we don't do any of that, we will soon not just be a luxury; we will be an antique.

**D32:** Would you like to say a few words about your work for Ford?

**CD:** It's just interesting to me that in the time we live in, our governments are failing us all over the world. We almost had a time where we saw enough legislative interest in dealing with climate change, social responsibility, sustainable economies, and well-developed education systems. But it didn't happen. We've tried many times.

It may happen in the future, we just don't know. What's interesting to me is that commerce and corporations are starting to realize that if they don't deal with it, nobody's going to deal with it. They also know that future viability is based on our ability to be intellectual creatures in a complex world. If government can't do it, then they'll have to do it.

Ford is an interesting example where they want to take on some of the challenges of the world ahead. It's not that I don't believe in politics. I do and I'm sure people at Ford believe in politics. We all have to because that's our place in humanity. But we also know that we need to step up to the plate on our own. Sometimes we need to do that more than other times. This is a time now where corporations are starting to work with these complex issues of climate change within their own products. Of course the automobile is one of the larger factors in challenging climate stability in our world. So Ford is working hard to make better societies, better places to live, and better interface with technology that's sensible and not overwhelming, so that in the future, we might have a chance to try something better.

I am quite fascinated by that—that it's the corporations that are taking this on and not our friendly neighborhood House of Representative person. Not that we need to ignore those people, but we also need to put value on this kind of a process. The fact that Ford chose Snøhetta is a kind of a miracle. We're not that large of a company. There are companies with thousands of people that are much more suited as a military machine to take on these issues. But Ford also knows the value of an intimate relationship in the working world. They are really advanced in how they design things. I was so impressed with how they work and how they create things. It's actually having an influence on us, too. It's an interchange; we're learning from each other.

There are two very large projects: one is the redevelopment of Ford in Dearborn and the other is the movement of some Ford staff to Cork Town. There is also Ford's participation and redevelopment of Detroit through the Michigan Central Station project. What we're trying to do there is to be absolutely cognizant of the material facts of life on the ground in Detroit. There are people who have been there for 15 years with practically no economy, no money, nothing really, and they have pulled that city up by their bootstraps, the skin of their teeth. And suddenly there is money, and all the money moves in and those people get pushed to the side. Gentrification is a polite word for saying "fuck you". Right? It's not a thing that we take lightly and we're working with that on very many levels.

**D32:** So which one comes first?

**CD:** Which comes first? Always the poor levels of society create the platform for the rich to enjoy. Always. Always, always, always. Never anything different. And of course, that doesn't mean that the rich aren't able to make things that the poor can also enjoy, but the platform usually comes from the minority and enslaved classes. That's what happened in Detroit.

-----

"Ford also knows the value of an intimate relationship in the working world. They are really advanced in how they design things. I was so impressed with how they work and how they create things. It's actually having an influence on us, too. It's an interchange; we're learning from each other."

-----

-----

"Which comes first? Always the poor levels of society create the platform for the rich to enjoy. Always. Always, always, always. Never anything different. "

-----



\_FEATURED THESIS:

-----  
Timothy McDonough  
\_Rendered Constructions

Lauren Miller  
\_Tableaux Typologies

Eileen Arcos and Kevin Sani  
\_Everything Must Go

Sam Bo Zou  
\_Figurative Theatre

Lauren Lahr  
\_Re-Imaging Suburban  
Wasteland

Karl Heckman  
\_Invasive Species: Cultivar

Kimball Kaiser  
\_SuperLivery

Feier Lan, Westley Burger,  
and Dongfang Xie  
\_Wanderweg

\_2018 THESIS AWARDS

-----  
Sam Bo Zou  
Figurative Theatre  
\_Burton L. Kampner Memorial Award

Lauren Miller  
Tableaux Typologies  
\_Marian Sarah Parker Memorial Award

Karl Heckman  
Invasive Species: Cultivar  
\_Alpha Rho Chi Medal

Andrew Kaczmarek  
\_AIA Henry Adams Medal and  
Certificate



# Thesis

The product of a year-long investigation, thesis occurs in the final semester of the graduate sequence. A self-directed creative project, students engage in the process of research, critique, and synthesis to create work that engages with architectural discourse. Capping the studio is a review by outside critics and a week-long public exhibition of the work.





# Rendered Constructions

\_Timothy McDonough

\_Advisor: Meredith Miller

In his treatise *On Painting* (1436) Leon Battista Alberti set out to discover a tool for scientifically measuring and recording the world around him. Perhaps the most influential optic tool within architecture's history—Alberti established a rigorous step-by-step algorithm, through geometry, for constructing an objective image of the world. This extension of the human eye, put into practice by Filippo Brunelleschi at the Baptistry of Saint John in Florence, became imbued within the system of architectural representation and laid the foundation for architectural renderings.

Even today, when architects learn how to render, they are not only secured with a representational drawing skill but are concurrently implicated in a vast history of projecting mathematics and its inherent truths onto the world around them. Today, this projection is accredited to the ray-tracing render engine, faithfully packaged within all the digital softwares of architectural production. The rendered image today is immutable in its application as an output of something already

designed, locked into the epistemic virtues of its proverbial past. As a means to break free of this deeply seated mathematical enslavement of architectural production, this thesis posits the rendering engine as the tool of creation as opposed to the customary tool of fantastical documentation.

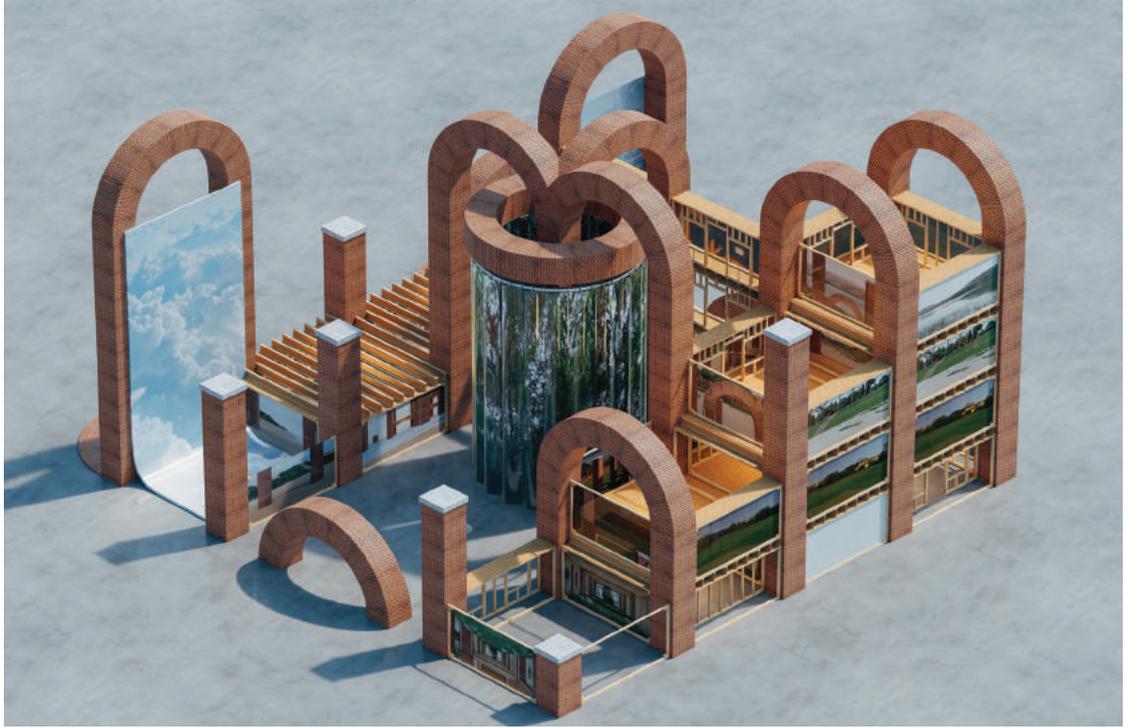
The project starts with two types of construction methodologies: the trabeated frame and the stereotomic wall, chosen for their qualities as part of the most fundamental elements of architecture. These elements will be implemented as a backdrop to apply two types of rendering techniques: image projection and normal mapping. The discoveries resulting from this design methodology will be applied in the crafting of an enfilade, the commingling of both the frame and the wall. The outcome of this thesis gives architects a new way to generate and imagine space, subject, and the world around them; liberating the discipline from the unerring constraints of its mathematical past.

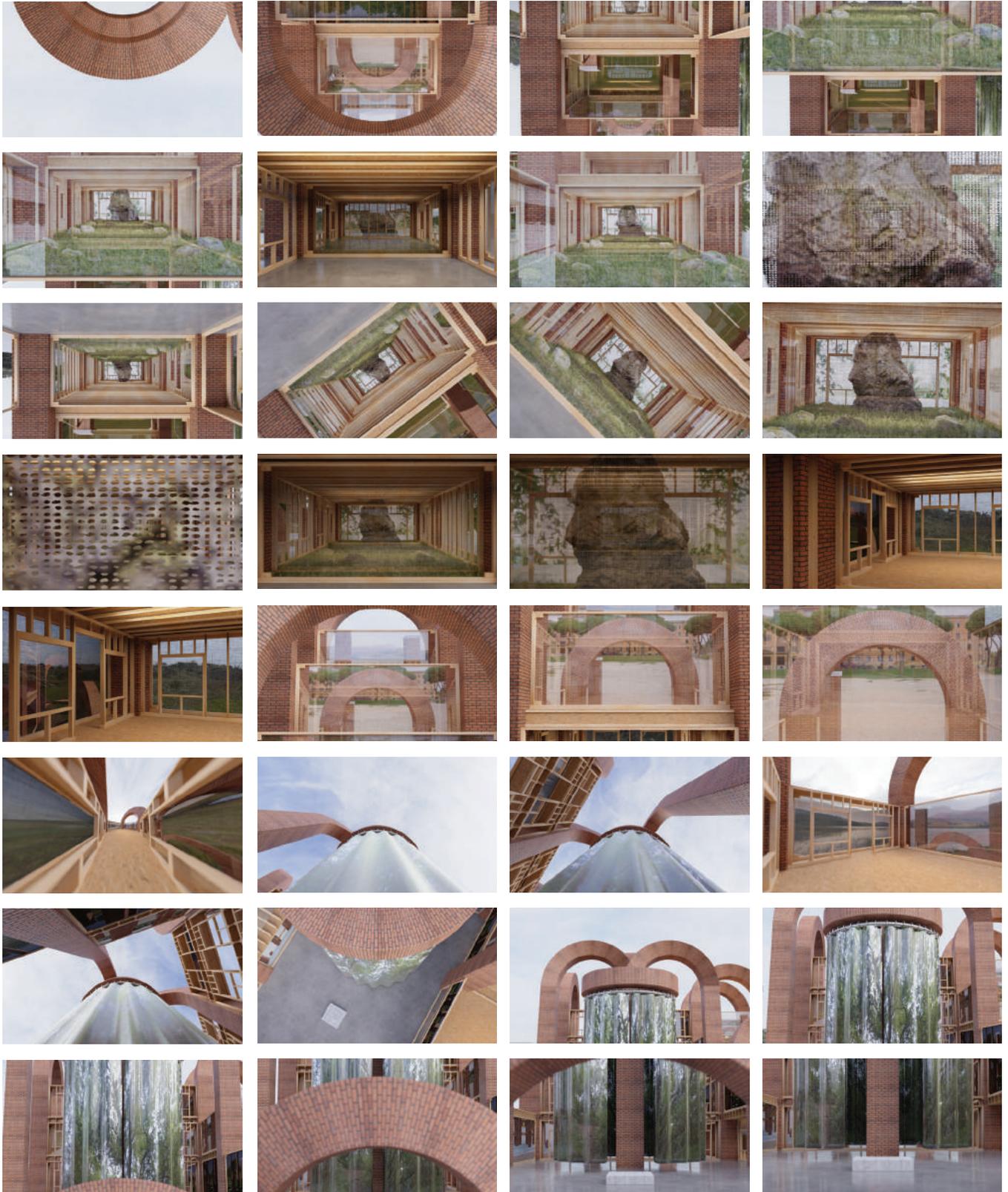












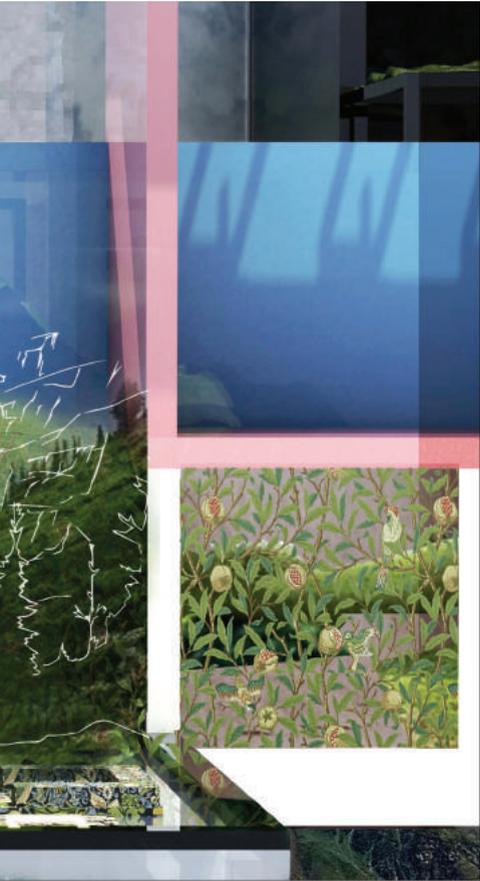


# Tableaux Typologies

\_Lauren Miller

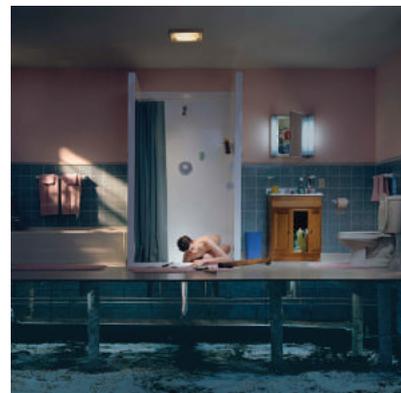
\_Advisor: Perry Kulper

This thesis seeks to develop a process for the creation of an architecture that takes nothing for granted, perpetually responding to, rejecting, and re-imagining the known condition in order to expand the field of architectural vision. This process is specifically focused on the subversion of typological thinking in architecture. The notion of typology has become a default condition for the discipline, foregrounding spatial relationships, programmatic components, and formal logics in a way that determines the building's end before it begins. *Tableaux Typologies* delves below the surface of typology, examining, understanding, and ultimately engaging the components that compose the typological bias in order to circumvent its prescriptions. The primary fault of the typological default is best identified by Peter Carl in his essay, "Type, Field, Culture, Praxis": "the type 'bedroom' tends to solicit a medium sized room with a bed, side table, window, closet, and access to a water closet; whereas the typical situations of sleep, dreams, sex, illness, and death open up much more profound and rich possibilities of interpretation." Thus, this thesis engages the situational structure present below the typological surface in order to re-imagine the ways in which a space might be formulated, re-inventing the building through the experiences that occur within it, ultimately creating an anticipatory architecture at the junction of what is and what might be, imaging and imagining the presently impossible.



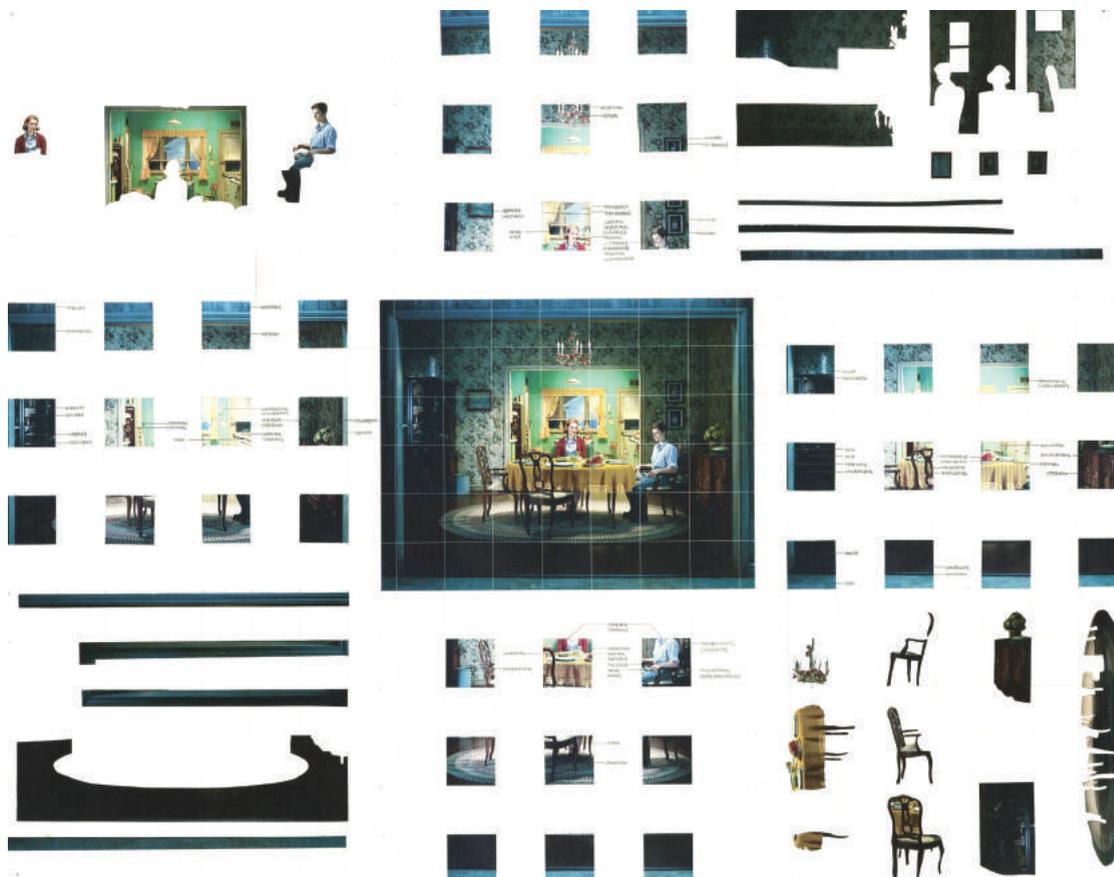
**\_Crewdson Bathroom**

This tableaux vivant photograph by Gregory Crewdson invites the viewer to explore that which lurks below the surface of our daily lives. In this image and others in his extensive portfolio, he casts a critical eye at the spaces that we use every day, activating them with theatrical situations in a way that allows for a deeper understanding of the ways in which architecture relates to the situations that occur within it.



**\_Crewdson Living Room**

A collage of Gregory Crewdson and other tableaux vivant photographers' takes on the living room, this image is aimed at exploring the various perceptions of elements within and situational tendencies of the living room as it is understood through the lens of tableaux-vivant photographers.



**\_Deconstructed Typology**

An active deconstruction of a Crewdson image, this drawing investigates both the architectural elements and situational structures that work together to form the typology.



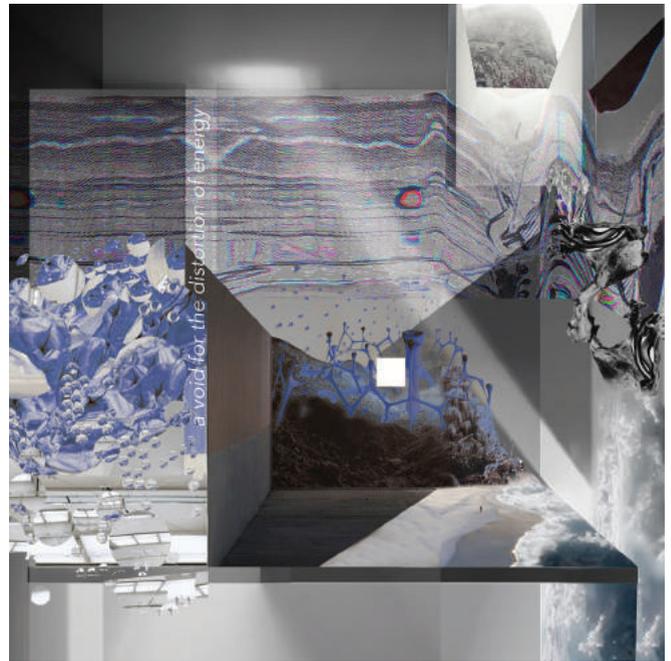
**\_Part 01: The  
Typological Town**

The thesis begins with a series of typologies, captured through the lens of tableaux vivant photography, sited in a typical American town. As with all typologies, these appear, at first glance, in their standard, objectively knowable form — the physical reality of the typologies as they exist. However, upon closer inspection, the tableaux vivant photographs begin to hint at the situational implications of the typology that exist below the surface.

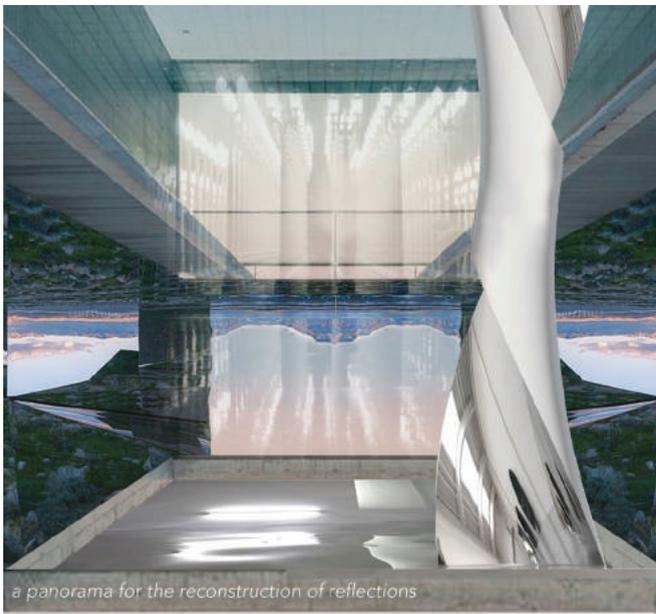
This thesis explores the implications of surfacing these situations, the creation of tableaux typologies in an experimental halfway house at the edge of this typical town.



A Vessel for the Awakening of Dreams



A Void for the Distortion of Energy



A Panorama for the Reconstruction of Reflections



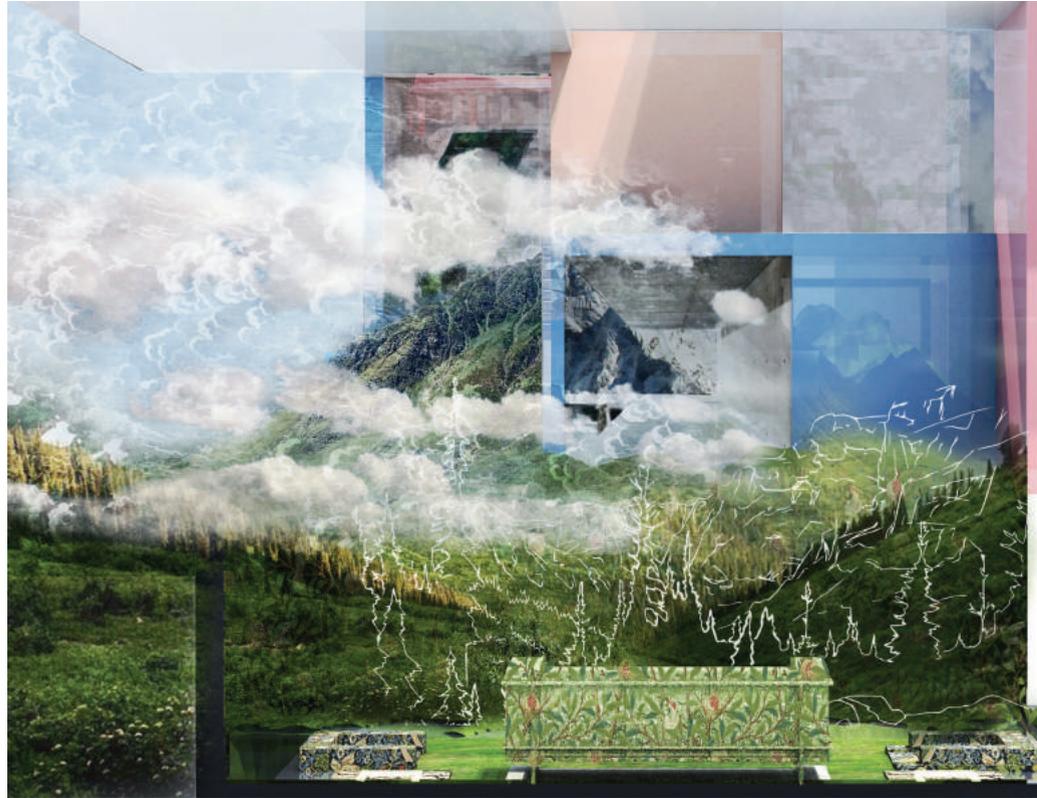
A Capsule for the Convergence of Conviviality

### **\_Part 03: The Halfway House for Tableaux Typologies**

This halfway house is the point at which the typologies are freed from their prison of preconception into the world of unbounded imagination. It is in this halfway house that the typologies make the transition from fluid to fixed, from insulated to engaged, from static to active. Situations are no longer the quiet product of architecture, they are its explosive catalyst. What was once a suburban home with a bathroom, bedroom, dining room, kitchen, and living room is re-imagined as a dynamic armature that serves as the framework for a panorama for the reconstruction of reflections, a vessel for the awakening of dreams, a void for the distortion of energy, a capsule for the convergence of conviviality, and a landscape for the viewing of the lost horizon.



\_A Reimagination of the Living Room



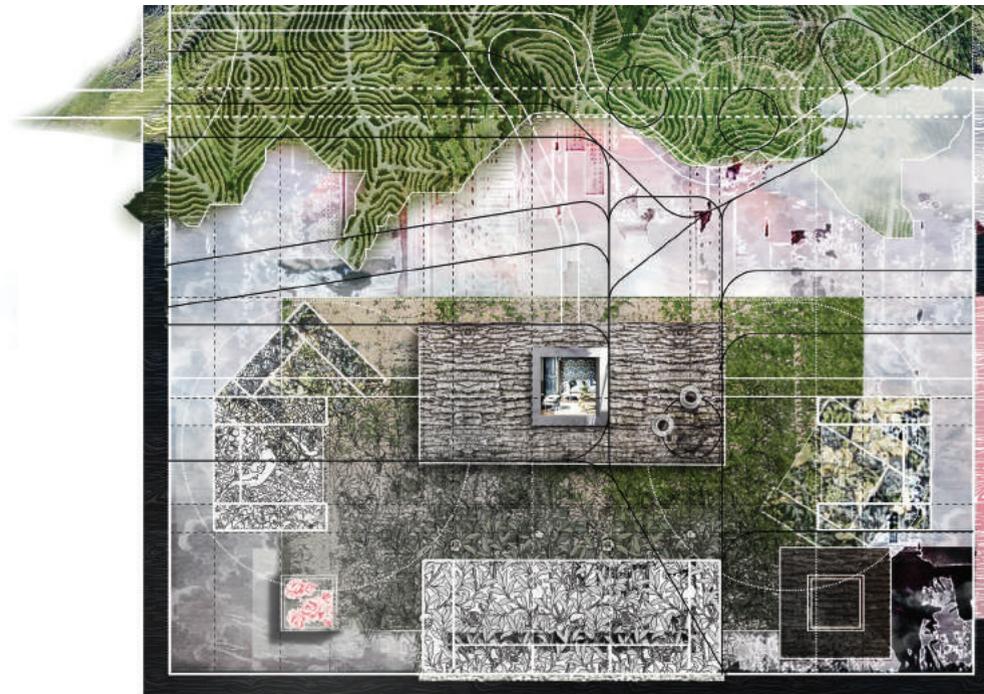
**\_Part 04: A Landscape for the Viewing of the Lost Horizon**

The landscape for the viewing of the lost horizon sets up a series of viewing conditions that might take place in a living room.

[ looking out the window / gazing at the television screen / reading a book / contemplatively staring into the distance / glancing at a photograph or painting on the wall ]

And this develops these situations into an architecture of their own, a space that transitions between elements and situations / between typology and typicality / between flatness and depth / between insulation and engagement / between interior and exterior / between miniature and gigantic / to create a tension / between the active and static conception of typology.

Ultimately developing an architecture that delves beneath the surface, sensing situations and expressing experiences in a way that imagines the impossible and forges a new future for the possibilities of the discipline.





\_PROJECT INFORMATION:

\_TITLE:

\_Everything Must Go

\_TEAM MEMBERS:

=2

\_TOTAL COST:

=\$2,300

\_MATERIALS:

\_aluminum dibond, 3d  
printing, photo paper,  
museum board, metal shelves  
and tables

\_TIME:

\_MODELS AND DRAWINGS:

=14 days rendering

=7 days final model

\_ALL NIGHTERS:

=3

PROGRAM, TOOLS:

\_rhinoceros, blender,  
photoshop, zund

PRODUCTION LOCATION:

\_DRAWINGS:

= studio

\_MODELS:

= studio



ACKNOWLEDGMENTS:

\_Lorraine Gemino

# Everything Must Go

\_Eileen Arcos and Kevin Sani

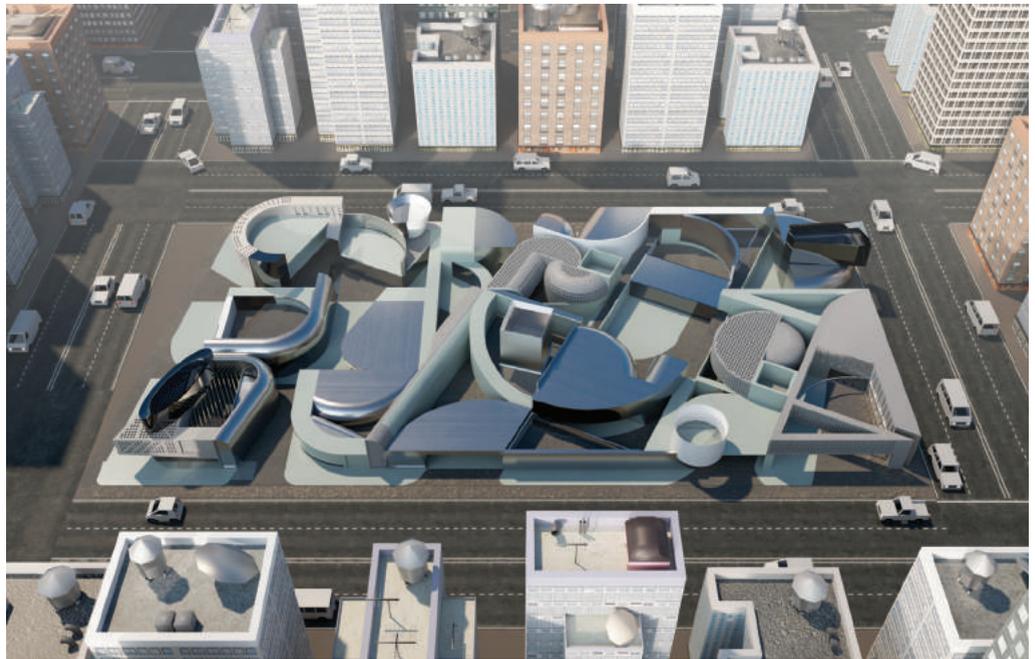
\_Advisor: Cyrus Peñarroyo

Consider the stuff of everyday lives.

Architecture typically performs as a repository for our stuff, but stuff has untapped spatial and material potential. These collections of things, individual and identifiable, need to gain more cultural autonomy and social valuation. One way of reconstructing the image of an object today, then, is to acknowledge its role within an architectural situation by considering its uncanny and unstatic properties. By flattening the landscape of stuff and its display, material and spatial hierarchies become slippery, and the definitions of foreground, background, support, surface, and ground articulation become malleable. Consequently, the display will not only showcase the items for sale but also collapse the surrounding buildings, as a miniaturized landscape offered for visual consumption.

This thesis invests equally in revealing how the objects gain or lose different meanings, but at the same time are undeniable concrete entities that continue to gather physical momentum as they take on new forms and functions over time. The enlivening operations deployed in the project are curation, decoration, and shuffling of display as well as aggregations and subtractions that alter the building, which is a department store. In doing this, the contained will reverse roles with its container and re-imagine its cultural value through compositional means.



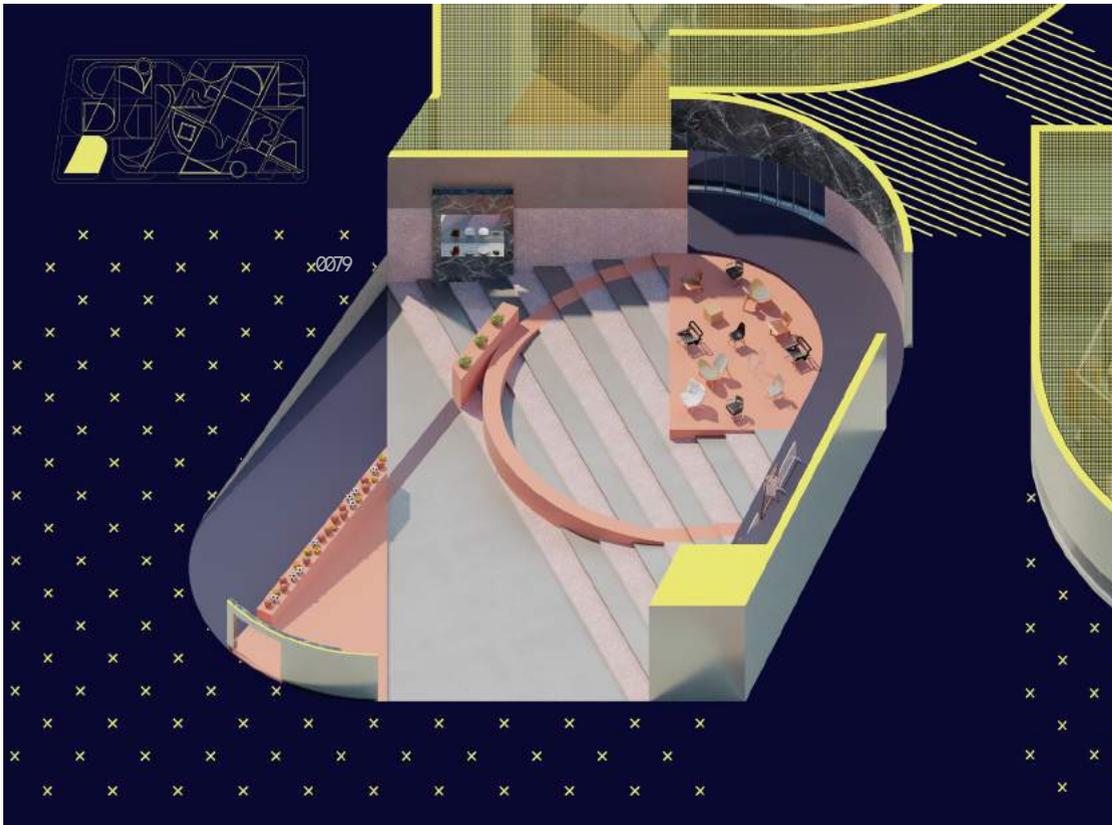


\_Aerial  
Axonometric of  
building on site

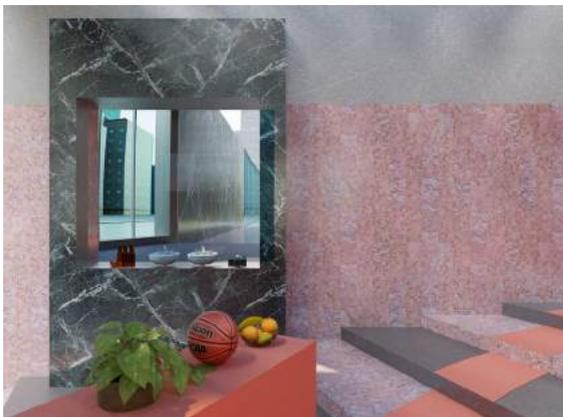


\_Elevational  
Perspective

Shows facade as  
object reflecting  
urban texture



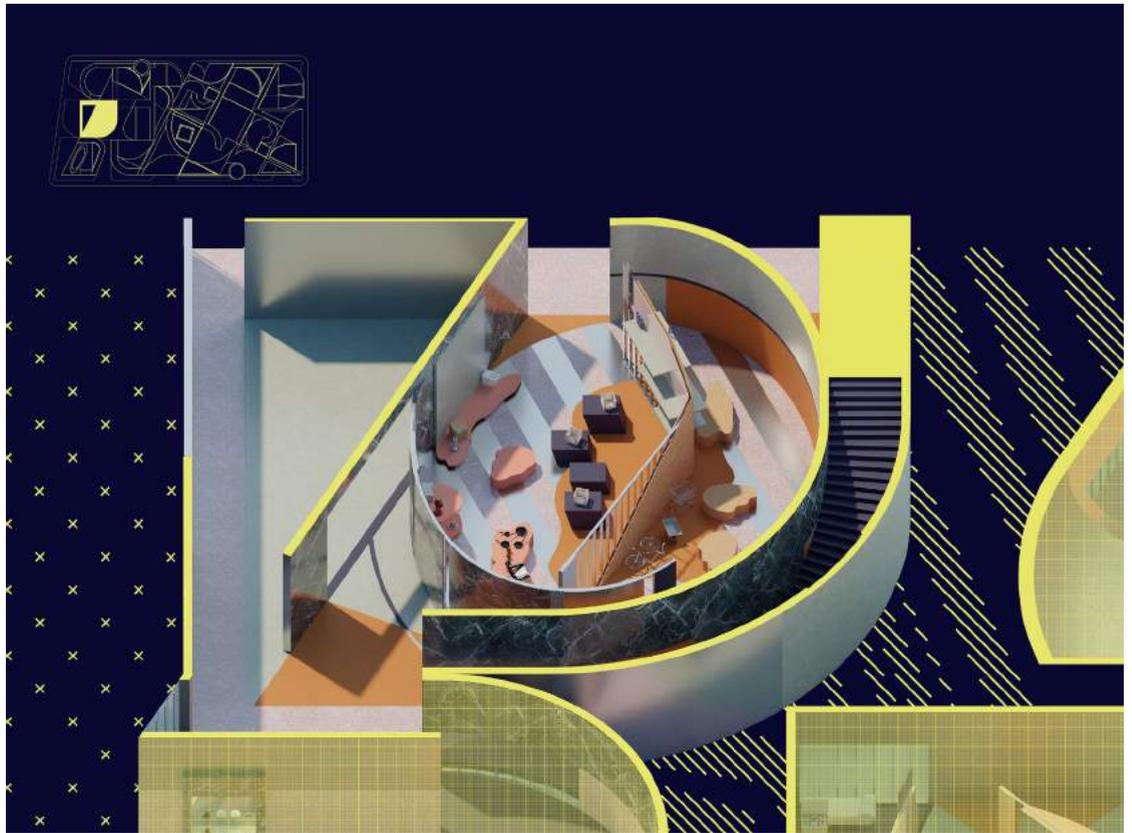
\_Collection [01]  
Ground floor  
isometric with objects



\_Interior Perspectives

\_Collection [02]

Ground floor  
isometric with objects



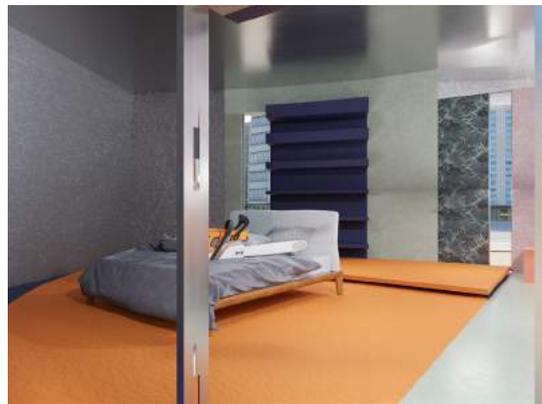
\_Model  
Photographs and  
Interior  
Perspectives





**\_Collection [03]**

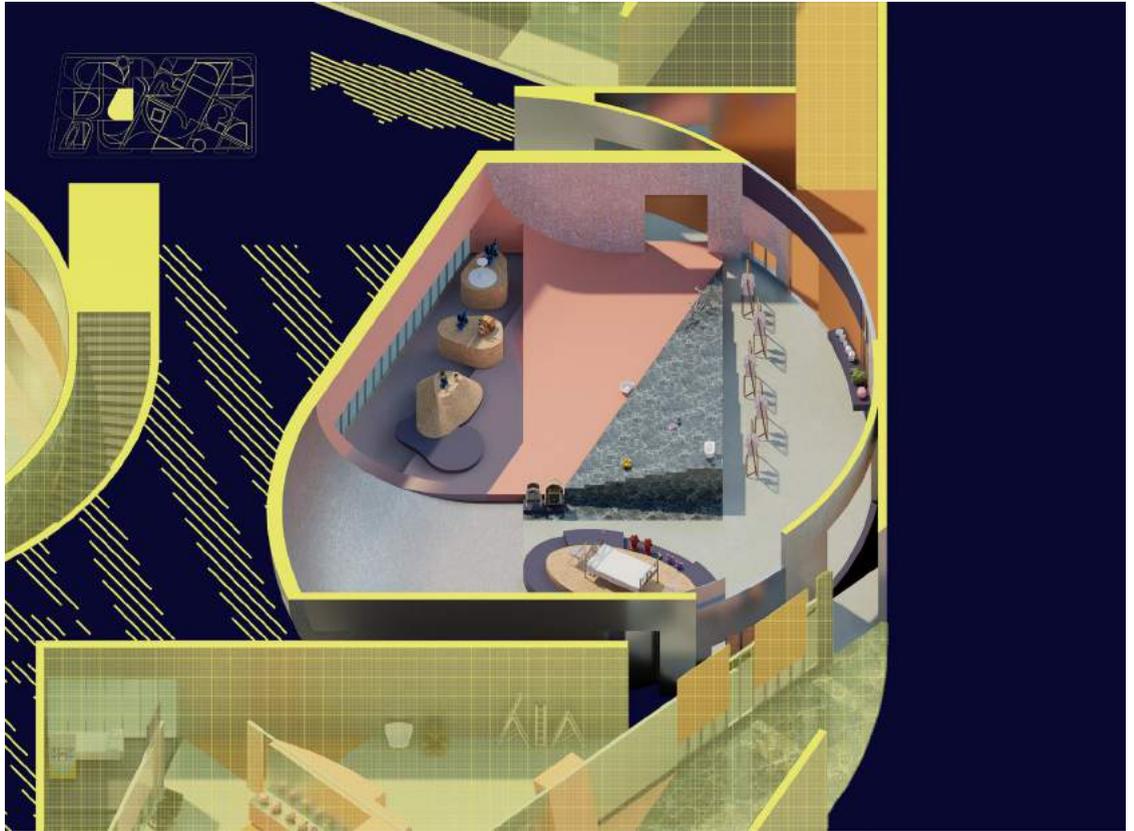
Ground floor  
isometric with objects



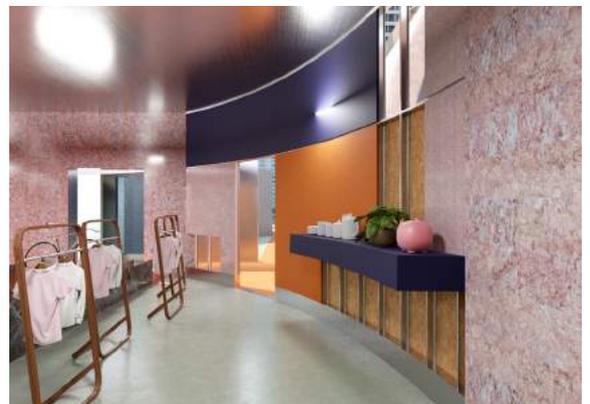
**\_Interior  
Perspectives**

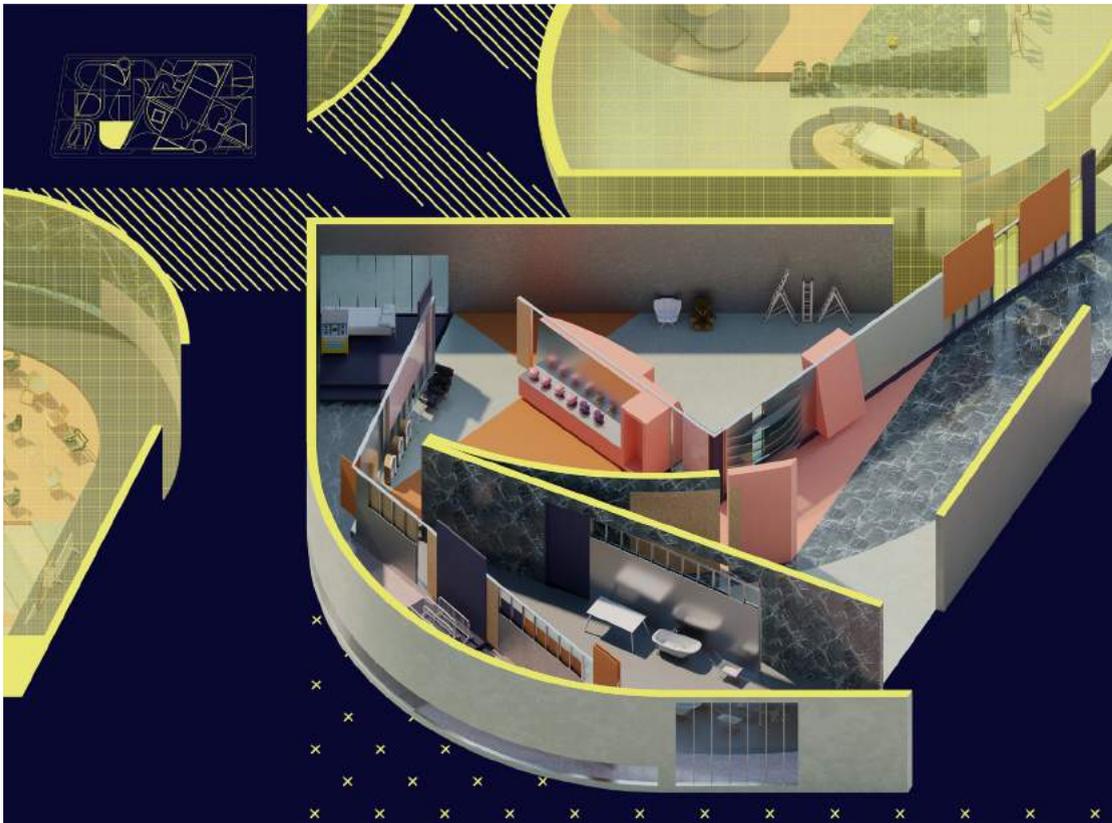
\_Collection [04]

Ground floor  
isometric with objects



\_Model  
Photographs and  
Interior  
Perspectives





\_Collection [05]

Ground floor  
isometric with objects



\_Interior  
Perspectives



\_PROJECT INFORMATION:

\_TITLE:

\_Figurative Theatre

\_TEAM MEMBERS:

=1

\_TOTAL COST:

=\$1,000

\_MATERIALS:

\_heavy bond paper, basswood

\_TIME:

\_MODELS AND DRAWINGS:

=20 days

\_ALL NIGHTERS:

=3

PROGRAM, TOOLS:

\_laser cutter

PRODUCTION LOCATION:

\_DRAWINGS:

=studio

\_MODELS:

=studio

ACKNOWLEDGMENTS:

\_n/a





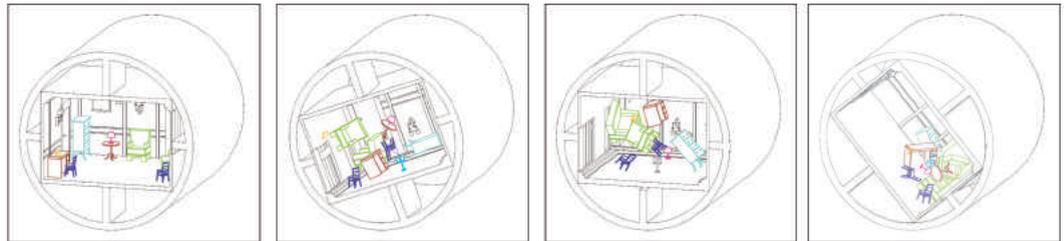
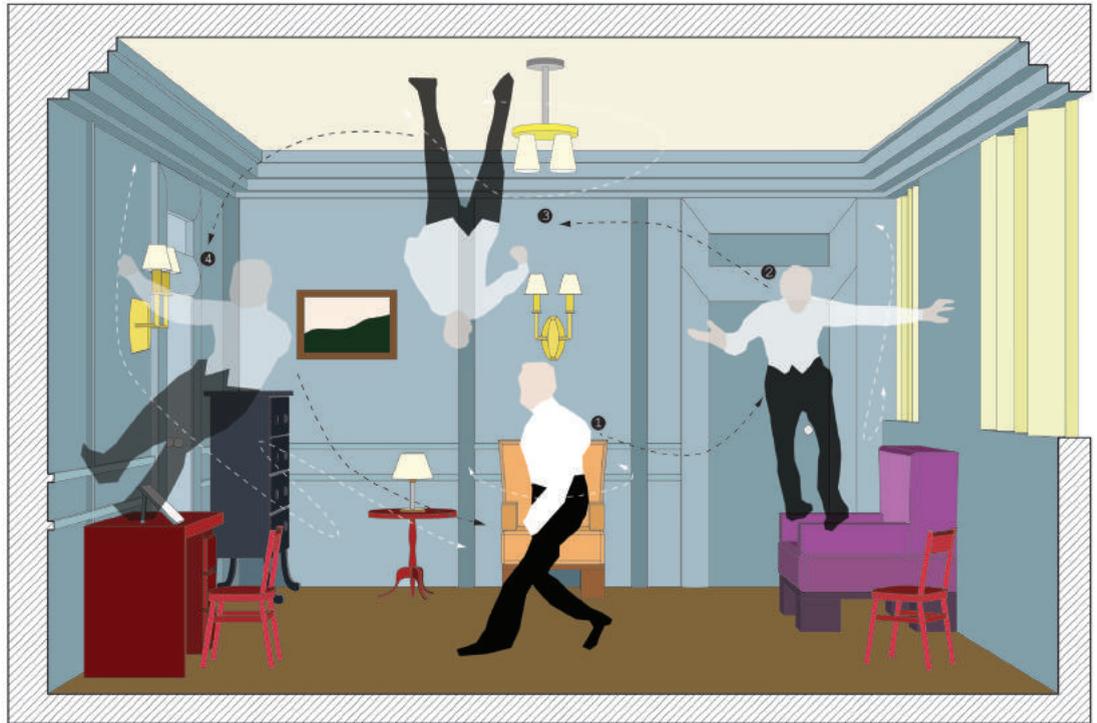
# Figurative Theatre

\_Sam Bo Zou

\_Advisor: John McMorrough

Architects have always seemed to like orders. From Vitruvius to Le Corbusier, architects are always on the path of finding the order of buildings through proportion, dimension, and scale. Currently, architects are beginning to look for disorders. Disorders are attractive because they create contingency and instability. Figurative Theatre is made of several different blocks. Each of them is a distinct figure. These figures break the typical high-rise typology. They go through different levels and span through different sizes of space. Floor plan and section change vastly through the whole building. Hence, there is no typical plan or section.

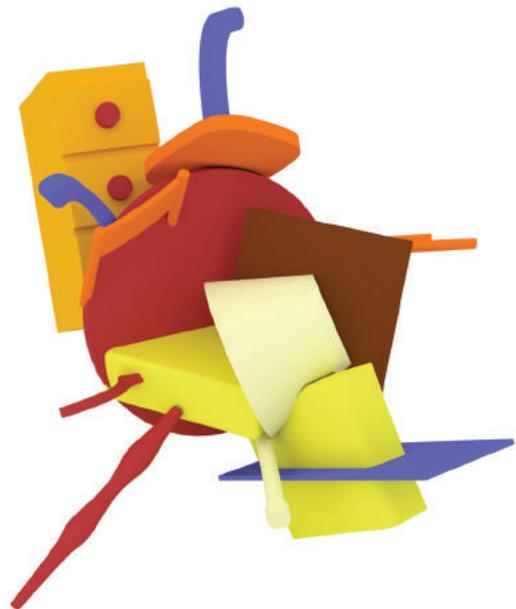
\_"You Are All  
the World to Me"  
-Royal Wedding  
(1951)

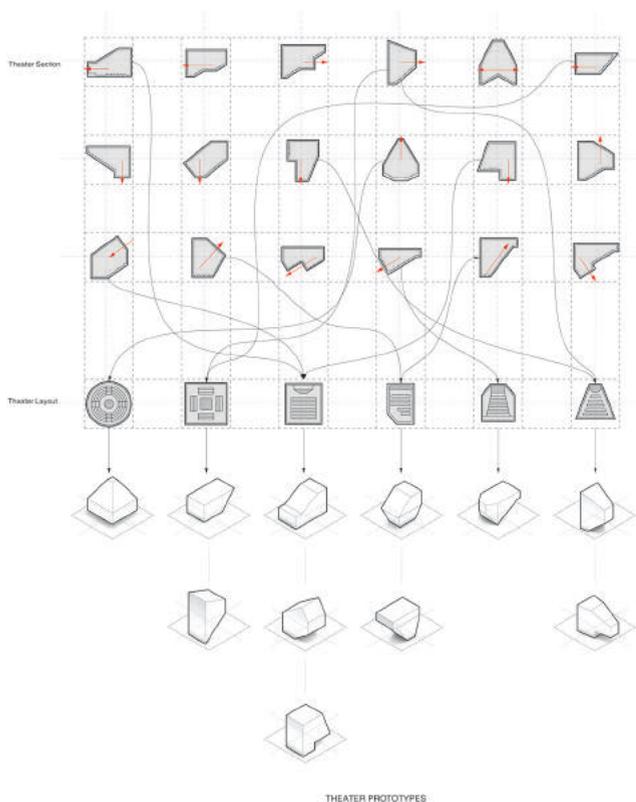


### \_Part 1

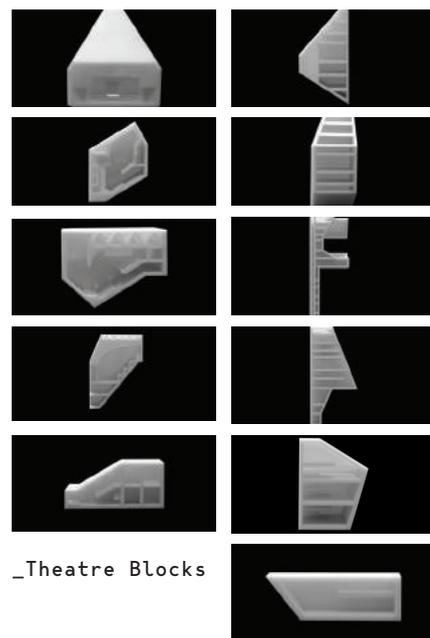
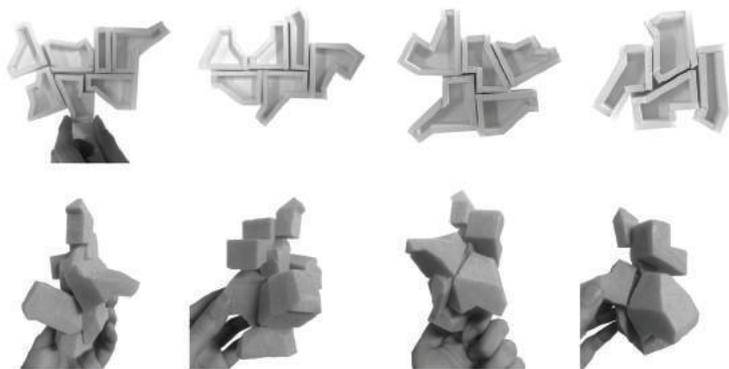
*A Royal Wedding* is a 1951 Metro-Goldwyn-Mayer musical comedy film starring Fred Astaire and Jane Powell, with music by Burton Lane and lyrics by Alan Jay Lerner. The film was directed by Stanley Donen. The particular number the project studied was "You Are All the World to Me", where Fred Astaire was dancing on different surfaces in a room. The scene was achieved by physically spinning the room. The number creates the effect of instability and falling. Unlike dancing, architecture appears to be a still artifact. The project aims at the issue: how can we try to create instability and a sense of falling in a still object (building)?

In fiction, a MacGuffin is a plot device in the form of some goal, desired object, or another motivator that the protagonist pursues, often with little or no narrative explanation. The design of the MacGuffin is to use "real" objects in combination to form a novel configuration. The MacGuffin of this musical was created based on the assumption that all the furniture falls on each other when the room starts to spin. They begin to merge into each other. It retains the instability and sense of falling in a still object. The result is an integral composition of several segments.





To make all the segments fit together, different sections were selected to make compositions. Through a series of two-dimensional and three-dimensional study models, a total of 11 forms which worked the best with one another were selected. The top five worked as theatres, and remaining six were used as offices and service spaces.

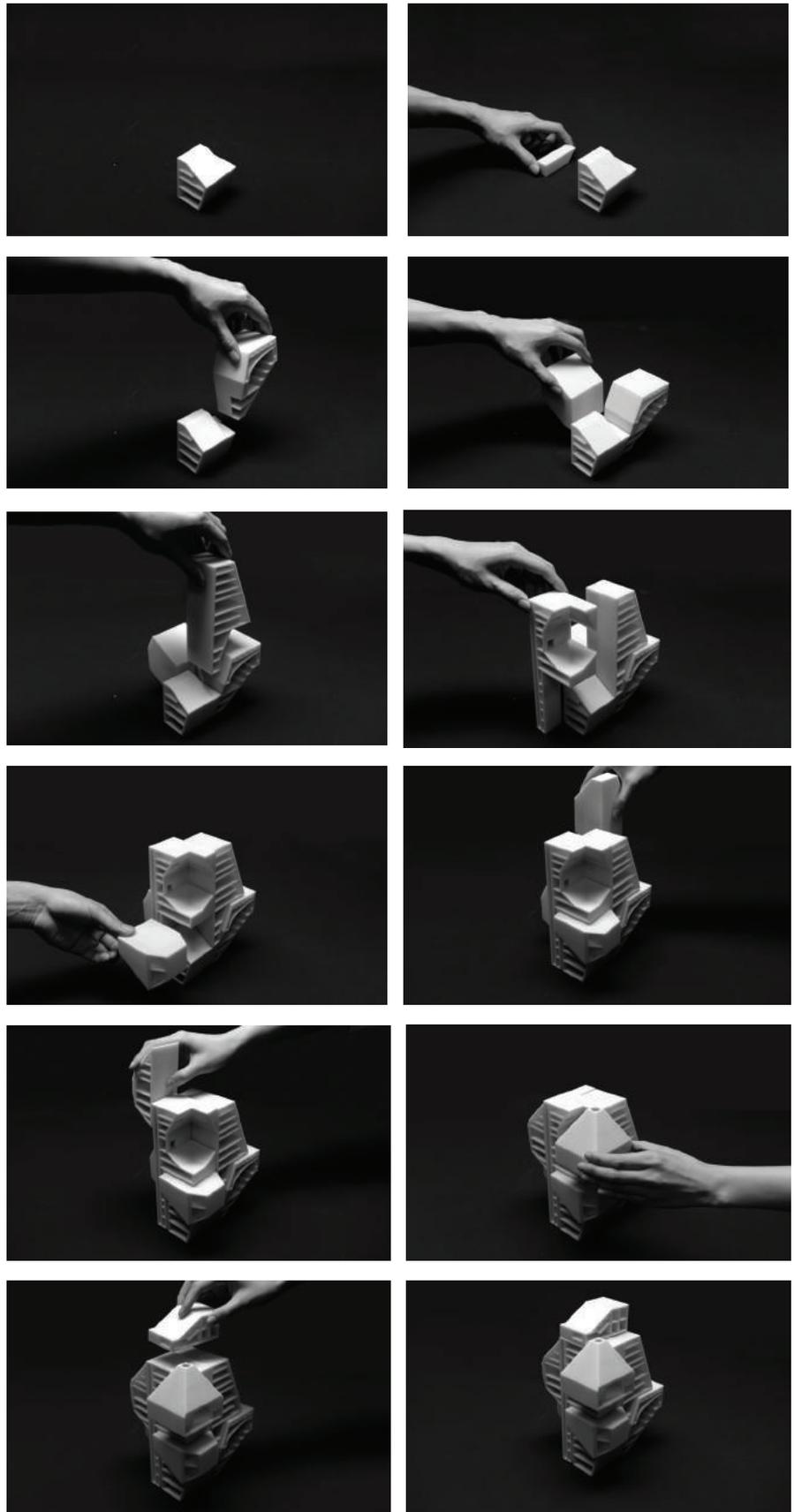


\_Theatre Blocks

\_Service + Office Blocks

## \_Part 2

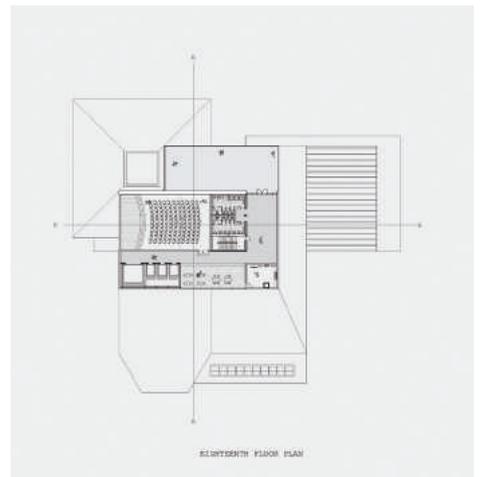
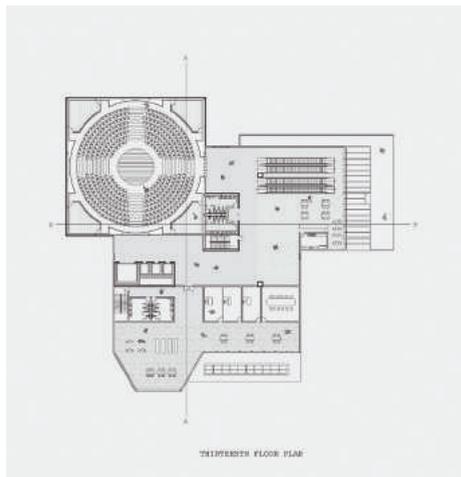
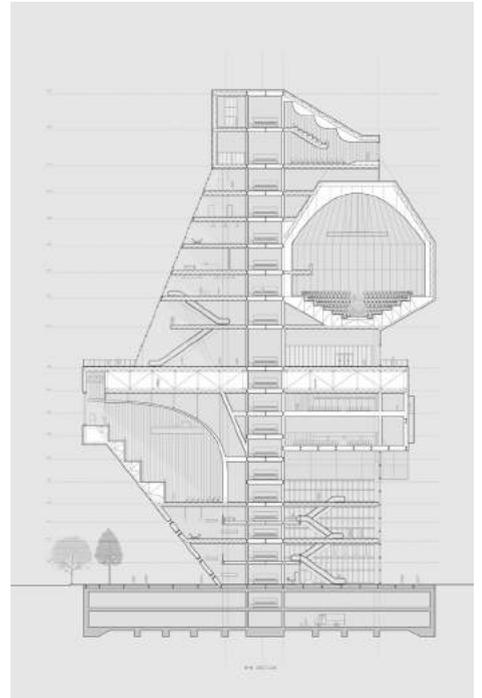
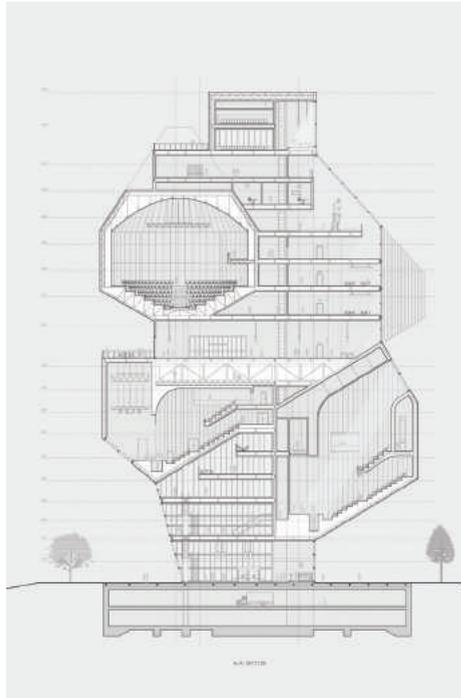
In order to continue achieving instability in the theatre building, the project studied sections of the theatre. Unlike traditional theatres that are always being hidden inside a black box, the new sections explored views looking outside. This helped create theatre prototypes that allowed views sideways or vertically upwards.



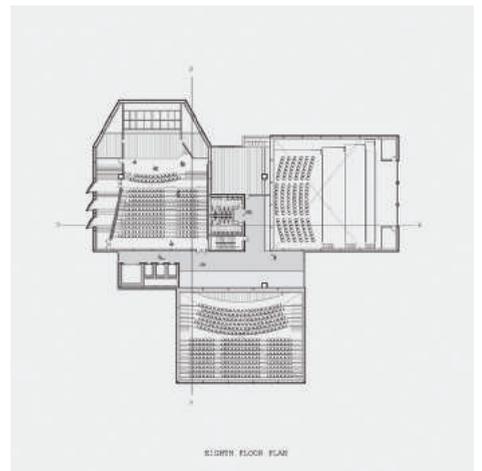
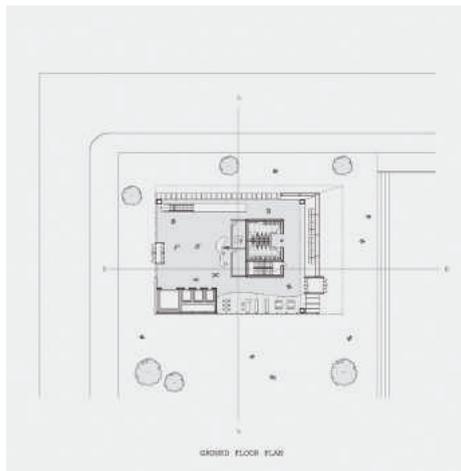
\_Model  
Assembling  
Process

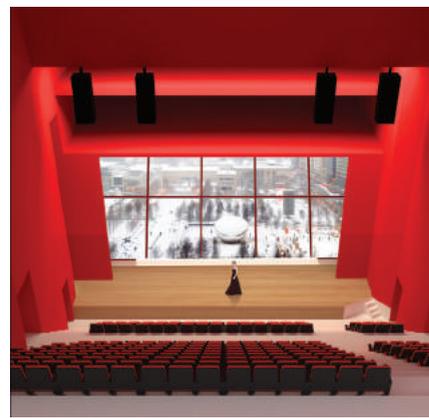


\_Section  
Drawings



\_Floorplans





**\_Renderings**

200-seat theatre,  
interior perspective



400-seat theatre,  
interior perspective

From outside, the building reads as one integral piece while each of the segments are still perceivable by their form, material, and color.

Inside the building, the space varies greatly from figure to figure. They go through different floors, spanning across different widths, facing different orientations, creating different boundaries. The spatial qualities change dramatically through the whole building. In plan, the boundary of different figures is sometimes clearly defined by walls. Sometimes it's blurred and only divided by floor pattern. Sometimes it disappears, and the space is merged.



\_PROJECT INFORMATION:

\_TITLE:  
\_Re-Imaging Suburban  
Wasteland

\_TEAM MEMBERS:  
=1

\_TOTAL COST:  
=\$500 - \$1000

\_MATERIALS:

\_mylar printing, mounting  
materials

\_TIME:

\_MODELS AND DRAWINGS:  
=14 days

\_ALL NIGHTERS:  
=0

PROGRAM, TOOLS:

\_rhinoceros, adobe suite,  
vray

PRODUCTION LOCATION:

\_DRAWINGS:  
=library, studio

\_MODELS:  
=n/a





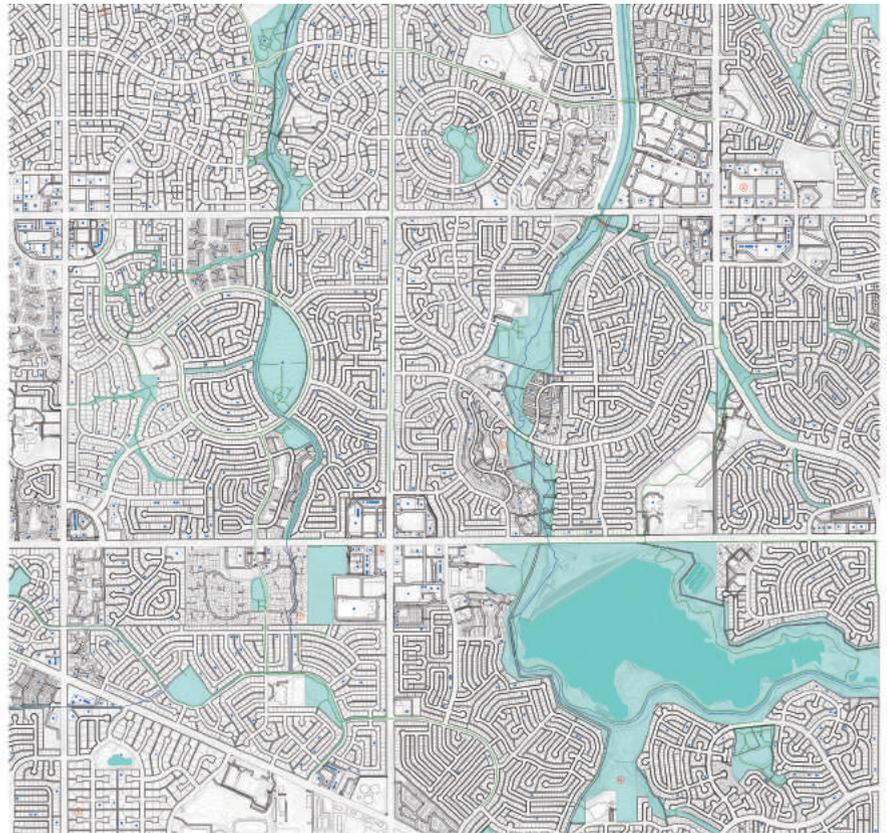
# Re-Imaging Suburban Wasteland

\_Lauren Lahr

\_Advisor: Tsz Yan Ng

The suburban landscape is prosaic compared to the iconic buildings of typical architectural discourse. However, the suburban landscape is deeply ingrained in our collective imagination as the space of American domestic architecture. Built upon a prescribed and carefully crafted image for the ideal American life, the suburb has been optimized by the real-estate market to appeal to the consumer looking to buy into a specific lifestyle. As a symbol of American consumerism, suburban architecture has become a product of market-driven design. This idyllic suburban vision has changed since the mid-twentieth century. The relentless uniformity of older suburban neighborhoods has transformed them into wastelands with rising foreclosure rates, increasing rates of poverty, and cheap land value attracting immigrant families or the urban poor. These changes, however, have revealed a new opportunity for architectural intervention that was previously controlled by developers and investor interests. New possibilities of re-imagining the suburb are presented, as market-driven investors

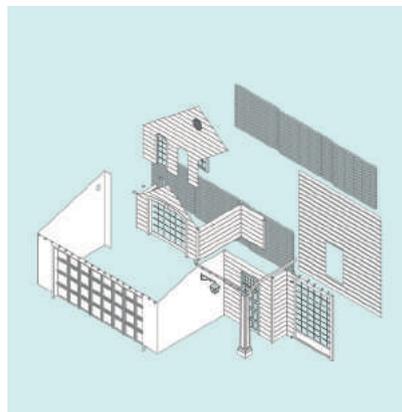
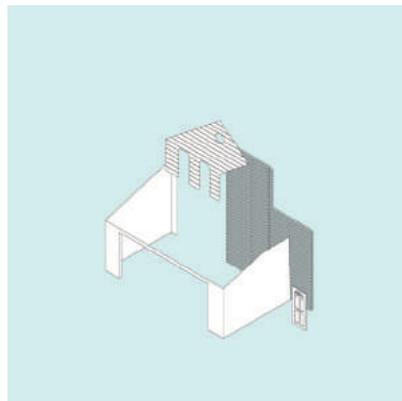
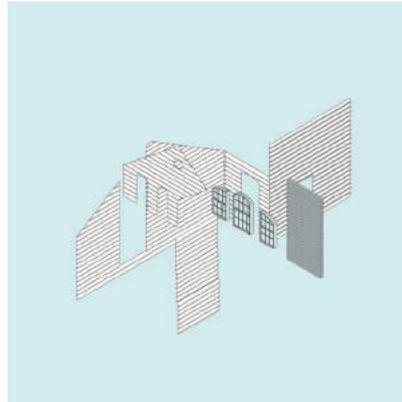
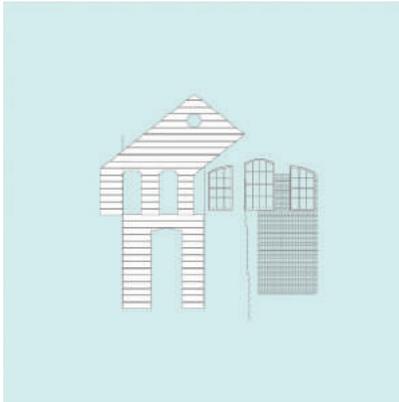
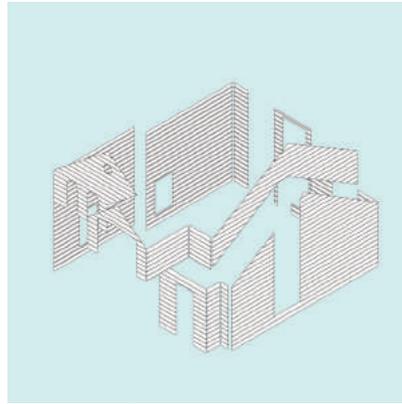
abandon the old suburban model for new urbanist development. Re.lmg aims to redefine the suburban context through the use of existing materials, elements, and spatial configurations. Rather than assume the material and program of the suburban is useless and ugly, this project aims to realize the suburban construct as a resource for redevelopment. The project examines the material and elements and their attached programmatic assumptions to realize new programmatic opportunities and configurations better attuned for contemporary living. The general appearance of the suburb, especially the single-family home, remains recognizable but it is altered to offer what it could not before. The suburban layout becomes a more socially engaged and sustainable model of living. By reclaiming elements from dilapidated homes to construct a denser suburban fabric, space is simultaneously opened up to be reprogrammed for more public amenities. This project reconstructs both conceptually and physically suburban life in the twenty-first century.



\_Suburban  
Context Map



\_Element  
Redistribution  
Urban Scale



**\_Digital Collage**

**\_3D Model Collage**

Filip Dujardin and Jan De Vylder both utilize collage as a design technique. Filip Dujardin utilizes existing photographs of architecture to create an image and imagine surreal architecture. Each technique results in unique space created out of existing materials, structural elements, and spatial configurations. This project utilizes both techniques hand in hand to experiment with design-as-image and as-architecture.



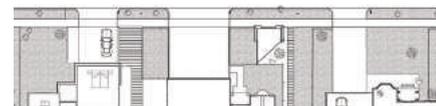
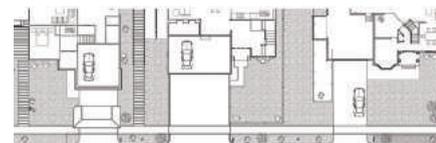
\_Exterior Block Elevation

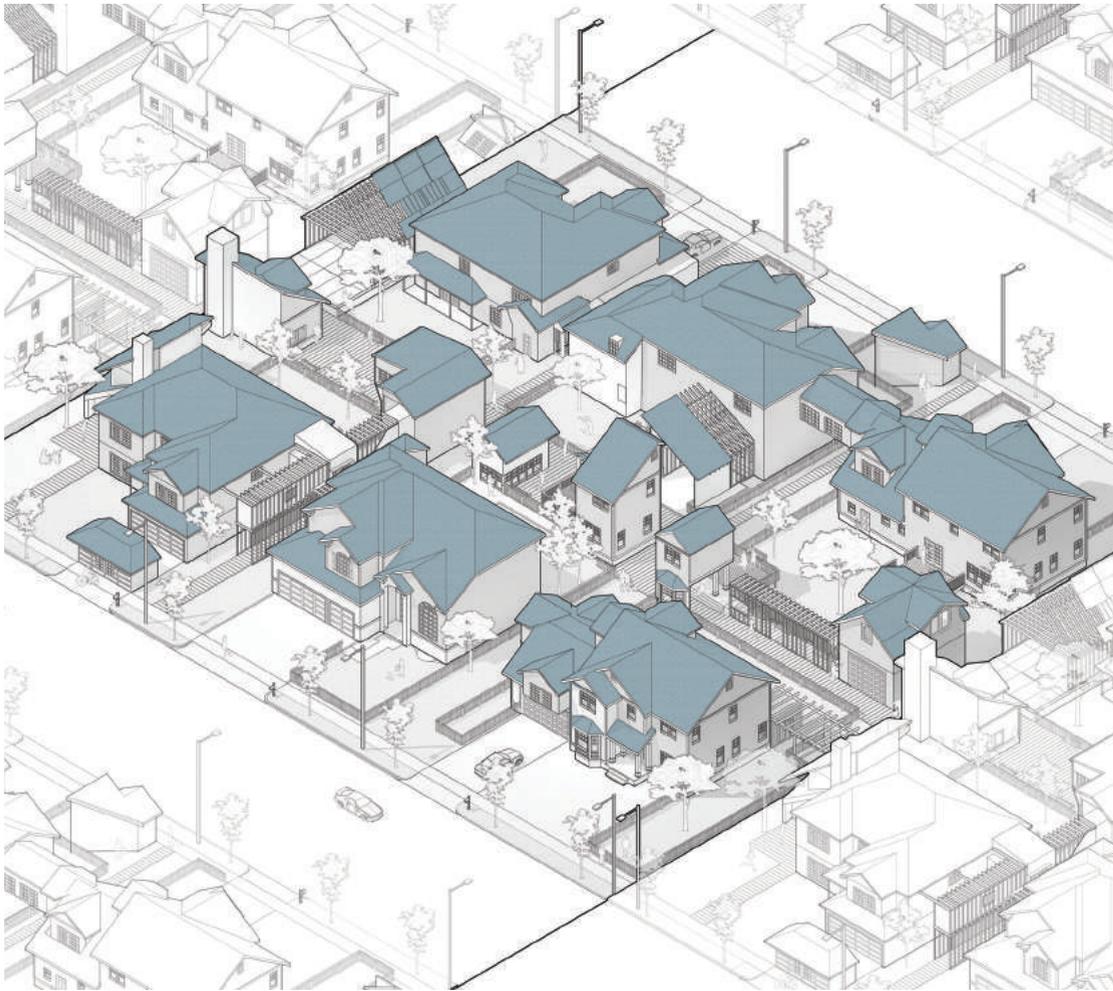


\_Interior Block Elevation

Materials, elements, and spatial configurations that once defined the typical suburban neighborhood can be analyzed for their material properties along with their associated programmatic potential. Through the collage of material to support different programmatic options, the previously connected assumptions about material can be manipulated or even erased. New programmatic organizations allow for space to be appropriated for public use while supporting variable lifestyles and familial structures. Reconfigurations of existing material elements will redefine how residents live within the suburb to support a diversified and inclusive environment. This will establish a suburban landscape centered around work, socialization, and sustainability as a place of production rather than consumption. Through the manipulation of elements and space, new adjacencies and interactions are supported. The general appearance of the suburb, especially the single-family home, remains recognizable but is altered to offer a new potential for the typical suburban house. The street-scape layout or suburban development becomes more socially engaging. The interiority of the private backyard becomes a public pedestrian street to share resources.

By reclaiming elements from dilapidated homes to construct a denser suburban fabric, space is simultaneously opened up to be reprogrammed for additional public amenities. The continuity of the suburban landscape is erratically reinforced and completely restructured.





**\_Final Suburban Block Design**

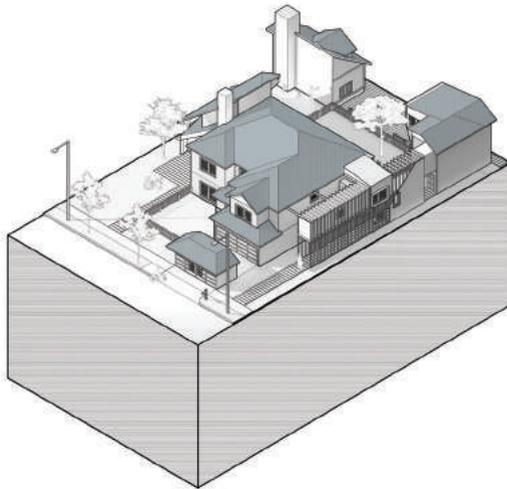


**\_Plan View and Distribution**

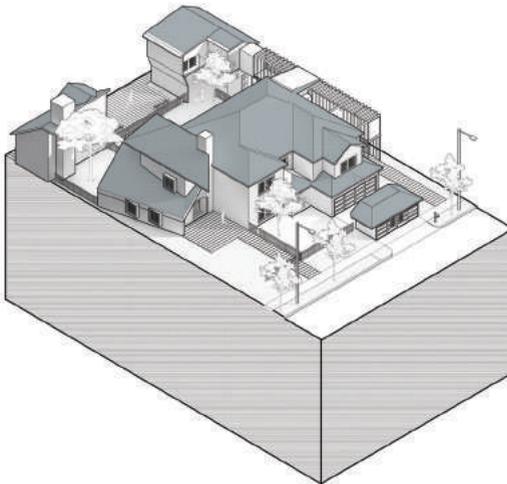
The over-calculated redistribution of suburban elements edges on slightly bizarre but the appearance is maintained in order to change the image of an already existing place. The nuanced structure of this reimagined suburban landscape allows the perception of the space and its residents to transform. The suburban landscape and its function change monumentally while concurrently appearing the exact same.

**\_Group C:  
Single Family  
Home**

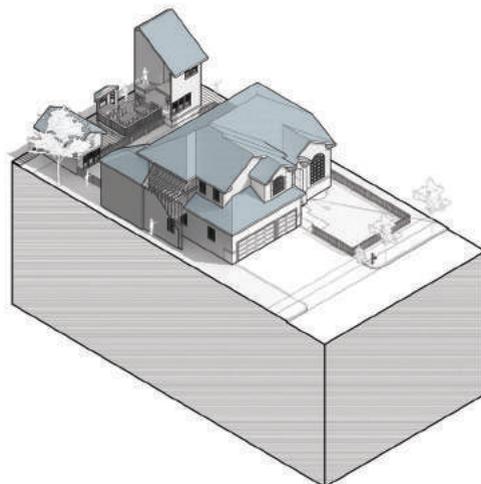
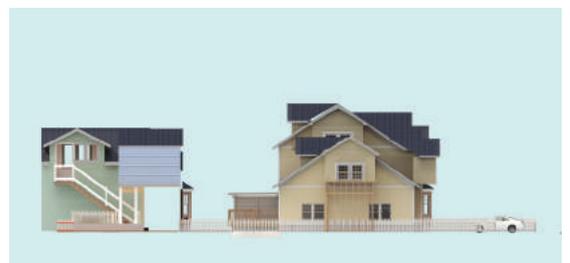
How design affects  
interior space and  
individual house  
layout



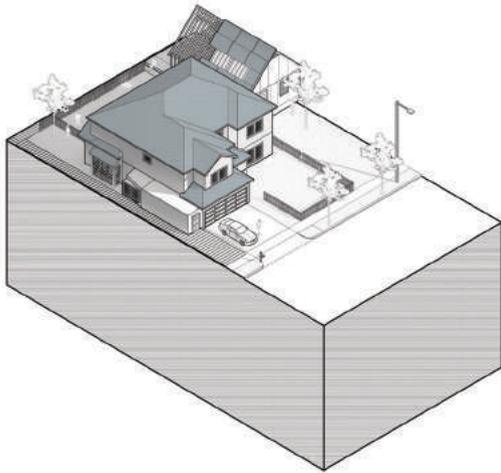
\_House 1



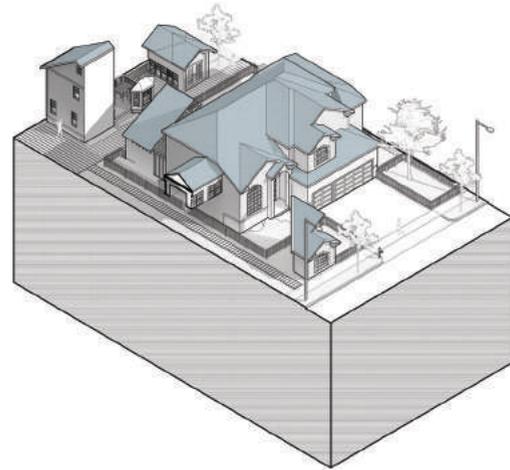
\_House 2



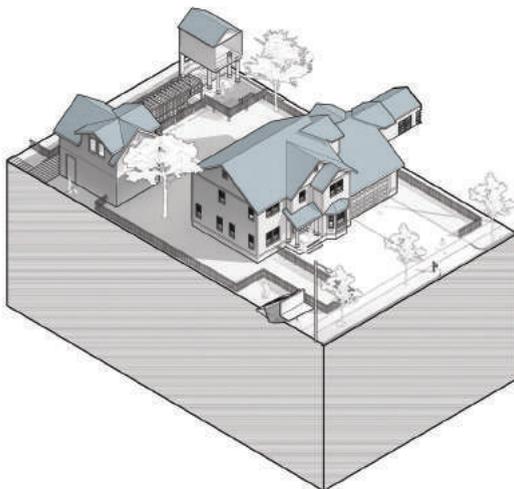
\_House 3



\_House 4

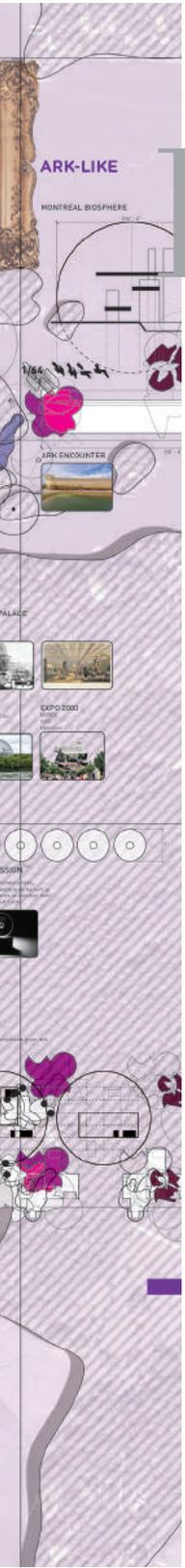


\_House 5



\_House 6





# Invasive Species: Cultivar

\_Karl Heckman

\_Advisor: Perry Kulper

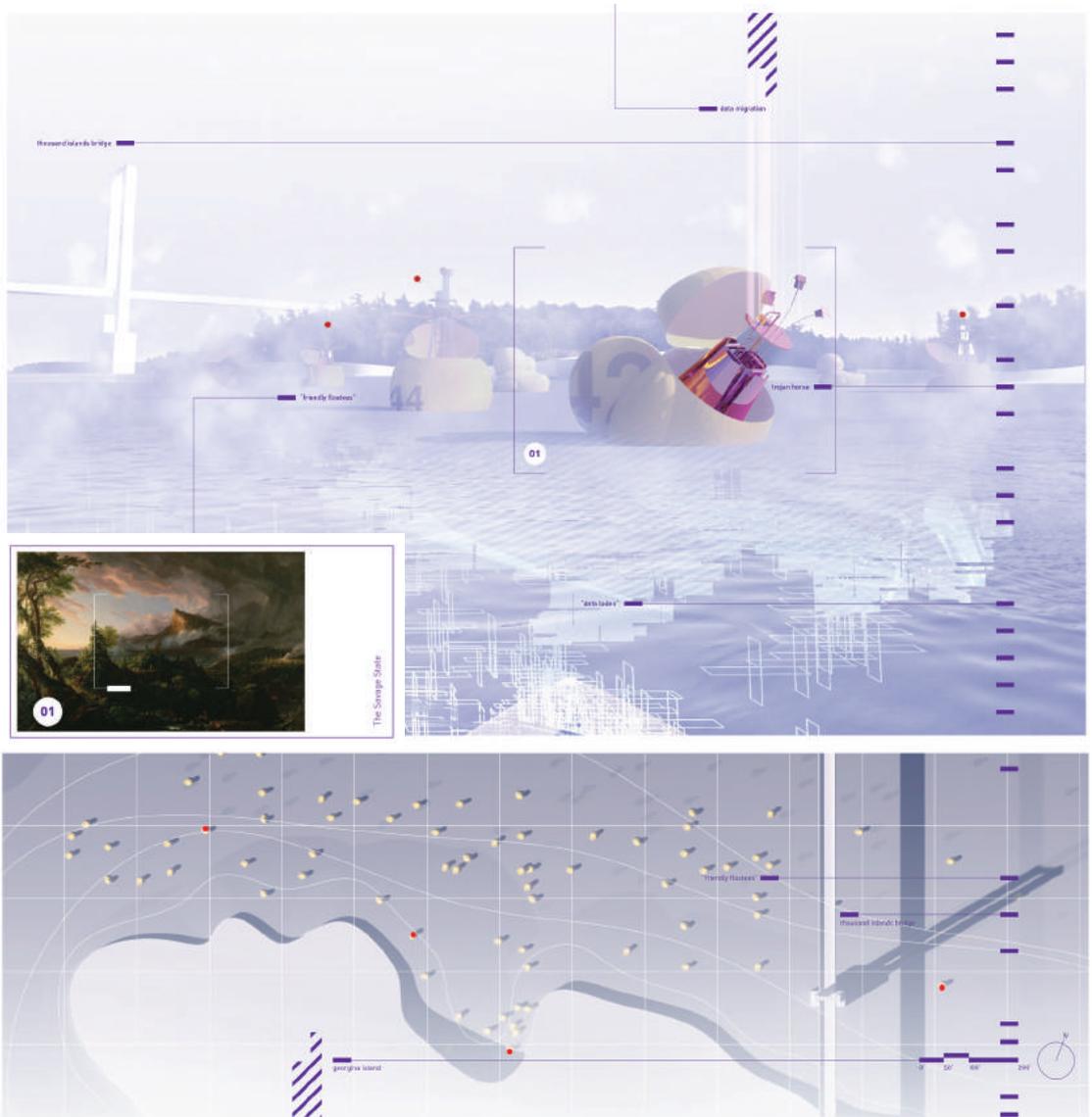
Invasive Species jumps off the backs of both Kenneth Frampton's "Towards a Critical Regionalism," and Constant's "New Babylon," in search of an expanded realm of discourse as to what architecture's engagement with 'context' might be. This thesis is about running contextual conceits (site, program, form, material) against ways of working which sidestep the frontal, or didactic methodologies that permeate much of contemporary representation, design, and culture. These ways of working are two-part: a mode of proto-speciation and the construction of a situational entanglement. Proto-Speciation suspends judgment for promiscuity and suggestiveness which is momentarily detached from "reality" (it's all real). The situational structure weaves together character elements which play a role in the thesis' contextual understanding for varied durations of time and meaning. By framing the thesis in this way, I hope to provide a rich filter through which past and future projects might be viewed as larger entanglements of ideas, rather than immediate diagrams of an instantaneous thought. The

current work is made relevant by the focus on surface as a primary design tool. Surface can float along in the realms of material, form, site, and even program. Therefore, it seems best fit for this realm of inquiry.

The thesis works over split geographies becoming an architecture that is both here and there. First, a constructed topography in the Thousand Islands region between the United States and Canada is grafted into the archipelagic landscape. Second, a painting in the headquarters of the Environmental Protection Agency which unpacks itself at night into a digitally gilded interior. These two agents work together to produce an ark for the "Rogue EPA" which encodes climate data into temporally active spatialities. Thomas Cole's "The Course of Empire" paintings are used as an analogous vehicle for the narrative of construction and context. It is both a representational and temporal ally, and hints at an architectural language of cultivation, building, and ultimately un-building.

## \_01\_Friendly Floatees

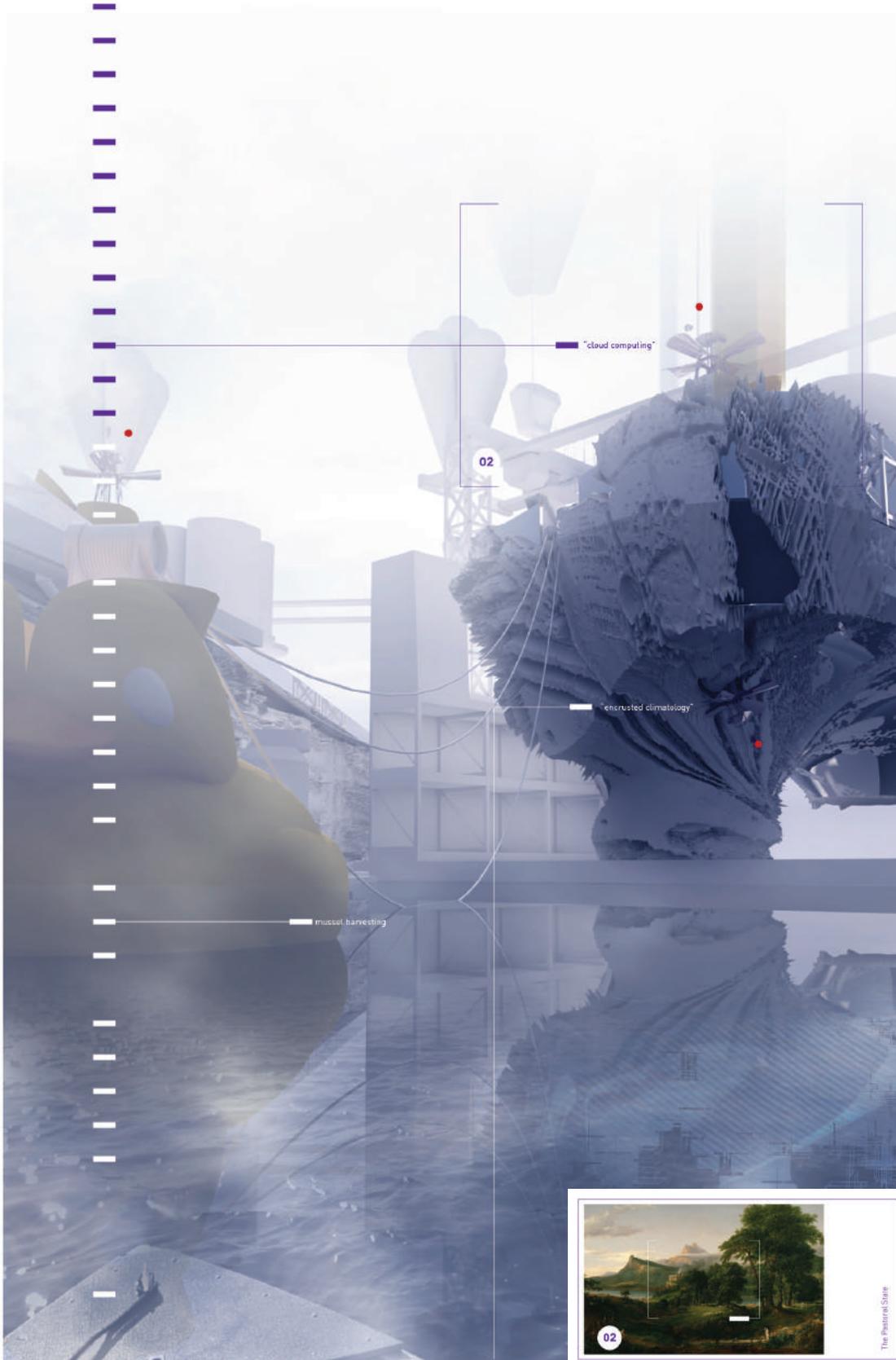
A publicity stunt, possibly. Large yellow ducks have blown into the Thousand Islands region between the United States and Canada. They are seen as friendly and pose no threat. Some say they have seen scientific equipment blooming from their tail feathers when they dive down to eat.



## \_Part 01: Speciation

This portion of the project frees up the designer to run off-leash and build a grammar or language which will help to drive the design proposal of this project. These are proposed as “proto-landscapes.” The landscapes themselves might be more ambiguous and promiscuous but should open doors. An interest in “proto” thinking has grabbed hold here and seems to be very worthwhile. It suspends early judgment but allows for analogous possibilities and readings.





**\_02\_Construction**

Working as double agents, the visitors begin to create a topography in the Thousand Islands. Encrypted landforms are built via a series of harvesting, dredging, and milling operations. Originally commissioned as a new golf course for wealthy vacationers, the project is subcontracted to the Rogue EPA who begin to encode climate data into constructed ground as a physical Ark for this knowledge.

**\_03\_HeraLds**

A near-future speculation, the topography is host to a number of visitors. Milled into a runway for a visiting bird motel, the question of context accepts the work of others into its realm and embraces appropriation/ collaboration rather than defense against this “invasive species.”



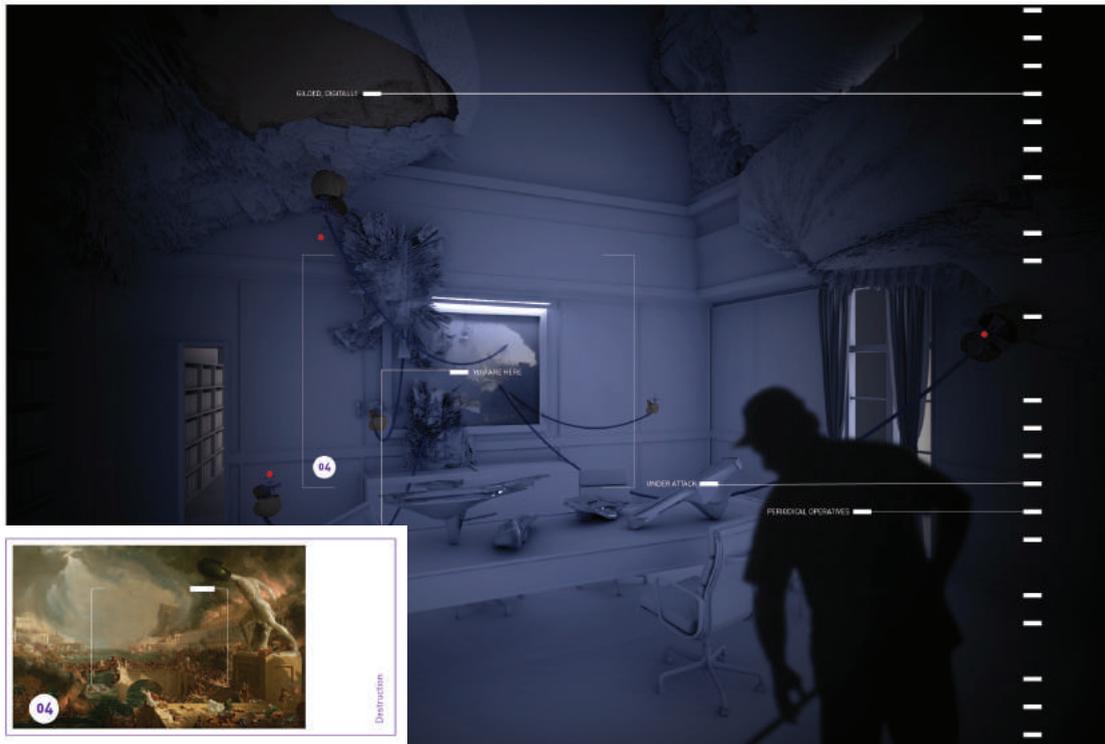
**\_Part 02: Situation**

Expanding upon the notion of what site and program can be, the situation is a drawing/construct that holds in relation a collection of fragments. Ideas in the situation might not formally “make it” to the end product but through their remaining in play via visual proximity they might do work by hovering on the periphery. The goal is to elevate the provisional or fleeting thoughts which often guide decision-making but are left out of the final conversation because they are not “resolved” enough for that format.



**\_Part 03: Performance**

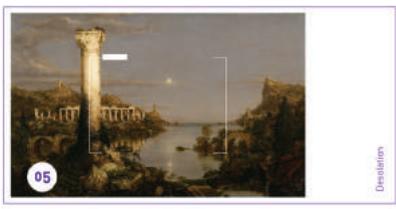
A series of architectural proposals, or one proposal with a series of fragments and morphologies, are developed. They are rooted in the situational structure from part two. They also arise from the speculation through their use of proto-grammars. Structured here is the idea that the architecture project is a way to concretize ideas, but isn't necessarily the idea. The situational payoff is the enabling of a project to extend beyond what normative contexts and site thinking have to offer.



**\_04\_Night Shift**

Situation part two. An imitation Thomas Cole painting has found its way into the “real” EPA in Washington D.C. Emerging at night into a digitally gilded interior, the friendly ducks appear again. Custodial agents, cleaning up the mess, they collect data that has been tossed by the current administration.





05

Destination



**\_05**  
**Fossilization**

Sometime in the future, the topography is absorbed into the everyday. The touristic activities of the Thousand Islands carve out a hotel and spa. Under the water, there is a view meant for a non-human visitor or two.



\_PROJECT INFORMATION:

\_TITLE:                   \_SuperLivery  
\_TEAM MEMBERS:                   =1  
\_TOTAL COST:                   =\$800

\_MATERIALS:

\_museum board, 3d printing,  
mdf, hardwoods, paint,  
acrylic, led lights

\_TIME:

\_MODELS AND DRAWINGS:                   =31 days  
\_ALL NIGHTERS:                   =1

PROGRAM, TOOLS:

\_rhinoceros, adobe suite,  
cnc router, 3d printers,  
woodshop

PRODUCTION LOCATION:

\_DRAWINGS:                   =studio  
\_MODELS:                   =studio

ACKNOWLEDGMENTS:

\_Michael Jefferson  
\_Suzanne Lettieri  
\_Steven Purvis





# SuperLivery

\_Kimball Kaiser

\_Advisor: Hans Tursack

There are two parts to the title of this project:

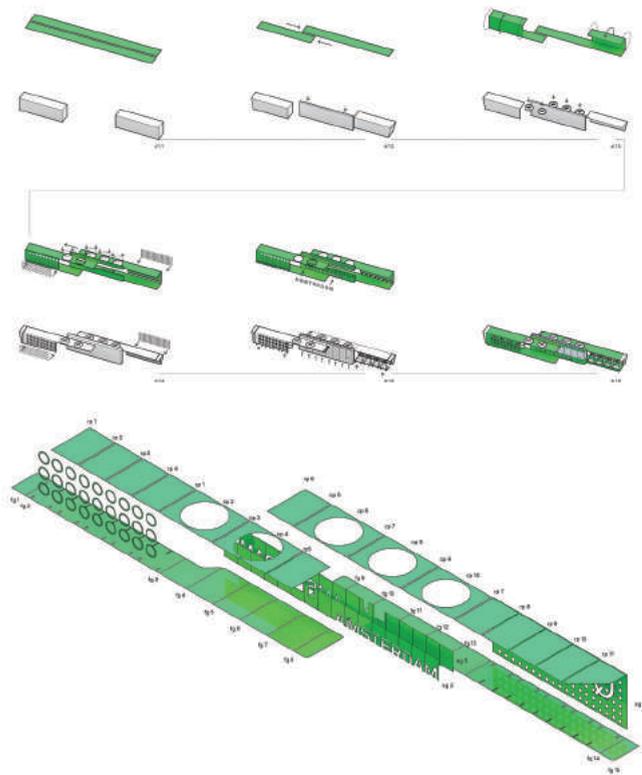
‘Super’ is borrowed from Supergraphics, the term that classifies the super-scaled, two-dimensional geometries that began appearing on walls, floors, and ceilings in the 1960s and 1970s. These stripes, numbers, words, and arrows were applied to existing architecture to achieve optical effects. These results were often accomplished by disregarding architectural planes, betraying corners, and visually masking form with pattern. In these instances, Supergraphics had more in common with Op Art and its older sibling “Razzle Dazzle Camouflage.”

‘Livery’ is the term used by designers for the specific set of colors and graphics wrapped on products such as automotive vehicles. These graphics directly respond to three-dimensional form by requirement, and are often used to accentuate form to geometry piece by piece. Whether or not the graphic jumps a joint or highlights it, wraps an edge or gets cut, the design of a livery quickly requires a magnitude of thoughtfulness.

‘SuperLivery’ as a conglomeration of the two terms begins to describe an argument and conceptual attitude for the graphic treatment of architectural surfaces. For example, the graphic as a design element should be specifically attached to an architectural form rather than be applied as an afterthought. The process to achieve these results requires a SuperLivery to

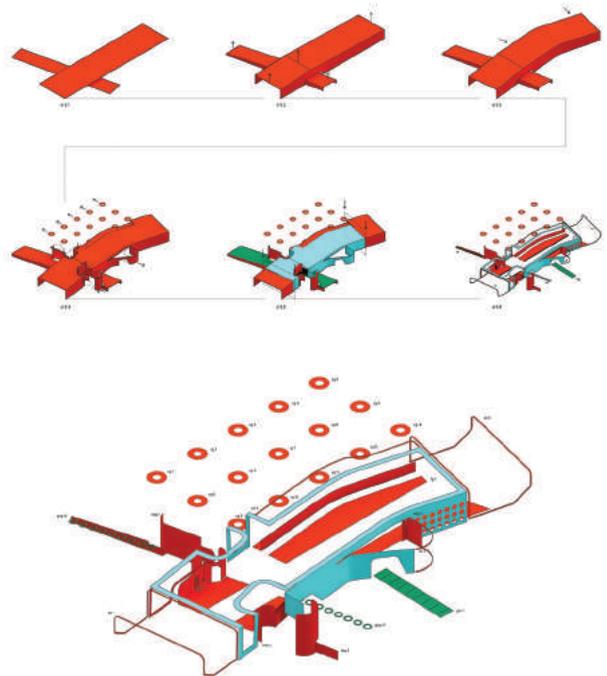
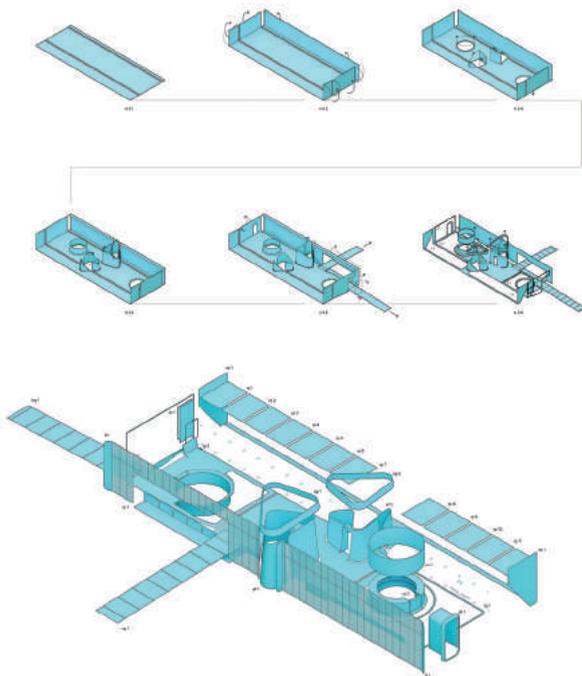
supersede form and become an autonomous compositional device—one which uses a process that privileges the graphic to be the conceptual driver for architecture, letting the SuperLivery be the skeleton in which the form fills in the blanks. This project and study is executed through the design of three separate train stations with different requirements in scale and program. The first station is a simple street car stop that performs as a canopy for shelter using a process that maintains a shared autonomy between the juggled formal moves with graphic moves. The second stop is designed through attempts of leading a process driven completely through the manipulations of an independent SuperLivery. The last stop represents the largest, inner city station which continues with a graphic process and controls all global design moves of the station, confirming the equal instantiation of the graphic’s presence as equal to any other architectural component.

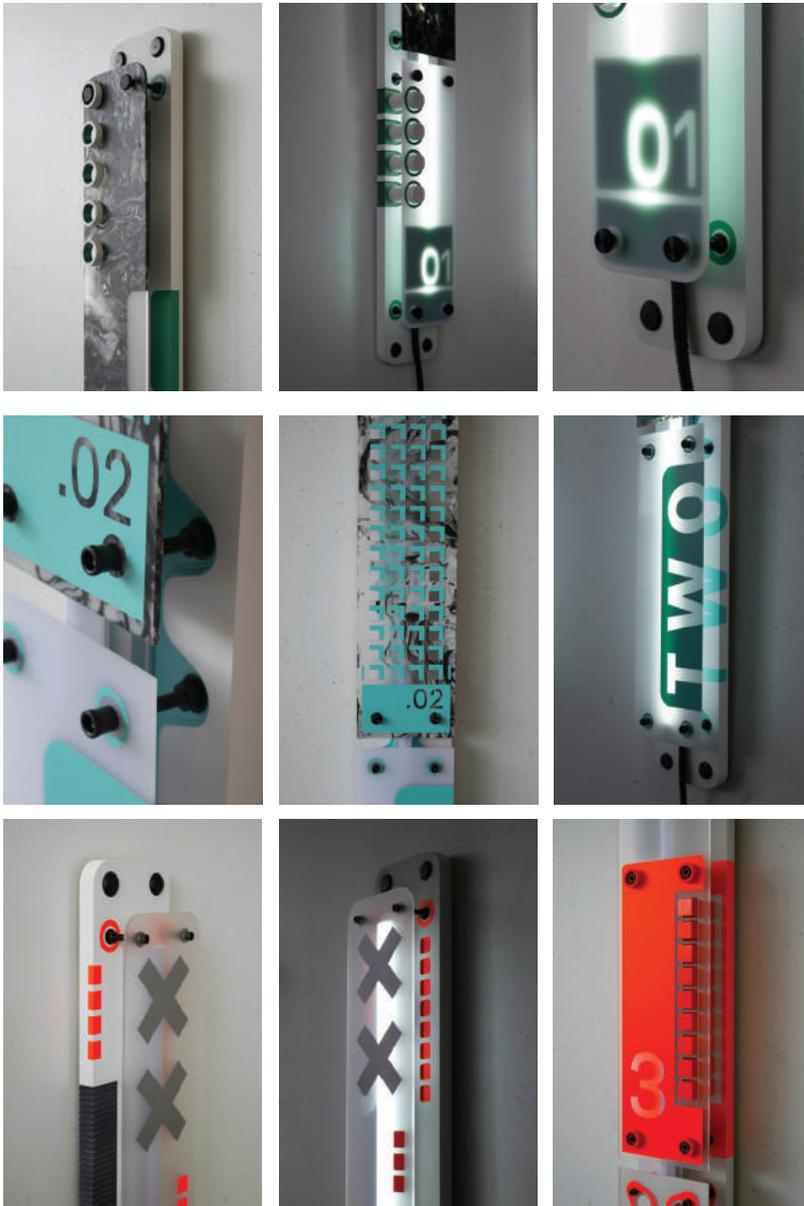
Models, drawings, and material studies are developed as carefully considered artifacts, not only to prove their own importance to the separate representational strategies of the project, but also because of the one-to-one scale study of the project. SuperLivery’s contributions therefore aim to be at the level of the architectural detail, as the design philosophy of the project requires the graphic to be an equal component of the construction assembly, especially in design with the reveal or the fastener.



### \_Stop One SuperLivery

'Super' is borrowed from Supergraphics. Previous conceptions of the surface graphic were often based around the notions of a pop sensibility (see the Supergraphics of Venturi and Scott Brown in relation to Jasper Johns) or visual effects that were meant to distort perspectives or camouflage form (see Nibankan Tower by Minoru Takeyama, Barbara Stauffacher at Charles Moore's Sea Ranch Sauna House, or the older "Razzle Dazzle Camouflage"). These strategies generally left the surface graphic in a superficial state, one in which paint was a decision to be made after the design of the architecture, completely separating itself from the design process of form. This thesis stakes a conceptual wager that is an alternative to the "after the fact" Supergraphic.





**\_Material and  
Conceptual  
Studies**

These studies acted as some of the testing grounds for developing a one-to-one scale proof of concept for the project. The goals of the project were to operate at a level of the largest building scale but also the construction detail. These studies were made to test how the SuperLivery concept would behave once brought to the fastener, the joint, or even the proto-facade like condition.

SuperLivery's graphic attitude is closer to contemporary works such as the Alan Voo House by Neil M. Denari Architects. Here, the surface graphic finds itself having enough independence to connect the addition to the existing home. Additionally, the graphic is often treated equally in presence with the architecture, as it wraps an opening for a window, specifically commands the joints in the stucco, and begins to describe the liminality between exterior and interior in the design. However, it is through a creation myth for this house that the conceptual wager is revealed. What if the house were completely designed through its graphic shell? What if the typical design processes of starting with a massing, developing spaces, and then realizing materials and surface articulations were flipped on its head?

**\_Drawings**

The top drawing is the isolated SuperLivery displaying each piece and its correlating part number. Below is an axonometric of the stop, revealing the interaction between the SuperLivery and the interior of the form.



**\_Renderings**

The top rendering is a view looking back at Stop One from the street. Seen here is the ticket buying station with the SuperLivery incorporated into the main feature wall of the stop as well as with the ground plane.

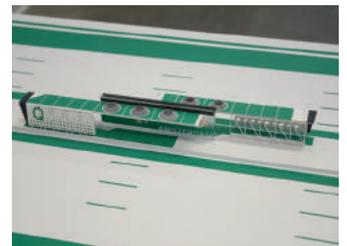


Below is a view from an aerial position. This view accurately shows some of the finer details of the SuperLivery concept e.g., the way the graphic reacts to the overall order of the stop, the panel of the materials, and even the formation and shape of the hardware belonging to the Stop's tectonic construction.

**\_Stop One**

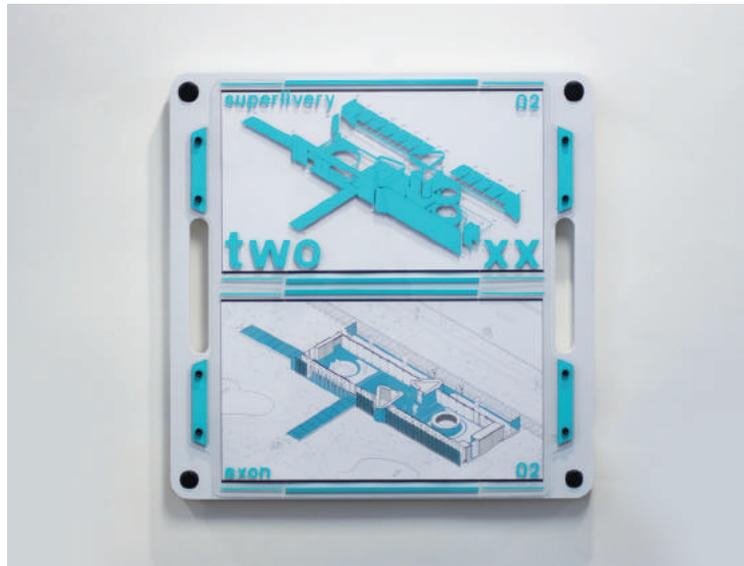
This is the smallest of the three designs and is a streetcar stop. The design was developed including the independent design of a graphic that was tied to an architectural massing. These two elements were designed semi-autonomously with a close relationship to each other, as the design juggled between both form and graphic step by step. This resulted in a design where the graphic is just as much part of the panelization and assembly as the rest of the architecture.

The models are built on top of pedestals that are meant to coordinate and display some of the smaller details used in the design of the different stops. The graphic treatment here shows how the graphic is ingrained with the design of the form as well as how it responds as if treated equally tectonic to other small-scale components of architecture.



**\_Drawings**

Drawings for Stop Two in presentation format. The top drawing is the isolated SuperLivery displaying each piece and its correlating part number. Below is an axonometric of the stop, revealing the interaction between the SuperLivery and the interior of the form.

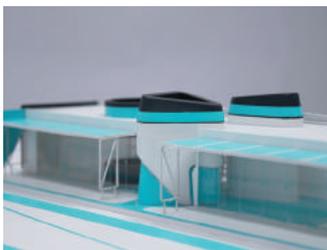


**\_Renderings**

The top rendering is a view looking from the lounge of the stop to the ticket counter. Seen here is the SuperLivery exhibiting more compositional autonomy. The graphic is more than a treatment on flat surfaces; it is a tool in generating the volumes present in the formal construction of the station.



Below is a view from the opposite side of the interior. Here is an example of the SuperLivery as a participant in the form but also the programmatic functions of the stop, as it defines and denotes different pieces and programs within the interior.



**\_Stop Two**

This is an imagined regional transportation stop on a less dense site and has conditioned spaces. Here, the majority of design decisions were pushed through the development of the graphic itself, to reflect that the graphic was indeed the originator of its conceptual construction.

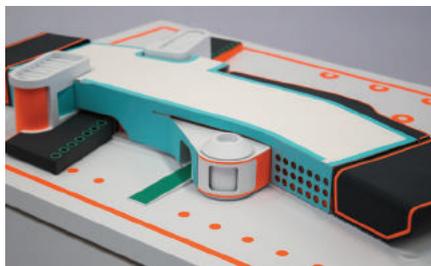
**\_Drawings**

A detailed image of the isolated SuperLivery drawing.



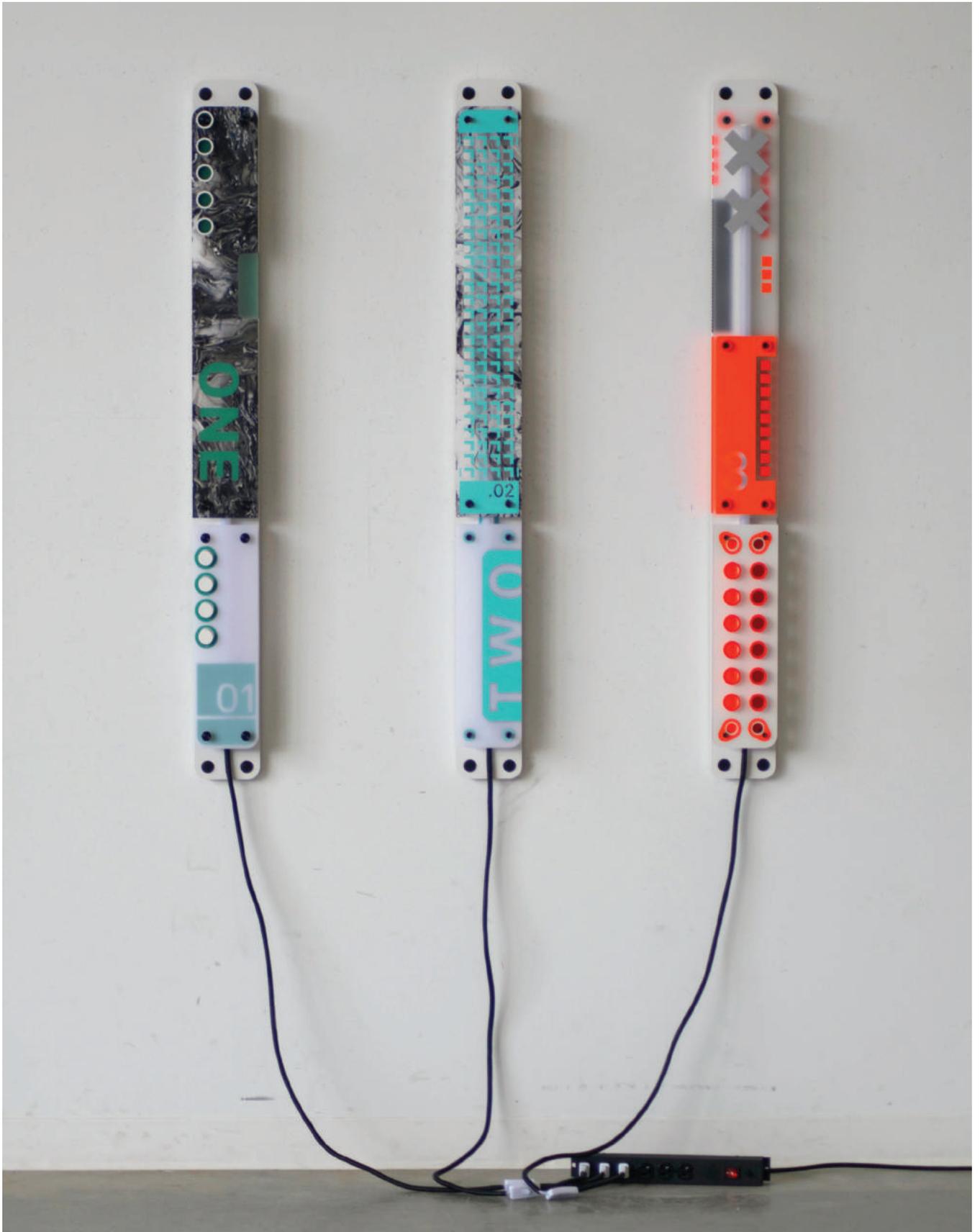
**\_Renderings**

The top rendering is a view looking from one side of the stop to another. The bottom rendering is from the opposite side looking back. The graphic is a generative part in the form per the main conceptual wagger of the thesis. However, here it subtly designates zones and reinforces the main formal moves.



**\_Stop Three**

The Third Stop is the largest of the three, and its constraints are as if it were just outside of a downtown city center. The third design is meant to push the argument the furthest, into the territory where again the graphic becomes completely autonomous in developing the architectural form, but the design decisions are unified and more global over the entirety of the building as every form is resulting from the development of the SuperLivery.







# Wanderweg

\_Feier Lan, Westley Burger, and Dongfang Xie

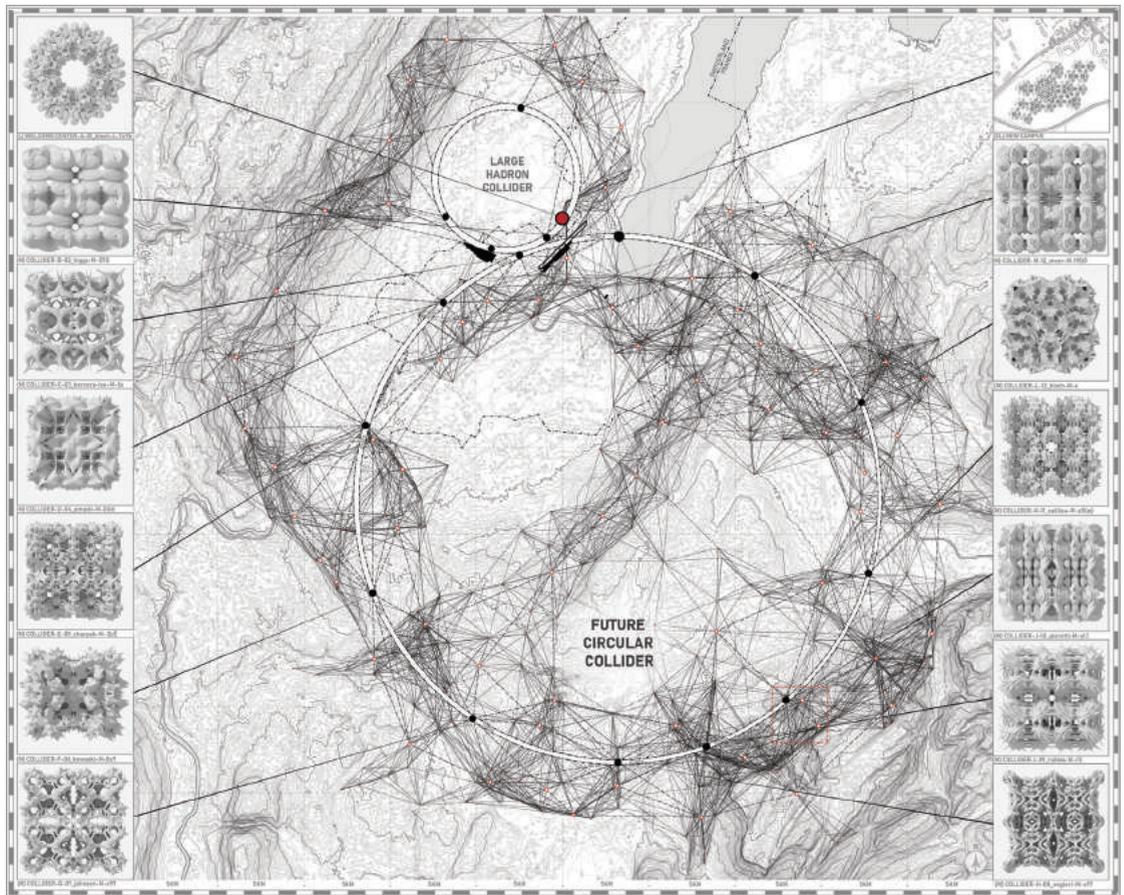
\_Advisor: Matias del Campo and Sandra Manninger

In order to experience the essence of CERN, the visitor must grasp the sublime nature of the ideas and forces, which are contemplated and tested by this scientific community: the origin of time, the composition of matter, and the forces that shape the universe. WANDERWEG imbues the sublime nature of these profound questions by luring voyagers away from the scientific campus and into the wilderness of the Alps where they discover the relics of past CERN experiments enshrined in dedicated chambers, vaults, and grottos.

WANDERWEG expresses the scale and vastness of nuclear research through a scientific pilgrimage, which unites twenty-first-century technology with the Alp's eighteenth-century heritage of the Grand Tour as a means to gather knowledge and sublime experiences. The pilgrimage route circumnavigates the 100 kilometer ring of CERN's Future Circular Collider (FCC). Twelve subterranean collider experiments lie along this path, each of which is marked by an expressively formulated architectural marker. At each of these locations, trails disperse from the loop, beckoning visitors

to discover CERN's history dispersed along secluded mountainous paths. The architecture of WANDERWEG operates at multiple scales and uses the elemental architectural tools of symmetry, proportion, and scale to transform rigorous geometric figurations into architectural structures exhibiting a variety of spaces and dispositions. Each of the 12 collider points was given a unique component from which the multiple scales of its architecture were crafted to accommodate different functions. The largest scale is the Welcome Center at the beginning of the pilgrimage, which is settled on the shore of Lake Geneva and overlays the first collider location. The Welcome Center is designed to be a multi-functional place for diverse activities, such as exhibitions, restaurants, and an auditorium. This is followed by medium-scale structures, which host the remaining experiment points along the FCC with small exhibition spaces and small-scale structures, which act as hiking destinations and serve as home to retired experiments. Finally, the extra small structures act as monolithic trail markers, guiding visitors along their way.

What follows is the story of WANDERWEG.



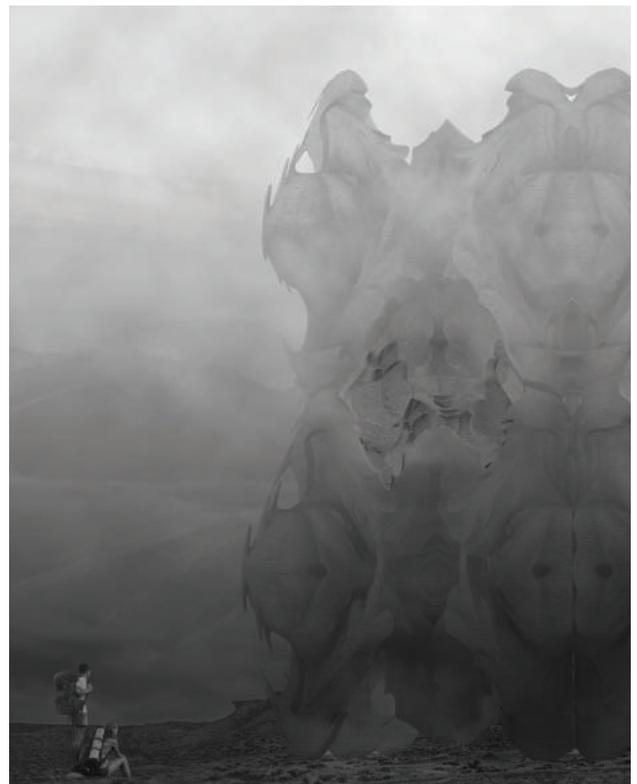
\_The Paths Map

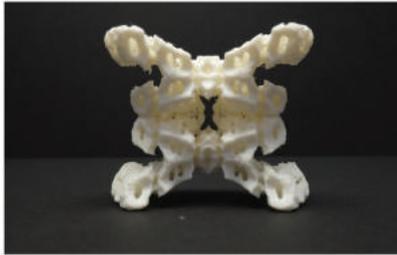
**\_WANDERWEG**

The 12 main stops, marked by the *Medium* structures, are located directly above the 12 collider experiments. The smaller destinations follow the ridges of mountains, hide deep in forests, and retreat into caves, creating hiking routes of varying lengths and difficulty. Diagrammatically, the paths connecting the shelters are shown as straight lines. However, when examined under higher resolution, they resolve into carefully laid out trails, which conform to the contours of the site. These trails are marked by the extra small particles which operate as monolithic milestones.

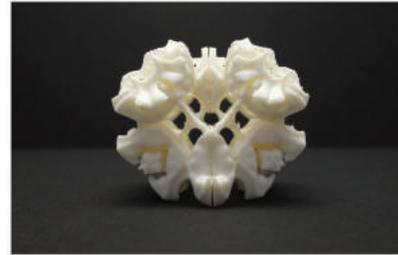
**\_Components**

Each of the 12 collider locations along the FCC is given a uniquely crafted component, which is used to generate the multiple scales of architecture needed for each location. The tools of symmetry, rotation, and surface articulation, which were used to create sublime religious structures in the eighteenth century, are also used in the creation of the Components.





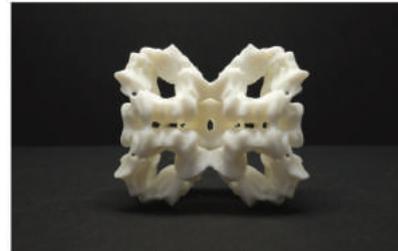
COMPONENT: ENGLERT



COMPONENT: CHARPAK



COMPONENT: BERVENS LEE



COMPONENT: BLOCH



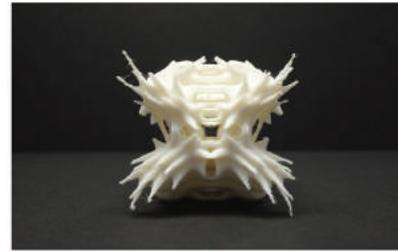
COMPONENT: KOWARSKI



COMPONENT: HIGGS



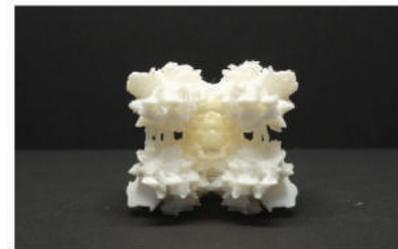
COMPONENT: MEER



COMPONENT: RIBBIA



COMPONENT: JOENSEN



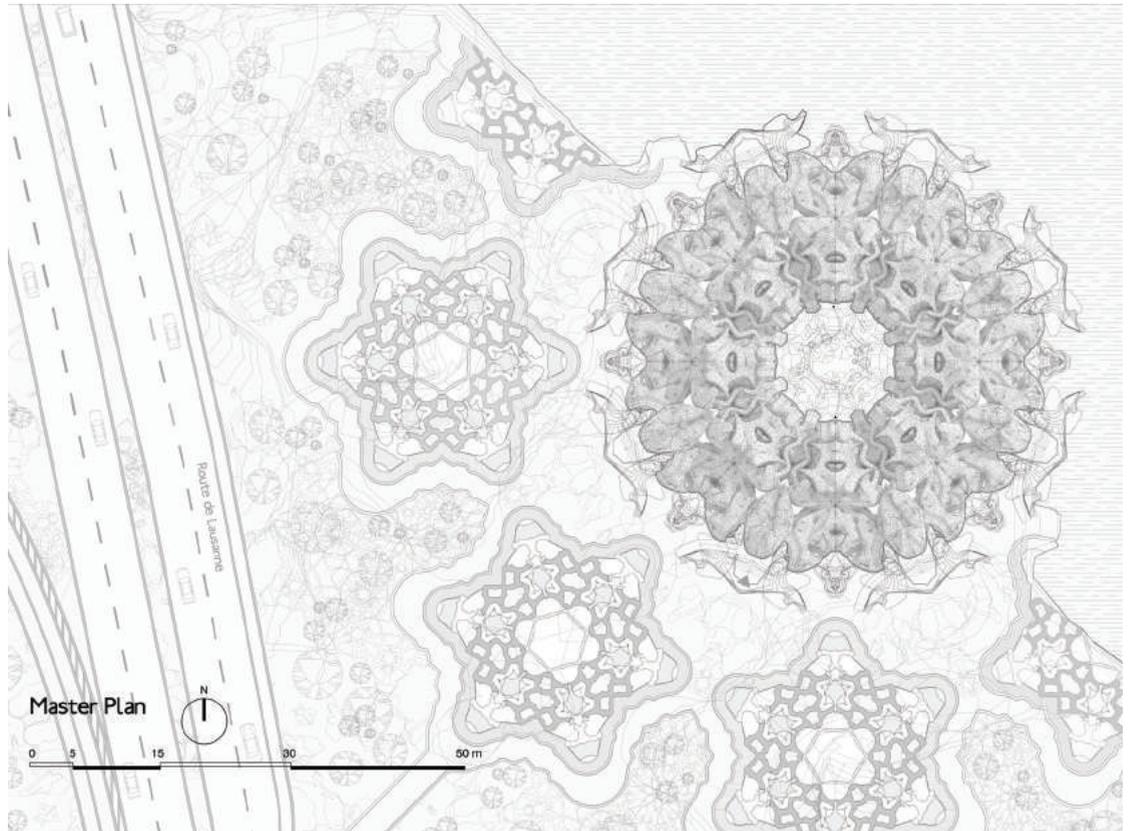
COMPONENT: AMALJE



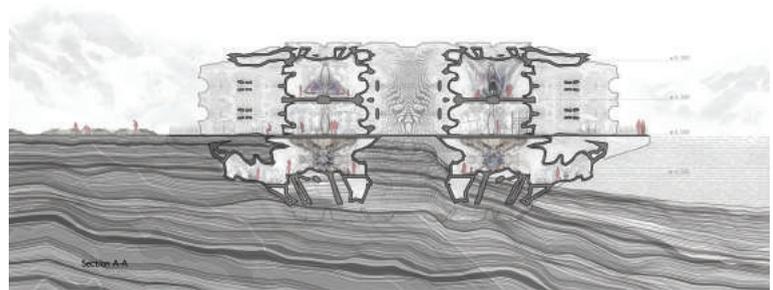
COMPONENT: GIANOTTI



COMPONENT: CALLIUE



**\_Welcome Center**  
Master Plan



**\_Large: CERN Welcome Center**

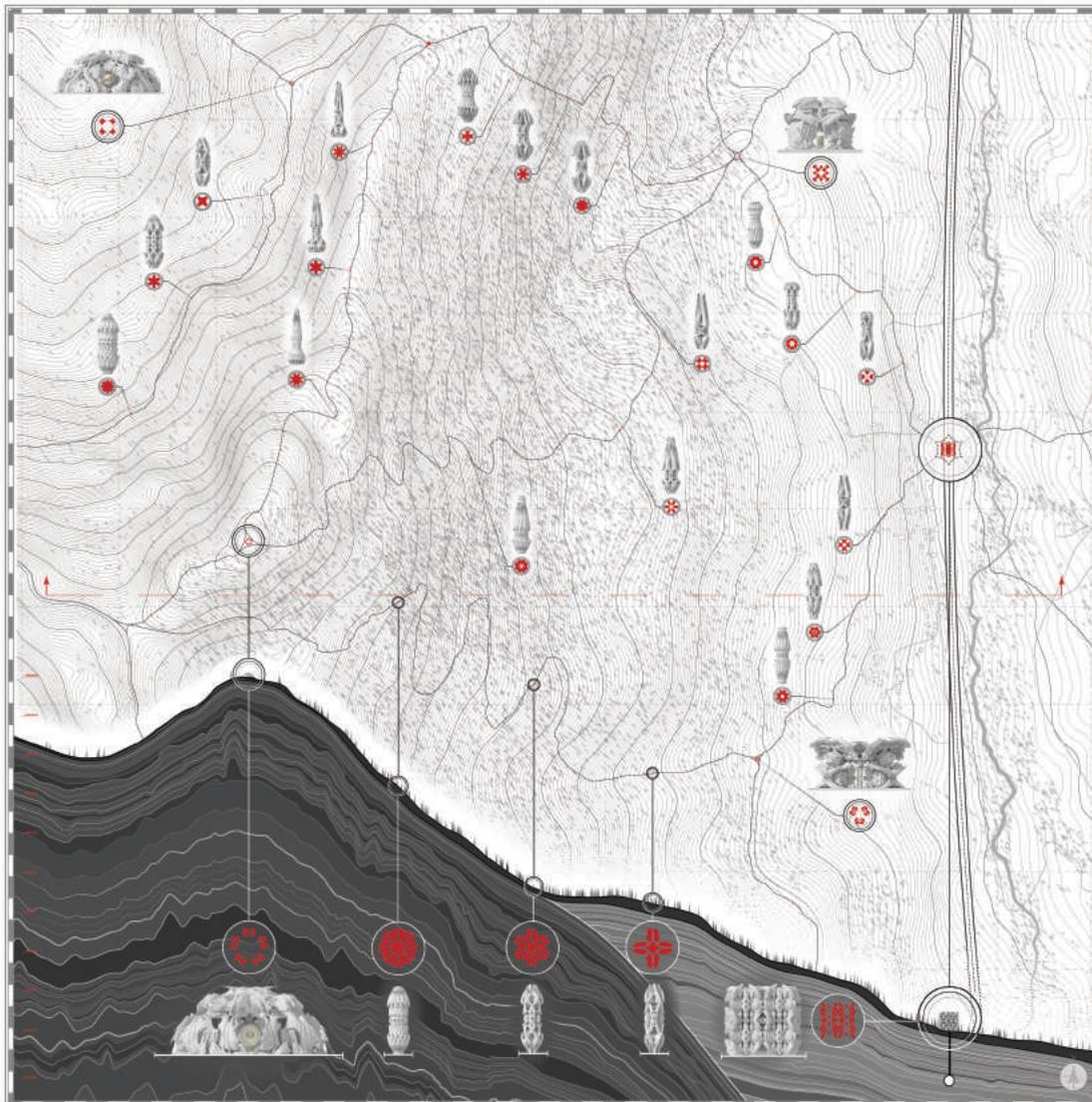
The Welcome Center rests on the shore of Lake Geneva, creating a visible symbol of CERN for those entering Geneva by plane and rail. Resting above the collider experiment at “Point B” along the FCC, the Welcome Center is the first among the collider markers. It may mark either the beginning or end of the pilgrimage where the path of the pilgrimage is naturally broken by the waters of Lake Geneva. The Welcome Center is designed to be a multi-functional place for diverse activities, such as exhibitions, restaurants, and an auditorium. It also contains the work space for the scientists working at the collider at Point B.





### Medium: Collider Markers

The collider markers rest atop the collider experiments, which lie 50 to 175 meters beneath the ground. The architectural acts of marking the subterranean structure will lie silently hidden below the Alps for tens of thousands of years to come. Each collider possesses a cube structure generated from its unique architectural component. The architectural expression for the collider structures is a cube because it provides a dense, secure, radiation-absorbing structure for the experiments which have many safety and security requirements, as well as requiring careful climate control. In addition to providing work space for the scientists and administrators, each cube possesses a gift shop, exhibition space, and limited number of hostel rooms for pilgrims.



### Medium

Rendering and map

**\_SMALL :  
OBSERVATIONS**

The observations enshrine relics of past experiments and prototypes. They are open-air structures, which house the relics and provide hiking destinations as well as shelter for the pilgrims. The structures are formed from the same architectural components as the collider.





### **\_XS: PARTICLES**

The particles act as trail markers for pilgrims venturing away from the main path along the FCC loop and to the shelters. They are robust, monolithic variations of the architectural components, which create the collider and shelter structures between.

# \_Rachel Armstrong: Soft Architecture and Wicked Challenges

## Dimensions 32:

Could you describe your design practice in one sentence?

### Rachel Armstrong:

I work with living materials.

**D32:** Is there a particular book, building, project, or person that has been a significant influence for you?

**RA:** I am very inspired by William Bryant Logan's book *Dirt: The Ecstatic Skin of the Earth*. That may sound like a very odd subject for design, but I think it's incredibly important in an ecological age that we give better attention to the quality of the ground that we are occupying. We need to integrate the cycles of life and death in our design. The only way we are going to reinvigorate this planet is by keeping those natural cycles of life and regeneration intact. Decay and death are a part of those holistic processes. Without consciously relinking them through the way that we live and inhabit spaces, we're going to keep on severing those regenerative processes from the living world. I think that is the legacy humanity needs to reclaim. In that sense, the idea we can consume does not become morally repugnant because we can return what we consume meaningfully to the living realm, and we have rituals and design codes that allow us to do that with the due care and attention that the world respects; therefore, I'm looking for what constitutes an ecological era. I don't think it is just about reducing, reusing, and recycling materials. We require a completely different, but very fundamental, quality of attention to the way that we work.

**D32:** Within that context, how do you define architecture? Do you think the definition of architecture has changed since you have become involved in the field?

**RA:** I would say that what we would think of as being architecture in a disciplinary context is shaped by the Industrial Revolution. Modern architecture rises from the need to be able to create new typologies of buildings that deal with the power of the industrial age and the population explosions that required a more organized form of thinking about people, place, and space. Gradually, the impact that those forms of design and habitation had, particularly around factories, became meaningful. Over the course of the twentieth century, architecture, working through universities and through practice, has developed a sophisticated set of codes that take that responsibility and interrogate it, but is still caught within the industrial framing of its ontology. It has struggled (mainly because of economic, political, and social pressures) to form modes of ecological practice that can genuinely rip free of the industrial infrastructure that sustains it, including things like fossil fuels.

What are the responsibilities of the choreography of space and matter that come

RACHEL ARMSTRONG

-----

\_Armstrong is a Professor of Experimental Architecture at the School of Architecture, Planning and Landscape, Newcastle University. Her work investigates a new approach to building materials called 'living architecture,' which suggests it is possible for our buildings to share some of the properties of living systems. Collaboratively working across disciplines, she builds and develops prototypes that couple the computational properties of the natural world with matter at far from equilibrium. She calls the synthesis that occurs between these systems and their inhabitants "living" architecture.

from a practice of creating inhabitable environments that would be compatible with an ecological era? It's essential to start thinking about the nature of the fundamental unit of architectural production. For example, we have already cleaved architectural thinking into landscape and architecture and it seems a forced dichotomy to me. Landscape is a space beyond the building, the space that architecture wants to care for, should be caring for, is involved in some care for, but is seen to be almost peripheral to the actual practice of architecture, which is making buildings.

In this global age of travel, cultural exchange, and people's ability to move and work in different places in the world, there is another scale at which the fundamental kind of choreography operates. Architecture is moving into a space which Donna Haraway calls "worlding" that comes from the Heideggerian notion of being in the world and the question of making the spaces that you inhabit—it's about being in a space, but it's also about making those spaces. I think that is the framing for an ecological architecture; you cannot separate the consequences of making a building from the impacts on the ground that it's standing on, from the air quality that the occupancy of the building produces, from the relationship to the way the traffic and pedestrians flow through it, from how birds might nest in its eaves. That doesn't mean that we have to design everything, but that we appreciate that what we're doing has relationships to many other things.

I do think that the definition of architecture is always changing—it's not an absolute. Just about every single architect has their own version of what architecture is, which is related to the way that they make space. In some ways, it is both generic in its relationship to the industrial era and highly personalized because architecture has mercifully hung onto its artistic origins. In that way, the individuality of the artist or the architect becomes expressed in their idea of what architecture is.

In short, architecture's definition is changing all the time. The framing for what architecture is in a disciplinary and professional context is fixed by a very particular kind of ontology. I think that we're going to see it change again with the insights that we're starting to draw together from the twentieth century and thinking about what a twenty-first-century practice of architecture might be.

**D32:** You talked about soft architecture during your lecture. When did you start thinking about that concept? When did you name it?

**RA:** As a child, I'd fill up jars with sticks, sand, water, sugar, and anything I could get out of the kitchen to create little recipes for space, and then I'd introduce creatures into these environments to see how they would live together. My interests were always about the fabrics of the living world, and I didn't separate the creatures from the materials that surrounded them. I wanted to design and engineer environments, but at the time when I went to university, there was no synthetic biology. There was no idea that you could design or engineer the living realm; biology was a fait accompli. With the advent of synthetic biology, we can deconstruct the conventional building blocks of life through genetics. We can ask questions like, "What if we introduced jellyfish genes into a rabbit and it could glow in the dark? Now what if?" Until that moment, the biological realm was not a medium for design. I went into medicine so that I could understand what it meant to configure different variations within modes of existence. What was a good life and how was that lived through the body?

It wasn't until I went to India that I started to see this in action. I realized that there

## INTERVIEW INFORMATION:

NOV01 '19 10:00PM  
The Graduate Hotel  
ANN ARBOR

A

## ACKNOWLEDGMENTS:

\_Interview  
Hannah Cane  
Jordan Laurila

\_Transcription  
Erin Peterson

\_Editing  
Nour Majzoub

## TIME:

\_Interview  
=58 minutes,  
33 seconds

\_Transcription  
=3 hours,  
30 minutes

\_Editing  
=8 hours

\_Total Time  
=12 hours,  
28 minutes,  
33 seconds

## COST:

\_Transcription  
=\$84.00

\_TOTAL COST  
=\$84.00

-----  
 "Using the term "soft" really came when I was trying to think of the smallest, most fundamental unit of design. I looked at the proto-cell because I was trying to escape the hierarchies of order implicit in genetics as a form of organization.  
 -----

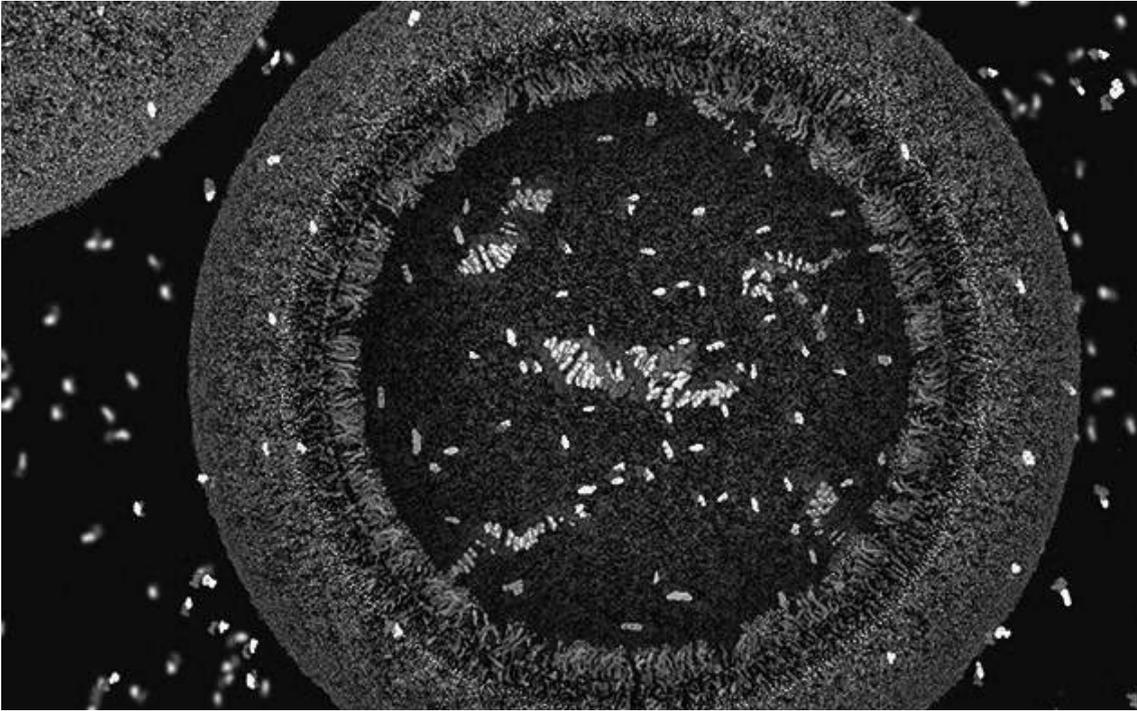
was a huge gap between my theoretical understanding of something like leprosy and what was actually possible in a small, underground village where people with leprosy had reclaimed their lives. Leprosy causes destruction of the nerves in the extremities. Sensory engagement with the world recedes and leaves the person vulnerable to a lot of damage. Because of the fear of this condition and the horrible infections that follow, people also suffer a social death. Families disown them and there is nowhere for them to go.

A group of people banded together during the 1940s and set up villages and created a community where people came to find kinship and reconstitute their lives. I noticed that very simple technologies made a huge difference to them. For example, they would take leather straps and bind their big toe to their knee through a simple strapping system. It stopped their foot from being scraped across the front of the ground, which would have given them ulcers at the front of their feet. Another thing they did was use wax molds to bridge the big gap that started to form in the upper pallet to stop the bacteria from eating cartilage and causing a sunken nose and loss of teeth. They also then put false teeth on top and made nasal prostheses to mold their noses to the shape that they wanted. It was astonishing to me that people that were so outcast could have such a sense of pride and aesthetic integrity. It was very naive of me but it was just amazing to see how much could be reconstituted from very simple things that changed with them through design, even if it was the most pragmatic set of reconnections with their world.

All of these things started to make me think about the relationship between the body, technology, the environment, and how you bring people together to live in space. I realized that there was much more to someone's sense of well being and purposefulness in the world than just keeping a body healthy. When I went back to the U.K., I thought about how to work with this idea. When I started teaching at the Bartlett, I began to develop the language I was looking for. In some ways for me, architecture was always an extension of the body and in that sense, always a soft space. The degrees of hardness come from the repetitions and fixities that become necessary in that process of living. Using the term "soft" really came when I was trying to think of the smallest, most fundamental unit of design. I looked at the proto-cell because I was trying to escape the hierarchies of order implicit in genetics as a form of organization. The proto-cell is a living agent that doesn't have genes. Its decisions are made through its interface; in other words, the way that it butts up against the world. The proto-cell is a soft technology.

**D32:** You mentioned the artistic origins or influences in architecture and you also cited a number of artists during your lecture. Do you find more value in references from the art world rather than architectural history? Is there something there in terms of the freedom of that discipline?

**RA:** I think reaching to multi- and transdisciplinary references enriches all practices. Architecture does have a rich cannon of references and it would be very remiss of me to say that architecture isn't big enough. But it has more to do with the fundamentally transdisciplinary nature of architecture and how architecture, from its origins, is learning from the contexts of the world and necessarily has to reach out to engineering and to a whole range of disciplines in order to make appropriate decisions. In some ways, the references are very architectural in that that is what architects have always done. I am very interested in the biotechnological sciences, but I am also interested in the arts because they provide that counterpoint to standardization. What you tend



\_Image of a "proto-cell."

to find with technology is that its ambitions are general. What you find with art is that its critique is particular and specific. So your decision-making process finds itself oscillating between these poles, and you try as a designer to find the most appropriate way forward.

**D32:** In that vein then, how do you find balance if you're moving between synthetic biology, architecture, arts, and other references? When do you make the judgment that perhaps you have moved too far in one direction and need to reference others to maintain equilibrium?

**RA:** I think it's a complex process. The idea of choreography is definitely correct. What we do in experimental architecture is iterations of experiment because very complex situations can't be theorized into a single solution. You have to worry, iterate, repeat, test, and interrogate your ideas. In that sense, you fear less about making a wrong decision because you inherently understand that most of the things you're doing are provisional and that they all involve a degree of risk. The thing is to have an informed process for decision-making and an understanding that you're making the best possible decision rather than the absolute perfect decision. Once you start working with multidisciplinary teams, it becomes various acts of diplomacy that deem certain agendas more important at certain times and other agendas at other times. It's an evolving process. I definitely wouldn't say I wake up one day with a perfect solution to something, but a set of ideas and intentions that are a response to something that is of value or is in jeopardy. The next step is thinking about what team might be best to help approach this, or what a meaningful framework would be. It's not about a fundamental knowing, but a process of discovery and paying attention to the things that you find out along the way and then reconfiguring and being able to do things again. A part of that is making and prototyping. I quite like that idea of an ongoing provisionality about all the things that we do because one day the structure is going to fall down, or the work won't

-----  
 "What we do in experimental architecture is iterations of experiment because very complex situations can't be theorized into a single solution. You have to worry, iterate, repeat, test, and interrogate your ideas."  
 -----



\_Philip's, Microbial Home, 2011.

exist, or it has to be taken down, or it's no longer appropriate for the site or the times. And that's not your fault; it's just that everything's moving.

**D32:** So that begs the question of when is the end point in the project and when do you consciously decide: "This project has concluded"?

**RA:** I guess the answer is it never really concludes per se, but you do have schedules, a work plan, and an ambition. It's largely about time management and knowing when you've reached a certain stage where everything moving forward needs to be a final decision in order to meet the deadline. I think one of the things that we don't talk a lot about in architecture are those management processes that enable buildings to come to completion within budget and within the appropriate timeframes. It's not always possible, but you definitely have a strategy for the production of work.

**D32:** Early in the year, Professor Neri Oxman came to lecture at the university and she presented work that also learns from biology in some ways. Could you speak about similarities or differences between your approach to architecture and hers when it comes to things like biomimicry?

**RA:** Yeah, I guess I would say that I don't do biomimicry.

**D32:** And that was a conscious decision.

**RA:** It was because again, it's to do with the inherent politics of what we value in the biological. One important part of the way that we recognize the biological realm is through its form, but when we get to the level of the molecular, we reveal landscapes that are invisible to our naked eye. I think bacteria are the absolute perfect example of

-----  
"Bacteria have been given typologies because of their form, but when we look at their genetics, we understand that some species have different metabolisms and there is a much greater variation and possibility than we can see through form. In some ways, my work is looking for the invisible molecular landscapes that produce the structures, but they're not form-led. My work is not about form making."  
-----

this. Bacteria have been given typologies because of their form, but when we look at their genetics, we understand that some species have different metabolisms and there is a much greater variation and possibility than we can see through form. In some ways, my work is looking for the invisible molecular landscapes that produce the structures, but they're not form-led. My work is not about form-making.

**D32:** You spoke about prototyping in your work. Have you thought about scaling up those prototypes eventually and do you have plans to do that in the near future or is it longer-term?

**RA:** I am definitely planning on scaling up. At the moment, our project doesn't finish until April. But in the meantime, we did apply to the EU for heaps of funding in what was called an FET flagship bid. Future Emerging Technologies flagship is a breakthrough proposal that will change something radical about life and society. We were proposing scaling up these living architectures in different sites throughout Europe and bringing together a much larger team of collaborators to do this. We weren't successful in the funding, but going through that process helped us think through how to scale up. Things like: Could we first of all replace burners within homes with metabolisms? So instead of something that sounds like a car engine starting up, it sounds like a stomach gurgling. It smells different, it has a different presence in the home, but it's performing some of the same work. When you think long-term, you think about possibly getting homes off fossil fuel completely. So it's not about changing the shape of the building, but rather is an infrastructural question. From that infrastructure, there are new decisions about the nature of spaces and how they are inhabited that are rooted in site specificity and the contexts that are needed in order for these exchanges to be meaningful.

Everybody uses a different set of processes or products in their home and, therefore, has a unique waste stream. Very much like our own bacteria in the body, the bacteria in everybody's home is also going to be different. Our homes will have bacterial biomes. Jessica Green from the University of Oregon is looking at what the environmental bacterial landscapes are and she likens them to grasslands, savannahs, and rainforests, depending on which home you're in. Now imagine if you were actually gardening those to perform particular kinds of processes, so that these systems have a unique signature that a family would share. Then I think that that necessarily invites different interior and exterior architectures as to how we give access to these needs of the systems that are feeding us, reducing our energy usage, producing forms of waste that can be used for other things. I would also refer to Philips' thought experiment in 2011, which was covered beautifully by William Myers and Paola Antonelli in their *Bio Design* book, which proposed the idea of a kitchen or a domestic space that was entirely filled by microbes. In some ways, you can think of the living architecture project as a prototyping and actualization of this through metabolic landscapes. They do have spaces and they do have design spaces, but we have to think of different needs because their population is different than that of humans.

I think they will scale up, but it's a bottom up process and what we wanted to do with the FET open was to have three or four prototype buildings or spaces with these metabolisms throughout different places in Europe and then start to get real statistics of how much stuff they're processing in a particular environment with particular users because what we're doing in the laboratory right now is very abstracted from a real family and is limited by its laboratory context. There is a scalability, but there is a need for infrastructural change and a need to create some demonstrators so people can actually see for themselves and experience what it means to walk into a space where

the interiors have a life. The idea that your home has an agency could creep you out in theory, but if in practice, you start to see things happening or you start to see certain changes with your relationship both with your home and the environment, that may help some ethical, cultural decision-making.

**D32:** In terms of teaching or being at a university, in retrospect, is there anything that you wish you had learned as a student? And does your past experience as a student influence the way you teach now or work in the lab?

-----  
" If you have got a passion, take the opportunity to do projects that are situated somewhere because you can only learn so much from books. So much of the learning experience is about realizing the deep problems of trying to translate what you think you know into an operative strategy for the world. That will be an ongoing experience for every single practitioner."  
-----

**RA:** I had a scientific education and I think that I was very fortunate that I went on the sabbatical to India. That opened my eyes. I don't think that's something that you can teach, so I would really recommend that to students. If you have got a passion, take the opportunity to do projects that are situated somewhere because you can only learn so much from books. So much of the learning experience is about realizing the deep problems of trying to translate what you think you know into an operative strategy for the world. That will be an ongoing experience for every single practitioner. For example, to get our students to work with the limits of time, space, and resource, we ask them to make bird boxes. We want them to think about the client and their needs and to interrogate how we think these creatures live. They then install those bird boxes in a park center and they become part of the wildlife trail. By the spring, our students are actually seeing their first tenants. It's quite an interesting experience as an architecture student to think that something you have built has become inhabited because that doesn't happen for a while in a professional context. Being able to see that early on has an effect that helps you think about how this shapes the decisions you make from now on in formal professional practice.

Immersion in the problems that are raised in the discipline makes a big difference. I do think that there are roles for tutors to create challenges within the curriculum that invites students to think for themselves and develop their own attitude as a designer. We fail if we only get students to tick the boxes as to what they absolutely need to do in order to construct a building so that it stands up. We start to succeed when students start to ask, "Why?" or, "Is there another way of doing this?" or, "What if?" Or they say, "I don't want to do it like this. I've got this idea." That's when things start to get really rich.

**D32:** Do you think that architectural education as it stands prepare students to address what you call the "wicked concepts of the world"?

**RA:** I think we're still teaching within the needs of an industrial professional practice. That doesn't mean that schools are bad; it's just that there is both demand from the industry and demand from the students. I think that now certainly in the U.K. when students are paying for their education, they want to make sure that when they graduate, what they have learned is absolutely appropriate for meeting the needs of their employers. But we also have a growing interest in architectural research, and research and teaching should be enfolded together. I think that we have got interesting tutors that are teaching some interesting perspectives whilst meeting those needs and I think that the nature of architectural research will become more mature than it is. Architectural research hasn't been needed to practice professional architecture and in some cases, it is regarded as a rather indulgent way to spend years of your life without actually making real buildings.

There is a kind of ongoing change in the architectural profession as it realizes it hasn't

got all the answers to things and that need for research is becoming more pressing. Questions like, “What is an architectural experiment? Is it the same as a scientific experiment? And if it’s not, then how do you know you’ve got a good one? How do you evaluate it? How do you know that you’re asking the right questions? How do you go about constructing the systems of interrogation and the critique that is needed in order to make sure that you’ve actually learned something and that learning becomes transferable knowledge that can be shared?” Part of the other problem of architectural practice is that knowing how to do something in a practice becomes a value in itself. If you know how to do it and your competitor down the road competing for the same business doesn’t know how to do it, then you are more likely to get that job. The idea of knowledge exchange within the architectural profession is a dance. What is open access and what should be freely available? What are the industrial strengths and abilities of particular practices that are competing in an economic world? Again, it’s wicked problems obstructing the access to addressing wicked challenges in the most appropriate ways. I am hoping that we’ll see more of this kind of thinking particularly in your generation that is not going to be satisfied with the idea that there are industrial secrets which make one particular practice extremely rich.

I am also really hoping that we build the relationships not just between architects, but the allied practices as well. At the moment, there are certain pressures in the world that put those kinds of possibilities in jeopardy. But I think that we have to think optimistically and I have a lot of faith in your generation because I think you’re just going to get absolutely sick to the back teeth of my generation and start doing things your way. You’re going to have to. We’re going to have to rely on you. There will be someone with some sense in the world.



\_Rachel Armstrong, Sentient Veil.



\_FEATURED ASRG

-----  
Ibiayi Briggs and  
Matthew Shulman  
\_Büro Bureau

Lorraine Gemino, Alison Truwit,  
and Ben vanSchaayk  
\_Fidelity

Megan Silverman and  
Jamie Johnson  
\_Virtual Brandscapes

a srg

The annual Architecture Student Research Grant (ASRG), initiated by the Class of 2013, provides a unique opportunity for student research projects. The Architecture Student Research Grant calls for projects that push the boundaries and possibilities of the discipline of architecture. These projects successfully propose new forms and methods of working, making, and representing.

\_PROJECT INFORMATION:

\_TITLE:

\_Fidelity

\_TEAM MEMBERS:

=3

TOTAL COST:

=\$2,219

\_Vinyl:

=\$1,012.57

\_Foam:

=\$403.58

\_Plywood:

=\$160

\_Bristol:

=\$200

\_CNC Time:

=\$254.30

\_3D Prints:

=\$34.41

\_Wood Veneer:

\$43.84

\_Acrylic:

=\$26.50

\_Metal:

=\$15.00

\_Glue,Paint,Tape:

=\$231.78

ACKNOWLEDGMENTS:

\_Michael Jefferson

\_John McMorrough

\_Sharon Haar

\_Laura Brown





# Fidelity

\_Lorraine Gemino, Alison Truwit, and Ben vanSchaayk

\_Advisor: John McMorrough

This project explores contemporary attitudes regarding architecture and its use of reference. Through the proliferation of digital tools and technologies, many contemporary designers have shifted their methods of working with and thinking about architectural precedent. The spectrum of these approaches varies from projects which evoke the original precedent through realism and direct reference, to those which embrace technical flaws, transforming and degrading content into remixed reflections of the original. Contemporary investigations into various new softwares and design platforms challenge notions of exactitude by engaging material through a range in fidelity. After researching the methodological approaches of various firms, digital processes were explored in order to better understand their capacity to translate source material into new creations. These experiments explore the range of possibilities for engaging architectural precedent. This exploration aims to find more nuanced ways of discussing the evolving nature of reference in the digital age.

In order to better describe the various levels of fidelity to source material, we have established three flexible categories: “Low Fidelity,” “High Fidelity,” and “Infidelity.” These categories are not exclusive, as projects inevitably contain

characteristics of multiple categories. In *El Croquis #184*, Timothy Hyde describes the work of MOS as “low fidelity,” in that it inspires associations to previous architectural forms without the clarity of direct reference. In House No. 5 and Community Center No. 3, repetition is introduced through architectural elements such as the gabled cube, square tower, the shingle, the slab, and the circular aperture. These forms are repeated many times within the building itself, but they are also repetitions of forms that have preceded them. They are precedents, but not in the way that term is typically defined by the discipline.<sup>1</sup>

Abstraction can be another means of “low fidelity” replication. In MILLIØNS + First Office’s Zoopol project, animal prints are used as a basis for architectural form. The project begins with a series of animal prints, which are translated into linework and developed into plan drawings. Essentially, the prints are utilized as figure-ground diagrams. By abstracting the source image, Zoopol separates itself from the associations that accompany the animal print, while retaining its formal characteristics.<sup>2</sup>

Not all contemporary projects conceptually distance themselves from their source material in this manner. We use the term “high fidelity” in contrast

**\_01.**  
Hyde, Timothy. "Low Fidelity." *E/ Croquis* no. 184 (2016): 277–79.

**\_02.**  
Atwood, Andrew, and Anna Niemark. "Zoopol." *Nine Essays*. Treatise.

**\_03.**  
"Living Picture." T E A M Living Picture. Accessed March 24, 2019. <http://tpluseplusaplusm.us/livingpicture.html>.

**\_04.**  
Lee, Wei-Han Vivian, and Macgillivray, James. "Delirious Facade." LAMAS, 18 May 2018, [lamas.us/thinking/delirious-facade](http://lamas.us/thinking/delirious-facade).

to Hyde’s description of the “low fidelity” project. A high fidelity project, in this sense, is not one which most exactly recreates its chosen reference; rather, a high fidelity project engages source material without distancing itself from its theoretical underpinnings. In its reference to precedent, a high fidelity project relies on realism, rather than vagueness or abstraction.

T+E+A+M, for example, often references source material in ways which allow it to retain both its legibility and its conceptual basis. In Living Picture, T+E+A+M uses images of the 1912 Ragdale Ring Theatre in their present-day proposal for the same space. This digital imagery is mapped onto objects placed around the site, creating a layered experience of perception. T+E+A+M describes this experience as “a vivid visual space where images and objects overlap, align, and misregister.”<sup>3</sup> As visitors encounter the scene, the objects place the images of the 1912 Ragdale Ring’s trees and buildings amongst the

trees and buildings of the current site. We identify Living Picture as an example of a high fidelity project due to its direct engagement with the source material it references. The high resolution imagery projected on the objects evokes a realism drawn from its context, emphasizing both the past and present, and flattening the distinction between the physical and digital.

In an example of “infidelity,” Toronto-based architectural firm LAMAS explores novel methods of precedent-based design in their Delirious Facade project. The project, which utilizes Google’s Deep Dream computer vision program, examines one possibility for introducing artificial intelligence into architectural design.<sup>4</sup> To begin, the designers select two images of architectural facades as inputs for the Deep Dream generator. The program then creates a new hybridized image that combines recognizable aspects of the two source images.



**\_Exhibition**



\_Exhibition

\_Detail of Wood Column base.

In the combination of the Toronto Royal Bank Plaza and the Christie Biscuit Factory, misalignments appear that cannot be easily traced back to either source image. Windows conjoin with one another and float across ill-defined horizontal and vertical boundaries, defying the order and alignment of the two input facades. In rejecting the formal structure of the two source images, the final facade contradicts or undermines the character of its original precedents. We identify this as an example of “infidelity.”

Our project is a series of experiments which aim to produce distinct moments of “high fidelity,” “low fidelity,” and “infidelity.” As source material for this experimentation, this project engages Hans Hollein’s series of columns for the 1980 Venice Biennale. Hollein’s columns are a play on the typical classical orders of columns. Between the found columns of the Arsenale housing the exhibition, Hollein places four playful columns. The first is a reference to Philibert de l’Orme’s *Primitive Trunk*. The second

is a recreation of Adolf Loos’s proposal for the Tribune Tower Competition. The third is covered in grass—an allusion to the environmental crisis. The fourth column goes for ironic effect as it is hung in the space, supporting nothing at all.<sup>5</sup>

In a biennale full of signification, symbolism, and irony, Hollein’s columns provide an architectural precedent with embedded meaning. This meaning can then be emphasized, discarded, or subverted by the various experiments of our project.

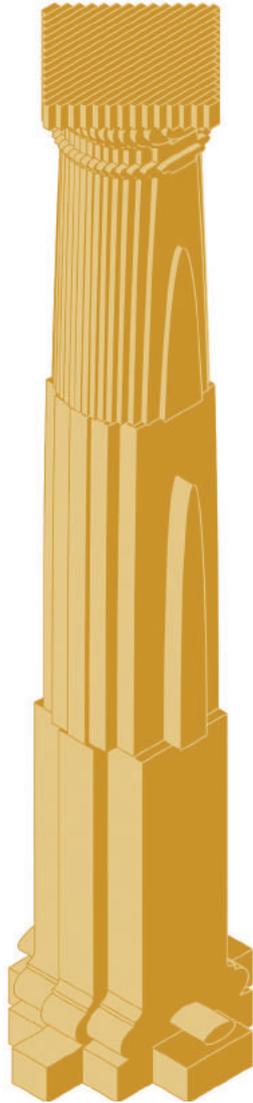
These experiments aim to demonstrate a range of possible relations to reference. The outcomes demonstrate various ways in which contemporary projects can extend the range of their source material. By gaining greater control over the ways we discuss these references, we hope to gain greater control over the ways our projects engage with source material in an age where the nature of reference is continuously evolving.

\_05.

Szacka, Léa-Catherine. *Exhibiting The Postmodern: The 1980 Venice Architecture Biennale*. Venezia: Marsilio, 2016.

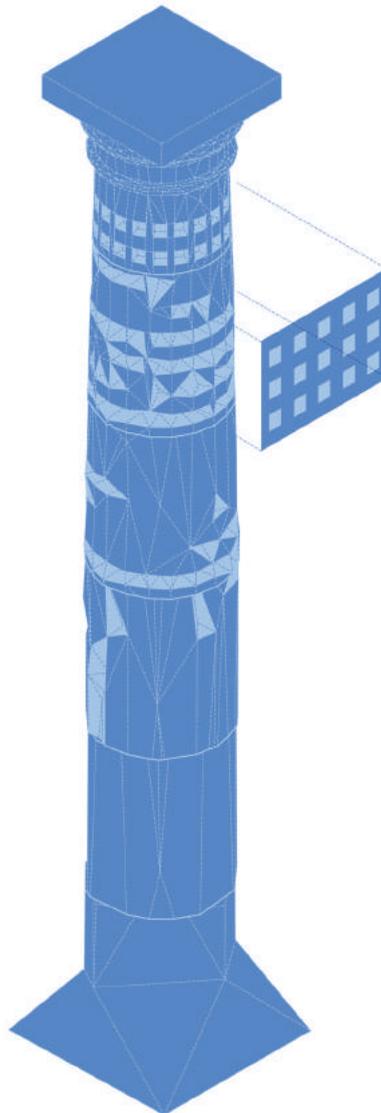
**\_Loos Column**

Adolf Loos's Tribune Tower proposal is reimagined through formal manipulation and degradation. The column retains the verticality that ties it to the tower form, while eschewing materiality to prioritize formal legibility. As the mesh defining the column's form loses resolution, errors emerge to challenge the legibility of the original reference. As the reference fades, so too do the column's associations with Classicism.



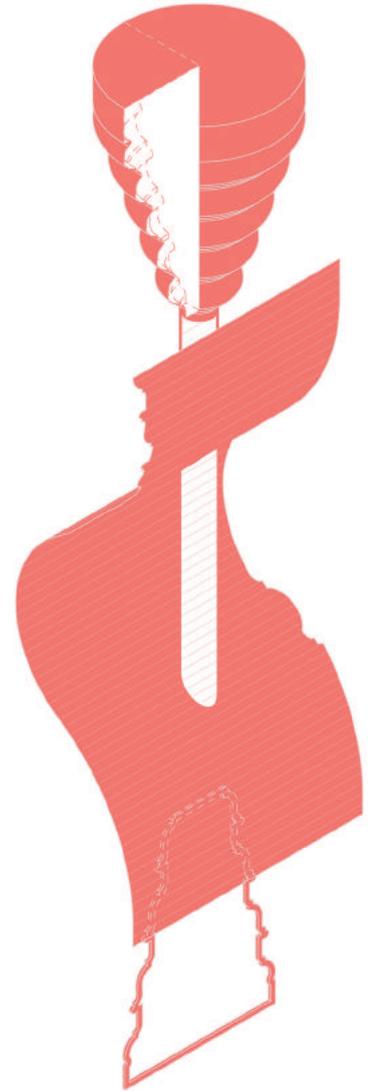
**\_Wood Column**

Hollein's reference to the Primitive Trunk is re-examined with various conceptions of materiality. Stacked plywood layers reference the solid wood precedent, built with today's standardized building elements. If the wooden primitive of ancient building materials was the tree trunk, perhaps today it is the 2x4, or the 4x8 sheet of plywood. Elsewhere, materiality is presented both as distorted vinyl appliqué and wood veneer—image masquerading as material, and material masquerading as image.



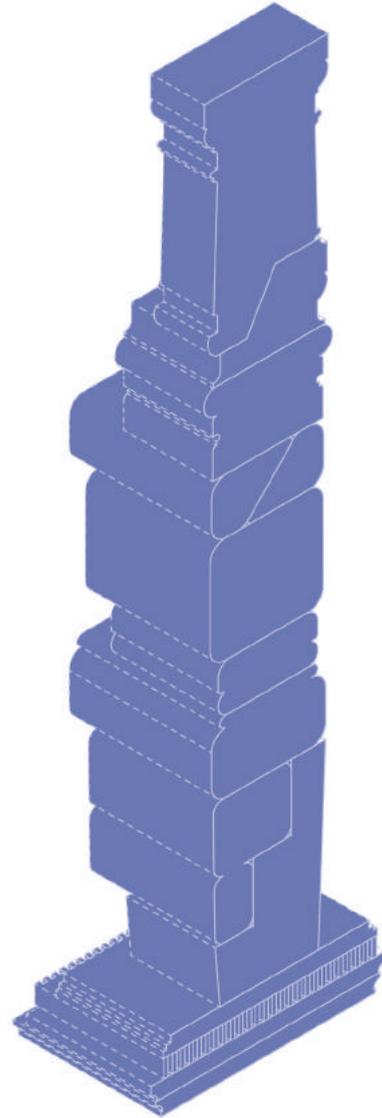
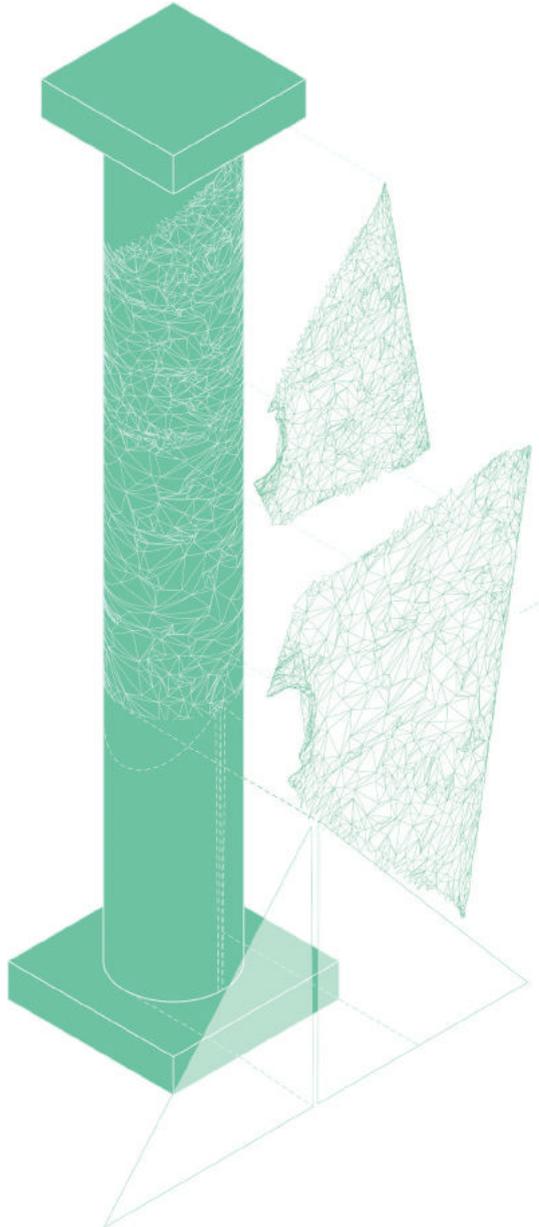
**\_Hanging Column**

Retaining the irony of Hollein's original, this hanging column is removed from its role as structural support. The column capital gains new emphasis as the shaft and base are fractured, exaggerated by repeating the rotated profile of the capital form. The shaft of the column is abstracted to its primitive, a slender cylinder, while the concrete texture of the digital model is separated from the form and hangs instead as a material swatch.



### **\_Leafy Column**

The leaf-covered column of Hollein's facade is digitally processed to separate the image of the column from its form. Photogrammetry software pieces image data together to construct a 3D mesh of a scanned column. Various methods and scales of texture mapping use a leafy image to generate distinct levels of legibility and connection to the original precedent.



### **\_Arsenale Column**

The found columns of the Arsenale in Venice are reinterpreted as an aggregation of marble blobs. This aggregation logic references the piece-by-piece assembly of classical columns, despite their seeming monolithism. Two-dimensional profiles of classical elements are distorted and extruded, recalling the aggregation of classical ruin fragments.

\_PROJECT INFORMATION:

\_TITLE:

\_Virtual Brandscapes

\_TEAM MEMBERS:

=2

\_TOTAL COST:

=\$2,100

\_Laptop, VR Headset:

=\$1,500

\_Printing:

=\$400

\_Misc:

=\$300

\_MATERIALS:

\_laptop, tv monitor,  
oculus rift headset,  
butcher paper, foam core,  
cotton string, steel  
pins, duct tape

\_TIME:

\_ALL NIGHTERS:

= 4

PROGRAM, TOOLS:

\_revit, enscape plug-in

EXHIBITION:

\_Expected Set-up Time:

=2 days

\_Actual Set-up Time:

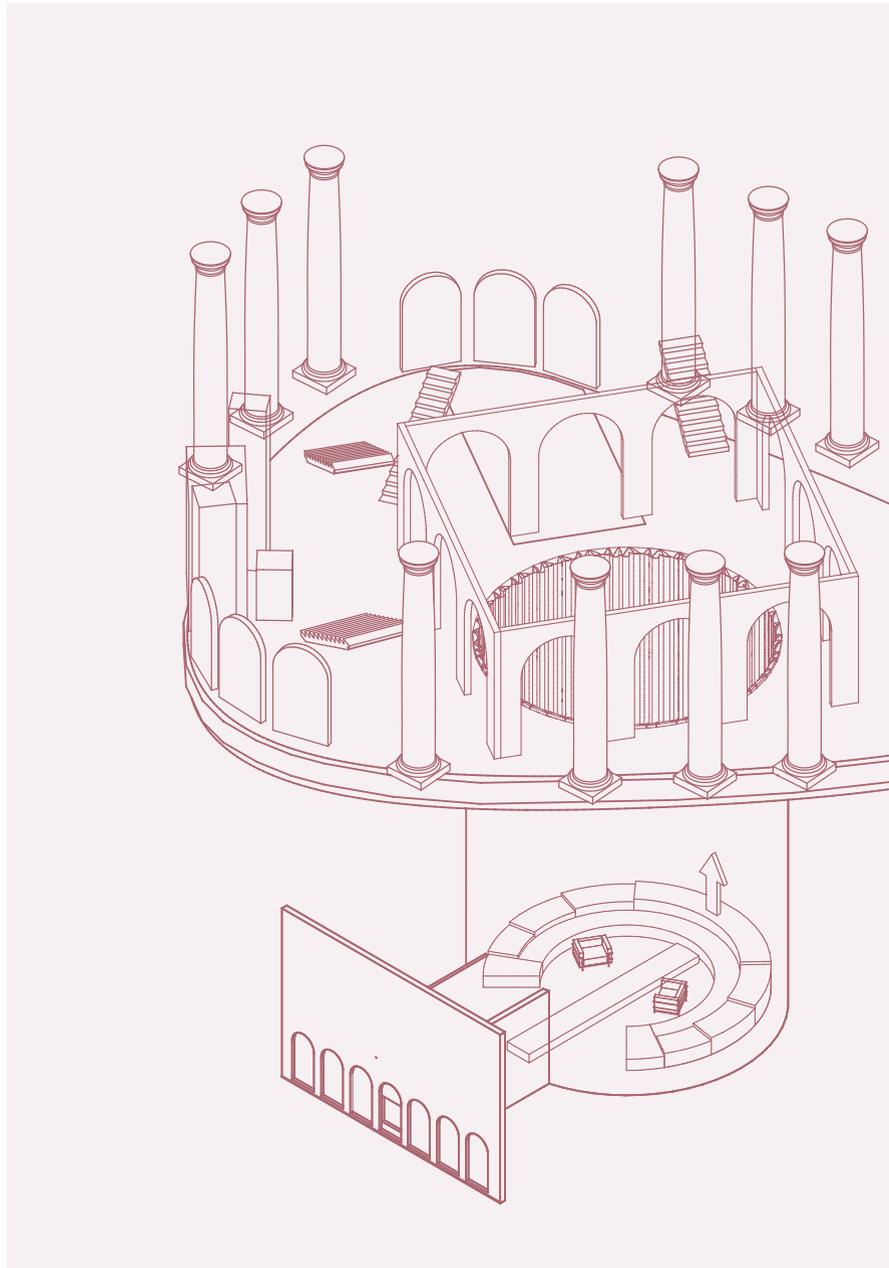
=5 days

ACKNOWLEDGMENTS:

\_Yojairo Lomeli

\_Laura Brown

\_Sharon Haar



# Virtual Brandscapes

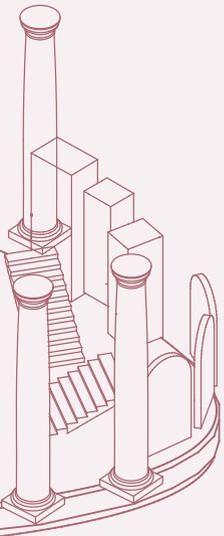
\_Megan Silverman and Jamie Johnson

\_Advisor: Yojairo Lomeli

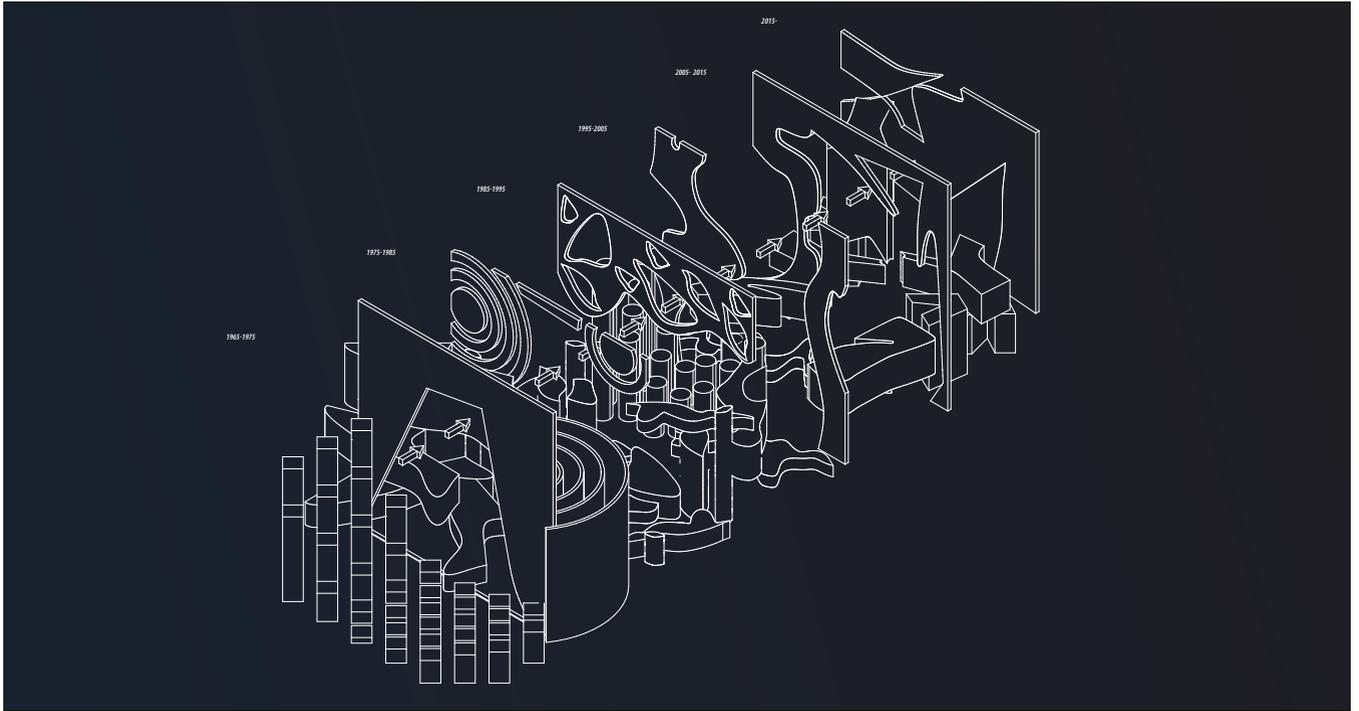
Architectural elements have been instrumental in the development of brand identity throughout much of retail history. Companies have used spatial design to their advantage in crafting narratives within specific environments that draw audiences in. In analyzing the role that architecture has played in the history of retail marketing, we can see that the discipline has adapted to the rapidly changing modes of retail marketing. As online shopping and social media sales are becoming increasingly popular, companies are experimenting with alternative methods of creating experiences for their customers and clients—experiences that are often set in a specific designed moment in space and time. Retail sale and branding methods are pulling away from physical spaces and moving toward social media and web formatting. However, we recognize the instrumental role that architecture can continue to play in the realm of marketing and sales. We look to the future of retail real estate and we realize the vast potential of architectural design in a virtual, boundless realm. We have examined the multiple ways that current brands are experimenting with

spatial design in non-traditional modes to continue branding narratives; thus, we propose a form of virtual real estate, in which accessible architecture continues to fabricate experiences in a purely digital landscape, untouched by the constraints of our rapidly developing world.

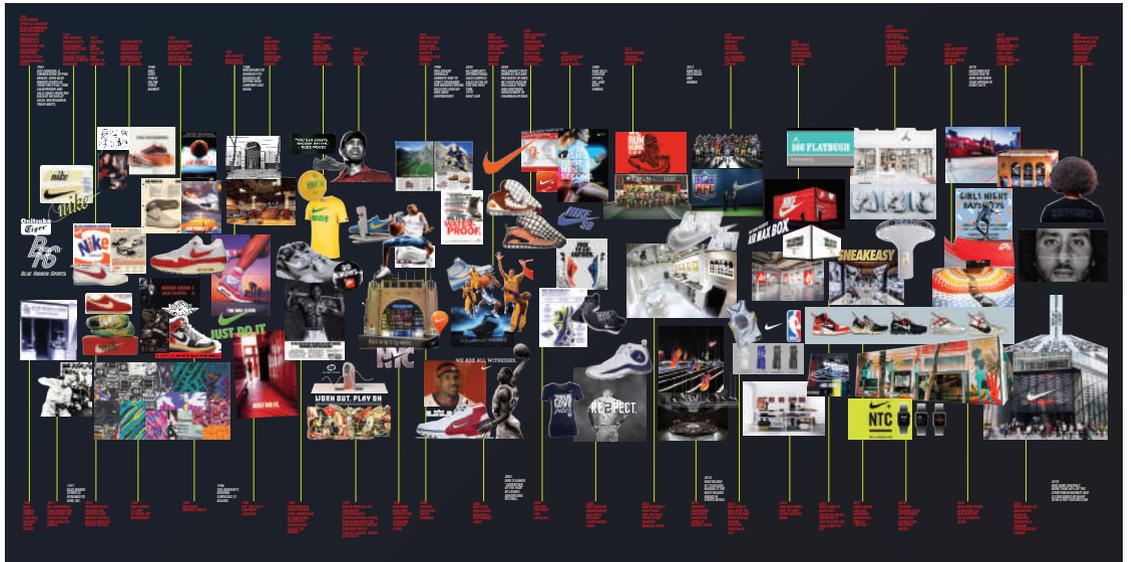
Our research process began with the examination of architecture's role in retail sales. To do this, we composed an extensive commerce history timeline, which tracks changing technologies and architectural formatting of sales from the start of human trade through the contemporary digital age. The findings of this exercise led us to search for a design method through which architecture would play an instrumental role in retail sales—one that aligned with the rapidly changing demands of spatial branding. Experimenting with ephemeral, experiential branding in a virtual reality setting allowed us to explore an emerging technology, which has the capacity to make ground-breaking retail experiences accessible in a future where physical stores may decline.



*Axonometric View*



\_Nike Axon



\_Nike Timeline



\_Nike  
perspective

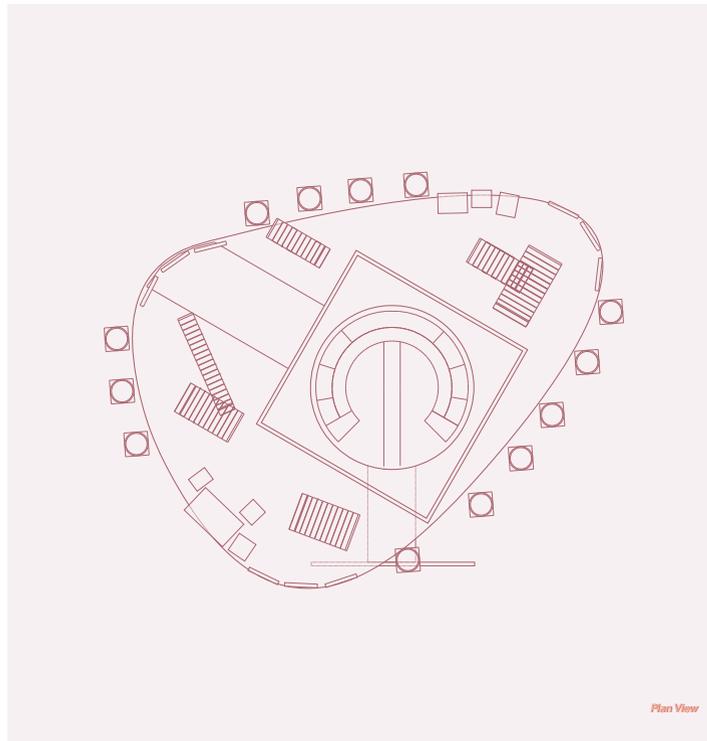
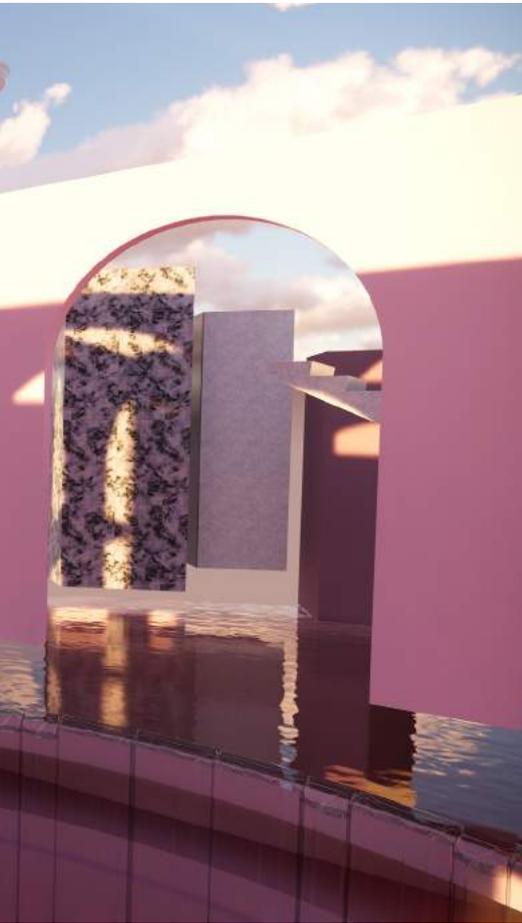


\_Nike Plan

\_NIKE:

Named the most valuable sportswear clothing and shoe brand of 2018, at least some of Nike's success can be attributed to its ground-breaking experiential marketing campaigns. Since 2011, Nike has been using spatial, interactive installations to foster emotional connections with consumers worldwide. Our virtual reality obstacle course designed as an experience for Nike is composed of a series of thresholds, each referring to advertisements and shoe design swatches for each decade since the conception of the company.





Plan View

**\_Glossier Plan**

**\_GLOSSIER:**

Launched in 2010, Glossier, Inc., is a skincare and makeup company that has become wildly popular through its branding strategies, which are heavily architectural and design-oriented. This “millennial pink” brand primarily operates online and through short-lived pop-up shops, which are often heavily stylized spaces meant more for concretizing their brand than for product sales. Our research design process began with cataloguing the posts found on Glossier’s Instagram feed—which now boasts almost two million followers worldwide—that we deemed to have architectural relevance. It became clear the importance that this online-based retail company placed on spatial design for the purpose of creating ephemeral experiences that reinforced its brand identity. Our virtual reality experience designed with Glossier in mind pulls references from the many spatial moments that the company presents in its own context on social media as sourced from parties not affiliated with its brand.



\_PROJECT INFORMATION:

\_TITLE:

\_Büro Bureau

\_TEAM MEMBERS:

=2

\_TOTAL COST:

=\$1,419.07

\_MATERIALS:

\_post-its, black foam core,  
mounting squares, zip ties,  
table, chairs, booklet, glue  
sticks, double-sided tape,  
materials for wall-board,  
materials for projection

\_TIME:

\_MODELS AND DRAWINGS:

= 14 days

\_ALL NIGHTERS:

= 2

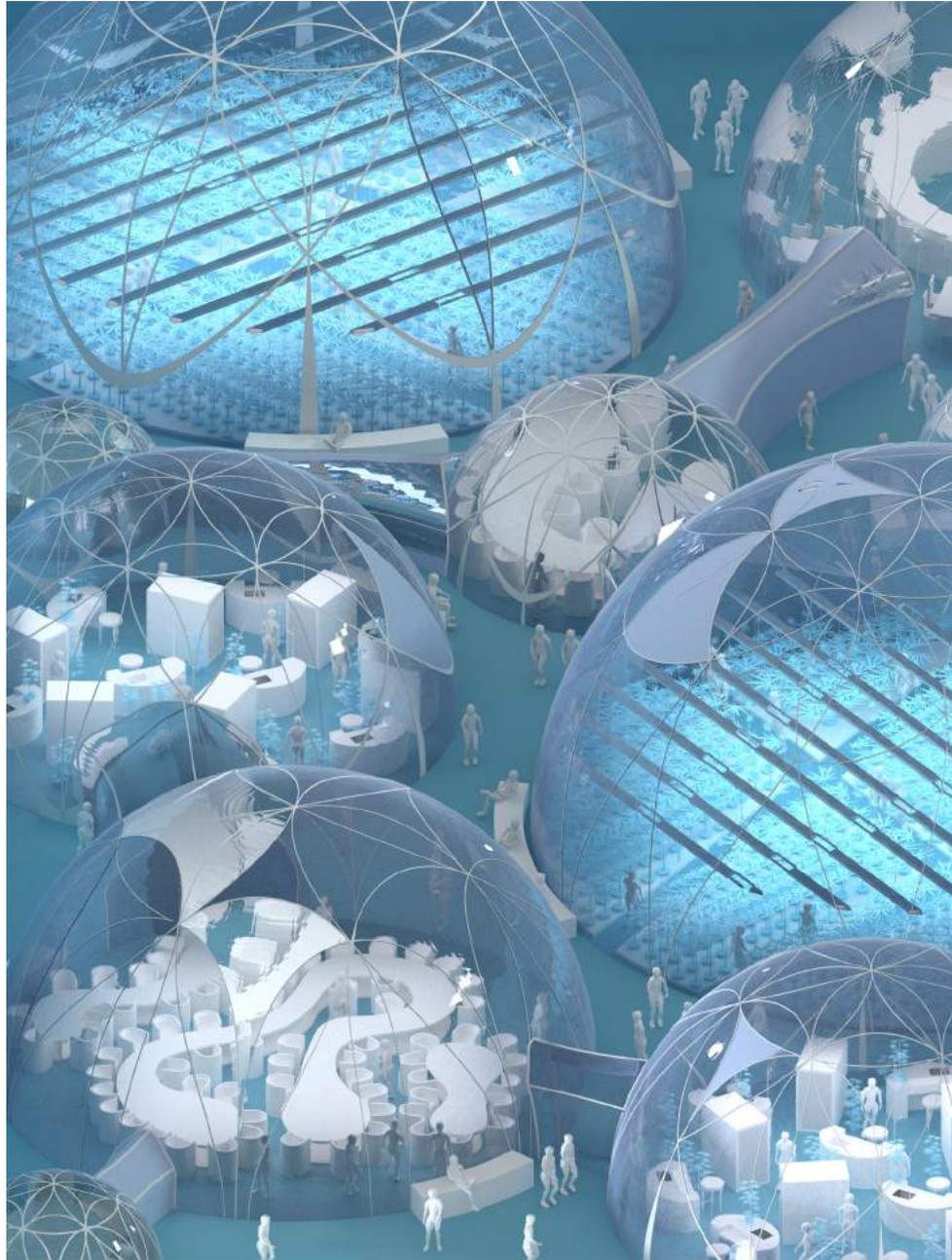
PROGRAM, TOOLS:

\_google docs (for organizing  
research and writing), rhino  
(for drawings), blender (for  
rendering)

ACKNOWLEDGMENTS:

\_Daniel Jacobs

\_Erik Herrmann



# Büro Bureau

\_Ibiayi Briggs and Matthew Shulman

\_Advisor: Daniel Jacobs

During a lecture in the Winter 2018 semester, representatives from WeWork shared their vision of the company, boasted the company's impressive growth, and established the important role that architects have to play in it all. A whisper network of recent graduates and young professionals seems to corroborate the financial value WeWork puts on designers, with rumors of starting salaries in the \$50,000, \$60,000, and beyond range. But what exactly is the role of an architect within a system that seems to prioritize the optimized division of space into three-, four-, five-people sized cubicles? Furthermore, how solid are these jobs when the business they are built on has \$18 billion in lease obligations? Do they merely exist to set the parameters for the algorithms that actually spit out the spaces? What power does the architect really have against the relentless pace of the algorithm? It's John Henry versus the steam-engine for the digital age...and we all know how that ended. The WeWork presentation also provides breadcrumbs to where the real value of the architect lies within the mad-grab to provide space for an ever-expanding VC-inflated bubble of startups. They

proclaimed that many of the customers were using WeWork as an alternative to the coffeeshop. Perhaps instead of buying countless cups of coffee, they could pay a couple hundred dollars a month and get a quiet space and free coffee.

Hot Desk in WeWork: start at \$190/month

Coffee shop: \$4.00 x 2 cups  
x 20 weekdays = \$160/month

The Library: FREE (but you can't talk)

However, competition strictly based on price is a race to the bottom. WeWork realizes this, so they offer more. Not only do you get a desk, bottomless coffee, and endless snacks, but you also get a community. Members have access to a network of like-minded go-getters and a slate of business-forward events. For many, it's the network that provides more value than the space itself. WeWork as an influential node in the network of neoliberal entrepreneurship is a much more powerful symbol than WeWork as a landlord. In order to better understand the power office organization and the specific tools available, we have to step

**An office for...**

an outdoor clothing, gear and footwear company whose mission and primary goal is to get nature-starved city people outside through fashion-forward products. The company culture projects calm, yet the brand is competitive because the market is saturated with active wear brands, each seeking to distinguish themselves in unique ways. The company has retail stores around the country and is headquartered in a dense urban downtown. Its employees are all hikers and outdoorsmen who regularly make company-sponsored weekend excursions to the trails just outside the city. During the week, they take advantage of every fitness class offered in the city. The demands of a competitive retail corporation might mean a lot of desk time, but that doesn't mean employees have to be inactive. Scenic trails have been recreated indoors, so even if employees can't be outdoors 24/7, they don't have to sacrifice proximity to nature.

—BÜRO BUREAU

**An office for...**

a medicinal marijuana company starting to expand due to the legalization of marijuana just passed in the state. The company grows, harvests, and sells The Product Itself, along with a collection vape pens, and other cigarette alternatives. The company advertises itself as a healthy, naturalistic, and environmentally conscious company with a strong connection to its bucolic, bohemian local environment. The leadership presents the company as one that advocates for healthy living. Fitness, food sourcing, and mental health are primary focuses in the office, and leadership wants their offices to be a model for how employees can live healthy lives despite the negative perception of their work. Considering the company's recent success, the leadership expects full commitment to the job. They expect employees to be regularly present and politically aligned with their goals. People who work at the company are both employees and advocates.

—BÜRO BUREAU

**\_Exhibition  
Labels**

back to look at some of the critical ideas that have shaped office design.

**Taylorism:**

In 1910, engineer Frederick Winslow Taylor proposed a scientific management of labor that quickly spread across industrial centers in the early twentieth century. Scientific management was a process of rationalization consisting of four basic steps:

1. An analysis of traditional labor and the separate tasks necessary for its execution;
2. A breakdown of each activity into smallest units of movement;
3. The specific study of each of these units, using precise timekeeping methods to track the movement and tools involved;
4. And redesign of the complete cycle in the form of a linked chain of tasks, adjusting the movements and tools according to average execution times.

If the assembly line was about the optimized collaboration between man and machine to create a product, Taylorism was about the optimization of the worker. In this sense, the worker had become the machine.

**Open Plan to Office Landscape:**

Architects and designers improved on Taylor's methods to revise its overemphasis on the performance of the individual worker—which they felt had a deleterious effect on psyche—and soften the separation between management and workers. As designers moved away from specificity, and the economic prestige of these companies grew, the open office became a symbol of the dominance of white-collar work.

The advent of organizational psychology pushed the open-plan further away from Taylorism's rigidity. In the 1960s, the Quickborner Team—a German design consulting group led by the Schnelle brothers—established the Bürolandschaft, or office landscape, as a new method for open-plan design.

They designed for flexibility, which was achieved through three principles: 1. interior subdivisions were to be eliminated as much as possible; 2. furniture was to be movable; 3. the workstation was to be viewed not as a basic unit, but rather as part of a system of components that could be joined together in numerous geographic configurations.

**Disposition:**

The example of WeWork shows the power of designing office space as a product, and their move towards software as a service (SaaS) platforms and management corroborates the more powerful tool of design as service. This distinction between product and service recalls Keller Easterling's distinction between the object-form and the action-form. In *Extrastatecraft*, Easterling explores the infrastructures that power global economic and political agendas, but these same qualities are easily extrapolated to corporations burgeoning companies. Easterling states that “active form establishes a set of parameters for what the organization will be doing over time. They have time-released powers and cascading effects. When the object of design is not an object form or a master plan but a set of instructions for an interplay between variables, design acquires some of the power and currency of software.” That set of instructions or the interplay between variables reveals an organization's disposition, or the “latent potential” within the relationships between a company's components.

**The Neo-Liberal Disposition:**

Silicon Valley is often used as the shorthand for the contemporary corporation. For better, but often worse, it is the epicenter of current corporate entrepreneurship. It is not just a geographic stronghold of companies and venture capital, but also cuts a large figure in the cultural imagination of neoliberalism—a beacon of entrepreneurship and free market innovation. While Silicon Valley might

not use Easterling's terms, its companies are well-versed in deploying several components of active forms to shape their corporate identity. Its companies are imbued with stories, temperament, and wiring that influence all elements of decision making. For example...

Official: "...give people the power to share and make the world more open and connected."

Unofficial: "Move fast, and break things."

Official: "...organize the world's information and make it universally accessible and useful."

Unofficial: "Don't be evil."

The official corporate Mission Statement is often paired with a more potent internal mantra. Together, they provide a powerful tool for molding consumer and employee disposition. They give the product purpose. In elaborating the difference between knowing how versus knowing that,

Easterling pits architects—who are typically limited to knowing that—against entrepreneurs, who know how. How might architects move towards knowing how? Not only to take companies at their word, but also to design for what is unsaid—what is implied and tacitly encouraged by their actions. If the architect provides no competition for the algorithmically optimized plan generator, how might we exert our influence as interpreters and creators? How might the reification of corporate mission statements in physical space force organizations to confront their ways of working, hierarchies, and embedded systems of power? The following six proposals are designed with and drawn to center the way the collective we, work. Offices that look at labor not just as a Taylorist optimization of procedures, or a WeWorkian real estate optimization tool, but also incorporate the corporate disposition.

## An office for...

a fast-paced, metrics-driven, digital tech company on the verge of a Series A. Until they receive this round of funding from their investors, leadership expects everyone to be available around the clock to push the product forward. The company is lean, but poised to grow; offers few perks, but has potential for significant returns from stock options. Most of the employees are software engineers who previously worked as contractors at big tech companies. As freelancers they typically worked from home, coffee shops, or a hot desk in a coworking space. Easing the transition from working with domestic comforts at arms reach, to being in close quarters with their employer (and other employees) is important. However, while leadership wants their employees to be comfortable, the demands of a start-up at a critical make-or-break point requires employees' constant physical presence.

\_\_\_BÜRO BUREAU

## An office for...

a print magazine and online news site dedicated to providing information and content for retirees. The publication is a subsidiary of a large media conglomerate, but its less glamorous content and consistent subscriptions has allowed it to remain somewhat autonomous. The company is still run by its original owners and follows the organizational hierarchy of a typical publishing house: the Publishers, Editor-in-Chief and Editors are considered upper management, followed by advertising, finance, operations, copy-editors and the staff writers. Considering the content of the magazine, the employees are largely composed of individuals 50-70 years old, who have family obligations and a lifestyle that caters to a clearly demarcated work-life balance. When the employees leave the office at 6:00 pm, they are not expected to think about work until 9:00 am the next morning.

\_\_\_BÜRO BUREAU

## An office for...

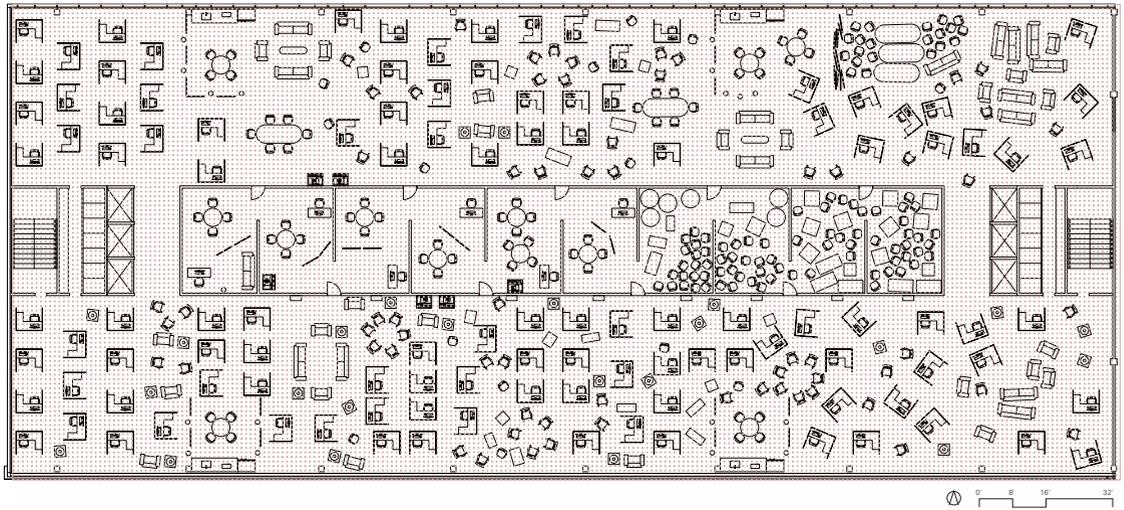
a creative consultancy firm that works with clients via specially assembled project teams of disciplinary experts, who regularly create intensive experiences and highly produced presentations for their clients. The company employs architects, user experience (UX) designers, graphic designers, design thinkers, business strategists, and writers. Their services are expensive as they provide highly detailed and design-driven strategies to some of the world's largest corporations. The company advertises itself as an alternative to the run-of-the-mill consulting agency with radical approaches to design that offer its clients better, long-lasting results. Their clients are taking a risk by investing their research initiatives with the company, acknowledging that all they are purchasing is ideas rather than fully realized products or solutions. The employees, a younger, energetic cohort who seek meaning in their work, are encouraged to use some of their work day to pursue their own projects. The leadership provides the tools, space, and equipment necessary for their employees to constantly generate, prototype, and present new ideas.

\_\_\_BÜRO BUREAU

\_Exhibition  
Labels

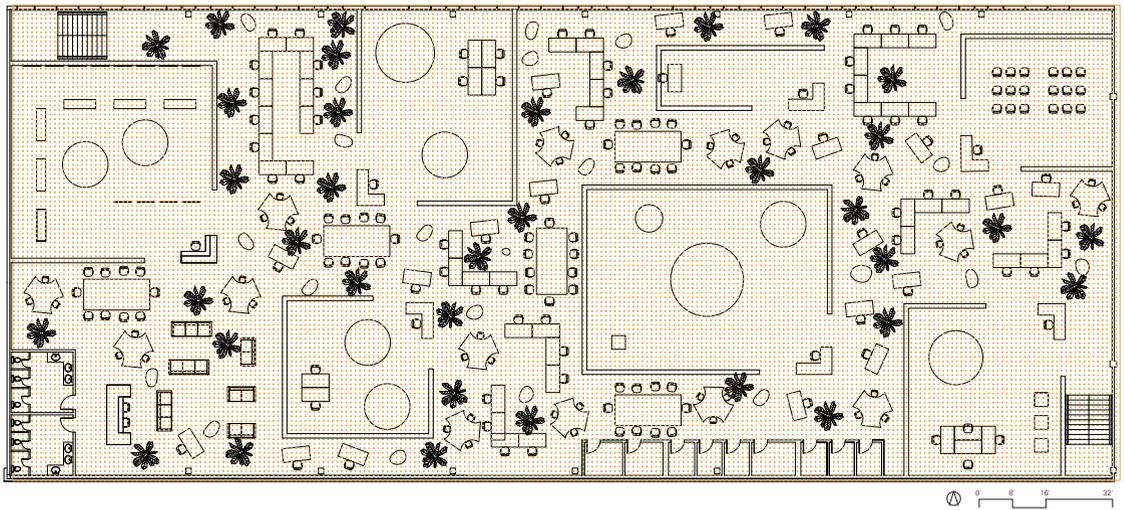
**\_Plan**

An office for...a print magazine and news site.



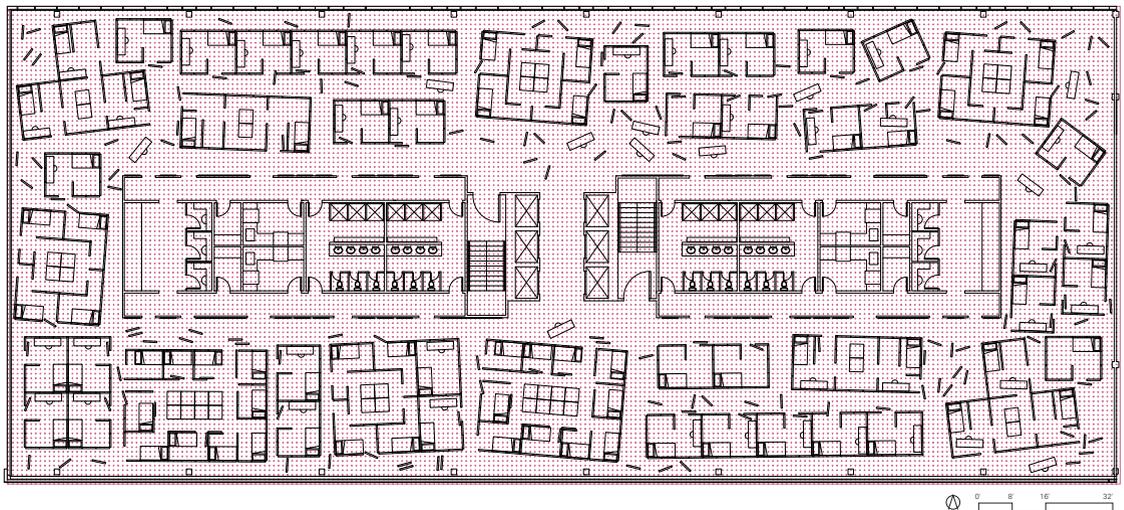
**\_Plan**

An office for...a creative consultancy firm.



**\_Plan**

An office for...a digital tech company.





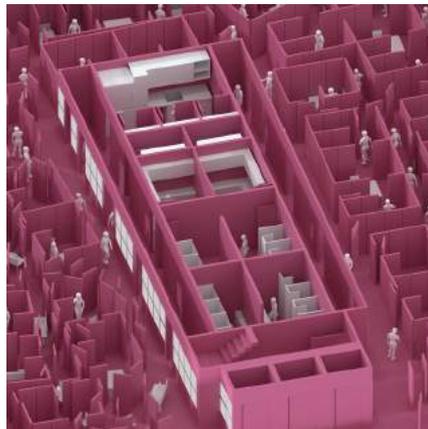
**\_Render**

An office for...a print magazine and news site.



**\_Render**

An office for...a creative consultancy firm.



**\_Render**

An office for...a digital tech company.



**\_Render**

An office for...an outdoor clothing, gear, and footwear company.

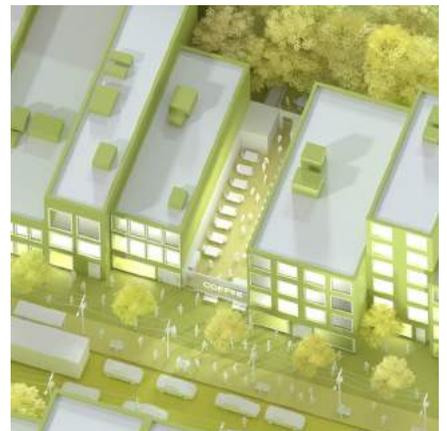
**\_Render**

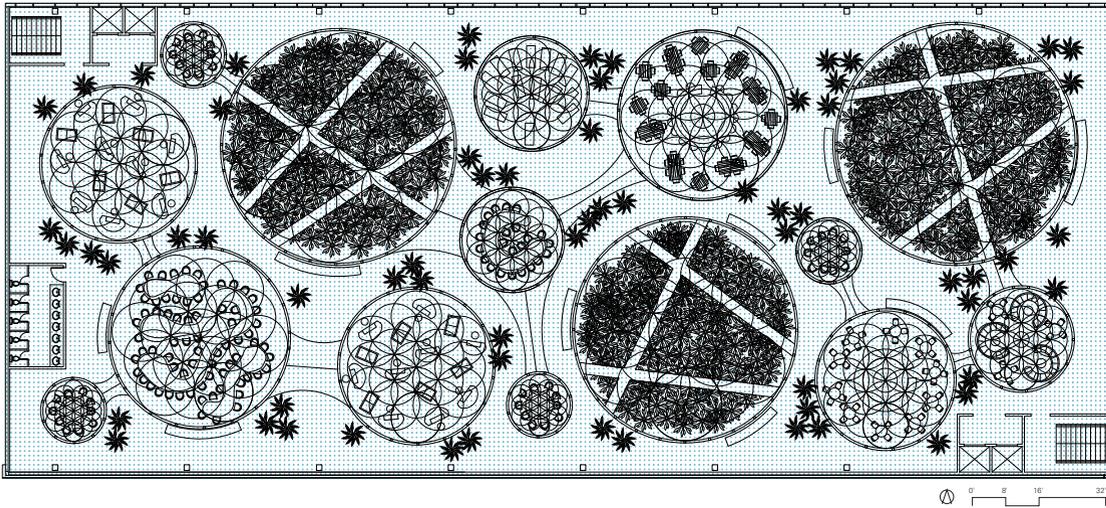
An office for...two recent graduates in their early thirties starting their own practice after receiving their M.Arch.

**An office for...**

two recent graduates in their early thirties starting their own practice a few years after receiving their M. Arch. They each still work full-time at more established firms and rely on this income to weather the early stages of an independent studio. The two architects live in different parts of the same city—two geographically close neighborhoods that are nonetheless a complicated series of public transit options because of constant train delays and construction. Most of their work consists of competition entries whose registration fees eat away at their quickly dwindling seed capital. There is no need for a space to meet with clients, and much of the deliverables are digital, so a studio or maker space isn't immediately necessary either. Funds for an office space instead went towards working with a graphic designer friend to create their website and visual identity, at a discounted—but still steep—rate. The two architects usually work from their apartments and communicate via Slack, but need a place conveniently in between their two apartments to meet every so often to discuss on-going projects.

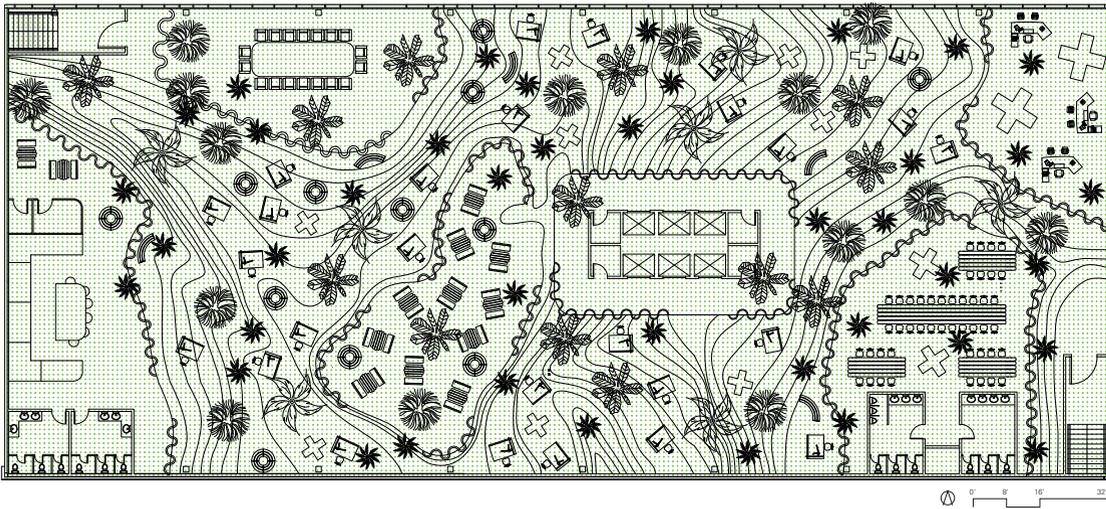
—BÜRO BUREAU





**\_Plan**

An office for...a medical marijuana company starting to expand.



**\_Plan**

An office for...an outdoor clothing, gear, and footwear company.



apartment A

coffee shop

apartment B1

# \_Mabel O. Wilson: Memory, Race, Nation

## Dimensions 32:

Could you describe your research practice in a sentence or two?

**Mabel O. Wilson:** Well, it's called Studio & because it's Studio and it includes all of these other things that I work on, whether it's research, or scholarship, a curatorial, or installation work. So yeah, it's a kind of a cumulative.

**D32:** Is there a particular book, building, project and/or person who's been a significant influence for you?

**MW:** It's hard to always pin things down to one influence because there are always many different things that change. You're always shifting in terms of where your focus is and what your interests are. I would just say that one pivotal moment for me was when I went to the Architectural Association for a term during my undergraduate education at University of Virginia. That was really groundbreaking and game-changing for me because it was just a whole other way of thinking about architecture and one that I am probably more aligned with than what I was otherwise getting as an undergraduate.

**D32:** What is the definition you hold for the architecture that you have created for yourself?

**MW:** It's very expansive. I feel like I tend to work from the limits of architecture, inwards, as opposed to working from the center, outward. I like to think about architecture in its very broadest sense, and so I think about the built environment being many things at many different scales.

**D32:** *Dimensions* this year, is foregrounding labor—particularly the labor that goes behind student projects. As the idea of labor is critical to your practice, we would like to know how you define the term labor in relation to architecture as a whole.

**MW:** Well, architects often don't see the work that they do as labor but more as a—I don't want to say vocation, but a vocation in almost the monastic sense of, "This is something I believe in, and I am going to be dedicated to it, and I am going to work all hours at it. And in the end, I am going to have this wondrous epiphany through my work that will change the world." So the register of the actual labor in all of that work is often elusive and I think my interest in questions around labor really came from my doctoral studies and getting involved in student organizing. By just saying, "Oh, okay, wait. I am a worker. What does it mean as an architect, to be a worker?" That enlightenment didn't really come from architecture but from thinking about my own career in architecture.

**D32:** Do you think your definition of architecture has changed, or have you noticed a change in the field or the way people are thinking about architecture and labor at large?

MABEL O. WILSON

-----

\_Wilson is a Professor of Architecture, a co-director of Global Africa Lab (GAL) and the Associate Director at the Institute for Research in African American Studies at Columbia University. She is currently writing *Building Race and Nation*, a book about how slavery influenced early American civic architecture. She is a member of the design team for the Memorial to Enslaved African American Laborers at the University of Virginia. She was recently one of 12 curators contributing to MoMA's current exhibition "Frank Lloyd Wright at 150: Unpacking the Architecture." She is a founding member of Who Builds Your Architecture? (WBYA?) a collective that advocates for fair labor practices on building sites worldwide and whose work was most recently shown in a solo show at the Art Institute of Chicago.

## INTERVIEW INFORMATION:

FEB26 '19 5:00PM  
 Institute for Humanities,  
 ANN ARBOR

## ACKNOWLEDGMENTS:

\_Interview  
 Hannah Cane  
 Jordan Laurila

\_Transcription  
 Erin Peterson

\_Editing  
 Karun Chughasrani

## TIME:

\_Interview  
 =51 minutes,  
 43 seconds

\_Transcription  
 =2 hours,  
 59 minutes

\_Editing  
 =5 hours,  
 30 minutes

\_Total Time  
 =9 hours,  
 20 minutes,  
 43 seconds

## COST:

\_Transcription  
 =\$70.00

\_TOTAL COST  
 =\$70.00



\_Mabel O. Wilson lecturing at Taubman College.

**MW:** I think people are becoming more aware of it. Things like The Architecture Lobby have certainly raised awareness among students, and so the younger generation of people going into practice is more conscious about this as well. Some of these questions are more on the radar now, in many ways. The AIA too, at some point, had to address that question of unpaid labor. The IRS was also raising questions about why architects were hiring all of these people and not paying them, which comes around taxes. So I do think there was a kind of readjustment in terms of the profession looking at itself, in terms of its own practices of how they pay people, and who they're hiring, and so forth, which I think has been a great thing for architecture.

**D32:** How do you think about your own work or labor and the work or labor of those around you?

**MW:** I always believe that people should be compensated for the work they do. There is a lot of shadow labor and there is a lot of unpaid labor, but I always have an ethic about making sure that people are getting paid, at least those who are working for me. There are collaborations, which are very different. Being mindful of what is it that we're giving away and how we are being compensated is really important.

**D32:** Do you start your new projects individually or do you immediately identify collaborators or people you would want to work with?

**MW:** It depends on the kind of project. But usually if it's more design related, it's always great to have collaborators—I just find it more interesting. You get challenged, you learn more, and it's just a richer process. It takes longer, it can be difficult. But the key is just finding good collaborators. And I feel like I have been pretty lucky.

**D32:** What makes a good collaborator? What kind of dynamic do you think is the most productive?

**MW:** People who are open and who can put things out there knowing that they're going to change depending on how people react to them. Allowing for this kind of give or take is really important. It's hard to work with somebody who's not giving and very rigid. Those do not make good collaborators. But the productive dialogue on collaboration and the collective investment are really important. You have to feel like everybody has a stake in whatever the project is.

**D32:** How was the team for the Memorial to Enslaved Laborers pulled together?

**MW:** That was Meejin Yoon and Eric Höweler. They invited me to join a team with a really great landscape architect and an environmental mediator initially. I helped find the artist, but I just think Meejin was very shrewd in terms of realizing what the project would need in terms of people who could brainstorm together, and it just turned out we all have very similar temperaments and a certain kind of ethos around questions of social justice. Aesthetically, we were all on the same page—very important. You just have to like the people you work with. We just all happened to like each other and it was fun. It's certainly a difficult project, but the fact that you like the people that you're working with makes a huge difference.

**D32:** What do you think are the advantages of leveraging architecture, with the aesthetic, spatial expertise, as opposed to other disciplines, in order to bring to light obscured histories and narratives?

**MW:** That's really a good question. When we interviewed, we were the only team of architects. The other four teams were all landscape architects. The committee that the university put together to make the decision didn't know what they wanted, they had no budget, they had no program, they had no site. They just knew that they needed to make a memorial to enslaved laborers. We didn't come with a project, we just directed them to the kinds of questions they should probably be asking in order to find out what they need to do and told them that we are the people to be able to ask these questions on their behalf. I think that helped in a sense and it was just a really great team. Our environmental mediator was used to working with communities and institutions, and then I was someone with historical expertise, but I am also a designer. We had a great landscape architect who had worked around Charlottesville and for the university. We all came with our knowledge and could contribute.

-----  
"But I was on site yesterday  
and I saw the workers and I was  
like, "Who are they? Are they  
being well paid? Does this look  
like a safe site?"  
-----

**D32:** While designing the project as well as while thinking about the history of labor on the campus, was there a conversation about the labor of construction, or the labor of building the monument?

**MW:** I mean there is always the thought of using this as a project for students to get involved. Very large pieces of granite are being moved into place and it involves digging the foundations, which is pretty complicated because there are things that already run through the site. It is also a state university and there are protocols in place in terms of contracting out projects. But I was on site yesterday and I saw the workers and I was like, "Who are they? Are they being well paid? Does this look like a safe site?"

**D32:** Thinking of the Who Builds Your Architecture? (WBYA?) project, do you think there are things that architects could do more to engage with the systems underpinning their work?

**MW:** We had a meeting recently to think about the questions we still need to ask. Part of it is to think about the site, but also materials and fair labor practices regarding materials. There is a law in California, for example, around transparent supply chains to ensure healthy practices if a big corporation is involved. I think this is why Everlane and Patagonia are the way they are. They're both based in California, and they have all of these fair labor practices around where they're getting their resources to make sure that their supply chain is clean not just ecologically, but also labor-wise. So what would that mean for architecture?

**D32:** What are the difficulties or limits of such research when you're trying to engage with those systems?



**\_Mabel O. Wilson lecturing at Taubman College.**

**MW:** It's very complicated because buildings are just complicated assemblies. Just look at this room and think about where all of this stuff comes from and all the processes that have to go into the windows, the doors, the door frames, the hinges, the locks. If you've ever seen a spec sheet, it's endless! It tells you how something is going together, but it also tells you who's putting it together, and how it is getting there. There are limits because of the complexity and I also think that architects are becoming a smaller part of large building projects. How much can the architect actually do is always the question. It's always a challenge because it's a difficult profession.



\_Mabel O. Wilson lecturing at Taubman College.

**D32:** Do you think questions like these fall on the shoulders of academia? Should architectural education be tackling questions like these in the first place? Or is this a question of post-graduate practice?

**MW:** No, I think it's both because this is where you get introduced to how things operate in the field. And then it's a question of how to engage once you go out in practice. It is possible that you could practice differently and change how practice works. Our model in, "Who Builds Your Architecture?" immediately became green building—30 years ago there was no such thing.

**D32:** As an educator, have you identified possible methods to introduce advocacy or awareness of global networks into architectural pedagogy or in other disciplines?

**MW:** "Who Builds Your Architecture" has been an advocacy and a research project, but I haven't used it per se to teach, although I know people who have used it in their teaching and their research. A lot of the work that I have done in studios are around global networks and trying to understand what those mean in terms of how that could impact cities and how you could trace or begin to understand global networks. This is something that I have always been interested in and "Who Builds Your Architecture" was a logical development out of having done multiple studios and research on that question.

**D32:** In retrospect, is there anything you wished you were exposed to as a student when you were going through your education?

**MW:** I feel like the education now tries to focus on issues of social justice, which didn't exist back then, especially where I was educated in Virginia in the '80s. It was very formal and structured. There were certainly things to learn, but it was in some ways prescribed, and I feel that things have really loosened up since then. Now when I revisit Virginia, it's a whole other world. Students are learning, they're doing work within Charlottesville—I think the education has progressed so far beyond what I was a part of. I think that's probably the reason I ended up at the AA. When I got there, it was cosmopolitan, it was intellectual, it was critical, it was artistic. It was all of the things that I was yearning to bring into my work but couldn't because I was in a whole other kind of pedagogical curricular institution. You students are definitely exposed to a better version of architectural education, far better than the one I got.

**D32:** How do you think about your different roles as an educator, a practitioner, a designer? Do you think of them as different or same sets of labor?

**MW:** It's a kind of blur. I'm not sure, I know they are somehow interconnected. I work on different projects that have some overlaps and sometimes they are varied. That is the nature of an architectural practice. It is something that one cannot step away from.

**D32:** How does the work you're doing now in your fellowship and humanities connect with your larger ambitions and further with Studio &?

**MW:** I'm working on a book called *Building, Race and Nation* that looks at slavery and dispossession and its connection to American civic architecture. It is a project I've wanted to work on for a while; very archival intensive, which has been taking a long time. I was actually working on it when Meejin called and asked me to work on the memorial project, which built on work I was already doing on Jefferson and slavery. So it was perfect. As a UVA grad, Jefferson has held a special position. He was this incredible figure, he was an architect, he is America's architect, he's the world. But they never talked about slavery—that there were slaves around the university or that Jefferson owned slaves. But what does that have to do with his architecture? Clearly, a lot because that was the labor building a lot of the work. Conceptually, there is a way in which architecture is being imagined as something that's specifically racialized because it's connected with all of the philosophical, aesthetic, and technological questions. You can't separate it because architecture as a practice of building in the West is emergent in a colonial moment. Architecture now is used universally, but that is the Enlightenment project: to take something from the West and universalize it where people have built everywhere around the world. But now through western architectural history, it's absorbed, named, and identified. I think that's important and placed into hierarchies.

**D32:** Do you still see traces of that heritage in the way architects still think about building?

**MW:** Yes, absolutely. Most people don't even realize that there is a very specific history to the frameworks we use that can be problematic. Architectural history is very Euro-American. Even the concept of history is problematic because it's a very western concept that then gets universalized through the university to stand for everything.

-----

"The concept of history is problematic because it's a very western concept—it's Hegel and it doesn't think about the past, cultures, and civilization."

-----



\_Featured Fellows  
-----  
Brittany Utting  
Willard A. Oberdick Fellowship  
\_138 MODEL HOMES  
  
Laida Aguirre  
William Muschenheim Fellowship  
\_Careful Crates  
  
Steven Lauritano  
Walter B. Sanders Fellowship  
\_Vase Dis-order

# felloWS

Taubman College offers three fellowships in the areas of architectural research and instruction. The fellowships include a teaching position related to the candidate's area of interest, resources for the development of work, possibilities to interface with scholars and researchers in the wider university context, and the opportunity to share the outcome of the fellowship with the College. Fellows spend one year in residence and teach three classes in addition to pursuing their fellowship interests.

FELLOWS\_UTTING

\_PROJECT INFORMATION:

\_TITLE:

\_138 MODEL HOMES

\_TOTAL COST:

=\$4,000

\_Labor:

=\$1,200

\_Flatbed Plastic Printing:

=\$1,400

\_Vitrine Construction:

=\$1,100

\_Catalog Print:

=\$200

\_Installation Hardware:

=\$100

\_MATERIALS:

\_flatbed printed pvc plastic mounted with stainless steel hardware, acrylic vitrines, fluorescent lighting, painted mdf bases, card stock catalog with stainless steel hardware

\_EMPLOYEE COMPENSATION:

=4 people, All paid; 3 paid with hourly rate through University payroll; 1 paid for photographic services

ACKNOWLEDGMENTS:

\_Collaborator: Daniel Jacobs;  
Production: Brian Baksa,  
Madison Strakele, Michael Paul;  
Photography: Yojairo Lomeli





# 138 MODEL HOMES

\_Brittany Utting

\_2017-2018 Willard A. Oberdick Fellow

The home is never innocent, never neutral. Utopian and speculative, the model home of the World Expo, the Trade Fair, and the International Exhibition is the prototype for a culture's habits of consumption. The relentless frequency of the global expo phenomenon endows it with the ability to influence public policy and consumer culture, marking it as both an index of a society's patterns of living and a measure of a culture's collective desires. A pure spatial product in this setting, the model home is a construct of models, drawings, images, financial analyses, and slogans, opportunistically adaptable to any rhetoric or purpose. An instrument appropriated by architects, politicians, and home-owners, the house has a history of being used for both radical, social experimentation and the reinforcement of the status quo. The domestic interior is a space that can be appropriated to sanction an explicit way of life and inflect patterns of consumption, making the World Fair, the Exhibition, the Biennial, and the Trade Show ideal delivery methods for an ideology. Today's model home

is a space of labor, a space of financial leverage, and a space for political action.

Perhaps our new space of architectural agency is within the developer's catalog of homes, the real author of the suburban landscape. This database of houses—a combinatorics of style and typology—constitutes a logistical regime of wealth distribution, territorial acquisition, and aesthetic management. The catalog's listings of architectural style and model number establish an organizational strategy that leverages the iconography of the home to clad otherwise standardized floor plans. 138 MODEL HOMES is instead an alternative catalog of model homes. Appropriating the same paradigms of deadpan combinatorics, material distribution systems, and organizational logistics employed by Levittown and the Sears Catalog, it seeks to reconstruct the 'useless machine' of development in order to realign the transactional and civic customs of the suburb and serve subjectivities not currently accommodated.

Characterized by typological excess and topological diversity, this new catalog of 138 MODEL HOMES constitutes the protocols for a new suburb, an alternative city in which to inscribe more varied forms of private and public life. These planometric permutations belong to a new category of domestic model—characterized by minimalisms and excesses, exotic layouts and redundancies—unfamiliar rearrangements of domestic objects that suggest new forms of collectivity and kinship within the expanding urban field. By reducing the home to a series of rooms characterized by specific furnishings and fixtures, the abstraction of the diagram

allows us to decouple the home from the potency of its enclosure, its style, its aesthetics, and iconography. The typological indifference to style allows for the plan and its associated slogan to open up to new modes of cohabitation, producing new structures of power and persuasion. These model homes make space for negotiation and cooperation, inevitably generating new hierarchies of power and territory; they enact alternative patterns of use, ownership, and occupation to challenge conditions of access, stewardship, and consensus. This new litany of homes is instead an alternative set of choices, habits, and forms of life:

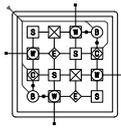
- No. 006 The House For Two Rather Friendly Roommates.
- No. 008 The House For Two Roommates Divided By Two Corridors
- No. 010 The House Where Four Friendly People Can Live And Work Together
- No. 011 Another House Where Four Friendly People Can Live And Work Together
- No. 016 The House For Four Pairs Divided By Four Corridors
- No. 022 The Home-Office
- No. 023 The House Without Kinship Structures
- No. 032 The House For Four People That Bathe Apart But Work Together
- No. 033 The House For Four People That Work Apart But Bathe Together
- No. 035 The House That Occupies Two Edges And Two Easements
- No. 039 The House Where Two People Can Live Apart From The Other Four
- No. 040 The House Where Sleeping Is A Communal Act
- No. 045 The House Without Hierarchies
- No. 047 The House For A Person To Sleep, Bathe, Cook, And Play
- No. 054 The House For Four People Who Sleep Alone But Live Together
- No. 060 The House For Four People That Share Two Lots And An Easement
- No. 065 The House With Four Units For Eight People
- No. 085 The House For Two People That Cook Together
- No. 086 The House For Three People That Share Two Bathrooms
- No. 107 The House That's Fifty Percent Bedrooms
- No. 108 The House Where Pleasure Is Separate From Labor
- No. 109 The House For Work And Play
- No. 113 The House For Three People With Two Yards
- No. 117 The House Where People Only Order Out
- No. 131 The House For An Average Size Household
- No. 137 The House That's Really A Duplex
- & No. 138 The House That's A Series Of Rooms

**\_Plan Diagrams  
for Home  
Typologies**

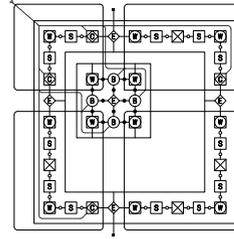
150+ hours were spent working on the organizational charts and quantitative data analytics represented by these diagrams.



No. 006 The House for Two Rather Friendly Roommates



No. 010 The House for Four Friendly People



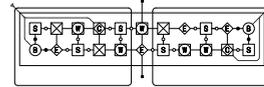
No. 045 The House Without Hierarchies



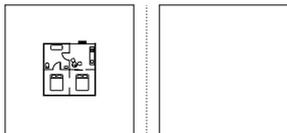
No. 047 The House to Sleep, Bathe, Cook, and Play



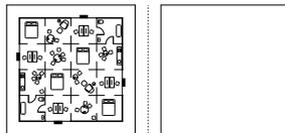
No. 117 The House where People Only Order Out



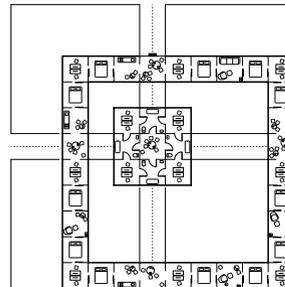
No. 138 The House that's Just a Series of Rooms



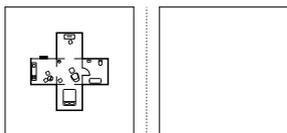
No. 006 The House for Two Rather Friendly Roommates



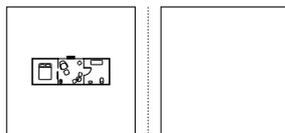
No. 010 The House for Four Friendly People



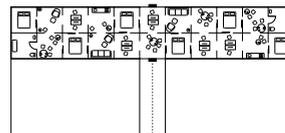
No. 045 The House Without Hierarchies



No. 047 The House to Sleep, Bathe, Cook, and Play



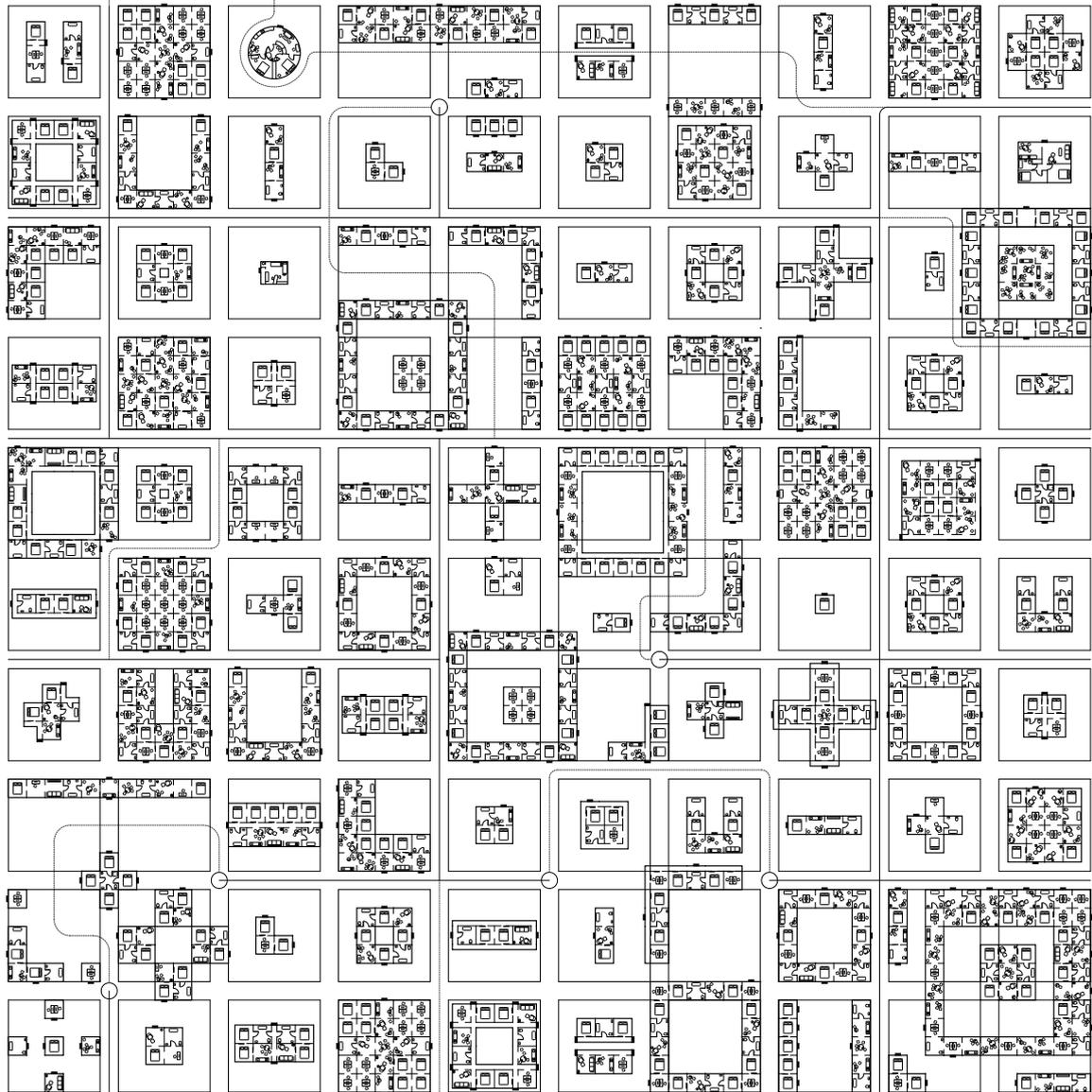
No. 117 The House where People Only Order Out



No. 138 The House that's Just a Series of Rooms

118	014	186	083	056	064	114	083	132	091	052	101	083	027	096	089	008	080	043	093	131	117	081	086	045	011	069	085	089	115
116	027	135	047	124	090	098	104	010	010	005	051	004	125	004	051	095	033	060	122	040	031	006	083	130	035	008	107	062	043
031	035	061	076	037	009	054	031	068	122	074	069	090	123	035	092	014	053	118	097	031	014	007	135	036	008	007	098	004	136
066	138	064	090	007	014	030	004	125	005	137	040	037	129	137	052	030	097	101	127	114	010	100	038	087	052	004	124	046	014
073	017	106	097	120	093	028	101	029	106	036	123	129	033	008	104	120	091	003	017	088	081	007	130	010	062	053	132	085	021
135	099	121	020	046	064	106	047	075	124	011	129	077	128	116	121	056	126	092	076	014	057	057	097	046	104	097	034	071	101
106	068	090	040	074	102	084	059	073	091	119	051	071	122	066	102	001	093	066	137	103	044	028	007	049	058	116	009	086	046
009	092	023	014	010	101	059	066	107	061	093	103	001	025	063	005	022	116	126	074	080	089	023	063	036	072	068	070	012	097
058	003	024	023	064	058	138	059	071	130	027	008	096	043	022	128	033	078	002	110	047	004	078	078	090	100	083	015	056	051
061	032	043	012	051	097	045	029	084	053	068	044	026	043	081	016	005	001	018	136	035	046	117	041	087	056	109	059	100	108
025	050	011	007	053	076	040	100	018	124	<b>090</b>	<b>021</b>	<b>009</b>	<b>126</b>	<b>001</b>	<b>094</b>	<b>098</b>	<b>117</b>	<b>019</b>	<b>010</b>	039	077	031	122	041	046	009	125	123	026
014	122	103	077	054	084	050	118	111	097	<b>028</b>	<b>007</b>	<b>118</b>	<b>070</b>	<b>093</b>	<b>005</b>	<b>049</b>	<b>047</b>	<b>124</b>	<b>129</b>	107	008	031	058	008	092	109	110	089	121
010	024	112	059	127	018	126	091	103	134	<b>078</b>	<b>026</b>	<b>124</b>	<b>002</b>	<b>077</b>	<b>117</b>	<b>026</b>	<b>053</b>	<b>116</b>	<b>042</b>	097	009	069	126	023	101	096	052	012	009
061	079	012	130	119	056	073	134	061	124	<b>135</b>	<b>008</b>	<b>023</b>	<b>044</b>	<b>117</b>	<b>122</b>	<b>082</b>	<b>076</b>	<b>001</b>	<b>119</b>	094	063	079	095	116	035	032	007	034	126
100	086	077	067	029	090	075	069	105	015	<b>038</b>	<b>025</b>	<b>027</b>	<b>124</b>	<b>051</b>	<b>040</b>	<b>021</b>	<b>111</b>	<b>109</b>	<b>117</b>	117	011	023	096	131	080	006	135	076	055
104	013	047	101	001	060	043	043	073	051	<b>122</b>	<b>022</b>	<b>047</b>	<b>027</b>	<b>014</b>	<b>026</b>	<b>085</b>	<b>004</b>	<b>061</b>	<b>116</b>	006	034	018	027	020	106	022	030	029	056
062	109	080	044	015	113	071	032	023	051	<b>053</b>	<b>065</b>	<b>128</b>	<b>073</b>	<b>040</b>	<b>115</b>	<b>059</b>	<b>057</b>	<b>032</b>	<b>008</b>	033	119	081	099	053	094	074	027	015	121
036	067	075	129	023	050	041	122	129	094	<b>115</b>	<b>112</b>	<b>136</b>	<b>129</b>	<b>106</b>	<b>040</b>	<b>005</b>	<b>121</b>	<b>013</b>	<b>000</b>	123	090	053	125	065	102	131	060	112	000
039	017	123	079	060	133	046	017	093	020	<b>079</b>	<b>058</b>	<b>070</b>	<b>026</b>	<b>122</b>	<b>102</b>	<b>078</b>	<b>029</b>	<b>118</b>	<b>046</b>	049	030	015	037	038	030	128	086	078	041
051	045	115	075	049	097	080	046	030	046	<b>050</b>	<b>004</b>	<b>129</b>	<b>021</b>	<b>028</b>	<b>094</b>	<b>135</b>	<b>107</b>	<b>003</b>	<b>121</b>	095	058	032	098	118	021	120	008	091	002
055	126	064	059	033	023	028	071	129	134	105	050	112	113	068	031	116	097	112	036	057	100	042	027	036	130	087	051	117	067
095	135	049	081	105	021	024	115	115	114	122	011	079	101	065	100	111	132	059	006	134	080	009	013	102	006	110	022	107	033
014	054	113	046	125	080	078	062	116	035	121	062	126	017	122	007	065	001	111	061	039	062	022	078	053	003	043	002	083	027
065	078	077	134	118	028	011	068	064	122	054	100	047	129	057	077	073	015	076	060	125	067	013	074	015	026	107	011	024	000
023	045	031	058	094	038	017	014	073	131	074	001	119	100	044	082	050	136	107	044	033	012	062	035	037	102	039	137	002	133
055	100	077	028	135	000	111	094	032	010	051	006	087	107	038	061	114	127	122	042	003	092	019	056	041	116	136	086	019	075
074	076	041	039	095	004	053	002	021	076	055	110	013	138	093	089	090	121	121	111	026	005	070	070	097	106	048	104	026	052
006	063	065	046	071	103	126	061	100	028	117	065	088	000	016	022	122	114	135	131	092	079	066	070	091	022	056	123	001	053
119	108	029	053	065	044	023	057	007	059	107	064	053	066	117	090	120	134	050	119	005	121	111	063	114	027	080	099	028	071
018	039	064	056	065	117	070	116	089	057	058	073	136	018	068	037	093	091	128	123	033	073	042	043	049	067	021	098	104	006

Combinatoric Grid for a Suburb



\_Planometric Proposal for a New Suburb



\_Exhibition View



\_Exhibition View





# Vase Dis-Order

\_Steven Lauritano

\_2017-2018 Walter B. Sanders Fellow

Why does the first published work of architectural history conclude with a chapter on vases? Johann Bernhard Fischer von Erlach's *Entwurf einer historischen Architektur*, completed in 1721, was immediately celebrated as a useful comparative study of world monuments.<sup>1</sup> Synthesizing a variety of sources, from coins and medals, to prints and drawings, and ancient texts, Fischer graphically reconstructed "the most noted Buildings of Antiquity and Foreign Peoples." Modern scholars have long recognized the groundbreaking status of this work, but Fischer's concluding chapter, devoted to a series of "*Divers Vases Antiques, Aegyptiens, Grecs, Romains, & Modernes*" has remained an enigma. Labeled "anomalous," or "inexplicable," Fischer's vases have frequently been dismissed as "extraneous."<sup>2</sup> Most troubling of all, certain scholars have attempted to disassociate the vessels from Fischer's larger historical project, positioning the illustrated objects as a curious, but inconsequential appendage.<sup>3</sup> This essay pushes back, arguing that it is precisely this implied connection—between works

of decorative art and a theory of history—that should be counted among Fischer's most original contributions.

Existing scholarship on Fischer's vases primarily aims to identify his source material, or, in those instances where he invented, to identify possible inspirations. Fischer himself included tidbits of provenance in the captions engraved below the vessels, claiming to have observed certain objects in one cabinet or another, but in nearly all cases, these anecdotes have been proven to be fictional. Erik Iversen, for example, demonstrated that two of the vases identified by Fischer as belonging to the collection of Cardinal Chigi and the Imperial Schatzkammer, in fact represent adaptations from Athanasius Kircher's *Oedipus Aegyptiacus*, volume III (Rome, 1654).<sup>4</sup> Others have identified an affinity between some of the vases represented in the *Entwurf* and the decorative urns designed for the Palazzo Borghese by Fischer's teacher, Johann Paul Schor.<sup>5</sup> Such research into Fischer's precedents, while useful, fails to decipher the vessels' historiographical purpose.

In order to glean some sense of why these objects appear at the end of the *Entwurf*, completing the chronological and geographical sequence of monuments, it is more useful to consider the compositional structure of the individual plates. Eight of the thirteen plates in the “*Divers Vases*” chapter conform to the same schema: a pair of vessels occupies the foreground, but they are pushed to the left and the right, leaving a sizeable gap in the center of the page. In each case, Fischer fills the resulting void with a kind of architectural mirage. Rendered in fine lines to emphasize a perceptual (and perhaps conceptual) distance from the foregrounded vessels, the distant buildings represent Fischer’s own architectural inventions.

Related compositions with monumentally scaled vases, set in ruin-accented landscapes, first appeared in the mid-seventeenth century. Jacques Damery’s suite of twelve designs in the antique manner (Rome, 1651-1660) provides one early example.<sup>6</sup> In Damery’s plates, the landscape stages a playful competition between ancient masters and those contemporary artists who aspired to match, or surpass, their taste and skill. Jean Le Pautre’s *Vases ou Burettes à la Romaine* (Amsterdam, ca. 1661-1718) uses a similar format to the one later employed by Fischer, with a pair of foregrounded vessels ensconced in their architectural setting. Though like Damery’s plates, the architecture here is clearly intended to evoke a generic antiquity; the same applies to the garments of those who inhabit the space. By contrast, Fischer peoples his vase compositions with figures dressed predominantly in the costumes of his own time, while the architectural structures framed by the vessels evoke a projective quality, as if they were oriented toward the future, rather than the past. Based on this apparent temporal discrepancy, the selected vases begin to communicate in more oblique ways with the architectural visions they bracket.

This dynamic of ambiguous proximity and oblique translation would seem to hold the key to deciphering the vases’ presence in the larger context of the work. Somehow, these objects mediate between the history of architecture and Fischer’s own conception of building for the present and future.

The overall progression of the *Entwurf* itself is organized by a logic of decreasing distance (in both historical and geographical terms) as the reader-viewer passes from plate to plate. Fischer opens with the architectural examples most distant from his own milieu, beginning with the Temple of Solomon and “Several Buildings of the Ancient Jews, Egyptians, Syrians, Persians and Greeks.” The second chapter moves forward in time depicting “Several ancient, little-known Roman Buildings,” while the third travels further abroad, but closer to the present, with illustrations of “Several Buildings of the Arabs and Turks as well as Modern Persian, Siamese, Chinese and Japanese Modes of Building.” Finally, in the fourth chapter, Fischer reduces the distance between himself and the illustrated works to a minimum, depicting “Several Buildings of the Author’s own Invention.” The expansive geographical scope of the project is indicative of European involvements in East Asia and the Near East at the time of its production, but Fischer’s book also carries on a tradition of greater geographical inclusivity developed in the works of Athanasius Kircher and Joachim von Sandrart.<sup>7</sup> That being said, the progressive collapsing of the vast historical and geographical scope of the first three chapters into what is, essentially, a monograph of Fischer’s own work, represents an innovation. How then, does the fifth chapter complement, or extend this trajectory? Might it mark a moment in the book where the viewer passes from the exterior world into the interiority of Fischer’s own creative process?

#### \_01.

Johann Bernhard Fischer von Erlach, *Entwurf einer Historischen Architectur: in Abbildung unterschiedener berühmten Gebäude des Alterthums und fremder Völcker; Und aus den Geschicht-büchern, Gedächtnüßmünzen, Ruinen, und eingeholten wahrhafften Abrißen, vor Augen zu stellen* (Vienna, 1721). Thomas Lediard published an English translation titled *A plan of civil and historical architecture: in the representation of the most noted buildings of foreign nations, both ancient and modern . . .* (London, 1737).

#### \_02.

See, for example, Thomas DaCosta Kaufmann, “Antiquarianism, the History of Objects, and the History of Art before Winckelmann” in *Journal of the History of Ideas*, Vol. 62, No 3 (July 2001), p. 532.

#### \_03.

Kristoffer Neville, for example, in the recent exhibition catalogue *Weltgeschichten der Architektur: Ursprünge, Narrative, Bilder 1700-2016* (Passau: Dietmar Klinger Verlag, 2016), describes the *Entwurf* as having only “four books,” (p. 13) before later acknowledging the “semi-independent fifth book” on vases (p. 15). However, the archival evidence all points to the fact that the vases were conceived of by Fischer as an integral component of his historical project from the very outset.

#### \_04.

Erik Iversen, “Review: Fischer von Erlach as Historian of Architecture” in *The Burlington Magazine*, Vol. 100, No. 666 (September 1958), p. 324.

#### \_05.

Howard Hibbard, “Palazzo Borghese Studies – I: The Garden and its Fountains,” in *The Burlington Magazine*, Vol. 100, No. 663 (June 1958), p. 209.

#### \_06.

Jacques Damery, *Vases antiques*, (Rome, 1651-1660).

#### \_07.

See Thomas DaCosta Kaufmann, “Eurocentrism and Art History? Universal History and the Historiography of the Arts before Winckelmann,” in *Memory and Oblivion*, ed. Wessel Reinink and Jeroen Stumpel (Dordrecht, Holland, 1996), pp. 35-42.



**\_Fischer Collection**

A comprehensive collection of vessels extracted from: Johann Bernhard Fischer von Erlach, *Entwurf einer historischen Architektur* (Vienna, 1721).



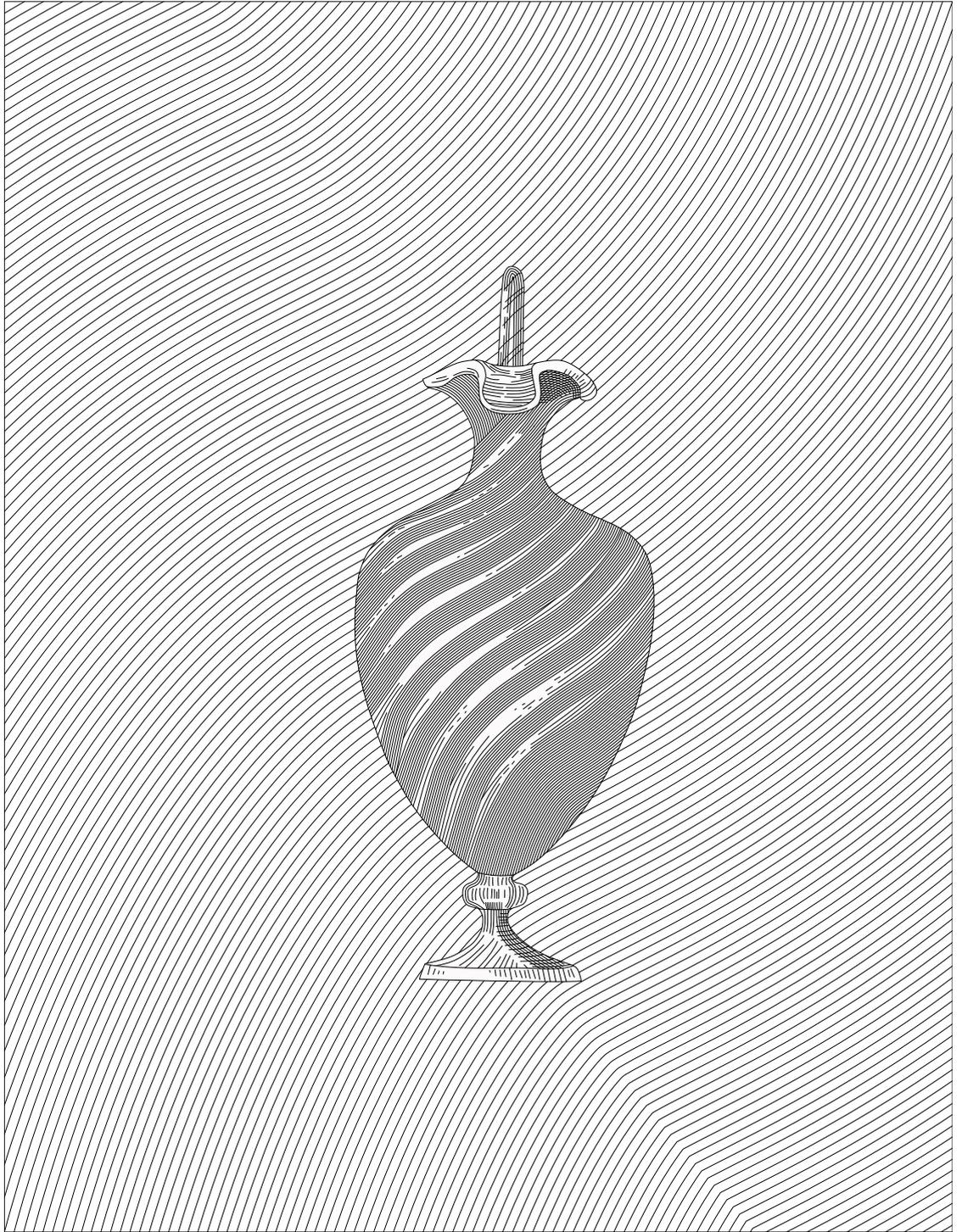
**\_Fischer Book V**

Johann Bernhard Fischer von Erlach, Plate 2 from Book V, "Divers Vases Antiques, AEgyptiens, Grecs, Romains, & Modernes," in the *Entwurf einer historischen Architektur* (Vienna, 1721).



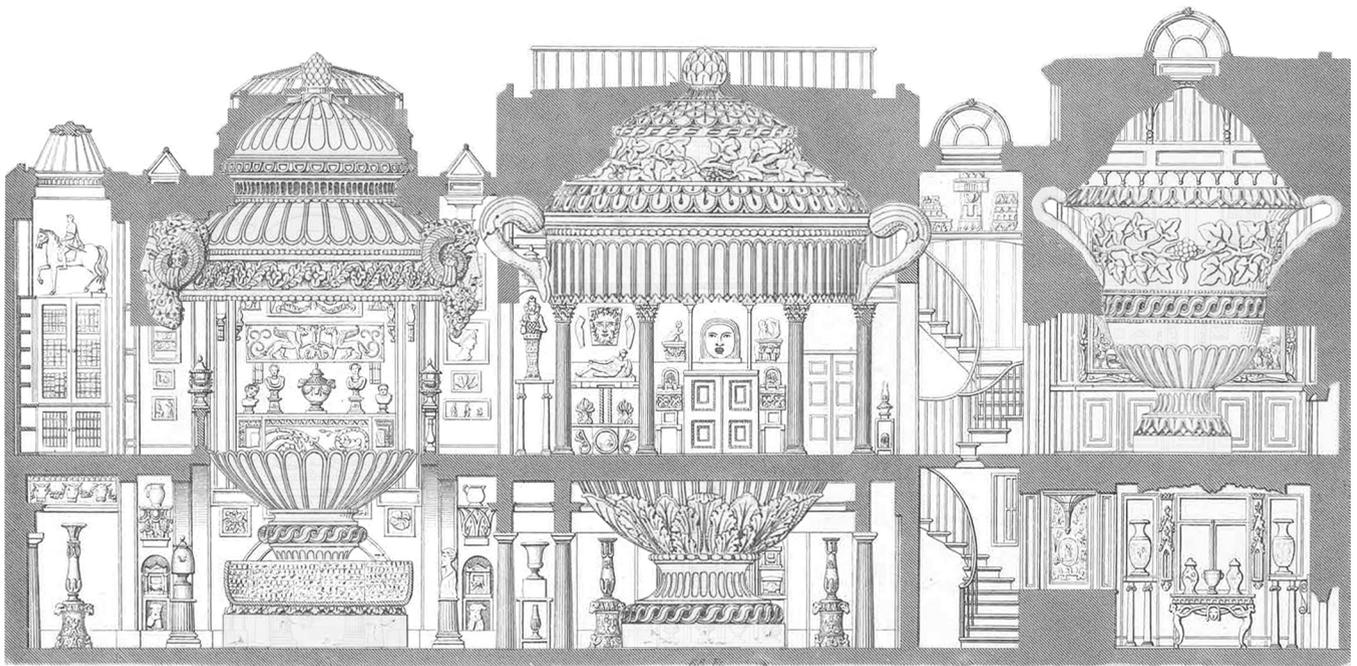
**\_Fischer Dis-Ordered**

Johann Bernhard Fischer von Erlach, "Symbolum Aeternitatis," from Plate 2, Book V, *Entwurf einer historischen Architektur* (Vienna, 1721), dis-ordered by Hannah Cane.



**\_Semper Dis-Ordered.**

“A filigree vase from the former Debruge collection,”  
illustrated in Gottfried Semper, *Der Stil* (Munich, 1863), dis-  
ordered by Hannah Cane.



### \_Soane Dis-Ordered

John Soane, "Longitudinal section through the museum & Crypt," plate XXV in *Description of the house and museum on the north side of Lincoln's Inn Fields . . .* (London, 1835-1836), dis-ordered by Megan Christian.

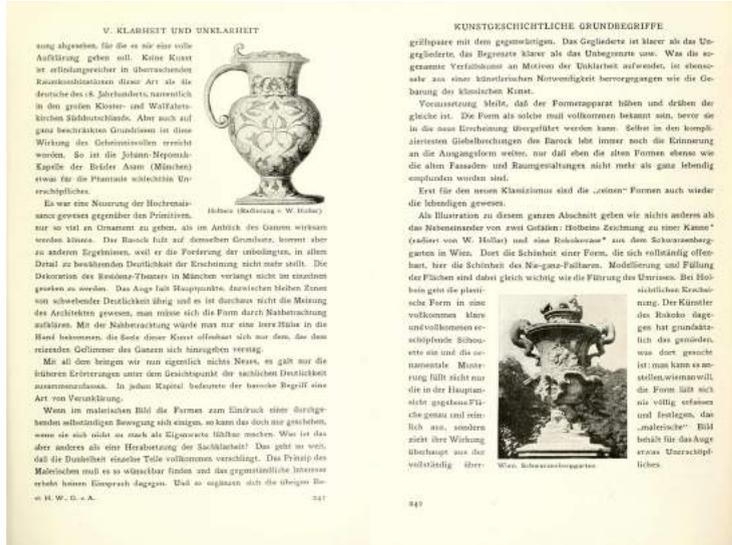
Fischer could have illustrated the Egyptian vases with the Egyptian architecture, the Greek Vessels with the Greek Buildings, the Roman vases with the Roman edifices, and so on. Instead, he chose a strict separation, severing the vases grouped in the book's final chapter from their various world historical points of origin. Might this separation indicate a crucial difference in these objects' material status? So many of buildings depicted in the first three chapters had vanished long before Fischer's time. As he acknowledges in the frontispiece, these monuments can only exist as reconstructions, graphically stitched together from "textual descriptions in ancient histories, commemorative coins and medals, ruins, and other artists' drawings." Some of the *Entwurff's* plates include depictions of this source material in the blank spaces surrounding the monuments, providing, in effect, a series of visual citations near the edges of the frame. The vases could have been deployed in this manner, as another

form of evidence, but Fischer clearly presents them as a separate category, a special category perhaps, of surviving objects. One is reminded of Gottfried Semper's later assertion that "pots are the oldest and most eloquent of historical documents."<sup>8</sup> They are the material, three-dimensional objects capable of traversing otherwise insurmountable distances between lost architectures and the present. Lending credence to such an interpretive framework, Fischer opens his series of vases with a special pair: one labeled as an allegory of "*Successio Temporis*," the other labeled "*Symbolum Aeternitatis*."

And yet, few, if any, of the vases depicted in the *Entwurff's* final chapter represent 'authentic' historical artifacts. While Fischer might esteem vases, in general, as a category of artifactual evidence, appreciating their unique ability to attest the "succession of time," or act as "symbols of eternity," the vessels he assembled primarily represent his own

### \_08.

Gottfried Semper, *Der Stil in den technischen und tektonischen Künsten; oder, Praktische Aesthetik: Ein Handbuch für Techniker, Künstler und Kunstfreunde*, 2 vols. (Frankfurt am Main: Verlag für Kunst & Wissenschaft, 1860; Munich: F. Bruckmann, 1863). This quotation comes from the English translation: *Style in the Technical and Tectonic Arts, Or, Practical Aesthetics*, Harry Francis Mallgrave and Michael Robinson, trans. (Los Angeles, CA: Getty Research Institute, 2004), p. 468.



**\_Klarheit und Unklarheit**

Heinrich Wölfflin, *Kunstgeschichtliche Grundbegriffe: Das Problem der Stilentwicklung in der neueren Kunst* (Munich, 1915), pp. 141-142.

**\_09.**

For an English translation see Heinrich Wölfflin, *Principles of Art History: The Problem of the Development of Style in Later Art*, M. D. Hottinger, trans. (London: G. Bell and Sons, Ltd., 1932). Wölfflin's five oppositional formal precepts include: I. Linear and Painterly, II. Plane and Recession, III. Closed and Open Form, IV. Multiplicity and Unity, and V. Clearness and Unclearness. For the vase illustrations see pp. 224-225.

**\_10.**

Wölfflin left the vase unattributed. At no point in the text does he mention Fischer von Erlach.

**\_Semper Vases**

(Facing page). A collection of vessels extracted from Gottfried Semper, *Der Stil in den technischen und tektonischen Künsten; oder, Praktische Aesthetik*. . . (Munich, 1863).



**\_Corbusier Dis-Ordered**

Le Corbusier, "Grecque," in *L'Art décoratif d'aujourd'hui* (Paris, 1925), p. 202, dis-ordered by Theresa Kaplan.

fantastical inventions. In this sense, the last chapter in the *Entwurf* contains an ambiguous conflation of historical and autobiographical content. The collection of objects harkens back to the earliest stages of Fischer's training as a sculptor, when he developed a working knowledge of the decorative urns and other *Prunkgefäße* commonly deployed in eighteenth-century architecture's ornamental vocabulary. Yet none of the *Entwurf*'s vessels could be comfortably described as "adorning" the architecture they accompany. Based on the consistent mode of arrangement, one is more inclined to read Fischer's plates as demonstration pieces illustrating two distinct facets of the architectural imagination here juxtaposed in the same frame. The vases represent the plastic side of architectural invention, originating in a set of processes which rely on direct, intuitive contact between material and the body. By contrast, the architectural vignettes placed at the center of each plate are shaped through a rationalized set of drawing maneuvers, constrained by ruler and compass. In essence, the

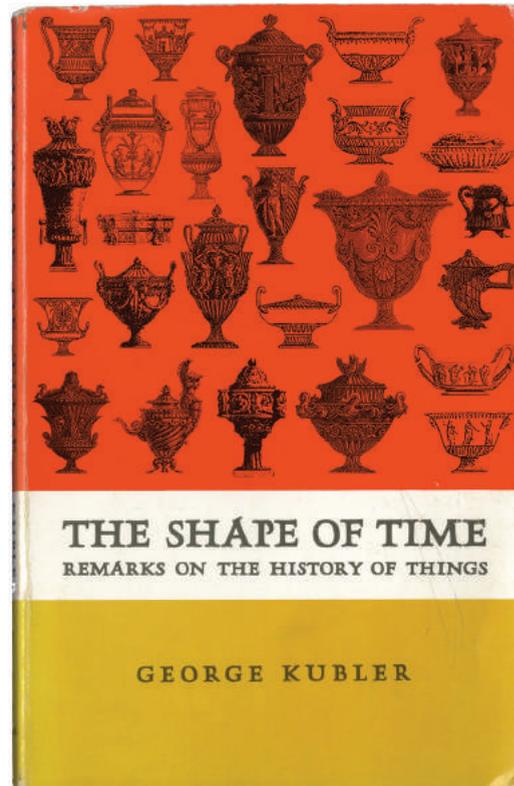
bracketing vases in Fischer's plates function as a kind of *id* to the depicted architecture's orthographic *ego*.

However anachronistic, such terminology might prove useful in the attempt to understand the role of Fischer's vases within a broader historical project. The fact that two centuries later Heinrich Wölfflin, in his *Kunstgeschichtliche Grundbegriffe* (München, 1915), chose to illustrate the last of his five architectural *Gegenbegriffe*, or oppositional formal precepts, *Klarheit* and *Unklarheit* (Clearness and Unclearness), not with a pair of contrasting buildings, but rather with a pair of vases, exceeds mere coincidence.<sup>9</sup> In a manner not entirely dissimilar from Fischer, Wölfflin seems to have recognized the value of illustrating an argument about architecture with objects rather than buildings. What's more, the image Wölfflin selected to represent the "Unclear" side of the aesthetic dichotomy was a photographic reproduction of a "rococo vase" in Vienna's Schwarzenberg Garden, designed by none other than Fischer himself (in 1728).<sup>10</sup>



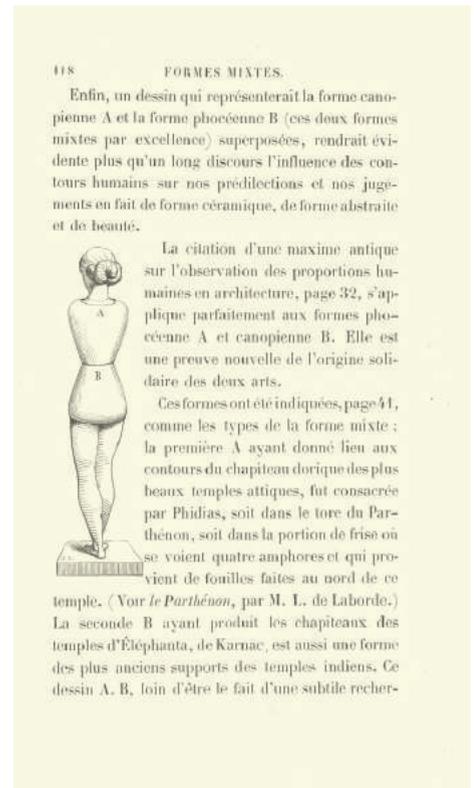
**\_Exhibition**

Vase Dis-order: vessel magnets, drawn from the works of O.M.A., Le Corbusier, John Soane, Giovanni Battista Piranesi and Johann Bernhard Fischer von Erlach, circulate freely, in and out of archetypal scenes. From the exhibition "Architectures by Proxy." Photograph by Yojaïro Lomeli, 2018.



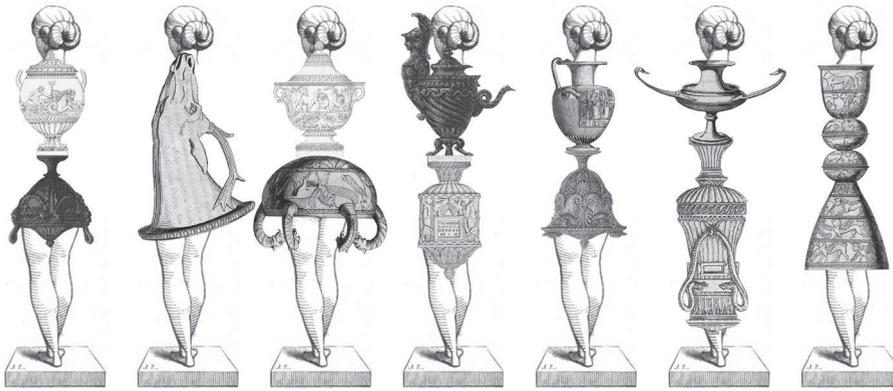
**\_Kubler Dis-Ordered**

George Kubler, *The Shape of Time: Remarks on the History of Things* (New Haven and London, 1962), dis-ordered by Jad Ismail.



**\_Ziegler**

J. Ziegler, "FORMES MIXTES," *Études céramiques: recherche des principes du beau dans l'architecture, l'art céramique et la forme en général...* (Paris, 1850), p. 118.



### \_FORMES MIXTES

Vessels drawn from the works of O.M.A., Le Corbusier, John Soane, Giovanni Battista Piranesi and Johann Bernhard Fischer von Erlach, dis-ordered by Jad Ismail.

Wölfflin selected this illustration at an art historical moment when multiple writers were considering possible connections between the properties of vessels and certain architectural forms. August Schmarsow, for example, had explored what he saw as a perceptual continuum between the pitcher, the vase, the baluster, and the column. Theodor Lipps was interested in the various degrees to which these objects evoked a sense of swelling. And Alois Riegl saw vases and other vessels as important sites for understanding the tactile stimulus which informs more complex sculptural and architectural forms.<sup>11</sup> Looking backwards from Wölfflin and the early-twentieth-century discourse on architectural empathy, might the final chapter in Fischer's *Entwurf* mark a nascent attempt to assert a particular notion of bodily tactility as the quality that connects baroque art with the art of other times and places, beyond those of classical antiquity?

Fischer's vases might constitute architectural pseudo-models, but they are also, clearly bodies. Long before the inception of Fischer's project, these objects carried their own set of anthropomorphic terms, used across multiple languages, to identify specific details of vase morphology: "feet," "bellies," "shoulders," "necks," and "mouths," to name a few. And it is precisely through this language of bodily analogy that we finally arrive at the ingredient conspicuously absent from

the *Entwurf*: the orders. At least since the days of Sebastian Serlio, graphic and written analyses of the columnar orders constituted a *de rigueur* aspect of architectural publishing. These customary exegeses are nowhere to be found in Fischer's tome. In their place appear the eclectic vases, displacing the classical columns and the ordering logics that traditionally accompanied them. If, following Vitruvius, the body-column discourse had centered around a set of idealized bodies, with perfect human proportions that helped to establish the guidelines for various architectural components, Fischer's vases introduce a very different collection of bodies. The vessels suggest wide hips, bulges, and protrusions that defy any sense of canon and point towards the need to reformat the very terms of the body-building equation. Ultimately, it is this dis-ordering capacity that led Fischer to include vases in his world architectural survey. To disrupt architecture in productive ways, to rekindle its creativity, it was not enough to merely expand the range of geographical sources. One can keep compiling, but these examples will still be assimilated, with all too much ease, into the existing framework of classical tectonics, grounded in the body-column analogy. To begin understanding and appreciating the actual diversity of world architectural history, one also needs a set of dis-orienting architectural proxies, a role fulfilled in Fischer's work by a diverse cast of vases.

### \_11.

On the context of this historical discourse, see Alina Payne, *From Ornament to Object: Genealogies of Architectural Modernism* (New Haven and London: Yale University Press, 2012), especially Chapter 3, "Art Historians, Objects, and Empathy," pp. 112-156.

FELLOWS\_AGUIRRE

\_PROJECT INFORMATION:

\_TITLE:

\_Careful Crates

\_TOTAL COST:

=\$5,000

\_Labor:

=\$3,500

\_MATERIALS:

\_mdf, foam, aluminum, vinyl

PROGRAM, TOOLS:

\_milling, carpentry,  
blender, photoshop, final  
cut pro, google drive

\_TIME:

\_ALL NIGHTERS:

= 2 (approx.)

EMPLOYEE COMPENSATION:

=8 people, paid with  
hourly rate through  
University payroll

ACKNOWLEDGMENTS:

\_Eileen Arcos  
\_Christopher Campbell  
\_David Alcala  
\_Autumn Zhao  
\_Ana Jinhua Tang  
\_Taylor Korslin  
\_Nathan Echstemkamper  
\_Annemaria Groenhout



# Careful Crates

\_Laida Aguirre

\_2017-2018 William Muschenheim Fellow

Careful Crates: A Culture of Shipping is a mixed-media project that explores the material/cultural byproducts of logistic networks, specifically shipping. It seeks to provide alternative entry points into the otherwise opaque topics of global trade and the data-thinking mindset of commercial logistics by focusing on the spatial and cultural effects of shipping policies and practices.

I. Global supply chains and logistics fundamentally condition contemporary life and architecture. The contemporary experience is, more often than not, propped by these mediums and networks. This project focuses on shipping/returns as a spatial, as well as a cultural phenomena, having the intriguing condition of existing at two scales: the human and the global. The human scale consists of the palpability of the material: the cardboard boxes on your porch, your login credentials to access the tracking number, the complaint email after your order did not arrive. The global scale contains the infrastructure: the abstracted data space, the black box logistics we send our boxes to, the ether of numbers and long distances.

Not just shipping, but the culture of shipping itself has had a big impact on architecture. 2018 was to be the declared death of the physical storefront, where major brick-and-mortar retailers closed down largely due to uptake of e-commerce. The foundational argument for this project is that shipping has created a bifurcation in the idea of a store





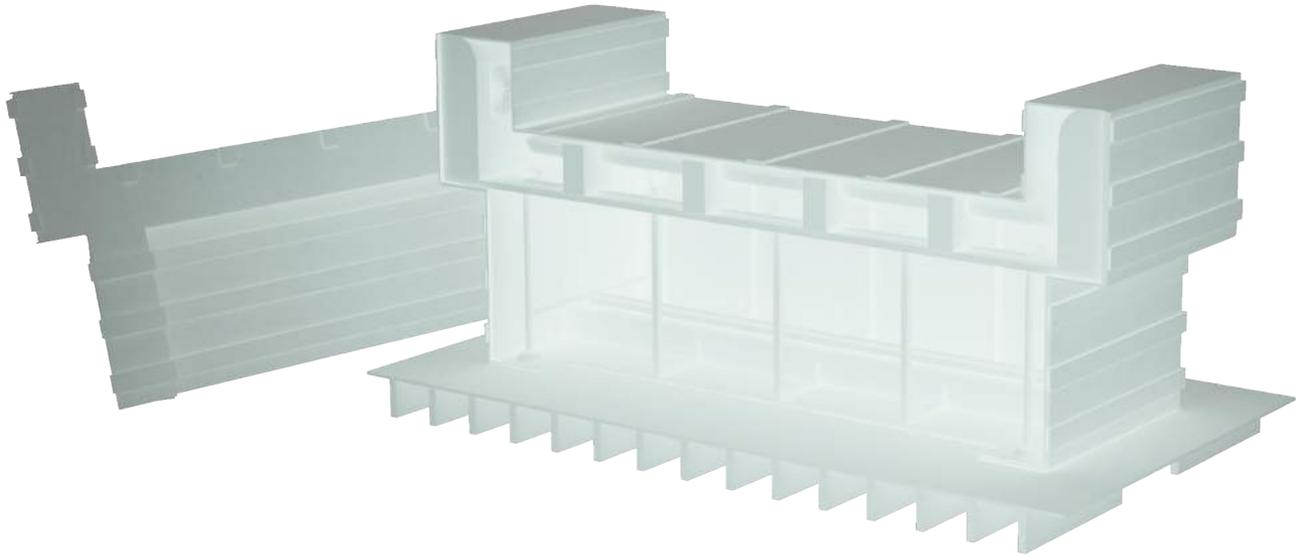
\_Scene [04]

and a storefront. Where the physical store used to be, we now find a series of new typologies that are varied combinations of the following: the physical inventory stored somewhere rather anonymously, governed by the long leash of shipping policies; and the immaterial image, the brand, the face, the interface, existing, but far removed, in the digital virtual space.

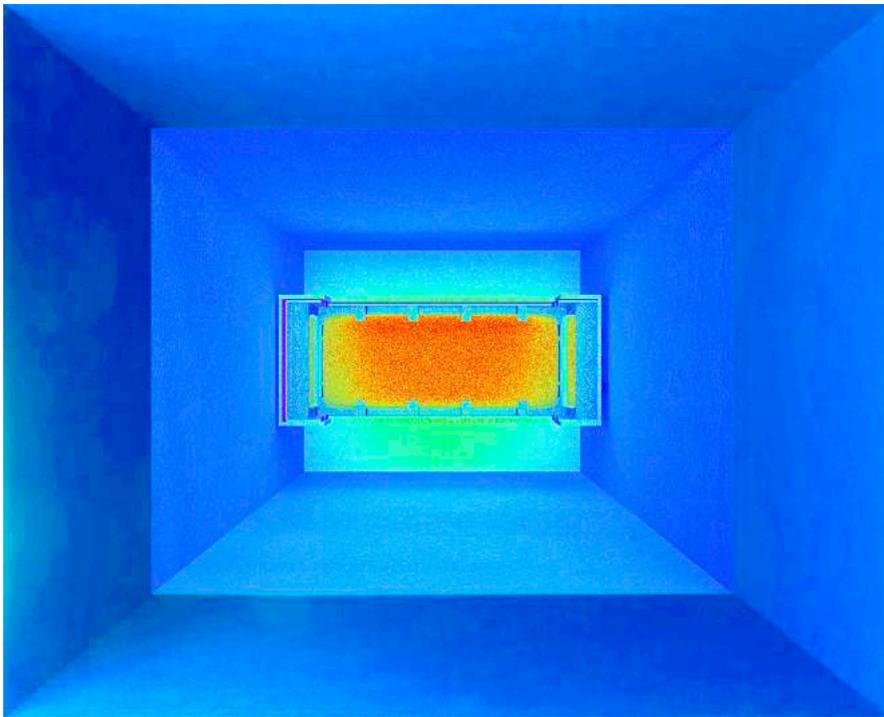
The storefront, while diminishing in square footage, no longer exists to “store,” but rather to create an image, becoming closer to a walkable billboard. A new imaginary has opened up where the physical store used to be: between the inventory and the storefront, between the logistical and the image-based. A vast new territory for architecture to act is anewed—the scale, medium, and character of which are yet to be defined. Whether it is at the object, systems, or image level, there is a vast space to sponsor architectural interpretation and criticism.

This work engages within the scale of both top-down and bottom-up processes. The top-down is represented by the black boxes of influence: the exhaustingly out-of-reach, incomprehensible, out-of-human-scale world of logistics. The bottom-up explores the culture around these systems, as a way to access our place back in the feedback loop of influence on them. Capitalism works in a closed-loop, resistance today is a product tomorrow, and vice-versa.

This project argues that one can equally attempt to understand the cultural/aesthetic through the logistical. And the other way around, attempting to decipher the logistical through the cultural/aesthetic. This project loves cliché: the Yelp review that can elevate or destroy, the bragging rights of Fedex’s fleets, choosing UPS for business and USPS for Christmas, the customizable sneakers visualized remotely in a virtual storefront but you got the wrong size.



\_Crate for a Couch



\_Crate for a Couch, heat map



### \_Crate for a Sink

II. Negotiating the exchange between these scales are boxes, crates, containers—armatures of material mobilities that are simultaneously material and immaterial. The box here is the logistical base unit of the material world. It is the data point, the unit of spatial thinking, equivalent to what the pixel is to the image.

These standardized objects of material mobility are the base-units for all things logistical, but they also function as a general stand-in for all that is “fillable” and “evacuable”. They are a subliminal force in the construction of space, a form of thought, an ordering system, an icon. The container, with its fundamental ability of containing and sheltering, has ushered the explosion of modern-day commodity. The container, along with the systems that govern its efficiencies, is responsible for turning the top layer of our world into a factory floor. It has created an endemic mobility, a perpetual state of temporality on things.

The transport, that containers organize, binds and delimits content in anticipation of an economically-bound, spatial construct. The container constantly attempts to regularize a form, square it out, turn it into a quantifiable data-set, flatten it, and standardize it, all in the name of efficacy. A boxy microeconomic logic that has gripped the world. The integrity of the perimeter casing, a tight fit, a safe gap, a healthy offset, a soft

cushion, a level landing, a legible label, all work on economization. The actual materiality of the apparatus, with its details like bolts, base, handles, protective edges, footings, levelers, soft surfaces, hard casings, reinforced corners, etc., is constitutive of the phenomenon at large. Transport readiness is instantiated in the material itself, in the apparatus of the box, and its specific material configurations.

These objects are of, and for, circulation. The object(s) within are no longer differentiated from the bounding box, they are discretized into a data point as they integrate themselves onto the larger field of fulfillment. Management takes over specificity.

I think about Walead Beshty, who did a study on circulation, and the physical forces endured by objects in motion. His work is interested in how objects acquire meaning through their context and through travel. A work specifically organized around the notion of global traffic becoming materially manifested through its movement from one place to another. He labels this as “the unbearable compromise of that which is portable.” For his Fedex series, he constructed laminated-glass objects that fit seamlessly within the dimensions of standard size shipping boxes. Through “normal” handling, the objects cracked and shattered, bearing the evidences of their journey. The object titles specifically mention the date, tracking number, and box size during shipment. In

Beshty's work, two critical issues emerge: Handling, and Volume. His work becomes pivotal in pointing that Fedex owns the copyrights to the exact dimensions of their boxes: a proprietary volume of space, distinct from the design of the box, which is identified through what is called a SSCCN (Serial Shipping Container Code Number). Essentially, a corporation owns a shape, not just the design, but the exact dimensions of a box. The volume is actually owned separately from the box. The two are owned independently from one another. Here, volume becomes political: an abstract concept now has legal boundaries—delineating volumetric perimeters as economic units.

These efficiencies are usually presented to be working in our favor, but at its core, the bounding box embodies the essentialisms of Capitalism. The box is an icon of the central dilemma of our current value systems. It is presumed to be needed, yet it is a suspect. Its aesthetics of efficiency both satisfy and repulse.

Autonomy, in this case, is illusory. There is a sharp interdependence between the logistical object and the systems it dwells in, as well as the culture that sends and receives them. Content here matters less, while management, weight, and bounding dimensions replace most factors. In this context, the 'difficult' becomes an act of resistance.

Artist Michael Wang in his work, *Carbon Copies*, examines the ecological footprint of logistics/production. He produced a series of 20 cubes whose dimensions are determined by the carbon footprint generated during their production,

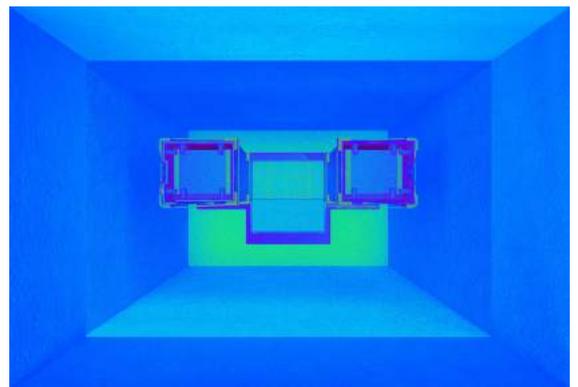
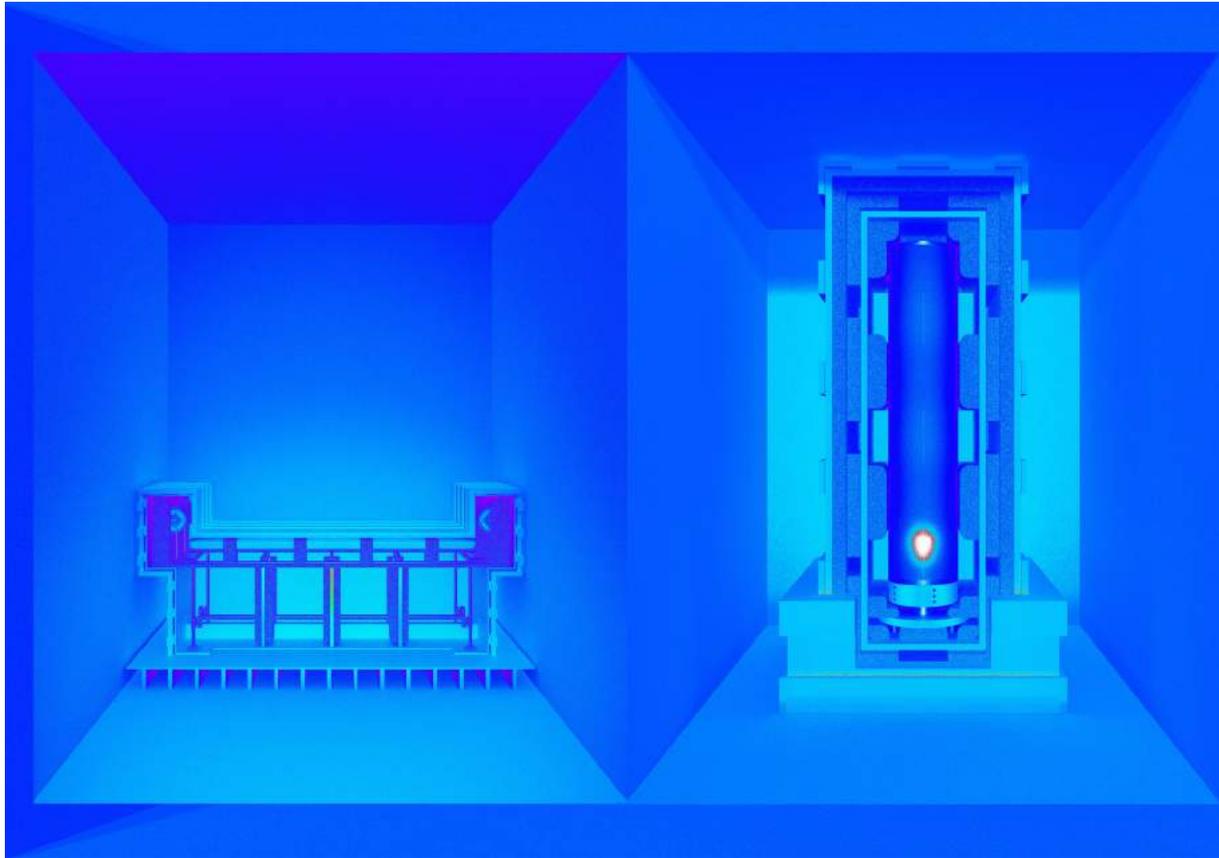
thus attaching specific dimensions within a global economy that the artist himself conceived. Each object, then represents, the often invisible factors that go into the making of a project—merging a kind of cultural and art-production critique, with materiality.

Referencing Richard Artschwager's crate sculptures, *Careful Crates* resist efficiencies. They offer clues of their contents through oddities in shape, a formal plasticity that contradicts the optimizations of the standardized shipping units mentioned above. Instead, they serve as a material resistance to the "bounding box" economy that organizes, binds, shelters, and delimits content in anticipation of global circulation. The same bounding box that transforms all objects in circulation to a data point, a monetized dimension, a tracking number. The object inside is covered in foam, within another layer of foam, the crate, a wrap, a strap, and then the container. Layer after layer, the object and crate become complicit to one another, a condition Michael Fried might refer to as, "mutually responsive." Thus, the object and the box bind to each other.

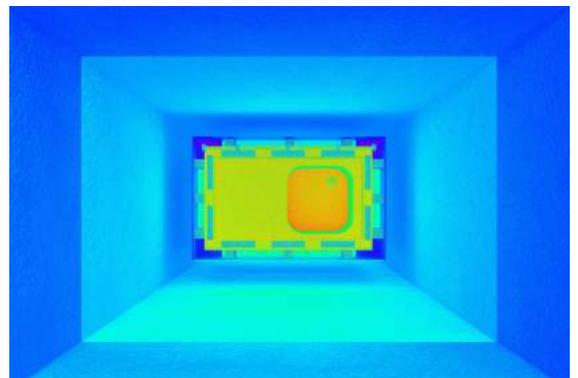
*Careful Crates* resist standardization. They are difficult to stack—the manifold of boundaries and edges of objects contained within, carry though the assembled whole. The *Careful Crate* becomes a pictogram of its contents, thus resistant to the bounding box economy, challenging the exhaustingly out-of-reach, black box world of global logistics, the 1-(800)-number, and data-everything that operates beyond our comprehension by exploring the politics of the box.



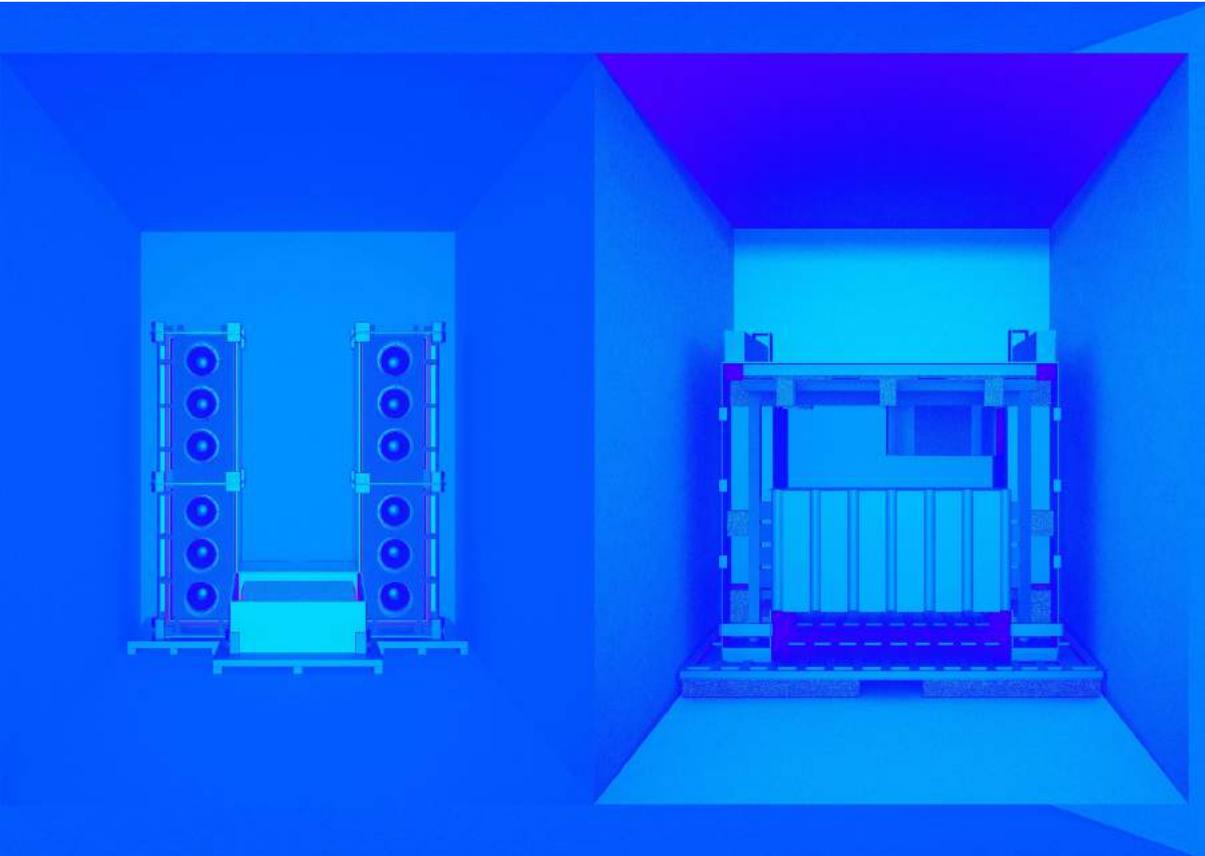
**\_Crate for Tubes**



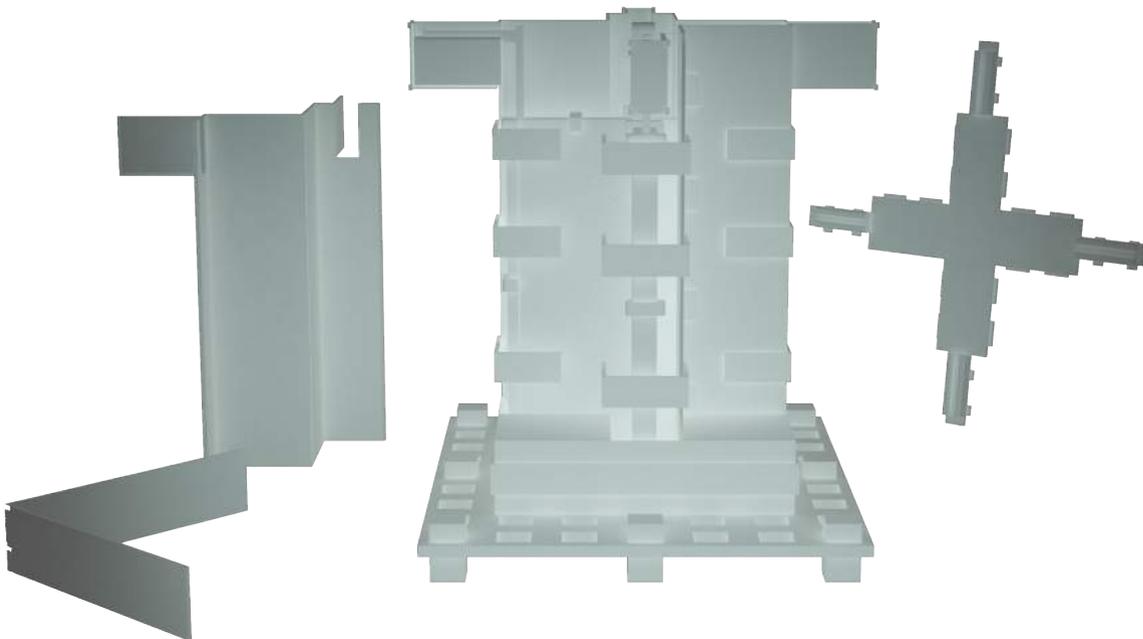
\_Crates for Speakers, heat map



\_Crates for Sink, heat map

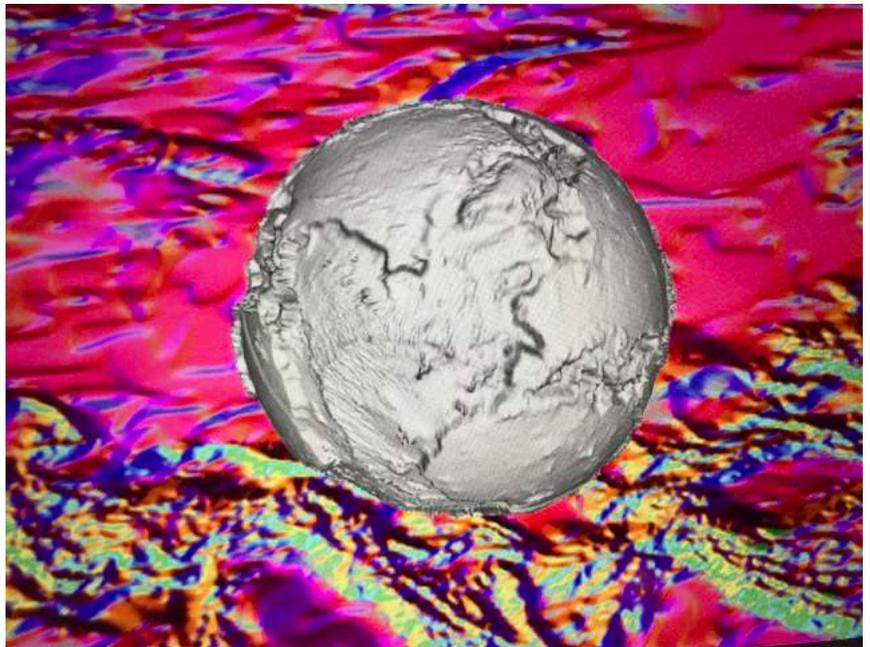


\_Crates,  
Front Elevation  
Drawing



\_Crates for a  
Display Rack

III. Global systems establish asymmetrical power relationships, and we have to continuously find alternative methods to comprehend them and their consequences. One of these ways is to study the physical by-product. System-objects exceed their immediate object-ness while pointing at systems beyond themselves. They are objects that can help us understand many others. They are anthropological tools that point to our societal methods of order and value systems. The asymmetrical power relationship, mentioned above, creates the need to understand shipping through a cultural lens, a need for an altogether different approach to experience the direction of influence. Seeing the system from the side of the managed, not the managers. 'Culture', in this case, represents the interests and demands of the particular against the homogenizing pressures of the general. Acting upon the object gives these systems a body in the present, where they can occur as a matter of agency, and not of witness alone. Shipping has shifted the spatial assumptions of retail and with it the existing culture of image.



\_Global Boxes [03]

\_Scene [03]



\_Careful Crates,  
opening scene



\_Global Boxes  
[02]



# Postscript

Christian  
Unverzagt

Associate Professor of  
Practice in Architecture

A proper postscript cannot be written until the rest of the work is done. So, welcome to the end. The rest of the work is done, and the stress has now shifted from the students to their advisor.

But is it really the end? Or even the end of something already over? Many would say it's just the beginning; perhaps it's somewhere in-between; or maybe, it's all of these — and more.

It's the end of the project, but the beginning of new practices, inquiries, and perspectives. It's a wrap on doubling back on a year's work, reshaping it, and putting it back into the world. It's the start of a new tandem ambition to spark discourse in more immediate ways. It's the middle in that we (or they) are done, but most of you won't see this book for months. It's the middle in another way for me, in that I have been the advisor for the last 16 of 32 volumes! Perhaps I'm just getting started too?

In the end, this volume simultaneously records and projects, documenting only a thin slice of critical, yet vital work and conversations at the school. It also projects the ambitions of the students who made the work, directed the conversation, and produced this book. Working with them continues to challenge me and what it means to 'advise' them. For them I am grateful. Congratulations Hannah, Karun, Grace, Austin, Jordan, Nour, Rinika, Jenny, & Arvinder!

Christian Unverzagt  
Advisor

April 9, 2019  
Detroit

\_GRATITUDE:

*Dimensions* would like to thank the Victor Gondos, Jr Archives Fund for their support. This fund was established as a memorial to Dr. Gondos ('25) by his widow, Dorothy Gondos Beers. Dr. Gondos was a distinguished archivist and historian who served 23 years with the National Archives in Washington, D.C. Mrs. Gondos-Beers' intention was that the fund be used to assist architecture students in exercising and improving their writing skills. Since its inception, the fund has supported the publication of this journal for many years. Upon her passing, Mrs. Gondos Beers left a substantial bequest for the Victor Gondos, Jr Archives Fund, which generously funds writing projects like *Dimensions*.

\_ACKNOWLEDGEMENTS:

*Dimensions 32* would also like to thank the following individuals for their efforts with this year's publication:

Rachel Armstrong  
Justin Brown  
Laura Brown  
Katee Cole  
CJ Darr  
Craig Dykers  
Britton Goetz  
Sharon Haar  
Amy Horvath  
Jeffrey Mansfield  
William Manspeaker  
Linda Mills  
Kelly Moore  
Michael Murphy  
Erin Peterson  
Cindi Phillips  
Camie Turner  
Mabel O. Wilson

The staff would especially like to thank our advisor, Christian Unverzagt. It's only with your help that we're certain we are too legit to quit.



Dimensions is the annual, student-produced journal of architecture at the A. Alfred Taubman College of Architecture and Urban Planning that seeks to contribute to the critical discourse of architectural education by documenting the most compelling work produced by its students, fellows, and visiting lecturers.

All Rights Reserved.

No part of this publication may be reproduced in any manner whatsoever without permission in writing from the University of Michigan Taubman College.

### Artwork

DISK: 1074-6536                      Layout provided as an InDesign CC Package with Dimensions 32 was printed by Uppigraphics and vector .eps. All files submitted to the printer must be in PDF. Fonts will be packaged. Proofs: 80# Finch Fine 100% contrast proof; 2# Color proof; 3. Any Opaque Cover, Vector artwork via PDF proofs for revisions not color dependent.

Submitted, vol. 32                      Printer to advise on date required to submit final Copyright © 2019                      Art in order to meet deadline without incurring charges of the University of Michigan

Be advised: Dimensions may require 48-72 hours to receive a color proof. All other proofs and artwork must be submitted within 24 hours, if not sooner.

Date: Steel Boulevard                      300 copies required May 3, 2019 to Taubman Ann Arbor, MI 48109-2669 USA: Dean's Office. NO EXCEPTION. Others taubman@umich.edu/dimensions

Packaging:                      Packed in boxes. Labeled "U-M Taubman College / Dimensions Volume 32 and 2019"

Delivery: Light, Didot 06 Light, Helvetica                      The University of Michigan, Taubman College, 2000 Bonisteel Blvd. Ann Arbor, MI 48109

Samples: reasonable attempt has been made to identify owners of copyright. Keep flat. DO NOT ROLL. or omissions will be corrected in subsequent editions.                      Additional Terms:

1. This project features works of fine architecture and requires a high degree of professional care, color accuracy, and print quality.
2. Please quote prices based on these specifications. Alternates may be quoted in addition to, but not in place of, any item in these specifications and must be so indicated on the quote.