DIMENSIONS

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WALLENBERG

The Wallenberg studio honors the legacy of one of Taubman College's most notable alumni, Raoul Wallenberg, through an undergraduate studio theme focused on a broad humanitarian concern. Wallenberg, a 1935 graduate, is credited for saving more than 100,000 Jews from the Nazi persecution in Budapest, Hungary, during World War II. The 2023 studio theme—Variance—stimulated a semester-long collective investigation of the contradictory and intriguing relationship that exists between variance and code. Across a range of studios and topics, students considered the norms and deviations that shape our built environment, and in the process, uncovered the cultural conundrums and achievements made possible by transgressing expectations. Each year, the studio awards traveling scholarships through the Raoul Wallenberg Endowment.

THESIS

The product of a year-long investigation, the thesis studio occurs in the final semester of the graduate sequence. Through a self-directed creative project, students engage in the process of research, critique, and synthesis to create works that engage with architectural discourse. The projects are exhibited just prior to graduation and reviewed by a panel of outside and faculty experts.

MASTER OF SCIENCE

The MS in Architecture Design and Research capitalizes on the University of Michigan's unique position as a premier research university. The University's scope and breadth across various architecture-related disciplines is integral to the course of study in all concentrations. The MS provides an additional credential that enables its graduates to pursue research and entrepreneurial practices, careers in the academy, or to expand their architectural practice.

INTERVIEWS

Each year, Taubman College hosts distinguished individuals from architecture and related fields to share their work with students and faculty through a public lecture. Dimensions invites several of these guests to participate in a conversational interview to be published in the journal. Members of the *Dimensions* team have a unique opportunity to curate and conduct interviews with these visiting individuals, offering glimpses into other dimensions of architecture.

FELLOWS

Taubman College of Architecture and Urban Planning offers several fellowships in the areas of architectural research and instruction. Architecture Fellowships focus on research, design, or physical production. Additionally, there's the Fishman Fellowship for scholars in urbanism, the Spatial and Racial Justice Fellowship exploring the intersection of racial justice and the built environment, and the Michigan-Mellon Fellowship for multidisciplinary research on egalitarianism's role in shaping metropolitan regions. Each fellowship incorporates teaching aligned to the candidate's interests, resources for work development, and possibilities to engage with scholars and researchers across the university. Final products range from exhibits, to publications, to installations, to other material or virtual constructions. All Taubman College fellowships allow for the realization of architectural works and endeavors typically unsupported within conventional models of practice.

ASRG

The Architecture Student Research Grant (ASRG), initiated by the Class of 2013, provides a unique opportunity for student research. The ASRG exhibition brings together the research of three distinct projects initiated in the fall of 2023. Funded by the Architecture Student Research Grant, ArtsEngine's Arts Integrative Interdisciplinary Research Grant, and the generous gifts of Taubman College alumni Adam Smith, Lisa Sauve, and Robert Yuen, these projects engage with a multiplicity of subjects, from digital-physical fabrication, to sustainability in material use, to systemic sexism in the workplace. These projects are featured as prototypes, constructed at one-to-one scale, then displayed at the Liberty Research Annex in the winter. In their future iterations, these projects are intended to grow beyond their immediate context of the exhibition, in turn contributing to critical domains within current architectural discourse.

JONATHAN MASSEY

Dean and Professor

FOREWORD

An Afro-harp among dissonant black creations. Generic erotica and soft robotic jellyfish. Victorian scramble and other food follies. Queer critter QR code. *Dimensions* opens a window onto the creative discovery that animates students, faculty, and staff in the Taubman College Architecture Program. The editors have interviewed some of the architects, scholars, and critics who visited us this year. They have documented design research projects completed by faculty fellows, the early-career designers, and scholars who join us for a year or two to develop and share their ideas.

The heart of the journal is work completed by the students themselves. Projects from the undergraduate Wallenberg Studio; from graduate thesis and option studios in the Master of Architecture and Master of Science in Digital & Material Studies curricula; and from the Architecture Student Research Grant program, which supports independent research and design work.

Thank you to the editorial team that created this vibrant compendium, along with their faculty advisor, Christian Unverzagt. Thanks, also, to the many students, faculty, staff, and visitors who imagined, refined, fabricated, installed, and interpreted the materials gathered here.

Keep reading and you'll find pink glitches and feral residences, a pluriversal Jerusalem archive and rehoused Roman registrations, a drag queen freedom tower next to a dirty garden game, an extended reality rug, and lichen bio-labs. Each of the selections here shows us a new line of architectural knowledge and creation entangled with other dimensions of life.

As generous a survey as this is, it's still just a tiny sampling of the conversations, scholarship, and creativity coursing through the Architecture Program and Taubman College. If you were part of our community this year, this issue can serve as a yearbook of sorts by evoking memories, prompting reflection, and capturing things you may have missed in the moment. If this is your introduction, I hope it helps you take the measure of our program… and inspires you to join us.

LETTER FROM THE EDITORS

If you were to put thirteen students in a room full of books and tell them to make their own, you might find them discussing whether the paper is matte enough, how a font feels, or which Pantone swatch of pink sticks best. The printed form would be at the center of these conversations, even as the closing of their college's media center remains imminent. You might also find them discussing what it means to be an architecture student, where they want to spend the rest of their lives, and reflecting on a desire to touch the world around them.

Simultaneously, students and faculty alike are discovering ways to embrace and reimagine digital, multi-dimensional environments alongside AI. With the gradual return of in-person studio culture, we find the physical leaking into the digital and back again. We're asking what gets lost when trying to translate these atmospheres back into a printed journal. We wonder what the QR code will evolve into over time and continue to ask what is gained through this analogue medium.

For the first time in *Dimensions*' history, this volume features the work from two cohorts of fellows, reflecting updates in the fellowship program to a two-year tenure. While in conversation with the fellows, Leah Wulfman noted the unique overlap as essential in building an "institutional memory"—a solidarity in understanding what comes before you.

A decade ago, Dimensions 27 wrote in their Letter from the Editors: "Only in aggregation do the volumes offer a lineage of the architectural practice and discourse here at the University of Michigan." It's now the year 2024. Architects still love to quote the Kahns and the Corbs, but us students enjoy making our projects funky and our technology techy. This volume might best be described as a herd of pink cows that wander occasionally to the beat of a soundtrack. It bleeds over; it flips fast; it's not nicely split in half.

We wonder what conversations will be entering *Dimensions* in another decade.

For now, we're busy putting the last touches on this book. It's Friday; many of our fellow classmates can be seen making hot pink installations for the first annual Taubman Architectural Ball. On Saturday night this week, we'll take a break from editing this volume to get dressed up and go dance in our decorated Commons. On Monday, we'll send this journal to print. It might be pink. It'll certainly be delightful.

March 29, 2024
Ann Arbor, Michigan

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PART I

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ORIGINAL REMIX
TRANSCENDENT DISCIPLINES

Original Remix: Transcendent Disciplines appropriates and reconsiders the disciplinary semantics of several disciplines to apply skill sets, attitudes, and perspectives of said practices to all others. In many ways, this actively targets "professions," which, although generally validating years of education, hours of effort, and indicating some degree of passion, are largely purveyors of gatekeeping. A wedge is being driven deeper between the "professional" and the "other."

The proposal of this network between historic disciplinary sites is to break down these professional barriers, to rise the tide, and perhaps establish a new median of human capability and information access via semi-physical yet wholly interactive interventions in these spaces. These interventions simultaneously question antiquated practices of ostracization and respect boundaries of historic preservation.
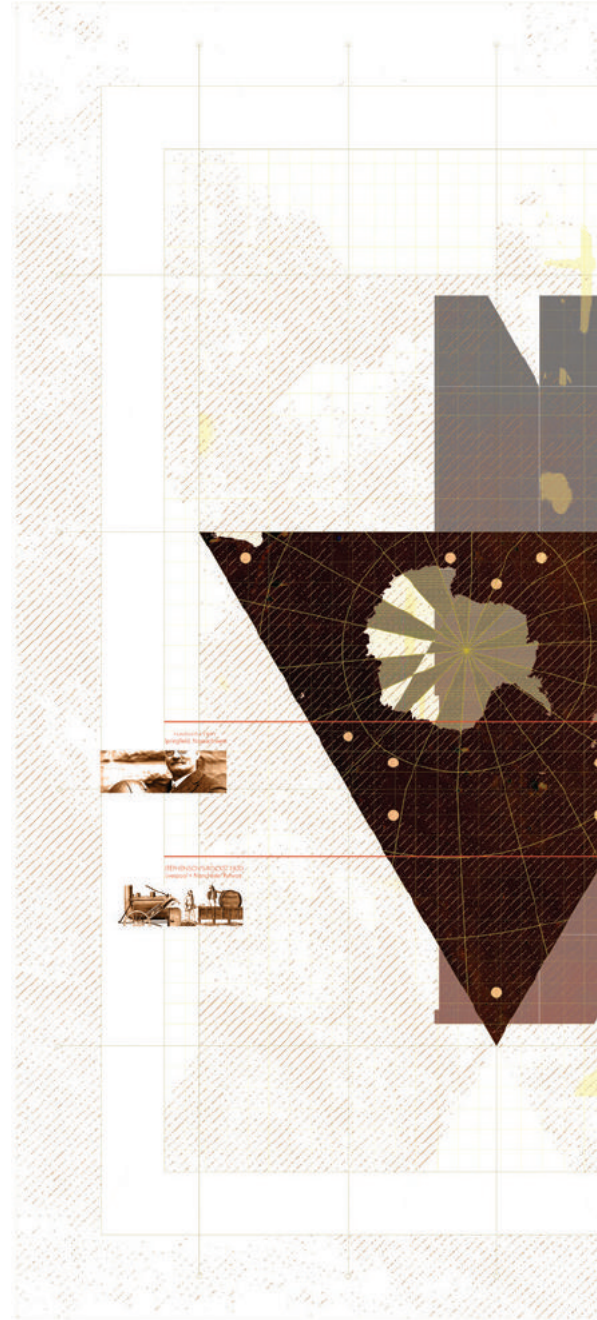
It is difficult to nail down the separation of the field, profession, or practice as distinct from the metaphor of architecture as art, an art, a social science, a physical science. Those who take ownership of autonomy of architecture or the ego of the architect may seek a degree of isolationism—but this is flawed and probably irresponsible. In "An Architecture of Change," Jose Gamez, Susan Rogers, and Bryan Bell warn of the gains architecture made through its postmodern era. While modernism yielded mostly "unfulfilled promises," its end caused the profession to lose its "ideological agenda." As it was replaced by postmodern thought, the discipline "liberated critical thought from the confines of rationalism while continuing the liberation of architecture from politics." But architecture cannot be neutral—"a building is never just a building." According to Gamez and Rogers, "American architectural efforts in the past 50 years have been mostly aesthetic exercises, and if political, only in symbolism." Despite advances in thought, there is an ambiguity to the efficacy of these symbolic exercises.
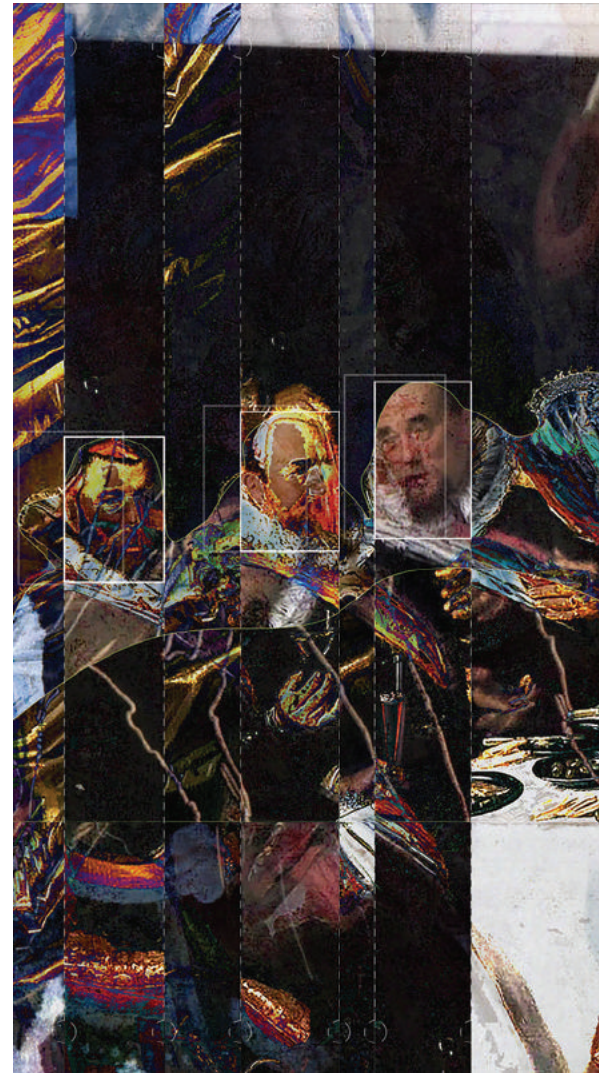
Referencing concepts which transcend our direct "field" is how students and designers learned and are learning to work. This train of thought is as ingrained into curriculum as it is to practice, and it is likely that a derailment of these methods would derail the field. Architects implicitly codified this ideological synesthesia as integral to the profession. This "studio" will examine this practice via the phrase: "the only original thing is a remix."

DECALCOMANIA

In Deleuze and Guattari's post-structuralist *A Thousand Plateaus*, a rhizome refers to a network which connects any singular point to any other one. It is horizontal and non-hierarchical, in contrast to the arborescent (referring to the shape and structure of a tree) which is essentially unidirectional— thus inherently dualist and reductive, where the relationships between points are structured by the dynamic between parenthood and offspring.

CREATIVE DESTRUCTION

"Creative destruction" is generally understood as an economic term, mostly associated with Joseph Schumpeter (though also related to Marx), considering business cycles, and more specifically economic innovation. The gist of the term is this: some degree of destruction is a prerequisite for creation and innovation. "Out with the old and in with the new," is taken quite drastically here.

By this logic, some degree of capitalism must fall to "make room" for Marxism. Creative destruction is a powerful proxy by which to understand this thesis. It indicates the fall of an "old way" of doing things, but the traditions of a "profession" or "practice" are not erased nor do they necessarily succumb to innovation. Architecture as a discipline is a palimpsest of these traditions, hence the apparently cryptic idiosyncrasies observed in both school and office.

This thesis does not advocate for an abandonment of tradition, but an expansion of it, thus expanding the role and perspective of the architect and the student as a steward of design rather than a lone genius.

Plenty of literature has already covered the perception of an architect as a borderline omnipotent designer of things, but this thesis considers this coming evolution through the lens of creative destruction.

METAPHOR

The essence of metaphor is understanding one thing in the context of another: precipitation intensity in the terms of the weight of common household pets, life in terms of an interstate, etc. It is inherently connected to allegory, and both of these are quite useful for designers, especially "architects" due to our supposed or apparent interdisciplinary responsibilities. It transcends communication or "getting over the hump" of gate-keeping—it is a practice in empathy and creativity.

Some assert that architecture possesses an internal logic (whatever that means), and that this internal logic grants validity to the profession and the discipline (whatever that means). Architecture is about practice, and practice has never evolved out of an adherence to internal logics—it must break them to progress. This metamorphosis is where metaphor enters the stage.

While there are certainly several alternatives to doing work, metaphor is especially useful because it is a low-hanging fruit by which to do a lot of work very quickly. This thesis aims to do precisely that—to understand the terms of architecture (or an "aspect" of architecture) in those of other disciplines.

"Sampling" will be used as a proxy for "metaphor." where the thesis "samples" other disciplines, whether aesthetically, methodologically, representationally, etc.

PEDAGOGY

The objective of this thesis is to provide a comprehensive (but puzzle-esque) method of facilitating a design studio—whether in practice or academia. It anticipates some shortcomings (and pain), but also the thickening of calluses in the process.

If a studio prompt were distilled from it, it would read as something like:

Hypothesize and test the ability of a discipline of your choosing to inform a method of doing work as it relates to "architecture." Define architecture and other said discipline for yourself. A heuristic approach, though perhaps reductive, may be a useful place to start. What is spatial about coaching in basketball? What representational techniques can be borrowed and reappropriated from film?

If it were an apparent "Mission Statement," of a practice it would read as:

We understand that the built environment is experienced by everyone. It is not a privilege and in many ways, not even a "right," but an essential element of humanity. So long as we exist we occupy space, and we share that space with a panacea of experience, expertise, and perspective. It would be irresponsible to assert that We ("Architects," "Developers," "Planners," etc.) hold some, if any, dominion over that without considering the perspectives of the composition of humanity. This must go beyond "planning for your needs." We aim to approach "your" project the same way "you" would. The goal is not merely "collaboration" (though it is part of the process), but a holistic adoption and addition of practical semantics for doing work.

A high amount of skill-building is necessary for the adoption of other disciplines, though so too is a conceptual framework for which skills to build. The studio will likewise incite some representational proof of the distillation of the concept of the adopted skills. Mastery is not necessarily the goal, but simply knowing that this proof is coming requires one's skill-building to be conceptually charged.

The goal of these representational exercises is not to allow free-reign, but considered and calculated representational choices. The studio, in a sense, is more about the process of making things than the thing. One of three case studies is presented here as an example of how a student might engage with the proposed pedagogical approach.
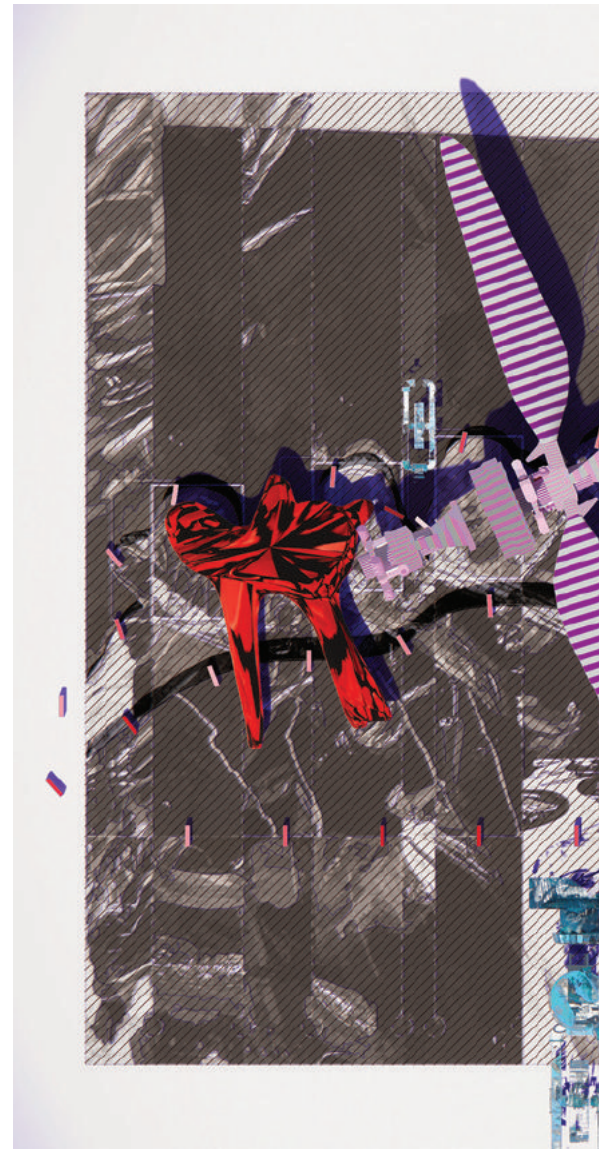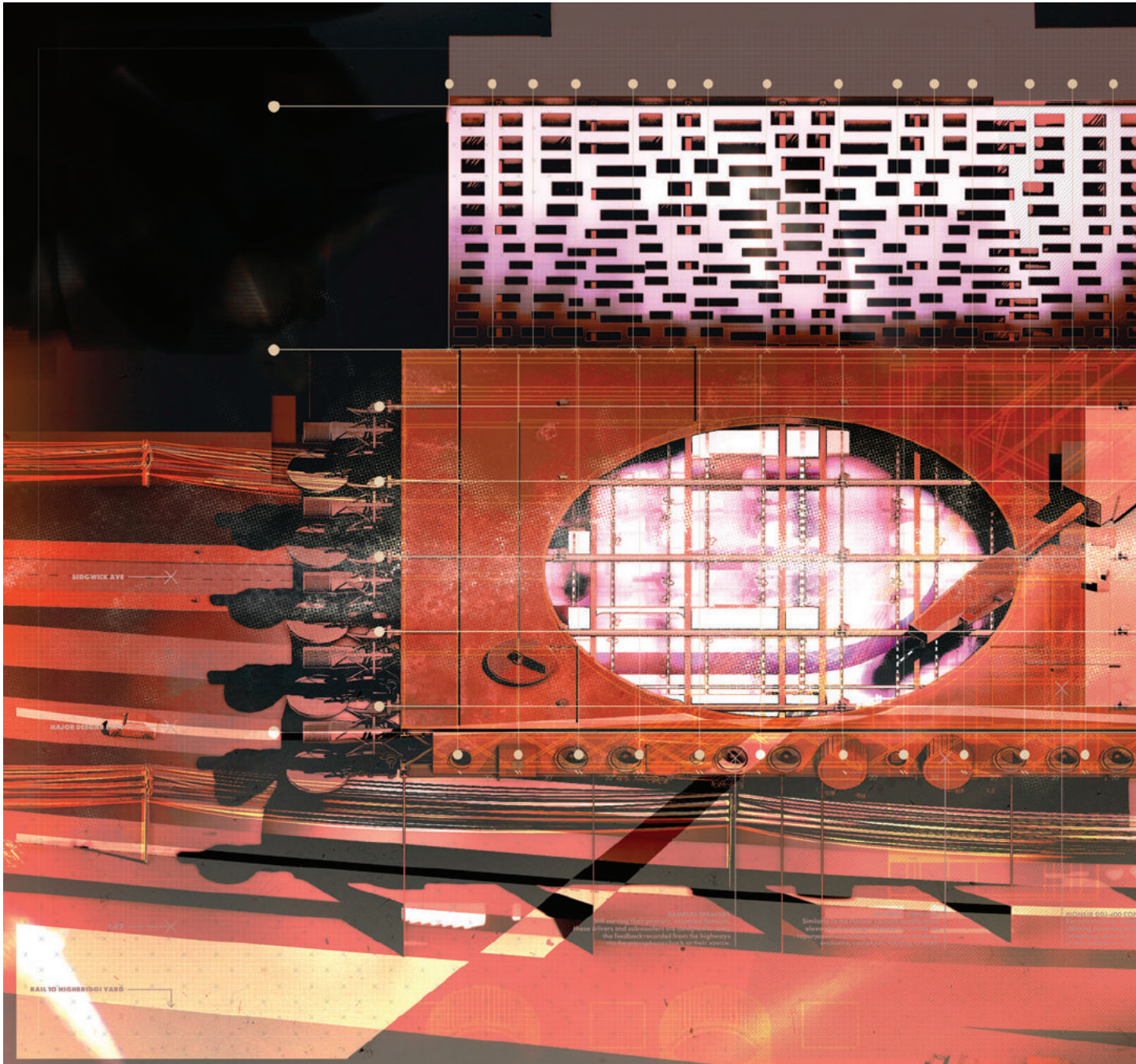
SITE STUDY: 1520 SEDGWICK AVENUE

In the summer of 1973, then 16-year-old DJ Kool Herc would MC in the recreation room of 1520 Sedgwick upon request by his sister, Cindy, for a back-to-school party. Cindy threw the party because she wanted a new wardrobe for the coming year. No one involved anticipated that this event would be the impetus for 1520 to be coined as the Birthplace of Hip-Hop.

In the early 1970s, the Cross Bronx Expressway displaced thousands of Bronx residents. It became a constant reminder of white flight and redlining in the Bronx. 1520 Sedgwick is located on the Expressway and housed several of those who were displaced by it. The intervention at Sedgwick speculates on use of sampling techniques to retaliate on the racist, physical infrastructure. Sound, especially volume, is as highly politicized as music. The practice of white flight can be linked to an apparent desire for quiet, associating high sound levels with "undesirable" spaces and people.

The intervention will actively sample the sounds of the highway: recording them, manipulating them, and then playing it back at the road at its resonant frequency. It would effectively destroy the racist infrastructure directly adjacent to what DJ Kool Herc described as "the Bethlehem of hip-hop culture."
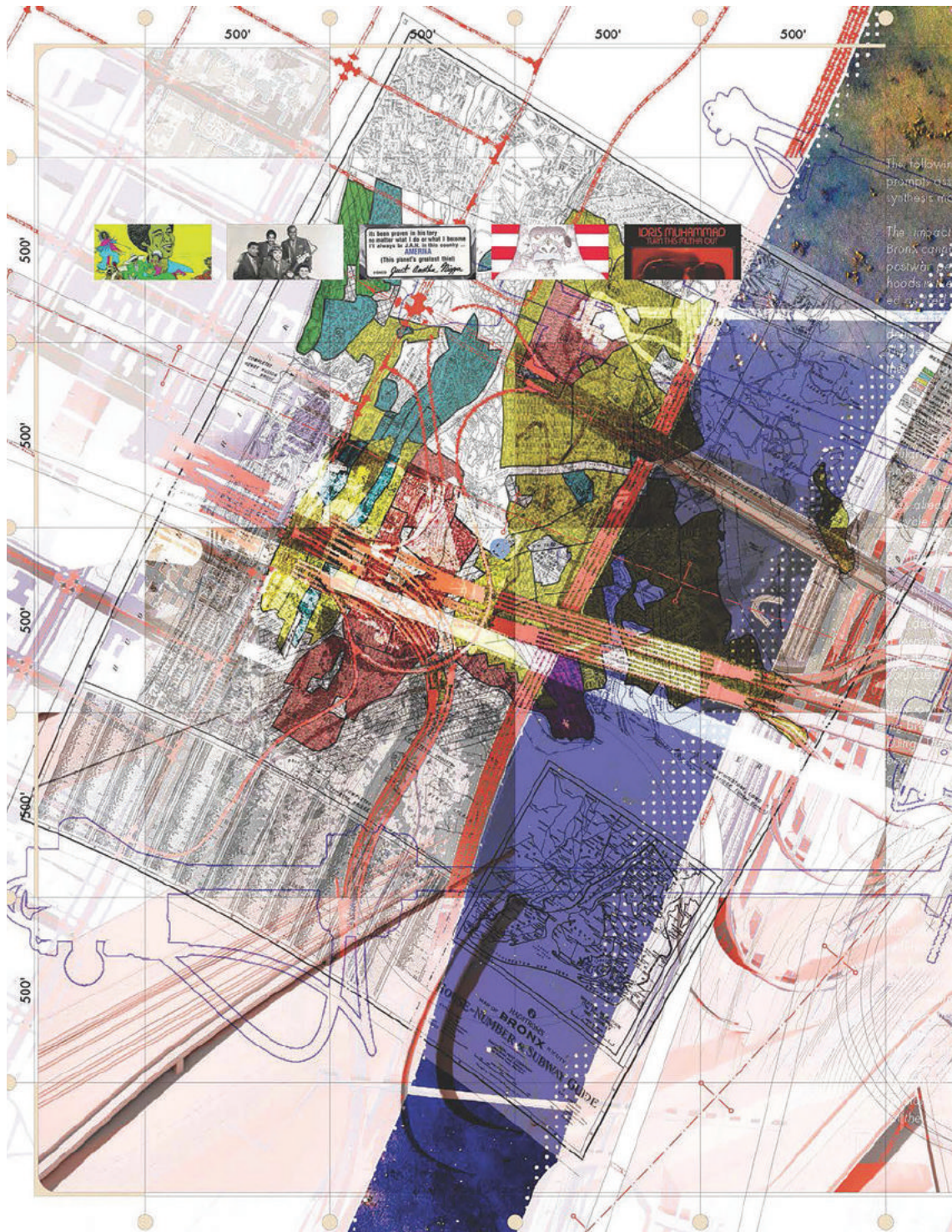
Visually externalizing the situations which accumulated to the apparent "Birth of Hip-Hop" at 1520 Sedgwick: forced relocation due to the Bronx expressway, redlining, and low-income housing.

500'   500'   500'   500'   500'   500'
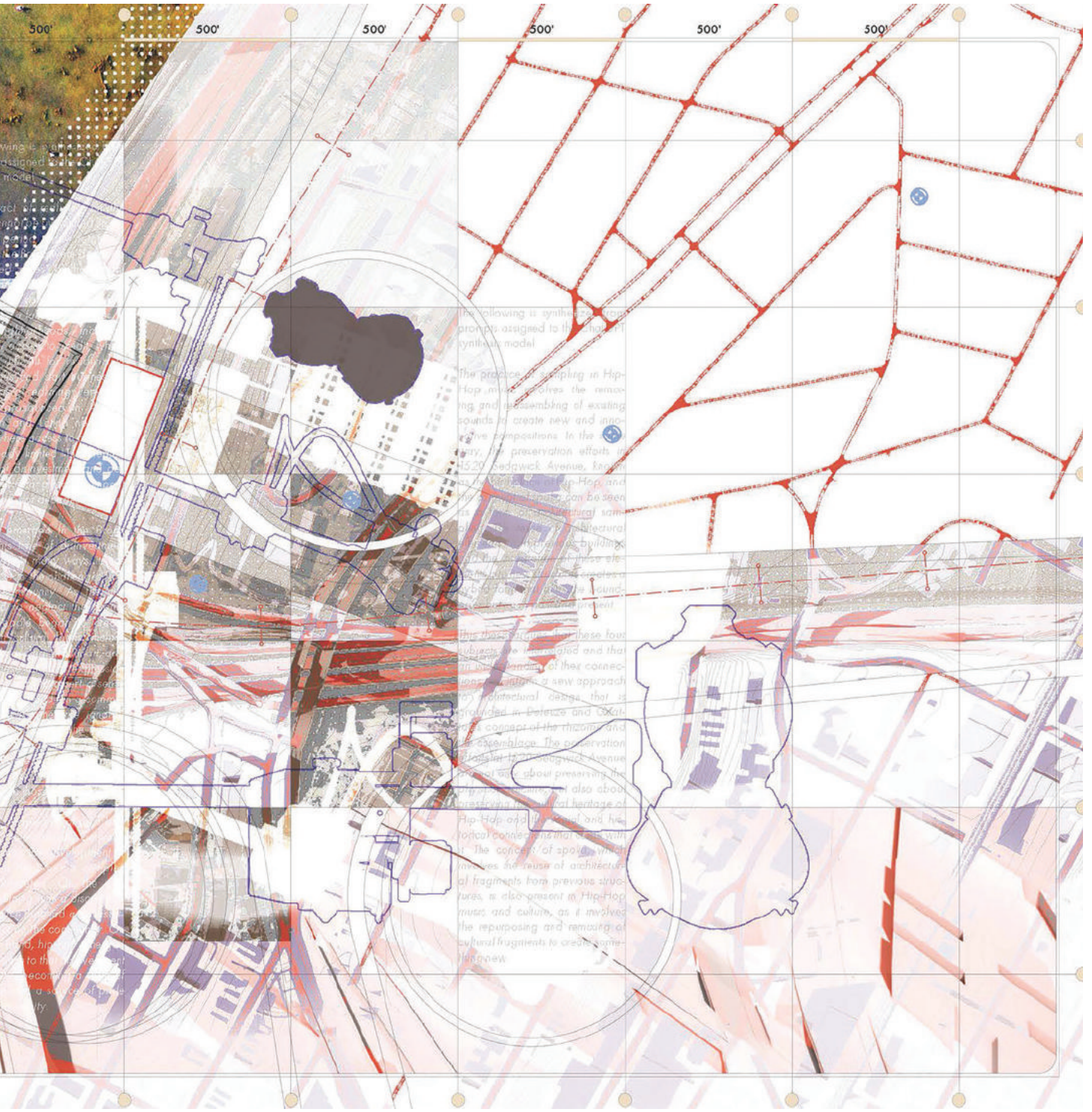
The following is synthesized from prompts assigned to the chosen synthesis model.

The practice of sampling in Hip-Hop music involves the remixing and reassembling of existing sounds to create new and innovative compositions. In the preservation efforts at 1520 Sedgwick Avenue, the birthplace of Hip-Hop, and can be seen as cultural sampling of architectural building elements a hybridization of the sound preservation and present.

this chapter these four subjects are investigated and that in understanding of their connections, we imagine a new approach to architectural design that is grounded in Deleuze and Guattari's concept of the rhizome and assemblage. The preservation effort at 1520 Sedgwick Avenue is not just about preserving the building, it is also about preserving the cultural heritage of Hip-Hop and its social and historical connections that come with it. The concept of spolia, which involves the reuse of architectural fragments from previous structures, is also present in Hip-Hop music and culture, as it involves the repurposing and remixing of cultural fragments to create something new.

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WORKWEAR &TEAR

Workplace architecture overtly favors the male body. This is observed in all non-domestic workplaces, from the construction site to high income offices. The worker is envisioned as a man in a full length suit at a corner office, or a man performing hard labor in rigid cotton work wear. When gender separations within the workplace began to disintegrate, women's workwear manifested as iterations of the accepted male work uniform. It failed to recognize and accommodate the differing needs of the non-male body in space. This research project aims to investigate the shortcomings of architecture in meeting the needs of all workers, and to counter these failures through a range of modifiable workwear pieces that return bodily agency to the non-male worker.

The initial theory base phase draws from modern and contemporary literature. Ideas and efficacy of what we consider wearables explored in literature were sourced through the Duderstadt Library such as *The Supermodern Wardrobe* (2002) by Andrew Bolton and *Body Covering*, by the Museum of the Contemporary Crafts of the American Craftsmen's Council (1968). These publications remained essential to not only the generative design process but also the final output (research publication and public exhibition in February 2024).

The research took place across three realms. The first realm, that of the unreal simulated actual or likely workplace scenarios through character vignettes created in Unreal Engine to collect and synthesize speculative data on the needs of the wearer in different work environments. Qualitative data through recorded interviews with various female faculty at Taubman College have been conducted to assist and catalyze the garment design—these can be found in our final publication.

The second realm is that of real material construction, assemblage, prototyping, and documentation to design and test the performance of adaptable, agency granting wearables that act as a counter to architecture that ignores the needs of the non-male body. Garment performance was evaluated in the physical workspace then also in the ubiquitous "workplace" constructed in Unreal Engine, using the projection VR/motion capture capabilities via the MIDEN in the Duderstadt Library.

Each realm was explored through the phases of information gathering, design, production, and exhibition. In the gathering and design phases, the Unreal world was built through animation detailing, photogrammetry of physical settings to construct a narrative, and the deconstruction, combining, and reconstruction of various settings to create speculative scenarios that require highly adaptable wearables.

Simultaneously, the collection of physical scrap materials, photographing of possible subjects, and gathering of physical artifacts like magazines and advertisements created a base to begin the production phase, which consists of prototyping and constructing said wearables. The prototypes were reconstructed again in Unreal Engine to test their effectiveness in the constructed environments. This effort was summarized into a phase called "Digi-Physical Hunting and Gathering."

The final realms encompass exhibition, publication, and distribution, not focused solely on representation of the research, but rather the details of publication, accessibility, and distribution of the work. This ensures that *WORKWEAR&TEAR* may be built upon and accessed as a resource, serving as a guide for wearers to employ the wearables to gain agency of their bodily comfort in the workplace. The final exhibition opening at the Liberty Research Annex in Ann Arbor displayed the garments and publication with a celebration with peers, faculty, and all visitors. The publication and post-documentation serves as a continuation of the research of *WORKWEAR&TEAR*.

WHAT'S IN YOUR BAG

Women often come equipped into any situation with a large arsenal of tools in their bags, purses, and hands to accommodate themselves and others in workspaces that sterilize or neglect the needs of non-male bodies. The psychological effect this has on women produces the notion that women must create their own comforts in spaces, a sort of makeshift-office within the boundless containment of their purses. They carry their comfort with them and offer those comforts to others in the form of a mint, an advil, a tampon, a candy, a coin, a lost earring, an old receipt holdings an old piece of gum, a loose rubber band functioning as a ponytail, a trinket, a tissue, a bobby pin, a paperclip, a safety pin, a hairbrush, a card, anything, and subsequently everything.

WHAT'S IN YOUR BAG creates fantastical, whimsical, satirical work environments to simulate how workplaces feel due to the comfort misfitting between the imagined male user and the real female user. These environments become situations for the Real team to design and prototype their garments within.
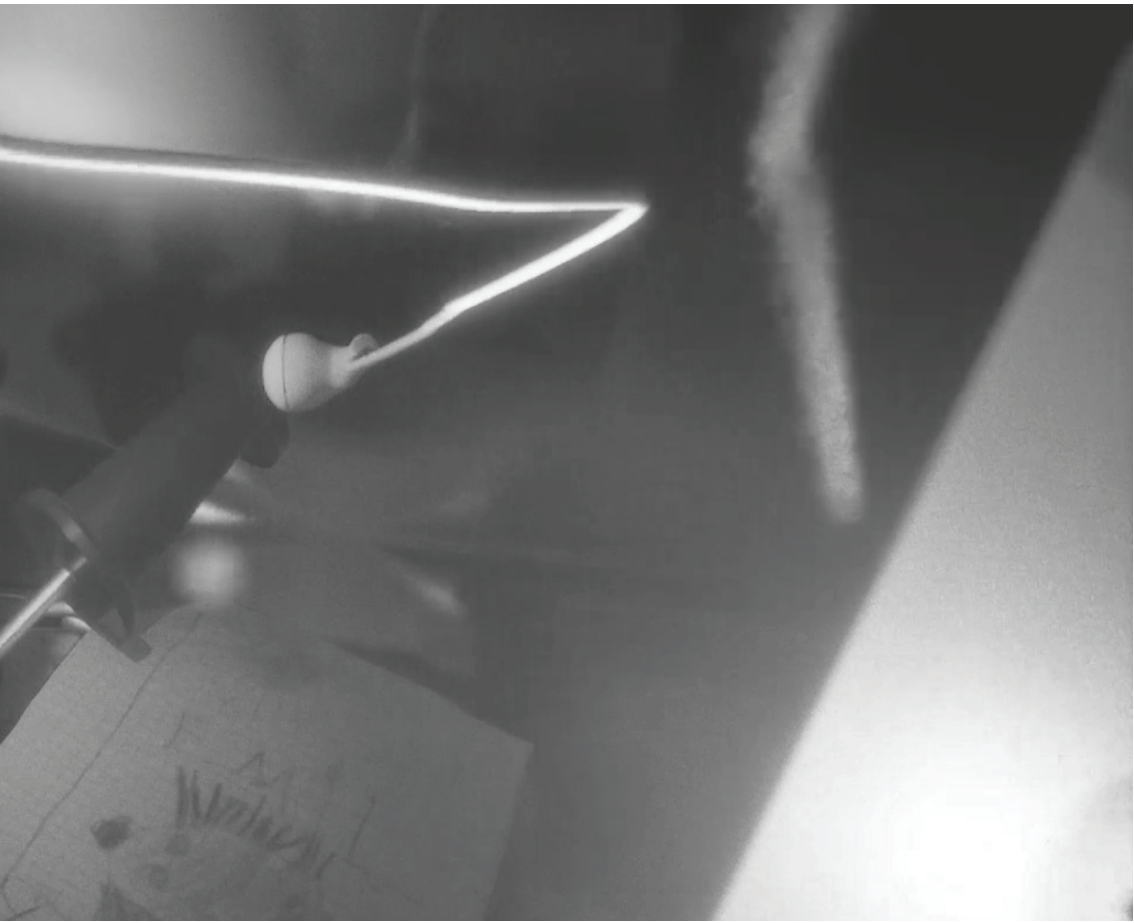
WHAT'S IN THEIR BAG?

These bags and their contents
belong to (from L to R, across
each row):
Carly Lowe
Maggie Cochrane
Nora Fradin
Lisa Sauve
Rachael Henry
Sarah Fradin
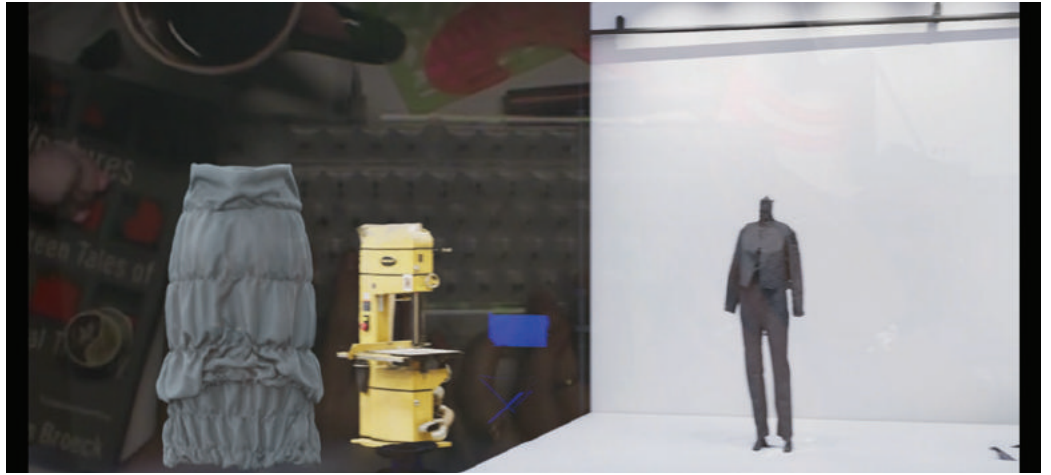
PROCESS, PLUG-INS, AND PROTOTYPING

Real artifacts are bridged into the Unreal world through photogrammetry, motion capture, and digital modeling. As the Real team prototypes new digital workflows, combining architecture, gaming, and textile design software to create an integrated design process. *WORKWEAR&TEAR* believes that the dynamic relationship between physical and digital ways of working generates unique knowledge sets. From ideation to execution, the team understands both the seams that hold each garment together and the lines of code that manifest them in the digital world. The digital archiving of the production process makes the usually opaque world of garment production accessible and visible.

CONGLOMERATES AND CONCLUSIONS

The scenes from *WHAT'S IN YOUR BAG* and the process work from Process, Plug Ins, and Protoyping becomes mish-mashed together and compressed into a single space that becomes a testing site for the Real garments. Here, the garments can move from the woodshop to cubicle, from drafting desk to bike path. The functionality, adaptability, and aesthetics of each piece are tested and showcased to respond directly to *WORKWEAR&TEAR's* research hypothesis.

WORK, DIET, and MALE

MARINA TABASSSUM

ON LOCAL WISDOMS

DIMENSIONS 37 STAFF

Zione Grosshuesch
Mason Magemeneas
Shravan S Iyer

MARINA TABASSUM

Marina Tabassum is the principal architect of Marina Tabassum Architects and a Norman R. Foster Visiting Professor of Architectural Design at the Yale School of Architecture. In her work, Tabassum seeks to establish a language of architecture that is contemporary and simultaneously rooted to a place's climate, context, culture, and history. Tabassum gave the 2023 Charles Correa International Lecture at Taubman College with Dimensions convening with her beforehand to talk about teaching as an act of reciprocity, receiving a project from her grandmother, and taking life one day at a time.

DIMENSIONS 37: What is one thing bringing you joy in life right now?

MARINA TABASSUM: Nowadays, the work we are doing is with the Foundation for Architecture Community Equity, especially working with the women's cooperatives in Ukhiya. They are building—they are making interesting things out of plastic, and there is so much potential in humans when you engage them in the right way and then you discuss and find beautiful things coming out of it. I think that's just the most wonderful, joyous moment that I am feeling right now. So yeah, when our team sends photographs that this is what they have made, it's like, "Oh, wow." It's just fascinating.

D37: You've spoken about these women's ability to make models before. And I almost feel your practice is your own version of maximizing your own potential. Would you say that that's true in how you approach architecture?

MT: I was trained in a very formal way of architecture practice in the late '80s and '90s. So the way we were taught was very similar to the service-rendered profession architecture is. But over time and as I have practiced, as I have built buildings, I have worked with many different kinds of clients—starting from government to private clients. Slowly, I think it has shifted in many ways, the thinking process. It's not that we don't still have projects where we have clients. We are still working for the government. There are other different projects, too. But at the same time, I think we need to innovate the practice in a way where we can have the opportunity to channel our profession and our knowledge, our ability to create things in a different way where people are not even aware that a profession like architecture exists. So how do you make yourself available to that?

Our knowledge has much more potential of being used by a certain community of people where they will be facing a lot of different difficult situations with the age as it's coming: displacement, about climate crisis, about all of the different things that we are in now. We now even see cross-border displacement, including wars, and conflicts. Migration. Really pressing issues. How do we make ourselves available to that? I think that's where I am more concerned nowadays—how we as architects can create a new way of practice, innovate ourselves.

D37: Before we get into your work in detail, how has your architecture language evolved with time? If you could talk to us a little about your childhood and your early years in architecture school, the influence of Louis Kahn, his work in Bangladesh, and the impact it has had on you and the next generations of architects in Bangladesh. And could you talk about income inequality or disparity? Because I read some of your interviews and you spoke about the architecture of transition—you said, "I come from a country where I've grown up seeing this disparity between the rich and the poor, and every single day when I get out of my house, you see this disparity." And "I don't know about architects in other countries and how they should be doing it, but in my case, I encourage the younger generation of architects to come and work for the people who have no knowledge about architecture." You said it's almost like a social responsibility. Could you elaborate a little bit please?

MT: That's a *lot* of things. You just packed everything in [laughs]. Well, the first thing you asked about is how my architecture language developed. Our school was actually set up by Texas A&M, so the curriculum we studied in was very much an American curriculum. That was in the '60s when the school started. I was a student in the '80s. That was the only school at that time.

D37: In Bangladesh?

MT: In Bangladesh. So only 50 students in the entire country got a chance to become architects in those days. We were trained in

a very formal, very modernist curriculum. So obviously space, form, you know, architecture as we have known architecture for the last hundred years is what I have learned. But then once you get out of school and you start to think about how you want to do your work or your practice, how do you want to shape yourself as a practitioner. Then you see your surroundings as not just about making forms, and it's also not about just, you know, copying someone else, but you have knowledge of a certain way people have lived their lives—certain wisdom, local wisdom.

The house that I grew up in, a courtyard house with a long veranda, was never taught in my school. Right? So where does that fit in? The material palette in Bangladesh is just brick. We don't have any other material as such because when you think about permanence in architecture, because it's a delta, we don't have stone. We don't have anything else. So then, if you talk about sourcing material locally, that's the material I have. I come from a climate where glass is almost—should not be a material. Right? I'm not from Michigan [laughs]. I'm from a tropical country where wind flow is very important. I'm from a place where the sun is very strong. Humidity is a major crisis, a major issue that you need to deal with. You have all of these things and then the way you're trained. Obviously the schools do address those, but then when you come into practice and you see that those things are sort of non-existent because we are all looking towards the West and we want to emulate that, we want to build glass buildings because that's progress, that symbolism of progress.

How you define your architecture in your locality or local, that is where you are basing yourself. We have Muzharul Islam, who is also a Yale graduate. He established a kind of, you could say, tropical modernity in many ways in Bangladesh, which really set the ground for us as architects. So I think my architecture language developed based on the localness in many ways. I wouldn't say regional. I don't like the word "regional." But I think it's something that's grown out of the land, but it has to be contemporary at the same time. You cannot just put me in a bracket calling me regional. I want to be contemporary at the same time.

D37: Now, Delft University of Technology and Yale, of course, how has this been influential in responding to the kind of work you do? You have been involved in projects with students that involve very multicultural projects. Like you said, you take them to Bangladesh and study the context. How do you think teaching has helped you develop in responding to the kind of work you do? Additionally, exposing students to different scenarios helps broaden perspectives. Studying here in the U.S., I could probably work within a bubble because I am only focusing on a certain project in school. How does this exposure help you become more diverse?

MT: My studios focus on the issues that I am interested in, and so I am working with what my practice is involved in. We've designed projects in the Rohingya refugee camp in Bangladesh. We have done eight projects. So my studio at the University of Toronto, the entire studio was based on this issue of the architecture of transition. I took my students to the refugee camp and they spent time there. It was not to focus on the fact that all of the projects have to be based in Bangladesh or in refugee camps, but it's a topic of displacement and how it affects people. Then once we came back, everybody had different projects actually. In most cases, it was just sort of an eye-opening trip, where you go and actually physically feel the heat and the density. One thing is seeing images. The other thing is when you're there and you actually experience for a very—maybe just a few hours being there. But that's somebody's life. And they have no way out of it. When you are standing in the heat and you're sweating, you know that within a half an hour you'll go back to the comfort of an air-conditioned car. For them, it's life. I think that's very important to understand and to be able to feel that.

Then once you get back, you can then think much more openly about all of the situations of this kind that exist everywhere around the world. There was one student who worked in the Zaatari camp. This whole idea that a camp which exists for, let's say, 10 years, 15 year, 20 years is actually a city. You have to question that temporality. Is it really temporary? This whole notion of camps being temporary is absolutely a wrong idea. Those are issues that you need to question. So when you set up a camp, how do you design it as it grows over time so that it can turn into some sort of a city on its own? Because there is no future to that actually. I mean you never know how—when they will be repatriated, *if* they will ever be repatriated. And so 50 years, 100 years along the line, what does it look like? There are generations after generations who are in that condition.

I think those are issues that are new in terms of topic. Since we are working in these kinds of areas, I think these conversations become much more important and pressing. And I hope that, in the future, I can only hope that they'll find ways of—through their work, ways to do something about these aspects.

D37: I think what's so deeply compelling about your work is that you're finding contemporary solutions for Bangladesh and you're willing only to work there. However, in terms of teaching, you're here today, and you also teach at other institutions. What are you learning from different students who have different cultures and backgrounds?

MT: I mean I do get asked a lot, "Why is it that you don't practice or do projects elsewhere?" I mean, we have enough to do in Bangladesh. That's what I feel. I just focus on that and that's what I know best. I don't know if you want me to come and build a project in Michigan. I mean I'm sure there are a hundred architects better than me who know Michigan better than I do. So why would I even bother coming to Michigan to build something which would not be Michigan-ish [laughs]. I mean I know my country better. There is enough work to do, so that's why I focus on that.

But for teaching, I think it's important to also share knowledge, understandings, and our ideas, it enriches us. I mean, it enriches me when I work with students, let's say, in the U.S., Delft, even in Bangladesh, or anywhere where I go and I talk to students. It enriches me and it's also a learning experience. It's always reciprocal, I think. Teaching, on both sides, it's a way of reciprocity in many ways. I bring in issues which I feel are important at this time, which need to be discussed in academia and in architectural education. And at the same time this is also part of my practice. I do have the experience which I bring in, so I think I also try to enrich the students' minds in a way. It's a process of reciprocity, and that's the reason I teach. Diversity is important also because people from different cultures think differently. When you take a studio and you have all of the different students coming from different backgrounds, everybody has—they all bring
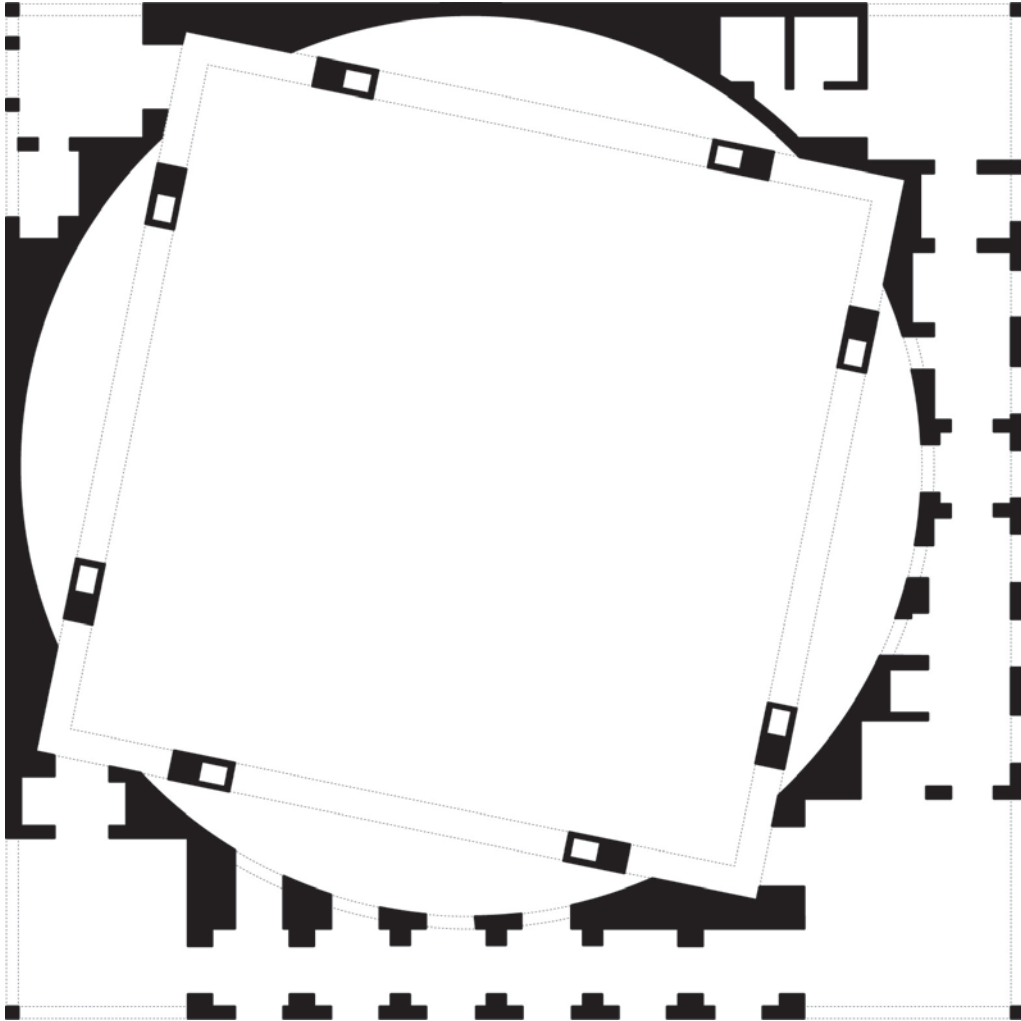
Bait Ur Rouf Jame Mosque
Marina Tabassum, 2012.
Redrawn ground floor plan
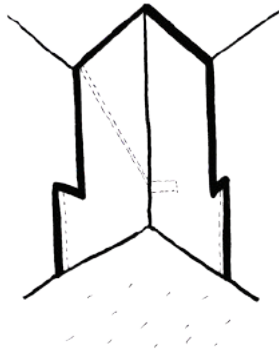
Bait Ur Rouf Jame Mosque
Marina Tabassum, 2012.
Light filters in through a missing brick

their own knowledge, their own upbringing with them, which actually reflects in their work and the way they behave, the way they present their works, which I think is also very important when you have this very cross-cultural understanding of things.

D37: Could you talk a little bit about the profit-driven field of architecture and the rise of this architect culture? What is the importance of attending to a more human scale?

MT: Well, yeah, architecture has been profit-driven for a few decades now actually. I don't know about other places, but in Bangladesh in the '90s, this whole idea of real estate development became a very prominent and popular way of housing. But that's actually for one percent of the population. We had a housing loan scheme which kind of slowly died down because of the real estate development sector. They promised housing and the government thought, "Okay, housing is being taken care of, so we don't have anything to do about it." So then, what they did is plan two especially large villages which are sort of expansions of the main city of Dhaka. Plot development became a major thing for the government. They plotted these areas, created streets, and plots. The plots were bought by wealthy Bangladeshis,

bureaucrats, politicians, and then given to the developers to build houses. In the end, it actually profited the one percent, and nothing was done for the rest of the people who are living in the city.

The lowest-income group pays the highest rent anywhere in the world, same for Bangladesh, in Dhaka. I think those are the kinds of injustice that you see happening. This real estate sector has actually created a huge—I mean they made profit out of this one percent of people. But the entire country did not benefit from that at all. That's why I have always been vocal about not just this whole issue of real estate development, but also they have really done a huge damage to the whole practice of architecture. Architecture as a culture has been highly affected because you are building flashy buildings, immediate appeal, it has to be fashionable in terms of material, in terms of look. This has become a fashion statement rather than architecture as we have known architecture. It's about space, it's about quality of life, it has to enhance all of these issues that we have learned and talked about. If you go 100 years back, there was beautiful housing which was about community, which was about developing a lifestyle around a sort of a housing scenario. It just turned into square-feet area and that's it. How many bedrooms, how many… so I think that was a huge, big blow to architecture in many ways. That's why I have always been very vocal about this development sector.

D37: Maybe your most well-known projects started with your grandmother and then ended up with you kind of having to fund it yourself?

MT: Right.

D37: How did that process impact the architecture and really impact the projects that you did after that?

MT: Well, the mosque, it used to be a very agrarian landscape when my grandmother offered the project. Because there was no mosque in that area. And Dhaka, it has grown very fast within the last two-three decades, from being an agrarian land to a settlement. It took maybe ten years. Within that, it was already completely filled with people building houses and everything. So I knew that this would become a sort of a settlement from that transition when I started the design.

And it was not part of Dhaka at that point. It was in the outskirts of Dhaka in 2006, let's say. That's when I started the project. And so it was unplanned. People made their own streets by just agreement. "Okay, you give up this amount of land. I give up this amount of land. Let's make a street here." That kind of personal communal agreement, and then making streets. And that's it basically.

So it took about ten years when this became part of Dhaka. When we built—when we started building the project, it was the entire community who were living around—who were actually lower-middle income families who were very happy that a mosque was being built. There was already a small structure that we built so that people could start praying while we were building this project. Before the mosque, I had about ten years of working experience. So I was already in a way of my understanding of architecture, the language that I was working towards in terms of climate response and materiality was already there. I would say the mosque became a project where all of these came together because the idea of a courtyard and this stack effect of wind flow was already done before in other projects. The porosity of the brick work was already done in other projects. The idea of light was already in the Museum of Independence. I think all of these elements were already in other projects which kind of culminated into one.
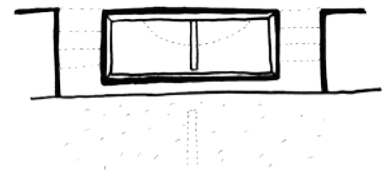
Bait Ur Rouf Jame Mosque
Marina Tabassum, 2012.
The floor reflects the light

With that, I think the other dimension that kind of became a part of this whole culture of mosque, and the history of mosque, and the typology which is mosque in Bengali culture, and where it started, how it started. I think all of those kinds of historic connections are probably the new thing that became part of it. How do you see religion, how do you see practice of religion, and what is more important: symbolism, or the action, or the belief? Everything, in a way, came together and what you see finally is the building.

So it's difficult to say how you process it. I don't even know how it came into being, but these were my concerns and throughout the process, this has always been the main focus of the design.

D37: As a designer, how have you been able to stay true to yourself, especially working within a mostly male-dominated field? How have you been able to still make sure that you are being you and not trying to emulate? These are questions I am wondering about from the perspective of a younger designer.

MT: You know, when I decided that I wanted to become a practitioner, which you do not see a lot of women doing because a lot of women find it easier once you graduate to find a job in some offices. Or even in Bangladesh, quite often, you see them becoming partners in an office, which is kind of also a trend. But a lot of women who become architects look for jobs as academics also because there is a certain amount of time you have to be involved. You have a work-life balance that you can manage, probably more easily when you are in academics, compared to when you are a practitioner and have to maintain a 24-hour job. You are constantly in that process. I decided that I wanted to become a practitioner because I really enjoyed designing and being on site.

But I think the problem was not on the site or even with clients or even with the people we work with. The problem revolved around my ability to assume that role, to go to a site, and to assert myself to ensure that people understand my knowledge, experience, and competency in what I am doing. To be able to kind of create that attitude and to be that person who then people would respect back, I think that's important.

That's something we're not taught, not even in school or even in our daily life. Especially

the way women are grown and especially in our kind of context, it's even—you have to be a good girl. All your life, good girl. You have to be good in your studies, you have to listen to your mom, you have to listen to your dad, you have to be a good sister, you have to be a good—everything is about being a good girl. And I have nothing against being a good girl, but at the same time, if I want to be a good architect, I have to have a certain attitude that needs to project. And I need to be that person.

That needed some work on my side. Once I was able to sit at a table with engineers, you are the leader of the team. You have the design idea. Everything is in your head and you are there talking to the contractor, engineers, and the clients. If you do not have that ability to sort of take that role as a leader, then your project will not work. So you have to create that persona in a way. That's what I feel. That's what I felt was lacking in me, which I kind of groomed myself to be. And then now when I am sitting at the table, people definitely respect and show that respect and know that I know my job. I think it took some work on my behalf. It's always a mind game in a way. If you can win that war, you are all set. Who is the leader or who is actually, you know, especially on a site.

D37: Calling the shots.

MT: Yeah. But when we're working in a community, I am nobody. I know nothing. I go there with the knowledge that I know nothing. I am there to understand; I am there to learn. It's a very anthropological way of practicing. So I think where you are, how you are going and presenting yourself has—you have to shift your role in every way. Working with a community is very different from working on a site, let's say, or in a project. Know your roles.

D37: How was the 2020 pandemic for you? If you could talk about how the pandemic had a role to play in the Khudi Bari, if it did? How does this address climate change flooding in Bangladesh and the importance of architecture with its relationship to context and people in Bangladesh especially?

MT: Yeah, well, the pandemic obviously was a very challenging time for all of us, right? But what it did was it—well, of course we all had that fear of the unknown. We

have also all gone through the crisis of the different variants coming at different times, lockdowns, and whatnot. I have my old father in the house. I had to be extra careful about him and all that. That was one part of it. The other part is I was grounded for two years, which was fantastic. I didn't have to fly anywhere. I didn't have to go anywhere. There was no socializing obviously, so I had the time to focus on things that I was really interested in. Work was slow in the office, and right before that in 2019 we had already done our research on the coastal areas of Bangladesh. That was a time when I thought, "You know, we should be focusing on that research now that there is less work in the office." It definitely was part of this whole notion of the climate crisis, being in the coastal areas, where we were already doing our research. We saw all the ponds that I was talking about, the dig and mount system. These ponds are becoming salt, salty water. Yeah, this used to be all sweet water, but now there is salt because of the penetration of salt in the coastal areas. That's really scary because you're losing your sweet water system and all the land movements. Glacier water flow is much higher and earlier than it used to be because all of the Himalayan glacier melt is coming through the Bangladeshi river. The land erosion is much more prominent and so the displacements are much higher than what it used to be. The disparity, of course, with our economic situation which has happened over the industrialization, over-industrialization, and overproduction, is now seeing our highest peak of disparity, which is also an important phenomenon that's causing people to displace. All of that kind of became an issue of discussion on how we can do something about it.

That's when I think we were trying to work out different ideas of mobility and how we can create mobile structures which can be moved. People can take it with them while they move because there is lack of land ownership and everything. I think that time over those two years was very productive otherwise, in terms of creating this whole idea of mobile structures. And also we built— we actually created our foundation through which now we are doing works which are related to architecture, but in a very different approach.

D37: There's one thing that I wrote down from when you were talking about the scope
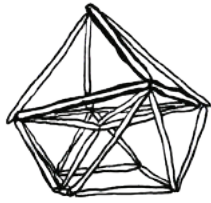
Khudi Bari
Marina Tabassum, 2020.
Structure from bamboo and steel (1/3)

of your projects in your career. You said in a lifetime there is only so much you can do, which is true for all of us. But do you think you know what you want to do for the rest of your life or do you think you're deciding every day?

MT: No, no. You know, I never plan life actually. I never did have any plan in my life. I just take it—take one day at a time. The pandemic, as I said, was an important point where we created the foundation. We're doing different kinds of projects, works which I'm hoping are a new way of seeing architecture and practicing. I don't know where we will go or where things will lead towards, but I never had any plans as such, so we'll see how it goes [laughs].
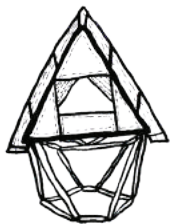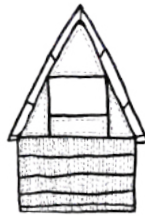
Khudi Bari
Marina Tabassum, 2020.
Khudi Bari is Bengali for 'Tiny House' (2/3)

D37: Yeah. I like how during the pandemic you're like, "We don't know what to do, so we're going to solve this problem."

MT: I mean yeah, especially when you are a—I think when you are a workaholic, it's difficult to just sit around, do nothing. You have to do something. And then you have to make your time productive. And, you know, there are lots of things that are at the back of your mind and because of time, you're not able to address it.

D37: What are you currently reading, if you are reading something?

Khudi Bari
Marina Tabassum, 2020.
Walls can be made with any locally found materials (3/3)

MT: Yeah, yes. There is this book on Louis Kahn that I hadn't read yet. An architect who works with me was from India. He gave it to me. It's Wendy Lesser's *You Say to Brick: The Life of Louis Kahn*.

D37: What is that one thing you do every day like a routine?

MT: Check my mobile phone [laughing]. Emails. I don't know what you want—what do I do? Other than the daily life stuff?

D37: Maybe, it's like, what is one thing that's just for yourself?

MT: Hm. I'm wondering—is there anything that I do? I do some breathing exercises and

yoga, if that is considered something that I do for myself [laughs]. That's probably it, yeah, a bit of meditation. Mm-hm.

D37: And what is bringing you delight these days? I think we already asked that question?

MT: Yeah, yeah. Yeah, with the joy. I think the joy.

ANN BOREK AND ELLA EDELSTEIN

Wallenberg Critic:
ANA MORCILLO PALLARÉS

CURB APPEAL

Curb Appeal takes the decorative pieces from a Queen Anne Victorian house to create a mutable backdrop for city performance, while simultaneously commenting on the illusionary and performative nature of these vernacular American homes. 959 South Van Ness, located in San Francisco, serves as an icon for the ideal American Victorian house. The Victorian house in America came about as a desire to project wealth and style at a relatively low cost. These houses could be picked from a catalog. The facades were customized with decorative elements, acting as a patchwork architectural mask—a sign of facsimile affluence put on display for the passerby. But what if these arbitrarily prescribed pieces of the facades were separated, misused, rotated, and scrambled to create an ever changing anti-facade? In *Curb Appeal*, set pieces, made of found materials masquerading as Victorian elements, create a scrambled facade housed in a tent-like scaffolding structure, poking playful mockery at its performative historical counterpart across the street.

SAN FRANCISCO

1940   1900   1870   1853

| Ohlone Structure (pre-1776) | Mission de San Francisco de Asisi (1776) | Schettler House (Early/Mid 1800s) | Italianate Victorian (1850s) | Eastlake Victorian (1870s) | Ocean Acres Victorian (1880s) | Mission Revival House (1890s) | Earthquake Shack (1906) | Tent (1970s) | 954 South Van Ness |
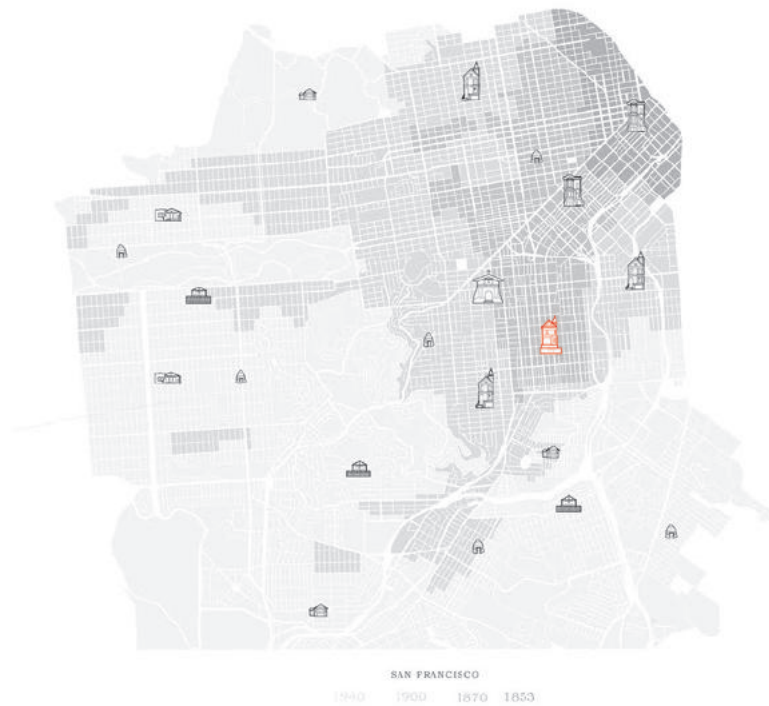
A perpetual boomtown, San Francisco is a model for how desire can shape a city. As the city has flexed—between prosperity, collapse, and rebuilding—so has the value of the buildings which have defined its streetscapes since the late 1800s. Today, well into the Silicon-Valley era of San Francisco, the Victorian house has reached an extreme level of inaccessibility. The interior of the Victorian house is invisible to all but those wealthy enough to afford these multimillion-dollar homes: to most, these houses are only their facades.

Many of the original Victorians were built during the Gold Rush, starting as homes for forty-niners with new money and dreams of civilizing the wild, western lands of California. At this time, the Victorian house was an embodiment of the aspirations of the people who inhabited them: aspirations of high culture, of Europeanism, of wealth, or at least the appearance of it. Made almost completely from wood, the construction of these houses complimented the San Francisco landscape, where an abundance of redwood trees provided wood which was sturdy but soft enough to carve into fine gingerbread trim. They were cheap, easy to mass produce, and didn't require much skill from architects or contractors. What we might think of as regal, elegant homes are really just architectural Frankesteins: Americanized, over-embellished, mail-order homes which are more of a surface treatment than a style. They themselves are an act of performance, always trying to attract the attention of a passerby, hoping to be idealized by yet another generation of Americans.

CORINTHIAN DETAIL

FRONT DOOR

SUNBURST WINDOW

FISH SCALE SIDING

KEYSTONE LINTEL

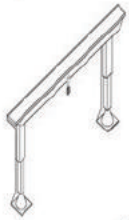ENTABLATURE

FLASHED GLASS WINDOW

GABLED ROOF

2 X 4 PLANKS

CONTRUCTION TARP
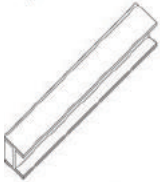
TIRES / INSULATION

GARBAGE BAG

TRAFFIC CONES / PAINTBRUSH

I-BEAM
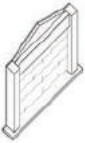
CHICKEN WIRE

CORRUGATED CARDBOARD
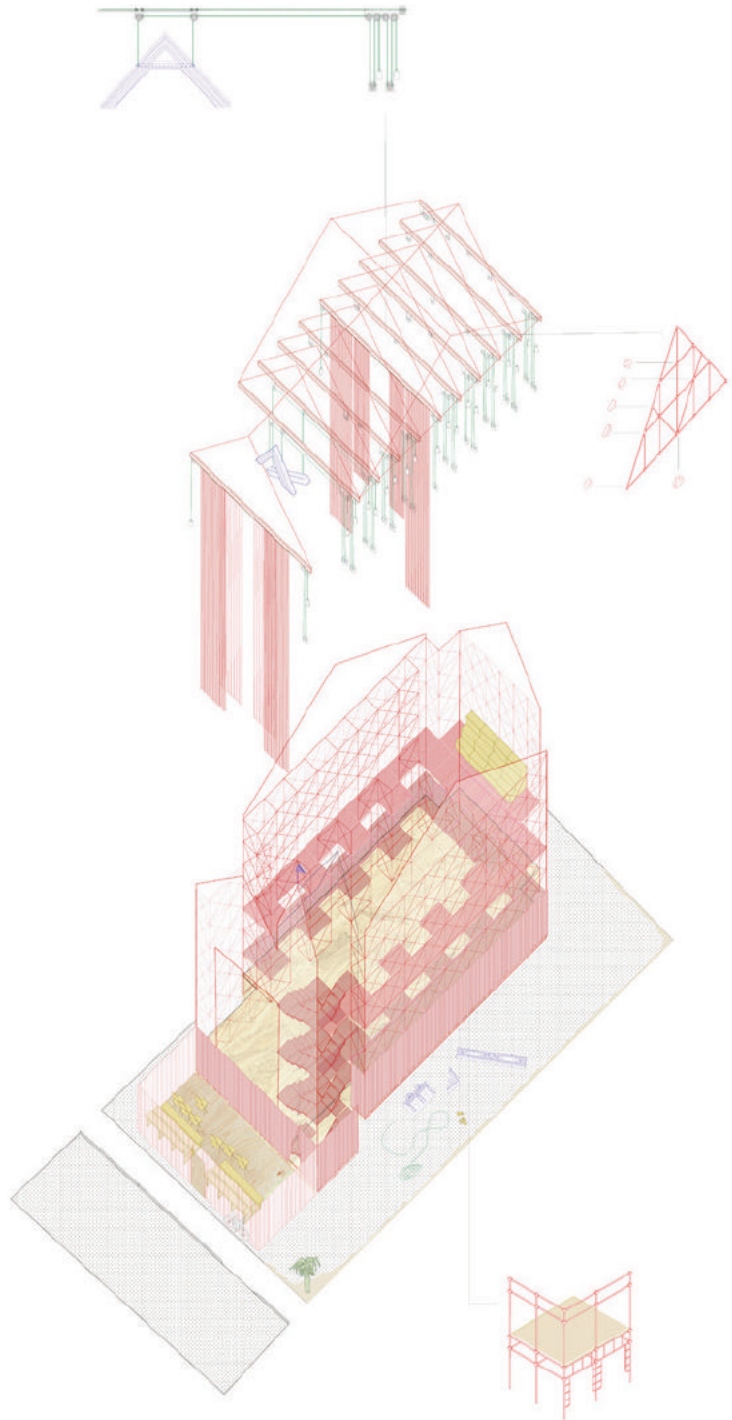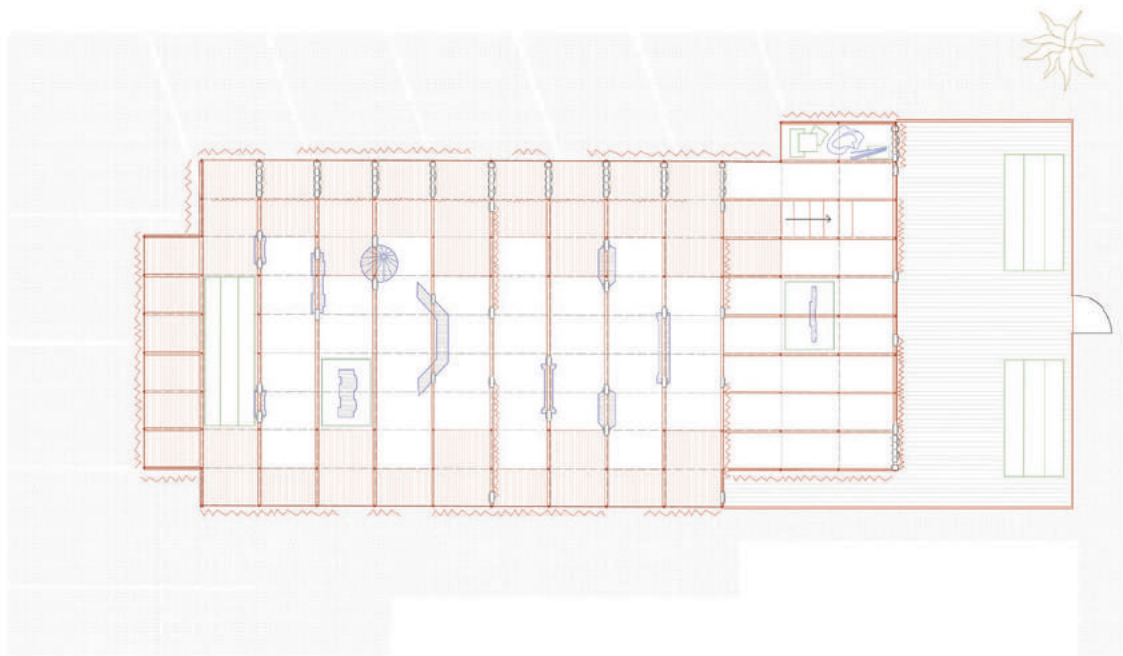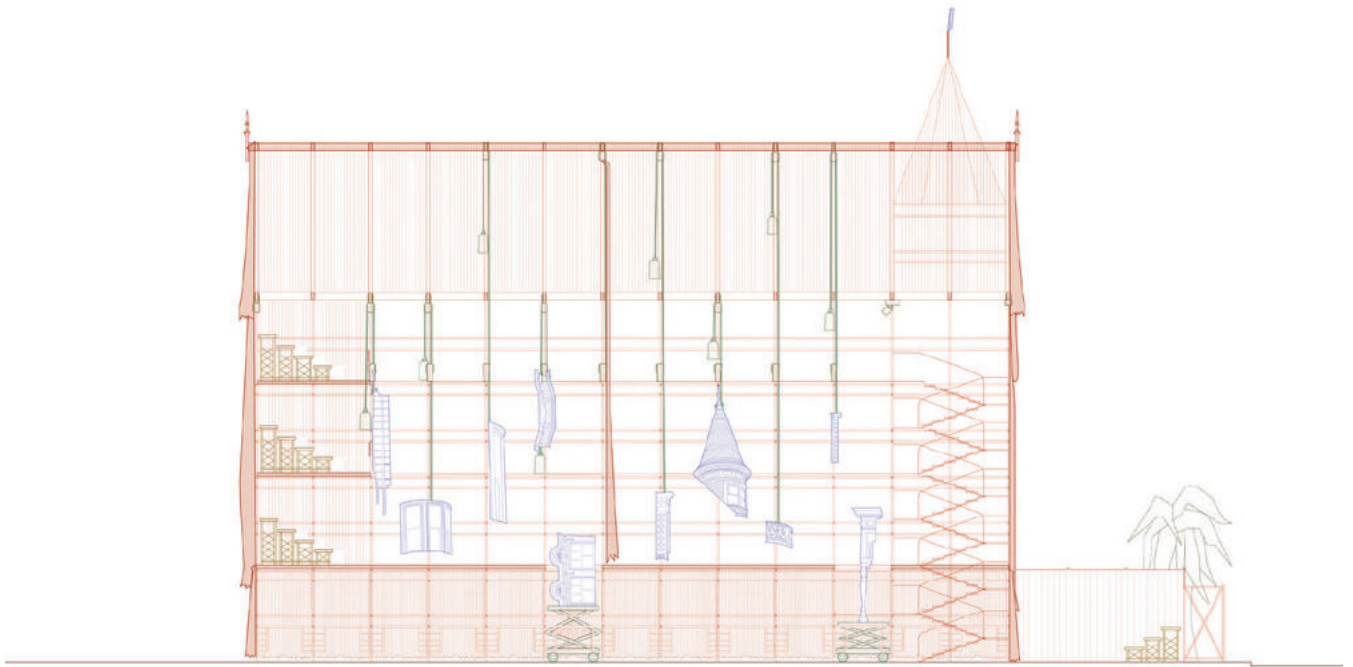
LOWER MISSION DISTRICT, SAN FRANSISCO, CA

Surface Parking Lot

Queen Anne-Style House

-------- Proposed Site

──────── 959 S Van Ness Ave
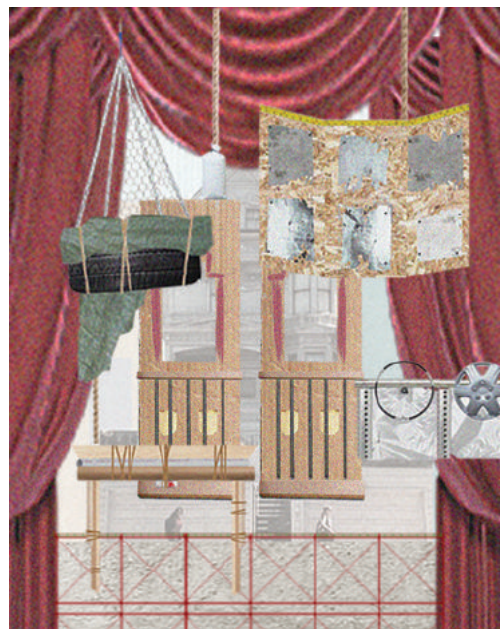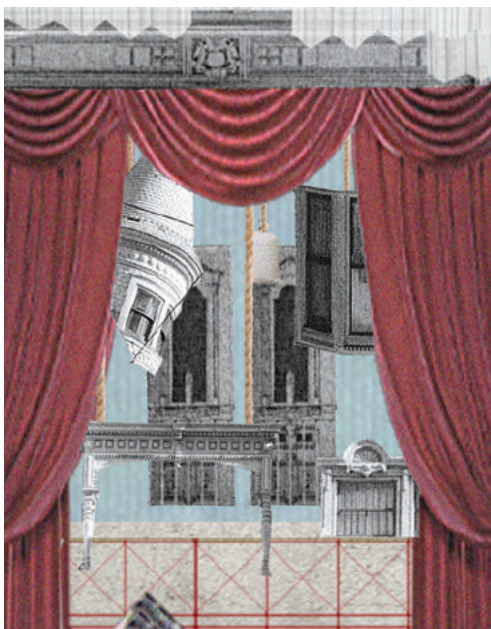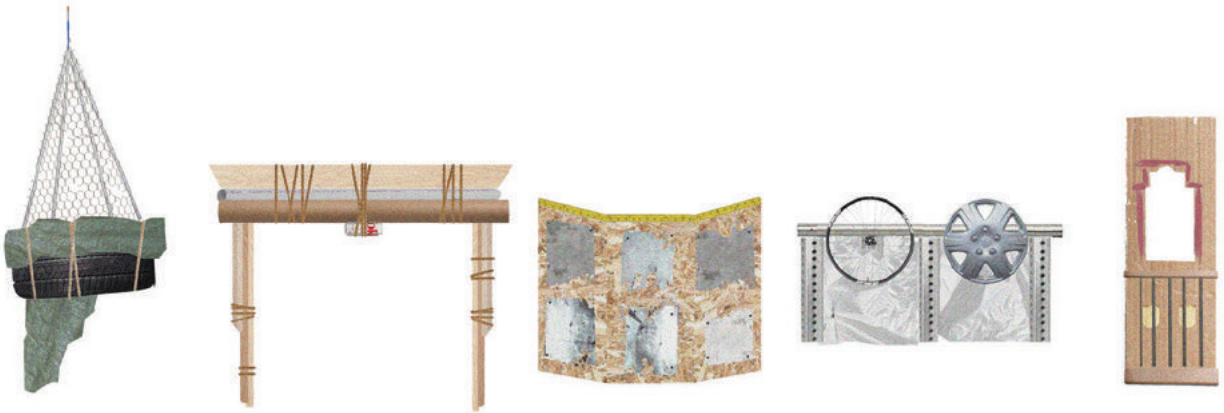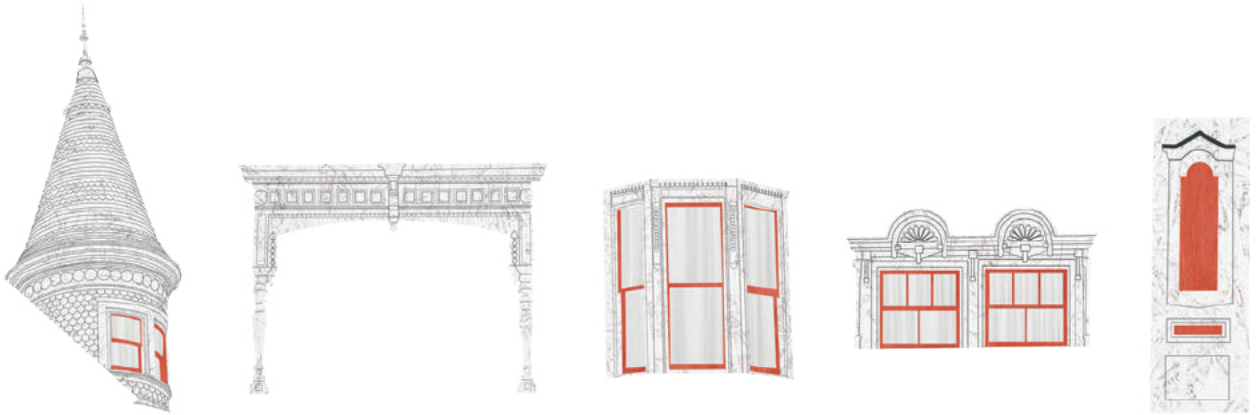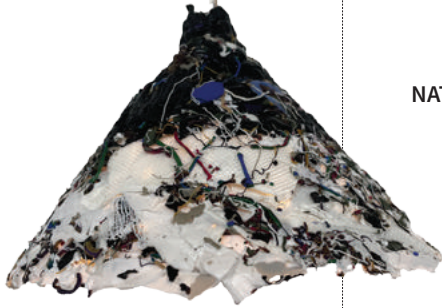
NATALIE DELISO, ZIONE GROSSHUESCH,
TARA MEHTA, SOPHIE PACELKO

MAKER'S WASTE

Maker's Waste aims to reduce, reuse, and re-envision materials that are produced in makerspaces in pursuit of an interdisciplinary, sustainable, replicable, and systems-based material approach. Starting at Taubman College's fabrication lab—a makerspace that has significant and novel waste—*Maker's Waste* creates and suggests alternative uses within the school to eventually serve as a case study for institutionalizing sustainable practices.

The starting goal for the project seeks to reduce material waste. This is done firstly by building awareness of material options. A guideline is then created, detailing advantageous ways to lay out prints, cuts, and builds for minimizing material waste. Finally, the project tracks both the temporal and physical properties of materials, such as PLA, metal, and wood, represented on a timeline that shows the lifecycle of materials.

The project also exhibits the physical qualities of different materials, comparing raw to shredded to chunk components of materials.

The second model of waste reduction is material reuse through the proposition of alternative manufacturing uses of waste. Various products—existing within the temporal and physical frameworks we explore—were designed and created out of material waste.

The reduce-and-reuse guidelines and propositions lead to the third component of the project: the re-envisioning of materials through an open-source network that has replicable results. Following the culture of computational design, makerspaces, and fabrication facilities, we aim to share results through digestible logs, protocols, and fully transparent pathways to product design. *Maker's Waste* also brings awareness to the concrete effect that fabrication has on the climate.

A sustaining future begins with education and foregrounds climate activism. Educating and performing material analysis within an architecture school will have sustaining effects as these practices are brought forth into the built environment that students will eventually shape.

JACOB NUGENT

Thesis Advisors:
ROBERT ADAMS AND DAWN GILPIN

THE COUNTRY

CRITTERS, CROP CIRCLES, CHRISTIANS, AND CRIMINALS

Rural America, or more simply the country, is a host for parasitic corporations, ultra-conservative-Christian politicians, and obstinate ideologies. A core belief of rural America is laid out in Genesis 1:26-28 where mankind is given dominion "over all the earth and over every creeping thing that creepeth upon the earth." Setting humans apart from and above all other living critters creates a spectrum on which queer or other marginalized groups can be removed from the definition of human, making them other, less-than, and criminalized. This hierarchy is exemplified by the impacts of settler colonialism on indigenous communities and by legislation designed to take aim and destroy queer people. Simultaneously, landscapes and critters continue to be harmed by careless industrial practices that leave behind lethal chemicals decades after the initial event. Borrowing from theorist Karen Barad's definition of queer both as a verb that challenges strict definitions, and queer as an identity that is indeterminate, non-binary, or at stake, the act of queering allows for the proposition of anomalies within known rural space that align with folk-lore, crop circles, and the inexplicable.

Using rural Michigan as a case study for explorations of queer-rural identity and space, an ethnographic and photographic journal produced four critical situations: four-way stops, dollar stores, trailer parks, and brownfields. *The Country: Critters, Crop Circles, Christians, and Criminals* demands a future that faces ugly truths head-on to confront the violence committed against humans, critters, and the land—a future that queers the status quo and realigns rural space with the values of craft, care, and decency for all critters.
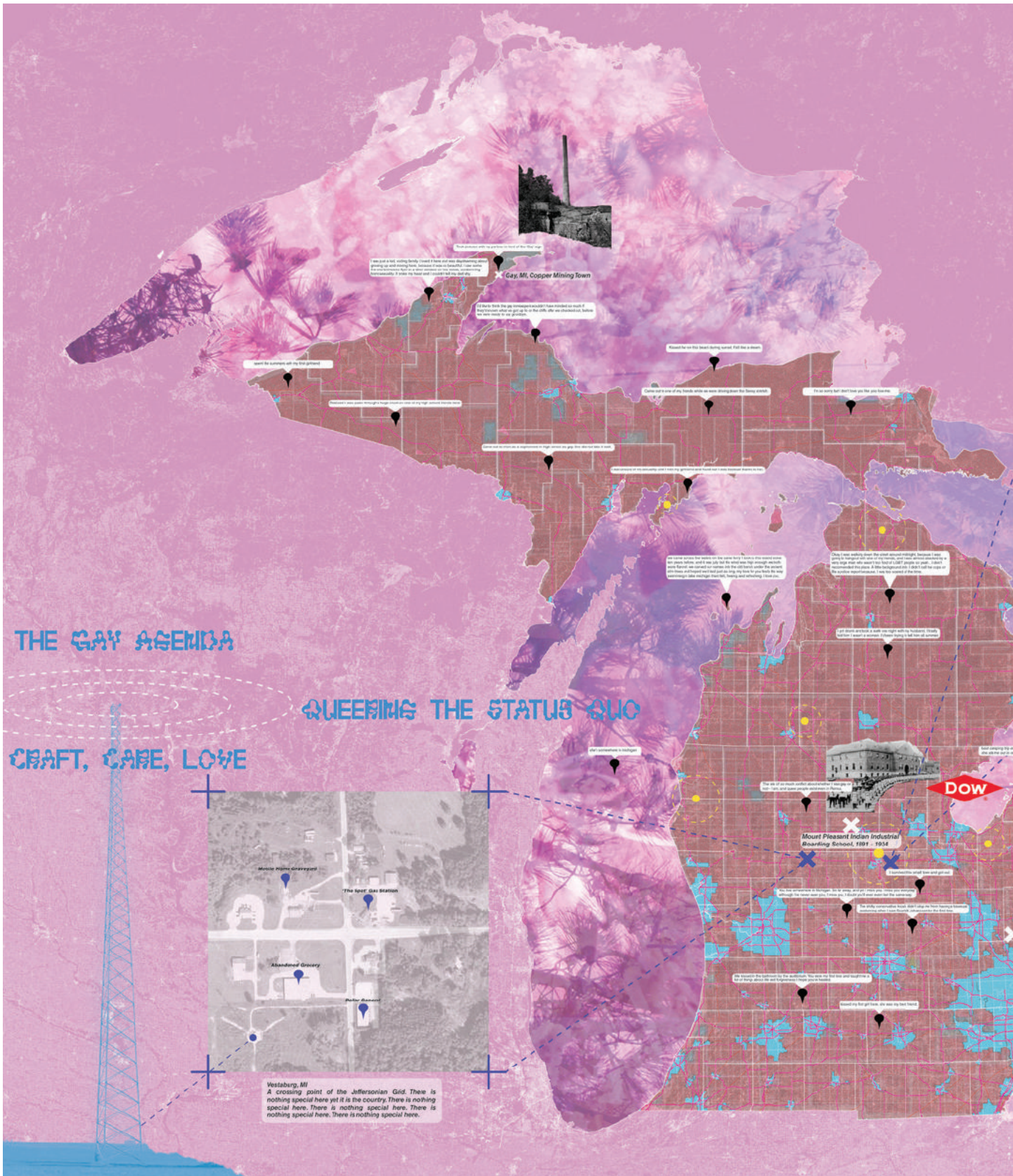
THE GAY AGENDA

QUEERING THE STATUS QUO

CRAFT, CARE, LOVE

Gay, MI, Copper Mining Town

Mount Pleasant Indian Industrial
Boarding School, 1891 - 1934

Dow
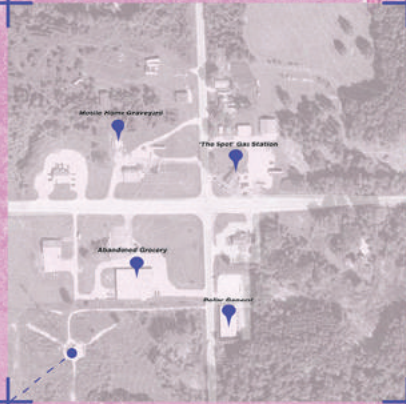
Vestaburg, MI
A crossing point of the Jeffersonian Grid. There is
nothing special here yet it is the country. There is nothing
special here. There is nothing special here. There is
nothing special here. There is nothing special here.

Mobile Home Graveyard

'The Spot' Gas Station

Abandoned Grocery

Dollar General

THE COUNTRY
CRITTERS, CROP CIRCLES, CHRISTIANS, AND CRIMINALS

St. Louis, MI
the former Michigan Chemical Company had a plant located in the small town of St. Louis Michigan. This plant was involved in many environmental catastrophes, most notably a mix-up in chemical production in the 1970's that contaminated animal feed with a flame-retardant chemical. This resulted in the death of around 9-million farm animals, and the contamination of milk, eggs, and meat which many Michigan residents consumed. The site the facility once sat on too became contaminated which has been attempted to be remediated many times throughout the years, and ongoing projects continue.

Secret Sky, Cale Newell,
Port Austin, 2019

Ortonville, MI

Kid Rock

Dolly Parton, Orville Peck, Lil Nas X

VS.

Ted Nugent

Donna Haraway

VS.

Anna Tsing

Karen Barard

VELSICOL
CHEMICAL LLC

Mount Pleasant Indian Industrial Boarding School

ST LOUIS 48880

WARNING
DO NOT ENTER

St. Louis Michigan Brown Field

RURAL STUDIO

VS.

Mobile Home + Trailer Parks

The American countryside, or more simply the country, is a space is environmental, economic, political, and cultural crises. Disinvestment from manufacturing industries has left many rural populations without a clear path to economic prosperity. Taking advantage of these crises are large corporations like Walmart and Dollar General, as well as investment groups seeking to squeeze every penny from rural communities

Secret Sky, Cale Newell, 2019

Speculative spatial interventions that queer rural space, culture, policy, and capital relationships. Taking direct aim at: large investment groups exploiting residents through mobile home parks, and national store chains which kill local businesses.

Dollar Store Barbie Aisle,
Sari Shryack, 2021

Beneath the Roses, Gregory Crewdson, 2003-2008

DOLLAR GENERAL

Walmart

EXTRACTION
EXTRACTION
EXTRACTION
EXTRACTION
EXTRACTION

PARTY STORE
DELI & LIQUOR

SELECT SPREADS FROM "STORIES FROM THE COUNTRY"

In order to document the spatial and lived reality of the country, a book was created. The book contains a series of five interviews and a series of photography that contextualize these stories. These methods aim to document stories from normative, queer, and indigenous perspectives of the country.

The book aligns with the reportage style photography of photographer Robert Adams and acts as an ethnography of rural folk, especially from the perspective of queer folk who live in rural spaces.

What: Queer Rural Experience 01
Where: Ortonville, MI
Who: J.D. Bigger
When: 01.16.24

About: J.D. is a queer individual who grew up in a rural area, moved away, and is now coming back to live in the country with a group of other queer individuals. I became aware of his story through mutual friends and his insights into growing up feeling othered from his family felt like it resonated with the queer experience of many rural youth.

J.D. is moving into a house just outside of Clarkston, MI. As my partner and I were driving these from Ann Arbor all of the classic signs of rural places began to appeal as elements of the city simultaneously disappeared. Lights on the highway began to disappear, any sound or noise barriers along the highway dropped out. Replacing them were open fields, lines of trees. As we exited the highway we began to see other hallmarks of the country: a Dollar General, abandoned metal clad buildings, barn houses, grain silos, and private property signs. We went into J.D.'s residence, a typical ranch home in the country with many out buildings. He gave me a quick tour of the grounds, seeing all of the spaces that he and his housemates hope to turn into art studios, farming areas, etc. We then conducted the following interview.

00:00:06:27 - 00:00:17:17
J: Maybe you could just like, start again with your name and kind of where we are in the world and what you're doing here.

00:00:11:14 - 00:00:44:16
J.D.: Okay. My name is Jeffery Bigger, and we are in Ortonville, Michigan, which is near Clayton, about, I don't know, 30 minutes north of Detroit, a little bit in the middle of nowhere. Um, yeah, we are at my friend Eliza's house. I'm moving in here. Um, what else.

00:00:52:00 - 00:00:59:13
J: Yeah. And you. Your goals for living here? Just to get away or—

00:00:59:27 - 00:01:29:14
J.D.: Yeah. Yeah. I am, I'm excited to be moving here because it's a little quieter. It's a little less populated. There's a lot of space for you to kind of do whatever you want to do. We're like, planning on using some of the space to set up like an art studio and do ceramics and also, you know, start a garden and give some mushrooms, stuff like that. We're also excited because there's tons of space for my dog to run around. It'll be nice because I feel like I'm camera shy. Now that I know that there is a camera I can't act crazy anymore.

What: The Taboo Clan
Where: Shepherd, MI
Who: Scott Kaboo
When: 01.21.24

About: Scott Kaboo is a Tribal Elder in the Saginaw Chippewa Indian Tribe. He currently lives in Shepherd Michigan. I know Scott from my sister who is currently dating his son Adam. Scott makes it very clear that he prefers to be called Indian, not Native American, or Anishinabe as I still respect his wishes. I reached out to Scott for his perspective on the Indian experience in rural Michigan. To help shed some light onto the community of the tribe, as well as just his life experiences living in rural areas.

Scott and his family live in a ranch style home within the small village of Shepherd Michigan, a village that Scott says is too populated even for him. When I arrived at the house Scott and his wife Kim greeted me and my sister. He was quick to business, stating to my sister, "You sit down out here with Kim, and J and I will go to the back." He led me to his garage room conjoining his modest backyard. Fairly typical for Shepherd Michigan. He had already set up two chairs for us and had begun playing Ojibwe drum music on a bluetooth speaker. Later he would explain this music calls into the space positive energies and the spirits of his lost loved ones. He explained to me he has done several interviews, and really enjoys the process of connecting with his life through them. I awkwardly fumbled out my camera equipment, finally getting my tripod set up, and then the interview could begin.

J: Just for the record if you could start with your name, and a little about yourself.

Scott: I'm Scott Kaboo, 60 years old tribal elder, I live here in Shepherd for about 4 years now going on 5. Just came from 6 years on the reservation. I am a Saginaw Chippewa Tribal member, a descendent of Bay Mills Indian Community in the U.P. on my father's side. My Mother was a tribal member here (Saginaw Chippewa Indian Tribe). The thing I want to shirt off right away is that I'm on the Red Road, which means sober lifestyle since 1996. Anytime I go anywhere that's what I mention because there's a lot of stereotypes a lot of things about Indian Men and people just to make that clear. Any interview I went on— job interview it's one of the first things I say. I have three kim, I had a son who died in 86' so he was my first with my daughters' mother, and then me and Kim (current wife) have Adam together. She also has three kids, make that two, two kids and Adam, we blended our family in about 2006 and that's actually why we are here in Shepherd because of Adam, and then Kim like I said. But at some point looking forward to going back on reservation land, so its more opportunities for Adam and I as well as his mother. You know she's working for the tribe, I'm sure we will get into more later but that's pretty basic right there.

"There are at least two kinds of silence that define us. One is the eloquent silence of the world as we more given it— the silence of light and beauty, the silence that ends a promise. It is a wilderness especially audible on the prairie or next to trees, but it can be heard in many places throughout the country.

Theodore Roethke spoke of this quite when we wrote that 'Hope has its hush.' It asks us to care.

There is also sometimes a dark silence within us, one that results from willful blindness and deafness. We struggle against it. What will America be? Will it accord with the stillness of sunlight?"

From American Silence, Robert Adams, 2021

Arts and Travis Studio
Lisa Moren + Rafael Antonio
Instructors:
Dawn Walden
Robert Adams
Taubman College
University of Michigan

QUEERING RURAL SPACE TO ITSELF

Through a video, the thesis transports viewers to a speculative queer future for rural America.

The thesis argues that the normative view of the country as seen by the photographic series is not innocent. Following Ru Paul's famous quote, "You're born naked and the rest is drag," the thesis argues that gray, brown, beige, renderings of the world restrict the acceptable and allowed range of expression and are not neutral. Through digital material, texture, pattern, and lighting changes, rural space can be made estranged, othered, or queer to itself. The recoloring of rural space increases the range of possible expression and allows for the increased inclusion of difference.

SCENE 01: Calf in Field

SCENE 02: The Crop Circle
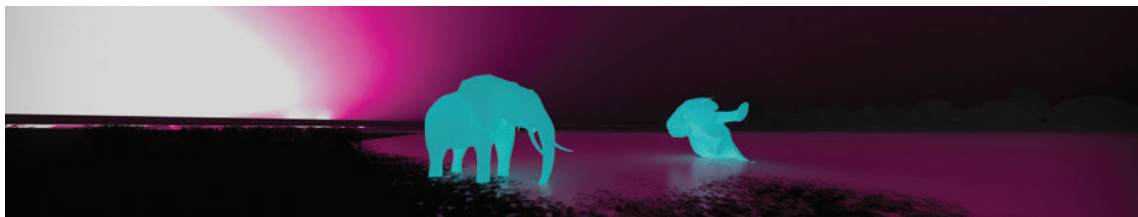
AUDIO DESCRIPTION
Audio clip from a tour of a "sex-offender park" plays as the tour guide describes how potential trailer park owners can make money by offering homes to felons and sex offenders as a reliable form of income. Thunderstorms can be heard in the background.

SCENE 03: Trailer Park

SCENE 04: Trailer Queer Group Home

AUDIO DESCRIPTION
News clip plays describing the site of the former chemical plant in St. Louis Michigan. A local resident describes the types of buildings that were present and the lasting effects of the chemical plant on the local river and people.

SCENE 05: Chemical Plant St. Louis, MI
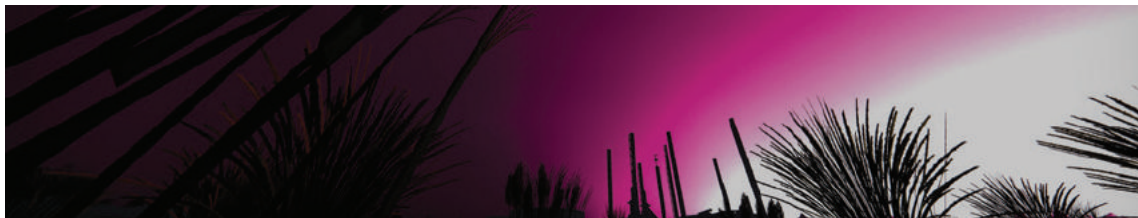
AUDIO DESCRIPTION
Author and former local resident JoAnn Scalf's description of elephants showing signs of distress while bathing in the river. One elephant can be heard struggling and splashing in the contaminated river water.

**SCENE 06:** Legend of the Elephant Killing River

Audio of a radio tuning lands on a conservative talk radio station. Conservative commentator Alex Jones describes how he believes tap water to be a "gay bomb" that is "turning the freaking frogs gay."

SCENE 07: Four-Way Stop the Gay Agenda

AUDIO DESCRIPTION
Audio from an interview describes how Dollar General is often the most convenient place to buy groceries.

SCENE 08: Dollar General
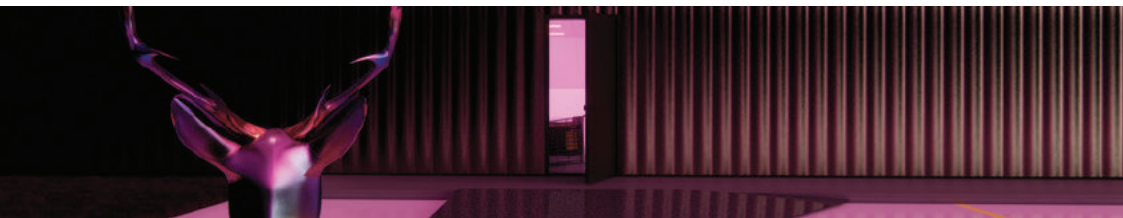
SCENE 09: Dollar General Back Door

AUDIO DESCRIPTION
Audio from the same interview describes how Dollar General "obviously doesn't have everything you need." Delaney describes how her family must make special trips to another town to get more substantial groceries.

SCENE 10: Dollar General Empty Shelves

AUDIO DESCRIPTION
Club music can be heard.

SCENE 11: Dollar General Sliced

AUDIO DESCRIPTION
Musical remix of Alex Jones' famous "Turning the Freaking Frogs Gay" plays as the basement of the Dollar General is revealed to be a queer club.

SCENE 12: Dollar General Queer Club

ERIC HÖWELER

ON TRANSLATION

DIMENSIONS 37 STAFF

Shravan S Iyer
John Spraberry

ERIC HÖWELER

Eric Höweler is an Associate Professor in architecture at the Harvard University Graduate School of Design (GSD) and a Principal Partner at the firm Höweler+Yoon, an international interdisciplinary design practice based in Boston, Massachusetts. Höweler was invited to present some of his work to the Institutions Studio at Taubman College. After the lecture, Dimensions met with him to discuss Instagram, submersibles, and drawings as love letters.

DIMENSIONS 37: We want to start off by asking: how do you experience architecture in daily life? We've been really interested in your Instagram. One of us commented on your egress plan documentation, and you also spoke about probably making it into a book.

ERIC HÖWELER: You know, Aaron Betsky wrote in *Architect Magazine* recently about the feed, and it's funny how you have been looking at the feed and speculating about, "Why is Eric interested in these things?" It's interesting to think about Instagram as a way of turning a personal thing into a public thing.

Whenever I travel, I seek out things that I'm curious about and interested in. Obviously, we live in architecture, we're surrounded by it. Sometimes you live in a building for 20 years and then you notice something unusual about the way that thing is connected to that thing. So there are questions of attention and distraction, which I think are just there. I think the best buildings are multilayered, they're nuanced, they're subtle, and they make you stop in your tracks sometimes. They make you look more carefully and turn you into an active reader. The memorial we did at the University of Virginia (UVA)—there's one way to experience it quickly and there's another way to experience it more quietly and slowly and there's a way to spend time

with it. There's a way to dig out meaning. And so I think as a reader of architecture, I like to look carefully. As a writer of architecture, I like to write in things that are nuanced and sophisticated but that communicate on different levels.

Instagram is a funny thing because they say it's about distraction, but I think Instagram can also be a tool for focusing and zeroing in. I always try to show a detail because I feel like most people can see the big one. Most of my students can Google any building you ask them to. But do they look around the corner at the way this thing meets that thing? I always try to find something more specific, more detailed, more nuanced. So some buildings I post about again and again. And when I learn something new about a building that I thought I knew, it's kind of exciting, a kind of discovery. I teach courses at the GSD on studio. I teach construction. I teach thesis. And many of them, I say, "Well, how do we teach construction?" First of all, it's not different from design. Like you'd say construction is the inertia of design for an intent to implementation. So you keep intending, you intend, you intend, you keep intending and then at a certain point, it becomes built. It becomes material. And so you never stop designing. You just push it through until it becomes a reality. So that's one thing; I like to break down that barrier.

We have to look at construction and look carefully at why it was built. So even though I teach construction in a case studies class, I'd say it's about looking at architecture. We go on field trips, we look at buildings, we talk about them, we look at them, we draw them. And so how do you teach design and construction? Well, it's about looking carefully, and asking questions, and trying to take things apart. I have a sketching exercise in my class. I ask people to draw the slide, but then try to draw a section of the slide or try to draw an exploded axonometric of a slide. So take it apart in your mind. "Did this thing come first and that thing came second?" It's about being attentive to certain things.

And I think it's funny that Aaron Betsky was talking about like, "Eric looks at this; therefore he designs that." And there's a transition between looking and doing, which I hadn't thought about too much. But you do tend to look at things you like and you tend to do things you like and so it does articulate a set of preferences, tastes, or interests. I do think it's a kind of funny road of being. It's like you can be a reader. You can be someone who's engaged. And I think as an Instagramer, you're kind of posting or producing, generating. As an architect, you're making and then maybe posting about what you're making. Or maybe you're posting about your process as you're making. And I sometimes call it

peripheral vision. It's like, "Ope," I sometimes see things on social media and I'm like, "Ah, what was that thing I saw?" I didn't pay attention completely. But then I see it twice or three times and then I pay attention. It's a different mode of vision or a different sense of perception or attention.

But anyway, my wife doesn't have social media and she doesn't look at anything. So even within one pairing, one partnership, I think she is completely disengaged and I am maybe overly engaged. But it's funny. She still seems to know what's going on in the world. So I don't know how she gets her information. And somehow we have managed to form a partnership where we're both actively designing and actively teaching, but one has a foot in social media and one doesn't.

D37: How did the process of making *Verify in Field* and finding lessons in those projects translate to your role as an educator and your teaching at the GSD? Have you noticed methods from there, which you talked about during your lecture, being translated into your practice?

EH: I think teaching and practicing are related for me. I was working in New York at Diller Scofidio + Renfro and then when I left DS+R, I moved to Boston and I was like, "Oh, let's start a practice." And, "Oh, let's apply for a teaching job." It's hard to start practicing without a form of income, and so teaching was a way to like—you're teaching, you're engaged intellectually, you're stimulated, you're also making some money, you're buying yourself some time. So for me, teaching and practicing were always together, and I think they feed on each other productively. I feel like it's safe to say that teaching is incredibly nourishing. It's incredibly stimulating and inspiring, provocative, and all the things you want from life. So it's a fantastic way to stay engaged, to stay in tune, to stay—I tell my daughter it keeps me young because I am working with these young people and they're always keeping me on my toes or asking me hard questions. When a student asks you a question, you have to think, "Why do I think that? Why do I believe this?"

But what you teach is different from what you do. So to the extent that those two come together, I talk about pedagogy and practice. And the space of pedagogy is distinct. There's different possibilities and constraints. The space of practice is highly constrained. I never teach studio as if it were practice. I never practice as if it were studio, but I try to push them together to a point where they're converging and maybe rubbing off on each other. Things that you learn in practice are actually *really* useful in school, and things that you think about in school can change the way you practice. If you're falling into a trap of like, "I am providing a service and I am just servicing you," that's a problem. If you're delivering a service *and* bringing a kind of cultural project to the practice, that I think differentiates the practice and allows it to be more speculative.

You have a practice, but do you have a project? Is your project something that spans over multiple buildings? If you design buildings, in 10 years will all of those buildings you designed—will they articulate a bigger, overarching project? I think you talked about Peter Eisenman as having both a practice and a project. Peter Eisenman was intent on something that superseded and went beyond individual projects. They all accumulate to something bigger than your project—I think that's amazing. As we practice and we look back at things we're working on, it's like, "Oh, these were articulating these issues." And sometimes it's clear in hindsight. That's why writing a book is interesting because it forces you to look at the work critically. "What have I done?" And then that changes how you look forward to future projects that are more speculative.

Intertwining practice and pedagogy is super interesting. The intertwining of practice and publishing is also interesting. And then tying back to the first question, writing a book is different from posting on Instagram, but they're both broadcasts, just with different cycles. If you write a book every ten years, you'd post on Instagram every ten days, or every ten minutes, or every ten hours. they have different cycles and the way you articulate yourself is different, what you can say is different. But I think they're all kinds of articulation, like public articulations.

The building is a public articulation. You do a building. It takes ten years to build. That's a statement. You write a book, it takes five years to write. That's a statement. You post something that took you five minutes to post, that's a statement. They're happening at different intervals and they're different degrees of resolution. But I think seeing them together can be productive, to see them all as these versions of each other.

I notice that my students don't like to render. They're looking for a different mode. I think as rendering software gets so sophisticated, it becomes very slick or photo-real, or maybe too commercial. For whatever reason, they don't want to do it. They try to find different modes, and one of them is building elaborate models and then photographing the models. There's an artfulness to it. Thomas Demand is someone we look at a lot. They're a photographer who stages these elaborate, very carefully constructed sets. In my own practice, we build models, but we don't build models to photograph. But we do renderings. I think in the world of practice, renderings are important to convey ideas quickly and are an expected part of a deliverable. So I think we're not going to go away from renderings. We try to be artful and very precise about it. But I think in our students, they're kind of an early warning system. They're like, "The future will be like this." So I am always attuned to what they're doing, or what their preferences are, or why they're not interested in this or that because that's interesting. Our students are going to be eventually in the practice and eventually leading practices, so what their interests are is also worth taking note of.

D37: Do you also look at pro bono community work? How do you balance the monetary requirements, versus how you're going to run the practice, versus all of the challenges that you would be facing while starting a practice?

EH: Yeah, I think obviously—we have to think about these things. In a way, you can't run a 20-person office without being extremely well organized and knowing exactly what your costs are, and what your fees are, and what you're taking in, and what you're spending. That's something that I didn't really think about as a student or as a young architect—as an employee. You don't worry about that. "I do my work and someone pays me." Right? As a leader of a firm, you have to think about, "Where is the next project coming from? How much are they going to pay? And can I pay people that I am employing to do the work?" So there's a reality that comes very quickly, and there is a lot of stress related to that.

I like to think that our projects are not all service oriented or profit motivated. I think we

are motivated by the desire to do interesting work and not by the desire to make money. I remember once I was meeting with a developer in Hong Kong and I showed him a lot of our public space projects that are cool and they're like, "This is so interesting. How can you afford to do this? And how can we get you to do this?" And I was like, "Well, we'll only do it if we found the project interesting." And he was so taken aback. He's like, "Well, if I pay you, isn't that interesting?" And I said, "No. We're not just—because otherwise we'd just sell you products or something." There's a lot of better ways to make money than architecture actually. So if you want to make money, do those things. If you want to have a life of intellectual pleasure, and pleasure in making, and seeing people interacting with things, that's architecture. And so keeping those two things separate is important.

At DS+R and in my own practice, part of the work is to make money and part is to lose money. You want to have more make-money projects than lose-money projects, but you're going to have lose-money projects because there are things you're curious about and there are institutions you want to work with that are not profitable ones, working for not-for-profits or working on the Coolidge Corner Movie Theatre. That's a not-for-profit community theater. It's a center of the Brookline community; people go there to be with each other. And after the pandemic, that's super important and we love them. But they don't have a lot of money and the project has taken a lot longer than it should have. We are basically funding it—we're still charging fees, but we're not getting paid for every hour that we work. And so that's a project we have to do because we love the project, we love their mission. I think maybe a firm that was more business–oriented might say, "Well, hold on a minute. We need additional services or we can no longer do this work." We stopped writing additional service requests years ago. So I think working for institutions you believe in, that's important. And then there's projects that you say, "I'm curious about this. Let's self-initiate a project around that."

In 2008 there was a great recession. There was no work and we were sitting around in our office looking out the window and we're like, "Oh, what's that Big Dig thing over there?" And actually, Meredith Miller was part of our office then and Meredith,

Meejin and I were sitting there going, "Well, let's research *that*. That's cool. How did that happen?" So the three of us wrote a Graham Foundation grant proposal in a day. I wrote something, Meejin wrote something, Meredith wrote something. We went around a couple of times. At the end of the day, we had a really compelling proposal. We sent it to the Graham Foundation, and they funded us to do a book on the Big Dig. And so we spent—I don't know—six months researching, and writing, and doing design projects around the Big Dig. The book came out and it's called—*Public Works: Unsolicited Small Projects for the Big Dig*. So it was self-initiated based on curiosity and not having a client. We did the research, we did the design proposals, and then we found a—we hired a graphic designer and we found a publisher, and we published it. And I think it's one of my most favorite things, but it's a completely self-initiated project. Years later I was meeting a guy to interview for an Audi competition, the Urban Future Competition, and I brought this book with me and I said, "Look, we've been looking at infrastructure, and highways, and bridges, and tunnels. So we think we can help you think about urban mobility." And they're like, "Oh, it seems like you've got some qualifications." So we qualified to do the Future Award Competition, which we competed with five other firms in 2012, including the Urban-Think Tank, Super Cool, and Jun'ya Ishigami. It was a tough competition, six months. We won. We got $100,000 for the competition, which is good because we spent about $100,000 to do the competition.

And then years later, 2014–2016, Audi says, "We're thinking about our campus. Would you come for a workshop in Germany?" So we sent four people to Germany for a workshop. We did a workshop with Audi about their campus and because we did this book, we had won the previous thing, and we were thinking about mobility, we won the master plan for their campus as a project. So the self-initiated project for a book becomes a competition becomes a commission. And that's a perfect alignment of interests, research, and expertise to convince a company like Audi that they should trust you to master plan their future campus. So I think research, design, and speculation can produce real business consequences like commissions and fees. That's a happy ending. It doesn't always work out that way.

D37: The first book that you and Meejin wrote was *Expanded Practice* and you both talked about getting out of the realm of architecture and design and into all of these different fields. It's obvious that's something that the firm is still interested in. How do you see some of the ideas about negotiation, verification, and reflection from the *Verify in Field* book relating back to that idea of expanded practice, and how might those ideas translate to other disciplines outside of architecture?

EH: I'll say when we started, expanded practice was our way to get work. We applied for public art projects. We submitted qualifications and some of our first projects were like street furniture, temporary art installations, solar canopies, and things. And those were really a way in, actually. Architecture is so capital intensive nobody wants to pay you to design their multimillion dollar building, but they might give you $40,000 to do a temporary art installation. So doing temporary art installations is a great way to build a kind of portfolio and learn the fabrication techniques. Meredith Miller was a part of our bike drift proposal we did for the Boston—I think it was a four-point channel at a public art competition. I don't remember the budget. It must have been $5,000 or something. But we milled some forms, and we vacuum formed them, and we produced these things, and we thought we could radio frequency control lighting remotely, addressable lighting. We didn't get it. But then a couple of years later, we pitched it to the Philadelphia Mural Arts and we built a project called *Light Drift*, which used the heat form—the vacuum forming, it used the radio frequency controlled lighting, and that was 2010. We built that in Philly for $40,000.

And then fast forward about six years later, Philadelphia Mural says, "We need a proposal for something in the river that's going to be really exciting and impactive." And we pitched *Float Lab* as a submersible in the river to observe the natural ecology of the city. Which it's crazy, but our project became a submarine that we're going to build next year in Philadelphia. I think it's going to be one of those career-defining projects because it's so cool that architects work on a submarine to look at the kind of urban nature. And each of them brings different issues like we talk about behavior and responsiveness with the *Light Drift* project, an urban play, and then the *Float*

Lab is more about ecosystems and education and we call it kind of eco-literacy. How do you read the river, how do you learn about the kind of interconnectedness of systems, water quality, and organisms, and how do you embed a viewer in that ecosystem in a different way to change their perception, change their outlook, change their attitudes? How do you affect the world at a distance? Stan Allen talks about architects' work on the world at a distance through drawings. Drawings of things that are implemented. It's another kind of nice success story of an art installation becoming a real thing with real impacts, we hope.
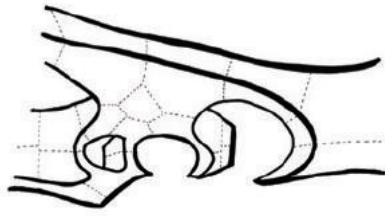
Collier Memorial
Höweler + Yoon, 2015.
A concrete arch

EH: I mean certain projects have an extra charge, as an extra symbolic weight. Certainly memorials do. Both Collier and UVA were incredibly difficult because they're dealing with a very tragic situation and dealing with the family, friends, and survivors or the descendants. You have to become empathetic to engage. And through that empathy, you become a kind of co-producer. You take on some of that. And so they're amazing, they're transformative. They're also exhausting emotionally. And so these two projects—and Meejin says these are projects we didn't hope for, we didn't want; they came to us. And we did the best we could do. But we don't seek out tragedies in order to memorialize them. That's not what we want to do. The Massachusetts Institute of Technology (MIT) Museum had a unique process in trying to give expression to the sense of, "The community needs to heal and we need some means to be strong together." And that was about finding the right articulation of something that was just in the air, this slogan, "strong, strength."
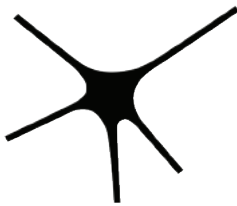

Collier Memorial
Höweler + Yoon, 2015.
Redrawn plan

D37: You talked in the lecture about the drawings, construction drawings specifically, being letters to the builders. And we were curious what verification and letters are necessary when you're designing a project for communities like the Memorial to Enslaved Laborers at UVA or the Collier Memorial. Do you see these as completely unique contexts that you kind of have to go in and figure out a process that allows you to respond to what the community is looking for? Or have you found similar ways of asking those questions and finding those answers?
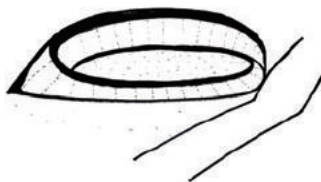

Memorial to Enslaved Laborers at UVA
Höweler + Yoon, 2020.
A circle joins a path

I think it translated nicely into the arch, which relies on all of the different parts. There was a really interesting technical aspect of, "How do we do this? And does anyone know how to do an arch?" The principle is well known, but no one's made one for a long time. That's where the back and forth between the builder, the fabricator, and the engineer happened, and we realized that architects can't do this alone. We're not actually doing anything in the field. But the distance between the field and the studio felt like a million miles apart. When you're working on a Rhino model, someone's carving a piece of stone, someone's hanging a piece of stone in the air and then trying to get it to fit with the next piece of stone. The sympathy is not just with the families, but also with the fabricators.
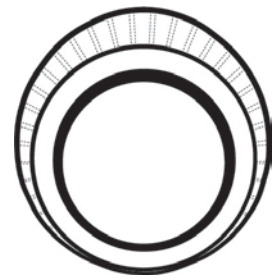
Memorial to Enslaved Laborers at UVA
Höweler + Yoon, 2020.
Redrawn plan

That's when I started thinking about these feedback loops and if the surveyor says, "It'd be a lot easier if we did it this way." And you're an architect and you're like, "No, no, no. I want to do it this way." It's like, "No, no, no. Listen. Why do they want to do it?" because they're thinking about tolerance and fit. "If you start with this and then you work your way out, then it's much more likely to fit together." So being able to listen and making it a two-way process as opposed to, "Here's my drawings. Deliver it as I say." That's interesting.
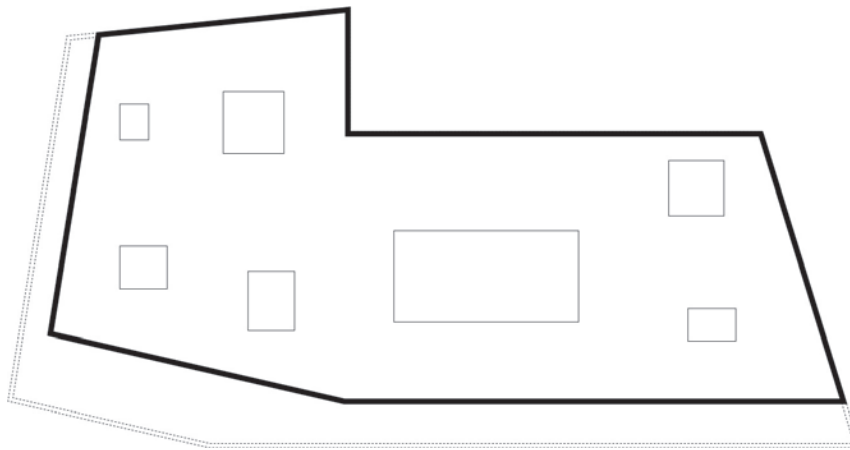
Sky Courts
Höweler + Yoon, 2011.
Redrawn plan

And then UVA was differently interesting because of the process of engaging with the descendants and their aspirations for it. I think if we hadn't been interacting with them, then we wouldn't have heard the things that they were really keen on. We might have gone in a different way: too abstract. They didn't want it to be too abstract or they didn't want to—they wanted to show the institution of slavery in all of its difficulty and they didn't want it smoothed over. And so the kind of roughness and the imagery and the text on it I think conveys in a very direct way the brutality of slavery.

If we're working in Rhino and we're sending drawings and models back and forth with the fabricator—the same fabricator, by the way—then we develop a relationship with a fabricator. Now when we conceptualize a project, we're like, "Hey, what do you guys think about this?" Knowing when to fold in expertise from outside is also important. I think those are lessons in a kind of humility, but also recognizing what you don't know or looking for partnerships with people that do know stuff would be really important to think about as you design. That's a little bit of how *Verify in Field* comes from this, but it's a back and forth. It's not just, "Take it and execute."

D37: Situations in the construction field are sometimes unexpected and they need to be made in a limited amount of time. For example, in the case of the Sky Courts project, do you have some priorities or standards to make such decisions?

EH: Mm. I mean Sky Courts was our first big project in China. And it was at a time when a lot of North American architects were working in China and a lot of them were getting burned. There was a whole lot of distrust. It's like, "Oh, we did a paid competition. We didn't get paid." Or, "How can we get paid?" You get paid, but you get paid in Chinese currency, which you can't convert. And so there was a lot of distrust there I would say. We were invited by an architect who had studied in the States but had gone back to China. And so in a way, that helped. But I think there was a moment where we just said, "Look, we have to believe that this is real, and we're going to treat it like it's real, and we're going to go into it." But we also knew that we were at a distance from that. The big discovery on that project for me was like, "Well, if we think about the brick layer and how they're going to lay bricks, if we can come up with an idea that's so simple that everyone understands: keep the bricks straight. The wall is oblique but keep the bricks running straight." That's something with a logic that makes sense. It's communicable across cultures and across languages and across— it doesn't require a million shop drawings or templates or BIM models. So recognizing the kind of global state of construction and the kind of impossibility of communication at a certain point or the distance between the execution and conceptions. I think that was a kind of—another kind of moment where we're like, "Oh! Shouldn't we be designing as if we had the brick layers in mind?" So these are the kind of love letter questions of, "How would a bricklayer interpret this? Would they understand it? Would they appreciate it?" And so that was also eye-opening that we're working with people we can't speak with. We can go to the site but we still wouldn't be able to speak the language.

I have been working on a book called *Design for Construction with Tectonic Imagination in Contemporary Architecture*. If you can imagine design—because design and imagination are kind of the same—if you can imagine design through the lens of implementation: how big is it, how heavy is it, can I arrange it this way, how hard is it to get it to fit together, who is doing it with what skill level. Those kinds of questions I think help you think about design differently. It's not like, "Here's my Rhino model. You figure it out." It's like, "I have thought it through as if I understood how heavy it was to put in place and how tight it is what I am asking you to do." So thinking through that I *think* can make us better designers and can change the way we

think about design. So the love letter, or the verifying in field, are all ways to change your subject position to be more empathetic to the person executing and really think about labor, and craft, and not from the outside, but actually trying to turn it around and conceptualize it from that point of view. It doesn't always work, but sometimes it does and it opens up different possibilities.

D37: You spoke about translating your ideas from paper to the mason on the site and how that doesn't always translate 100% as to what you thought it would be. There might be some loss in that translation, right? Because these are some things that we never account while we are making a drawing but when you go to the site and then you tell the person who's making it, there are so many things that are probably lost. And sometimes even the end result might be much better than what you may have expected it to be.

EH: Yeah, there is something lost and there might be something gained. I remember walking through a house being built and our drawings were in a stack on the table, but pinned up on the walls were little hand –drawn shop drawings, basically where the master carpenter was basically delegating to the framer, "This is how I want you to frame it." And so when I teach in my construction class, I show them the drawing that I do, and then I show them the drawing that the contractor did, and then I show them the scribble on the wall where the contractor was really figuring it out. So these are different versions of the same message. But sometimes they get to the site and they're like, "Well, I couldn't build it this way because you didn't consider this, but I built it that way, and therefore." So those moments of discovery that feed back into your design process make you a better designer and change the outcome. But instead of snapping your foot and saying, "That's not how I imagined it," how can we change our imagination to think through these questions? I think being open to that makes you a better designer. But yeah, it's funny. It happens in the States. It happens in China. Builders know things we don't know. So shouldn't we be attuned to what they know?

D37: A follow–up question to that, since you mentioned how that practice requires responding to and being attentive to what the builders might be thinking of whenever

they're actually making these things, in what other ways do you try to communicate that in your teaching or in your studios? And do you find it more difficult to learn in this way as opposed to the hands-on experience?

EH: Every once in a while you get a student that's like, "I used to be a carpenter" or, "I used to frame on summers" or something. And it's funny. They have a different approach, right? And sometimes we need to be abstract in order to imagine a possibility, right? So sometimes some distance is important. If you used to frame and you're about to frame it and then you can only think about framing, then you forget about, "Maybe it should be made out of steel. Maybe we should ask someone else to water jet cut it." Right? So sometimes it's too much information. But in my construction class I talk about joints and putting things together. I talk about modules like how big it is when it comes to the site.

In our project on 212 Stuart Street, 30-foot modules. They're coming on a truck. And I always show my students pictures of those signs over highways like, "14-foot clear." "Why is it 14-foot clear?" Because that's the bridge because you can't get a truck underneath it. And the biggest piece you can bring to a site is probably based on that 14-foot clear. Or to build in Manhattan, it's got to go through the tunnel, or through the bridge to get into Manhattan, or it's got to come on a barge. But usually there's some real constraints that set the maximum sizes and thinking that through. So Stuart Street I really thought like, "A 30-foot long piece I could get on a truck and I could bring it to the site, and then I could hoist it up, and it would hang on the building and we'd do three stories at a time." Like, "Wouldn't that be great? We'd save time, we'd save money, and everybody's happy." So I thought that was a genius idea. But it turns out it created all kinds of problems because the window wall is on every slab, right? And so the window wall is moving differentially from the piers, which became a problem in terms of the differential movement between the glass and the precast. But I do try to think about these questions and I try to get my students to. But they don't really need to know that to do their studio projects. But thinking through the process I think is useful.

I always quote Louis Kahn, who says, "Do your drawing the way you would build a building." So draw the ground, draw the structure, draw

the slab. Hang the curtain wall off of your slab. If you draw as if you were building it in sequence, then you won't forget to support the curtain wall on the slab because you will have drawn them in that sequence. Right? It's a romantic idea, but drawings aren't just lines. They're actually instructions. "This is a beam," even though it's just two lines, which is different from, "This is a piece of glass hanging on the edge of the slab." I don't want to be romantic about it, but imagine the power of your drawing, the agency of drawing gives it a different motivation, a different capacity than just a sort of drawing. Or just a Rhino-made 2D and then da-da-da-da-da, Illustrator, da-da-da. It's graphics. I say to my students, "Your drawings are not pictures." You could say it's a kind of anticipatory, it's a kind of future, speculative. But your drawings are actually instructions. They're telling you this and this, and they have notes on them, they have dimensions. And maybe they're a love letter because they elicit a kind of response and a kind of back and forth. That's the best case. But to think about the power of your drawing is important in the academic context… Beyond the vision, right? Envision something really awesome, but the kind of instructional and contractual aspect of drawing is empowering and has weight. It has legal weight. So recognizing they're not pictures, but documents.

D37: Yeah, I think in school, a lot of times we're making beautiful drawings. But not making informative drawings. Like sometimes if I'm doing a fabrication project, that's when I realize I am actually making a proper drawing because I know I have to make it. But if it's like a project that I am doing for school and it's more like a presentation board, I would make a drawing that looks better. And I don't know if that's right or wrong because I don't think we always study the details of the project.

EH: Yeah, it's not always appropriate. Right? Sometimes we need the big vision and sometimes we need—the drawing asks questions, right? Like I teach an integrated building studio and I'm like, "Well, how big is your column grid?" And the student's like, "Let me check my Rhino log." And it's like, "No, no. Put the dimension on your drawing because you talk to an engineer and they're going to be like, 'How long is this span? What's this bay? How long do you expect it to span?' So just put that dimension on there. And it's hilarious because I say that
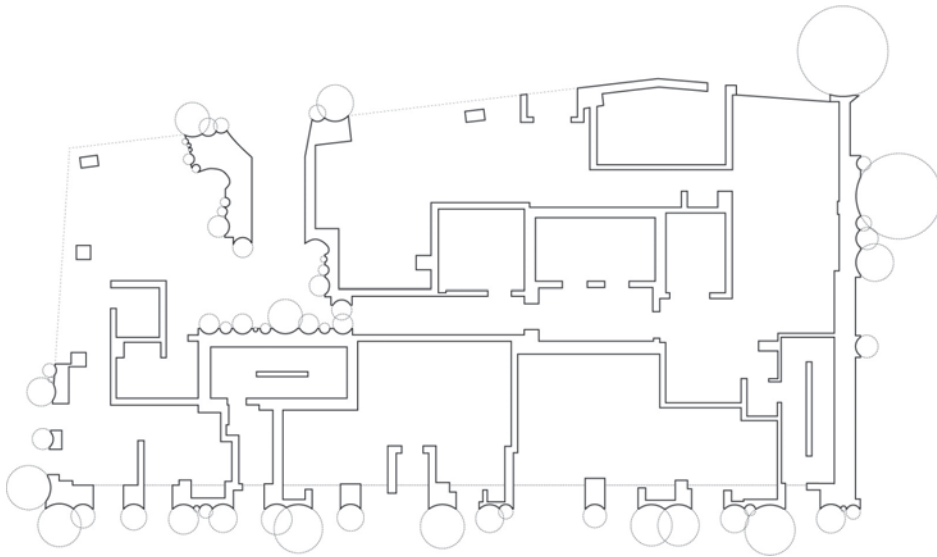
212 Stuart St.
Höweler + Yoon, 2022.
Redrawn plan

and then they don't do it, and then we sit down with the engineer and they're like, "Well, how big is this?" [Laughs.] So it's like, "Put the information on there that's going to provoke the conversation that you want to have so that you can get to the answers that you want."

D37: We were interested in the way that you spoke about the Moongate Bridge not resembling a traditional Chinese garden, but behaving similarly to one. We were curious if there were similar findings maybe in the Collier Memorial or 212 Stuart Street that both kind of have some historical or traditional derivatives, but are pulled away from them in new and different ways?

EH: To get work, you sometimes have to compete. And to compete, you sometimes need to be a compelling storyteller. You need to be a good form maker, but also a great storyteller. And so I often wonder why we don't teach rhetoric in architecture school. When I was in New York, my roommate was a lawyer and he was trained to argue so he studied structured arguments. He'd build an argument for a case and in the courtroom, that's how events unfolded around strategies of argumentation and rhetoric. Sometimes we need to build a case for a project. Sometimes we need to tell a compelling story. Sometimes we have to spark someone's

imagination. And I feel like in a competition, especially an international competition, you have to be strategic about how this is going to be received, how it is going to be interpreted, and you can't always predict that. There's a famous essay by Alejandro Zaera-Polo called "The Hokusai Wave" where he talked about winning the Yokohama Ferry Terminal Competition and he's like, "You know, they wanted to do a landform, kind of this thing." And then at some point someone's like, "Well, it's like that ancient Japanese wood cut the Hokusai painted of the wave and everyone knows that." And he's like, "Well, this is like architecture like a wave," and apparently that metaphor helped the jury understand the intent, the symbolism, the kind of metaphor. He says, "Obviously the project's much more nuanced than that, but at a certain moment, you need the Hokusai wave to tell that story." And that seems very—I don't know—I wish it was more sophisticated than that.

Working on a project in Shanghai, we wanted to think about something that would feel like it belongs there in the culture, and would be interpreted by the users in a different way. We've been doing work in China for a while both in Hong Kong and in our own practice in Chengdu. And my mom's Chinese, so I would sometimes ask her, "Hey, how would you interpret this?" But the Shanghai project, we really tried to think about not doing a kind

of Western idea of an image of a Chinese project. And even though I'm half-Chinese, I feel pretty Western. So it's not like it produces automatic access to certain cultures. But trying to think about, "Well, why is a Chinese garden different from a French garden? And what is it about the culture that makes this legible and this legible?" So I was very attuned to that and in the presentation to the jury, I said that it's about relationships. It's not about objects. And that seemed to register. They were like, "Well, yeah, it's not about making heroic geometrical objects. It's about allowing for certain relationships to be perceived by subjects in the garden, across the water."

I took a class on Japanese architecture in school, which was eye-opening in terms of the Japanese garden is a certain way and the Chinese garden is a different way. I remembered that it's not about overdetermined experiences. It's about creating possibilities for relationships to emerge. It's a very different philosophy about space and experience. And I think being able to say that in a presentation created a connection to the jury so they're like, "Oh, these Westerners have a sense of how we might interpret this and they're not just jamming this form through, but they're actually thinking about the users and…" It created a connection point. And
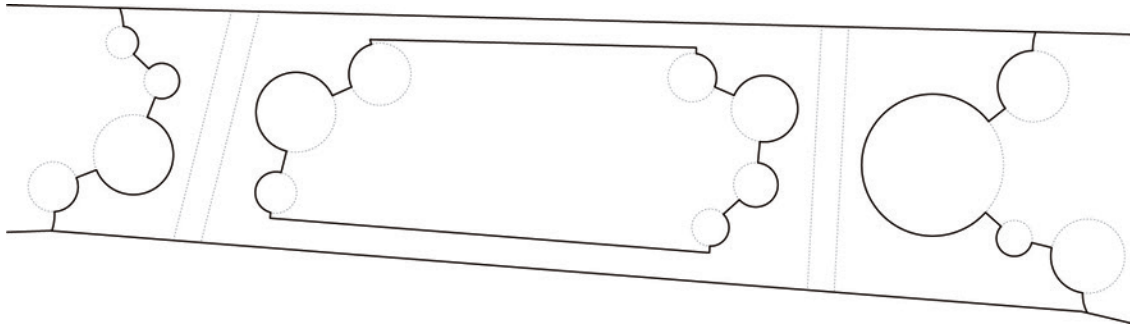
Moongate Bridge
Höweler + Yoon, 2022.
Redrawn plan

I remember that moment because I was speaking in English, it was being translated into Chinese and I saw some head nodding in the room and I was like, "Ah! I think I made a connection here." So there's moments where you can imagine a decision, then something clicks and you've connected, you've communicated, and I said, "I think we've got this project." And sure enough, they awarded it to us. And then they tried to build it without us. And then six months later they said, "Hey, can you help us?" And it was a classic Chinese project.

But I think this cultural sensitivity is also interesting. Can we train architects not to be global citizens, but to be thoughtful enough to try to imagine its reception in the cultural context in which you're projecting? I think it would be different to do it in China, to do it in Latin America, to do it in different cultural contexts. But I think we live in a global world and I think our students are completely international. We're going to practice in different ways so equipping ourselves with enough cultural capacity and literacy and sensitivity to work in different cultural contexts is super important. So it's not just about the Chinese mason understanding your intent, but it's also about the client who's saying, "This resonates with me. I think you understand me and I think our users will appreciate this." So I'm glad that it doesn't

look like a traditional Chinese bridge, but that at certain moments you might say, "Ah! I see this differently." It's hard to do one-to-one with culture, but it feels like it belongs there, even though it's not something they have ever had before or seen before.

D37: To wrap up we just have three quick questions. What are you currently reading?

EH: Yeah, I am working on a book, so everything I am reading has to plug into my book. I am reading a book by John Hixs called *The Glass House*, which is about conservatories, greenhouses, and the understanding of microclimate and atmosphere. Also, I am rereading Reyner Banham's *Architecture of the Well-Tempered Environment* because I am trying to write about a moment where architecture becomes environmental. It becomes about a kind of interior climate that's distinct from the exterior climate.

D37: What's one thing you do every day?

EH: Mm. I wish I could say I do this all the time. I just started swimming every day, which is really great to clear your mind. While you're swimming, it's physical. It feels great but also I just spend a lot of time thinking. So I can't say I have done it for a long time, but I am enjoying that right now.

D37: What's bringing you delight these days?

EH: I have a 13-year-old daughter who is like such a—she's smart and funny, and I just love the ideas that come out of her head. She has a sewing machine, which is over there. The other day she came out and she had taken her old jeans and turned it into a tote bag. The leg of the jean becomes a strap and she's sewn up the bottom and the bag had little pockets in it. I was like, "That's so beautiful." Like, "I love that." She is smart, and creative, but also thoughtful and enjoys making things. So that's my pleasure these days.
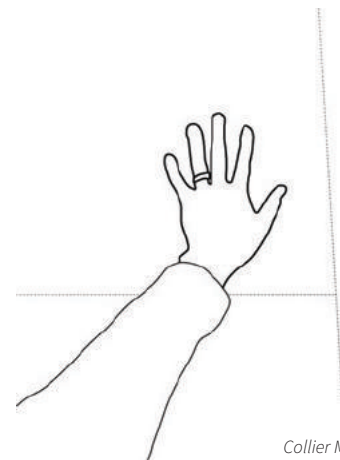
Collier Memorial
Höweler + Yoon, 2015.
Redrawn Instagram post

**NAOMI GRIGORYAN**

Thesis Advisor:
JOSE SANCHEZ

JERUSALEM

A PLURIVERSAL ARCHIVE OF CONTRIBUTIONS FROM PALESTINIANS, SEPHARIC, ASHKENAZI, AND MIZRAHI JEWS

A NOTE TO READERS

In April of 2023, an incomplete version of this thesis was presented. It archived stories from participants that have personal ties with Palestine/Israel with the hope of recentering personal truths of contributors to subvert the erasive narratives of oppression. I naively hoped to have a conversation where every story was seen equally. However, the relationship between Israel and Palestine has never been equal; the power imbalance is too great. Now, more than ever, documenting the accounts of Palestinians is crucial. Palestinians are risking their lives every day to document the reality of Gaza. The amended version, written in November of 2023, and presented in this volume of Dimensions seeks to reconsider default forms of engagement. Additions that further engage with the original text are distinguished through italics.

There is no longer any place for cautious language about 'risk' of erasure, the erasure is very real, present, active, and unrelenting. The need for an archive of Palestinian existence is immediate, not only for the preservation of culture and personal stories but as evidence of humanity and people who need safety, support, recognition, and sovereignty. We cannot let the Palestinian narrative be rewritten by their oppressor. This archive was created to document personal stories of people that had personal relationships with the lands of Palestine, Israel, Gaza— all of it. I wanted to portray personal stories to contrast the overwhelming narratives developed by institutions and the media. It is now even more imperative to preserve every ounce of Palestinian existence.
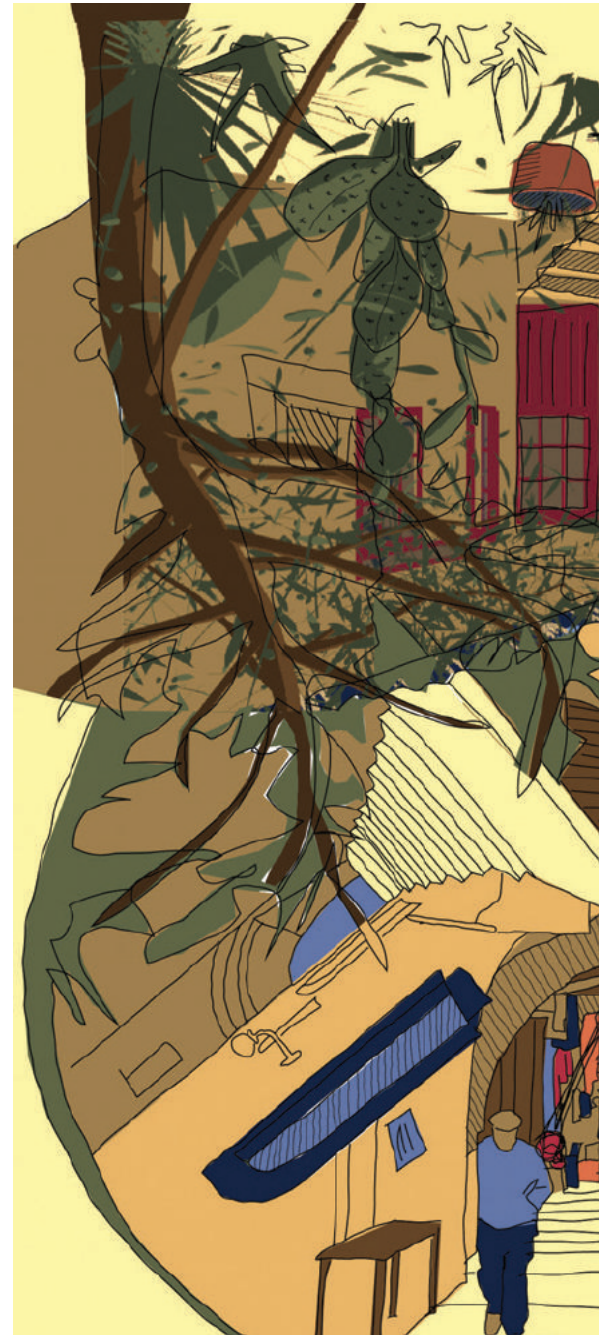
This thesis proposes a pluriversal archive of cultural narratives that operates as a digital commons within the contexts of Occupied Palestine and Israel. The formation of a tertiary ground for Jerusalem is crafted through digital ethnographic practices where contributions focus on accounts of individuals in hopes of working beyond binary oppositions. The archive transcends the polarization of narrative wars, providing a platform for the visibility of voices and the preservation of histories at risk of erasure.
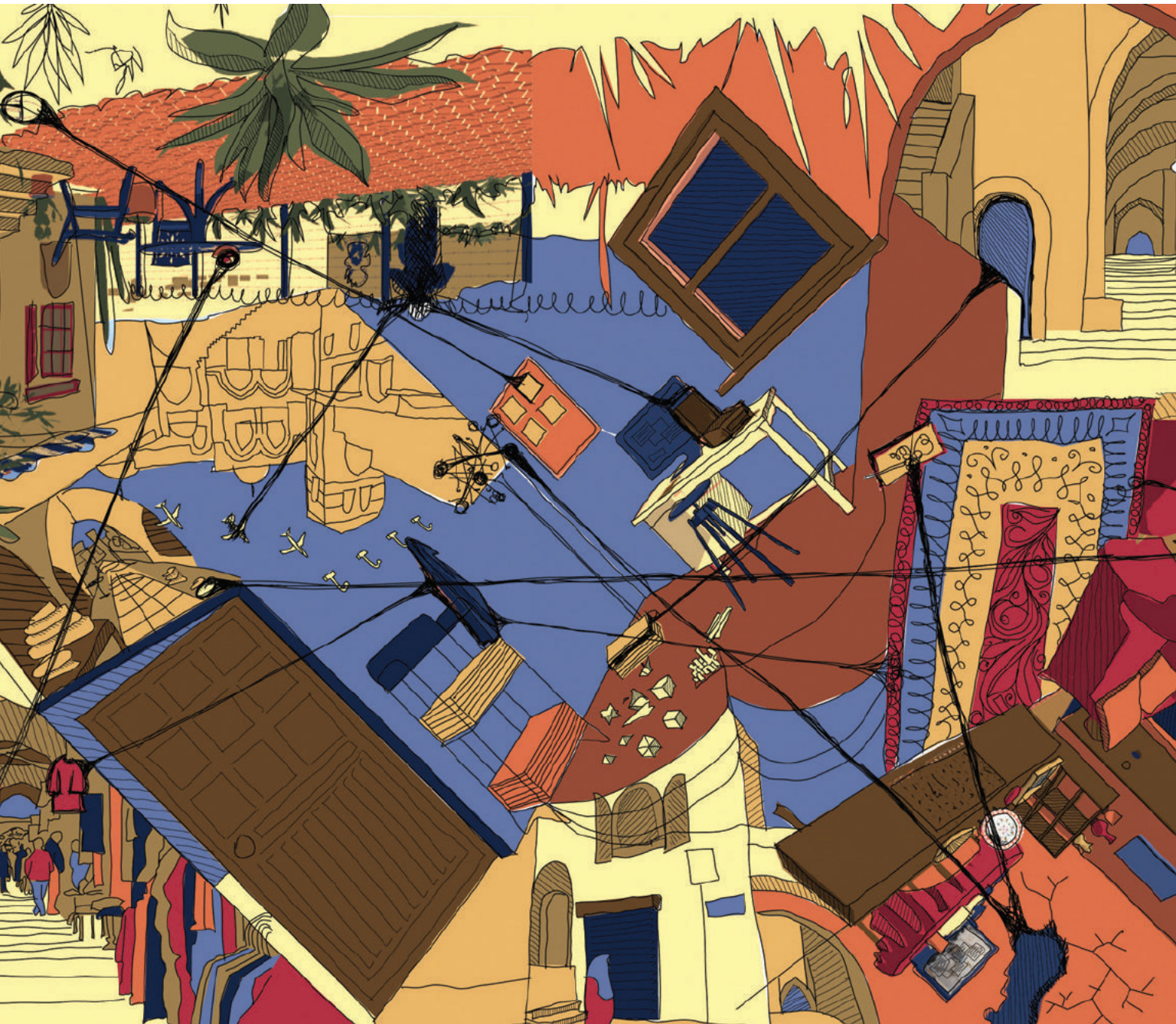
The Jewish faith is separate from the state of Israel. Political Zionism, this Zionism that causes destruction, is not what Judaism represents. In Torah classes, I learned about radical love, care, respect, and support. I, like many other Jews, make this distinction explicit, as the history of this faith cannot be rewritten like this. It is heartbreaking. I seek to preserve the other Jewish stories, beyond the propaganda of the Israeli government.

I spent weeks studying Torah in the distinguished seminary Neve Yerushalayim. As my connection to Judaism grew closer, I came face to face with the dissonance of this Jewish Jerusalem in the greater context of Palestine and Israel. What does it mean that I have a "Birth Right" to a land that my friend is not allowed to return home to?
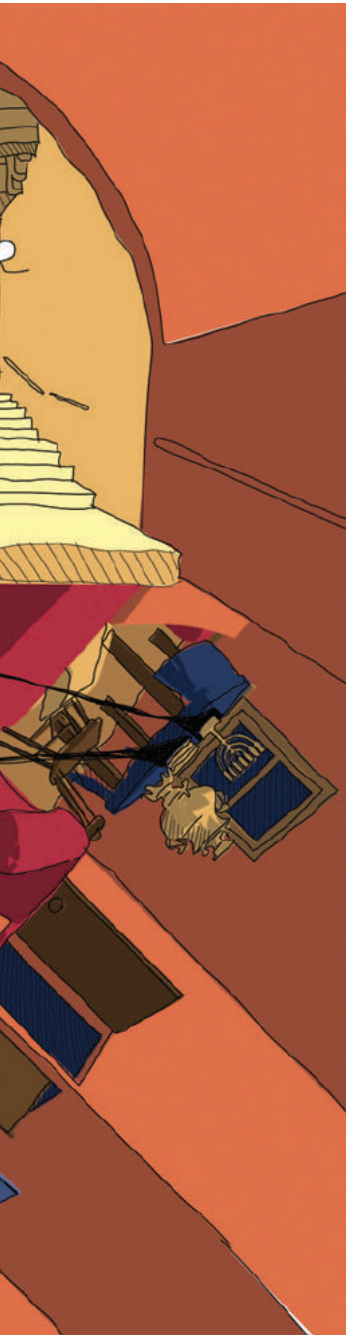
THESE ARE PRECEDENTED TIMES

On Saturday morning, October 7th, Hamas attacked central and southern Israel, killing around 1,200 people, and wounding over 2,500. These attacks led to the highest Israeli civilian death toll of any single event in the country's history and are the justification for Israel's violent response.

As I write, the Palestinian death toll surpassed 10,000 people. This number is expected to rise. As I write, bodies are still being pulled out of the rubble, and the airstrikes continue. Israel has dropped an estimated 25,000 tons of explosives, the equivalent of two nuclear bombs. On Friday the 13th, Israel ordered over a million Palestinians to evacuate Gaza and promised to intensify the airstrikes on Gaza after 24 hours. As I write, over 1.5 million Palestinians are displaced. The UN warned of "devastating humanitarian consequences" as a result of this evacuation. Israeli Prime Minister Benjamin Netanyahu promised that this was "only the beginning." On October 9th, Israeli Minister of Defense Yoav Gallant said "we are imposing a complete siege on Gaza. No electricity, no food, no water, no fuel. Everything is closed. We are fighting human animals, and we will act accordingly."

The crime of genocide is defined by "the intent to destroy, in whole or in part, a national, ethnical, racial or religious group, as such," under international law. Under no uncertain terms, this is happening right now to the Palestinian people.

President Biden continues to support Israel and American media continues to justify Israel's attacks on civilians. While Israel's largest newspaper Haaretz condemns these actions explicitly, the United States only censors. Meta is deleting footage of Gaza, CBS and CNN pulled leading Palestinian commentators' segments. Palestinian reality is being erased on every platform, at every scale.

As my dear Palestinian friend put it, "these are precedented times." Israeli propaganda has manipulated Jewish American children for decades. Fear of the Holocaust is a driving force in right wing leadership, presenting the Israeli state as the only defense against another tragedy. Breeding fear and hate, this system has taught generations to believe any critical thinking about Israel is Jewish hatred. Palestinian children grow up in a world where their very existence is contested. This system was designed for a genocide to eventually be carried out on Palestinians and for the general public to justify it.
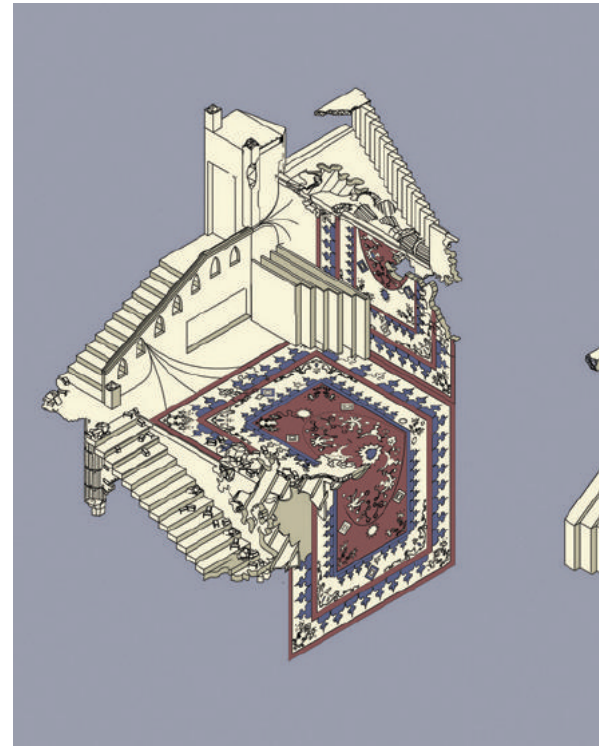
In 2023, frequency of military operations inside Occupied Palestinian Territories and Israeli settler attacks on Palestinian homes have increased significantly, with record levels of violence between Israelis and Palestinians. On April 6th, The Bureau of the United Nations condemned the IDF's raid on the Al-Aqsa Mosque. Simultaneously, antisemitism and antisemitic hate crimes across the world spiked 600% in 2021 and have increased since.

The extreme Right's unbridled racism towards Palestinians is part of a long history of dehumanizing Palestinians in the Israeli cultural imaginary. When Palestinians are seen as subhuman, they are no longer seen as people deserving of rights, access to resources, sovereignty, and love. The conflation of Jewishness with the acts of the Israeli government have justified the re-emergence of antisemitism in the academic cultural imaginary. Since January, hundreds of thousands of Israelis have been protesting and striking against the judicial overhaul and the violence against Palestinians. Mizrahi organizations such as the Mizrahi Collective and Shovrot Kirot have been calling for justice for Mizrahim and Palestinians, drawing connections across similar racial, gendered, and religious subjugations, demonstrating solidarity through a feminist and intersectional lens.

CULTURAL OBJECTS

Cultural objects are containers of histories, embodiments of lived experience and lineage, anchors to memories of places and times. Through displacement and migration, cultures cross pollinate and paths branch. Meanings are unique yet situated within a broader geopolitical context. These idiosyncratic dialectics between individual and culture act as a point of departure for empathic conversation. Cultural objects are at once local and representative, relative and subjective.

PERCEIVED SPACE
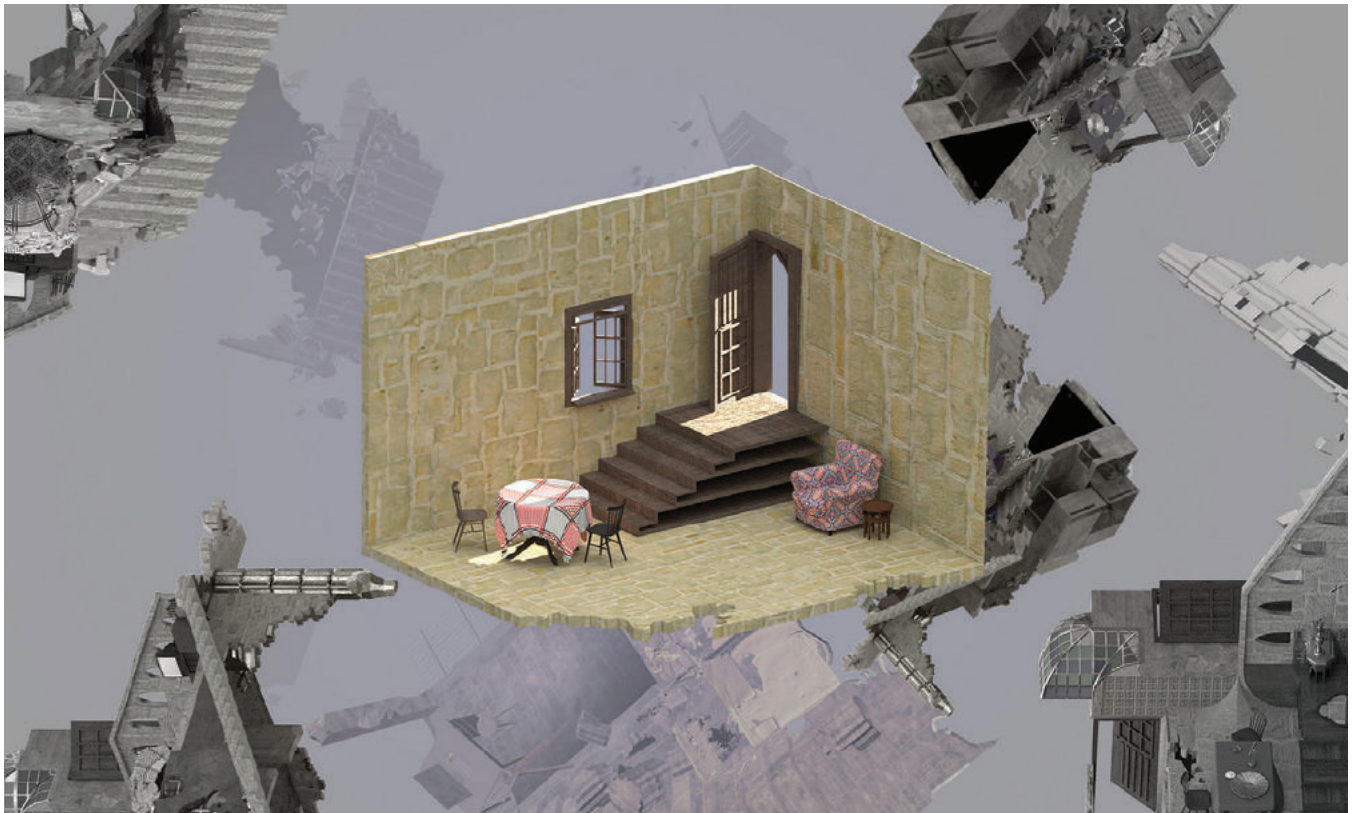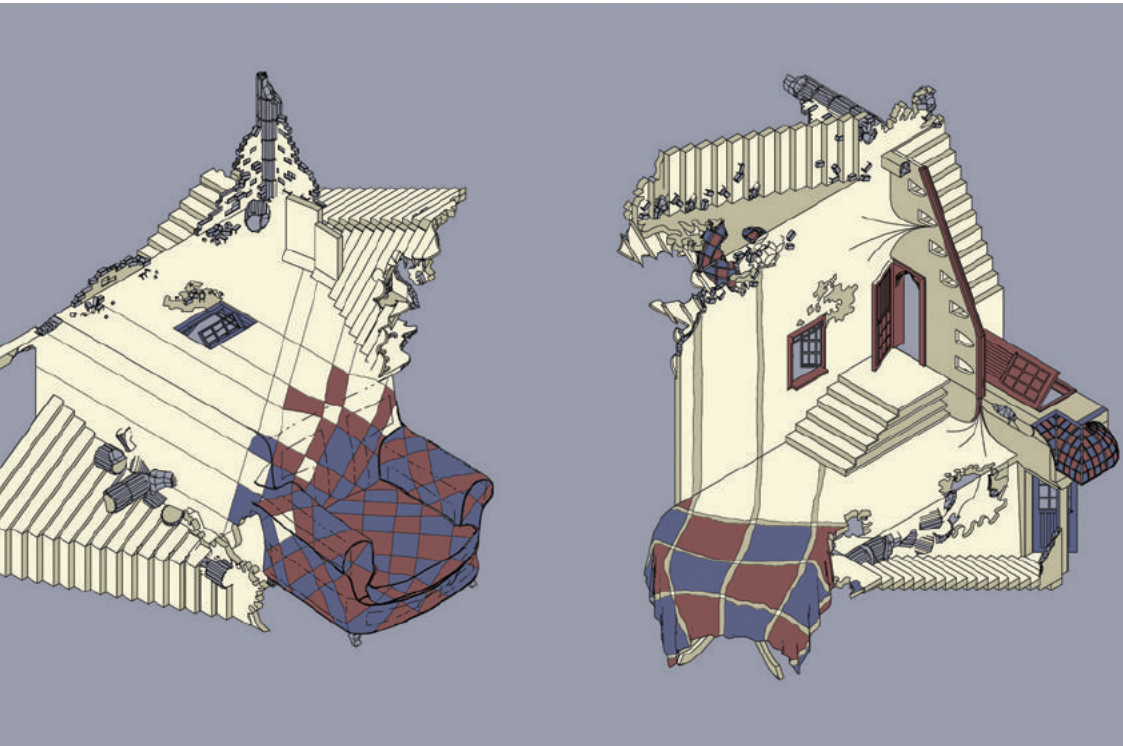
SPACE

LIVED

CONCEIVED SPACE

Lefebvre's trialectic of
conceived space, per[...]
lived space, or the ide[...]
physical world, and th[...]
between them. The th[...]
space is a result of the[...]
spatial duality. Soja ex[...]
a verb, thirding or oth[...]
reimagine/reorient sp[...]
of the lived space, fro[...]
as opposed to the go[...]
imperialism.

Gilles Deleuze and Félix Guattari,
A Thousand Plateaus (1987)

Ed[...]
to [...]
Re[...]

"[T]hirdspace [...] is
rooted in just such a
recombinatorial and radically
open perspective. In what I will call
a critical strategy of othering. I try to
open up our spatial imaginaries to ways
of thinking and acting politically that
responds to all binarisms, to any attempt to
confine political thought and action to only
two alternatives by interjecting an-Other set of
choices. In this critical thirding, the original
binary choice is not dismissed entirely but is
subjected to a creative process of restructuring
selectively and strategically from the tw[...]
opposing categories to open n[...]
alternat[...]

Jacques Derrida and his work on
Deconstruction, *On Grammatology* (1967)

Language, history, and
knowledge do not emerge
from a center, there is no universal
origin. Instead of looking at histories
and languages as having a linear tree
organization of development, a rhizomatic
(lateral, nonlinear, decentered, interconnected)
organization is a more accurate model of
transculturation. Similarly, a rhizomatic and pluriversal
model of narrative dissemination is a more accessible,
equitable, and ethical structure for knowledge distribution and
preservation than imperial monism.

In Deconstruction, grammar
and rhetoric are interrogated for
meaning within the context of
logocentrism, questioning all basis of
understanding through a critical lens.

'Power is everywhere', the control over the people expands
beyond the government; power is infused in all
institutions including academia, in media
and interpersonal discourse, mediating
the 'regimes of truth' created by
those in power.

Different forms of media are crucial players within modern
warfare. Precarious populations, those outside of the center
of Western norms, are abandoned in the cultural imaginary
before the lives are actually lost, as they are not considered
lives worth living within the definitions of western
society. Butler argues that the use of these forms of
media can also break this imperial discourse with
the insertion of emotion and a recognition of
precarious populations. The frames through
which media portrays conflicts with
precarious populations are what
perpetuate the alienation of the
populations and the
ungrievability.

Spivack identifies decolonizing as a
problematic term: the sole act of transfer of
colonizing power still operates with the same
logic of the empire. Those individuals and
communities located in the 'othered' space in
the spatiality of imperial expansion will
remain in the role of 'thirded' and
precarious to the spatiality of expansion
as understood by empire. Instead of a
transfer of power, a redistribution
of power breaks the mold of the
empire.

"Precisely
because a living
being may die, it is
necessary to care for th[...]
being so that it may live.
Only under conditions in
which the loss would
matter does the value
of the life appear.
Thus, grievability is a   To call
presupposition for   the frame
the life that   into
                                        question,' she
matters"   writes, 'is to show that
                          [it] never quite contained the scene
                                    it was meant to limn.'

Michel Foucault and his work on
Power/Knowledge, *The History
of Sexuality* (1976)

Gayatri Spivak's essay on
Mahasweta Devi's
'*Douloti the Bountiful*' (1995)

Judith Butler, *Frames of War:
When Is Life Grievable?* (2009)
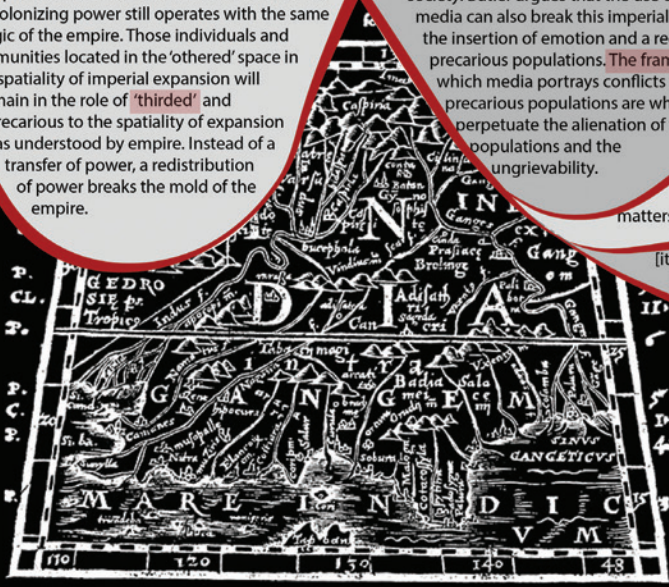
Gayatri Spivak, Mahasweta Devi, *Imaginary Maps* (1995)

f spatiality depicts
ceived space, and
alistic abstract, the
e human experience
hirdspace or lived
e first and second
xpands thirdspace as
hering as to
pace through the lens
m the human-scale
d-scale of

Orientation is immersion, a point of view from the inside. In Cartesian format, only the z-axis, gravity, orients us to a perspective. The "grounding" of the z-axis provides the tools of situating ourselves within a given "here". A person's zero-point of orientation (background, history, socioeconomic status, race, gender, sexuality, ability) is void of personal agency and the process of "re-orientation" is difficult and complicated. It is not a simple move from point A to point B, it is also a reorientation of all predispositions.

Sara Ahmed, *Queer Phenomenology*, (2006)

ward Soja, *Thirdspace: Journeys
Los Angeles and Other
al-and-Imagined Places*. (1996)

Harun Farocki (2004),
Orit Halpern, *The Trauma Machine:
Demos, Immersive Technologies and
the Politics of Simulation* (2015)

Arturo Escobar, *Designs for the Pluriverse* (2018)

"Farocki (2004: 193) once argued that "reality has not yet begun": it has not begun because we cannot witness or experience the death or suffering of others—whether animals or human—with love. In saying so, he awakens us to the fact that the demos of our digital and electronic media are not simulations, because there is no world to which they refer or replicate. What our demos do is remove our ability to care, and insert our ability to consume and analyze."
Orit Halpern

"It is our challenge in critical work to unmoor the practice of the demo and reattach it to different forms of time and experience that are not reationary but imaginary. [...] The goal of critical scholarship and artistic and scientific practices is to make media unstable. To turn not to solving problems, but to imagining new worlds exceeding the demands of war and consumption that kill signification, experience, and time itself. "

"The notion of oww [One-World World] signals the predominant idea in the West that we all live within a single world, made up of one underlying reality (one nature) and many cultures. This imperialistic notion supposes the West's ability to arrogate for itself the right to be 'the world,' and to subject all other worlds to its rules, to diminish them to secondary status or to nonexistence, often figuratively and materially. It is a very seductive notion […]"

Forensic Architecture's investigation of the IDF's crimes on Nablus in 2002 shows the actionability and potential for destruction in applying critical theory to war. By appropriating Deleuze and Guattari's conceptions of space and dismissing the necessary ethical lens, the IDF justified destroying over 50% of the homes in Nablus. The ethical and moral objectives within theory cannot be separated.

The fungibility of 'border' - its ability to slip between the material, the metaphorical and also occupy the liminal between- appeals to the political imaginary for the potential to compartmentalize space and time borders act as the container for the territorial-temporal state within the linear narrative of national development where nations emerge along an imperial linear temporal scale. Recontextualizing 'border' collectively from a lens of care creates space for lo narratives and cultural imaginaries.

al Weizman, *Walking
Through Walls* (2006)

Mary Pat Brady, *The Fungibility of
Borders* (2000)
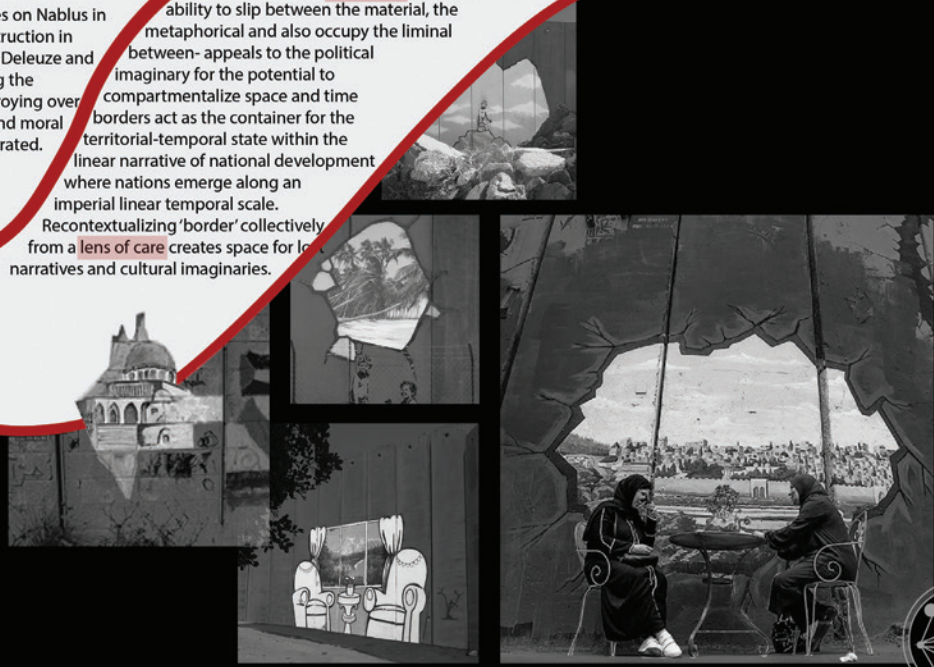
INFRASTRUCTURES FOR CULTURAL PRESERVATION

Without government support, cultural preservation of Palestinian, Mizrahi, and Sephardi voices is dependent on oral histories, objects, and collective self-organization. With most museum curation and institutional dissemination of cultural knowledge executed by outside parties, there is a need for accessible infrastructures which support traditions of cultural preservation. This archive centers cultural objects that have personal meaning, reorienting individuals as the storytellers, curators, and audience.

In addition to archival infrastructure, there is a need for systemic change. Institutions hold and wield power over people speaking out. In the U.S., people have lost jobs and scholarships for speaking in solidarity with Palestinians. These intimidation tactics are not ones of a democracy.

ORIENTATION, RE-ORIENTATION

In this take on the digital commons, the navigable perspectives enabled by game engines drive the experiential framework of "re-orienting" users to new perspectives with each narrative. A person's starting point of orientation: culture, race, gender, socioeconomic status, sexuality, and ability, is not a matter of choice. The process of re-orientation—accepting new truths and expanding one's world view—is difficult and complicated. Rather than a simple move from point A to point B, it is a reconfiguration of predispositions, foregrounding cultural objects as windows into personal histories. Re-orientation encourages consideration and expansion of personal views by shifting the very ground upon which we stand.

How is it possible that people can see the footage of Gaza, of thousands of dead children and grieving families, and continue to support the Israeli government's actions? It is the work of decades of Zionist propaganda that is embedded in the curricula of schools in the U.S., in Israel, and much of Europe. As someone raised with a Zionist, Russian-Jewish upbringing, separating Zionism from Judaism takes radical unlearning. Now, when so much evidence of the reality of genocide and apartheid are circulating social media, we are conditioned to think that we have no choice—but we are only helpless if we choose to say nothing.
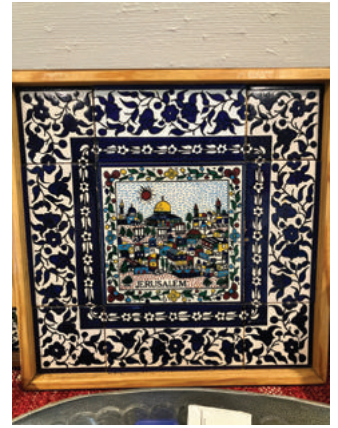
AN ARCHIVE OF PERSONAL STORIES

The objects in this archive are of Jewish and Palestinian Diasporas, sourced from research and direct interviews. Scenes are composites of Palestinian, Ashkenazi, Sephardi, and Mizrahi cultural objects and environments, each presenting cultural differences and similarities that expand beyond existing dominant narratives.

Instead of summarizing, rephrasing, or curating contributions to fit into a larger specific narrative, the goal of this proposed digital archive has been to document direct personal stories. This thesis engaged with participants in person, over the phone, and over video calls.

Several Palestinian contributors asked to remain anonymous in this project back in April 2023, speaking to the safety imbalance between Israelis and Palestinian sharing their truths.

Participants sent in text and images, sharing vulnerable stories and hilarious anecdotes. Together, we created interactive 3D objects with their direct quotes and photos as the interactive elements.

This thing is a handmade spring loaded bird trap
that my grandpa would make from scrap metal wire. We
thought they were so cool and beg him to make them.
He'd literally bend the wire with his bare hands
until there was enough tension. It also worked for
rats. The design was out there but my Sidu taught
himself how to replicate it. The steel wire used had
a necessary tensile strength and came from melting
down old truck tires to extract it. We never
actually used them on birds, he just knew how to
make them and we thought they were so interesting
and fun to play with. Dude had tough ass hands.

X: 4.40
Y: -7.17
Z: -28.30

IMMERSION, INTERACTIVITY, PARTICIPATION

The interface of the digital commons features a
contribution portal for files such as images, sounds,
videos, text, photogrammetry, and 3D-modeled
objects. Users have the option to collaborate on
language translation, digitizing, or modeling. Users
are encouraged to interact with objects that were
added through contribution: upon selection, objects
receive their color, drawing them out from the muted
site and highlighting them as full of life and context.

The built environment of the archive is fragmented
to reflect the fragmentation of diasporic cultural
narratives. Featured are the historic Jerusalem
stones and ruins of antiquity from the Biblical
era. The concrete references the separation walls
between Israel and Occupied Palestine, as well as
the international style of Israeli cities brought over
from the Bauhaus of Dessau that replaced many
Palestinian villages. The construction rubble reflects
ruins of the last century, with the displacements,
occupations, military attacks, and pogroms.

Through interfacing with individual stories, the
interactive digital commons presents personal
narratives as profound proof of pluriversality within
a world of absolutes.

AN ARCHIVE—NEVER COMPLETE

As the destruction of Palestine continues, the internet
is flooded with images of death and ruin. For many
people, these are the first images of Palestine they
have ever seen. This cannot be how the Palestinian
image is memorialized. Proof of culture, love,
happy memories, and beauty must be preserved
and shared. Palestinians are more than victims of
a genocide, they are a people with a rich history,
culture, and future. As those with the privilege of
watching everything unfold, we have the choice to
speak in solidarity with Palestinians and call out the
systems of oppression within our own communities
and governments that are enabling this to continue.
None of us are free until all of us are free. This project,
an archive of first hand accounts of Palestinians and
other systematically oppressed groups, will never be
complete. There is too much to say and there are too
many voices missing.

PART II

TAUBMAN FELLOWS 2021–2023

DIMENSIONS 37 STAFF
Talia Morison-Allen
Alvin Poon
Varun Vashi

ADAM MILLER
KEVIN BERNARD MOULTRIE DAYE
LEAH WULFMAN

With recent changes to the Fellowship Program, Dimensions asked the fellows featured here to reflect on their experiences in the program. Amidst the holiday spirit, Dimensions convened with Adam Miller and Leah Wulfman, bridging multiple time zones over Zoom, to talk about their thoughts on the fellowship.

DIMENSIONS 37: What initially prompted you to apply for the fellowship?

LEAH WULFMAN: For me it was actually Xavi Aguirre, who was a previous fellow and taught at Taubman for quite a bit. Unlike many of the previous fellows, Xavi went to Cal Poly Pomona and not an Ivy League, and they are queer and actively nonconformist through that queerness. I know them, I related to and found myself represented in their experience. That's all to say that representation matters, and their presence and the presence of others from different backgrounds and life experiences help to chip and peel away at things that otherwise can be closed and feel out of range. In terms of finding a place and community, the fellowship here seemed like the right place for that.

ADAM MILLER: I was at UT Austin finishing a fellowship there, and during that time, I was reaffirmed in my interest and passion in teaching. I needed to find more opportunities to develop my pedagogy and my thinking with original coursework. I had known about the Taubman fellowships since I was a graduate student. I discovered the program by reading about architects and designers that I admired at the time, and still do, and most of the time this fellowship program would be present in their bios. Like Leah, I was drawn to the queer environment and faculty at Michigan and knew I wanted to apply, to discover new people in design who shared my values. Meeting Leah through the fellowship, I had never met someone in architecture with whom I could so relate, but also differ productively, and grow with them mutually.

LW: Yeah I would second that, because for me, I also bounced around teaching in different capacities, but mostly it was like tech seminars, or workshops, or I taught a project. So for me, it was an opportunity to develop my own coursework and to work on that development with students and in collaboration with others that you're in the fellowship with. I think the biggest bonus of the fellowship is the people you're going in with. Many of us are practitioners who are charting different territories and asking different questions within architecture, and this is a wonderful home for that. It's special to do that in a space with others. And I think Michigan in particular—you look at many of the previous fellows, and it's a bunch of queers that are doing incredible work in the field. From that, you come to learn that upon getting there, you're like, "Actually, here are probably the most queer architects in one space, one architecture department, even if it might not always appear as such."

D37: What inspired your research and how did you go about working on your projects?

AM: To talk about research developing and all of that—if any of you are interested in academia, or teaching, or research, or doing anything that isn't required of making a building, I would really just think about what gets you fired up. If you think about some feeling you have, like if it's something that pisses you off, or makes you smile, or whatever, just something that stirs a strong feeling inside of you, if you can figure out what that feeling is and then try to think about how that can have some kind of an attitude, some kind of aesthetics, some kind of politics to it and you can start to sort of develop that into a research agenda—that's where I came from in terms of my research. It came from feeling really disaffected by architecture, feeling really like architecture needs to change, like the discipline of architecture needs to change, and the pedagogy of architecture needs to change. I am gathering allies and friends around me who have similar outlooks on life, and we all want to see things get better.

LW: Yeah. I feel like all of the projects in our cohort do a kind of amazing thing of reconciling but disinvesting in everything that Adam just described as a point of some kind of particular difference, but I think you could say that it's true of our generation overall. In terms of the architect as an individual, you could say that's the notion and the presence of the self-aggrandizing architect's alienation from labor and community that all of the work in our cohort somehow undercuts. Ultimately, I would say my inspiration came through being open, in conversation, and in many ways, in collaboration with Adam and with various people and conversations across the board at Taubman and from people who came from Taubman.

I truly believe research is just you as kind of a funnel and a social interlocutor for all of the things that exist in the world. And you're not singular in that, right? You can have a conversation with a friend, you can do a project with a friend, and you influence each other. For me, the *FREE DIRT* project came out of us being so overly online during the early parts of COVID, and I just wanted to literally touch dirt.

AM: Yeah, I feel that way absolutely. I would not have done the exhibition work that I did if it were not for meeting Leah and everyone else at University of Michigan and being there. Because I thought about how I wanted to do something that contributed to an ecosystem of ideas. Leah's talking about reaching out to invasive-species biologists. I wanted to work on animatronic, responsive, dynamic installations, and there's a robotics department at the University of Michigan. There is an art department here and I work with soft fabrics and textiles. What an amazing set of intersections of possibilities and expertise. When I conceptualized this, I decided I'm going to put the majority of my research money into hiring students to work for me, and work with me from all those various backgrounds. I give them full credit all the way through everything they've done, their roles in the work. I always talked about

it being a collaborative design process. I may have conceptualized it and directed them, but it literally would have been impossible without their expertise and abilities that they brought to the table, and their own ideas that, also through dialogue, we integrated into the design.

LW: In terms of hiring architecture students, as part of the way that I teach, it's really invaluable for folks to follow their interests and find their own agency with those interests and areas of expertise. That they allow themselves the space and time to not be solely directed through the professor's wants and expectations, not feel like they have to do something for the professor, but that they're actually doing it to expand their own skill sets and interests as well.

AM: We really believe in interdisciplinary thinking, opening up this idea of architecture outside of the discipline completely. In my work, I wanted it to be about interaction with people who may know little to nothing about architecture so they might become interested in architecture and feel like they have agency in space.

D37: What were some of the strengths or shortcomings of the fellowship program that you experienced?

AM: The fellowship program was invaluable to me, giving me the space and support to develop my teaching and research topics, and a research stipend to produce new experimental work. One of the strongest assets of the fellowship program is the amazing people you meet at Taubman and its openness to improvement. While we were there, we continued to push for it to evolve. It was explained to us in the beginning that it had become a two-year fellowship, which was formalizing something that was informal in the past, where the fellowship would be one year. Previously, after your first semester, you had to apply for jobs. So you've been there for three months, and now you have to apply for academic jobs somewhere else. You're mentally not there, and so making it two years lessens that burden where, "Oh, my gawd! I don't have to get another job immediately."

LW: I would concur that the strength is the two-year. Now we're seeing that it's kind of becoming more standard within university

fellowships overall. It's about time, but I just want to highlight that the thing that is special about the Taubman Fellowship is the overlap; the new fellows came in after the first year. So that builds in institutional memory, gives space for exchange, and pushes and grows the culture of the Fellowship, and that's all really key. It builds camaraderie and solidarity in just understanding what is before you. I felt like the opportunities within the Fellowship were vast. What's so wonderful about this Fellowship in particular, for one, are the numerous ways in which you are supported as young faculty. You'd be hard pressed to go into a school of architecture and find the diversity of faculty that are doing their own thing, but then also collectively supporting each other in the ways that frequently occur here. That's incredible. There are many wonderful folks here, generous and dedicated people and educators, who mean a lot to me, and I feel very lucky to have met them while at Taubman.

I think it's hard because the shortcomings of the Fellowship, and how I would like to see it evolve, are defined by the shortcomings of architecture, the shortcomings of academia, where people are made to feel disposable and expendable. Not crediting people, not recognizing background, lived experience. All of these sorts of things. I mean that's literally capitalism, too.

AM: But that's at every university you'll see them always trying to get rid of permanent positions rather than fill them because of the cost-benefit analysis. So when you have a fellowship, you're getting something out of the institution and the institution is extracting something out of you. The university doesn't have to invest a lot of money in those people because you get paid a fair salary for what you're doing, but it's not what a tenured track professor is getting paid, not even close. So you're doing all this and they're getting the bang for their buck. And so this fellowship model is great. But it's because it works so well for capitalism that it disincentivizes actually keeping anyone.

LW: It's really important to recognize. But it's again a larger issue within academia. It's interesting because it makes everyone disposable. At Taubman as fellows, you're teaching at the same level as tenured and tenure-track professors. You're teaching alongside them. There is a financial dynamic to that for sure, but I would say it makes

even the tenure people disposable because eventually we're headed to a point where everyone is being shopped around. With the future of tenure in many states also precarious, this future is a pretty harsh one, where the university, financially, is looking at its bottom line and saying, "Oh, well, what makes sense? Actually, they can all be adjuncts. Wouldn't that be great? They can all be fellows." The whole system is often bent towards making people disposable.

Of course it depends on which institution you're going to, but oftentimes, they're also drawing people through the lens of DEI like, "Oh, we need people to hire people who are gay, who are black, who are trans, who are this, who are that," and it's not talking about the history of how those people have already been put through so much and already been made disposable or to feel precarious. There is purposely little understanding of and space given to class in these discussions about inclusion. So to bring them in, but then being like, "Well, actually, now we're shopping and saying, 'Oh, you're too political.'" It's DEI plus silence, that's what the system wants. So that's a shortcoming, but that's just how the fellowship exists in a context. That is an institutional issue across the U.S. really.

AM: We've made a lot of great friends of the new cohorts and obviously Kevin is a great friend of ours, and it was really cool that we overlapped. Stratton's amazing. Overall this is definitely the best fellowship in the U.S. for architecture. The university needs to prioritize people who are asking hard, real questions and willing to do risky things. I think that Taubman makes space for that.

LW: There's a huge openness for doing a variety of research and architecture practice, which is amazing. That is one of the things about Michigan as a school, the architecture department in particular. It is quite unique that it is also more willing to question the institutional history of architecture. Bringing identity along with us versus being asked to leave it at the door upon entry. Embracing community practice, experimenting with ideas, materials, tools, and technologies, raising and following up on questions, and questioning all the baggage and elitism of architecture that's there, and it's welcomed. We each are given agency in our teaching and research to do this, which is huge. That is unique to Taubman.

Due to scheduling conflicts, a seperate written interview was conducted with Kevin, reflecting on how his fellowship operated, and how his works came into fruition.

DIMENSIONS 37: What initially prompted you to apply for this fellowship program?

KEVIN BERNARD MOULTRIE DAYE: Initially, it was Taubman who reached out to me. As this particular fellowship program was brand new, I wasn't aware that it even existed. But I was incredibly excited at the conceit of the fellowship.

D37: What were some of the strengths and shortcomings of the fellowship? How would you like to see it evolve?

KBMD: I think the extended length of the fellowship is crucial to actually develop a full methodology or theoretical approach to whatever your area of research is, but the balance between teaching commitments and research development is, as it is in most places, a delicate balance to strike and do very well at both things consistently. I think that, for me personally, my work manifested mostly in the city of Detroit, and because of the distance from Ann Arbor, both professionally and physically, it seems like many of my colleagues and students were not able to engage with or see the work at all. Closing that gap feels important to me for both selfish reasons as well as those outside myself.

D37: You recently finished your tenure as the inaugural Spatial and Racial Justice Fellow. I'm interested to hear about how your experience differed from the existing fellowships positions, starting off with the differences in focus but also in terms of support from the University, who you're collaborating with, requirements, etc.

KBMD: I can't speak for the other fellows on the perceived or real differences between fellowships but in my opinion the focus on racial and spatial concerns meant two things. First, framing all classes, whether of my own design or not, through a lens of political and social awareness and responsibility. To make clear that an architect's role exists in the public realm no matter the typology because all built structure takes up space. And then attempting to bridge the gap between the architectural profession and experts, formalized or not, in other disciplines. This often took the form of collaborations and lectures with astronomers, unhoused activists, musicians, archivists and more.

D37: How did you finalize your topic of research to pursue during your fellowship? Is it something you had developed before you received your fellowship or did it mature during your time at Taubman?

KBMD: My interest in interrogating the visual language of architectural practice (i.e. drawing sets, model making, etc.) and its means of production has been an interest for a long time, especially through techniques like *EXTRAORTHOGRAPHICS* and *SHADOW WORK*, but here at Taubman I was able to utilize resources to scale up those investigations in a way that was simply not possible before. It also provided an opportunity to deepen my understanding of working with local communities. I'm truly a novice in this realm, and Detroit's wealth of beautiful, knowledgeable and deeply committed organizations are actually the foundation of the current manifestation of these investigations.

D37: How have your teaching experiences influenced your personal research? Is there a point where one flows onto the other, and how does that affect the objective you are seeking to achieve?

KBMD: Teaching is such a joy. I think for me, the conversations with students about their concerns, questions, dreams and aspirations keep the possibility of an expansive field of architectural practice alive. Students have been a huge help this year in actually making and crafting aspects of my research which was yet another level of insight into what's interesting or uninteresting to the next generation of designers.

D37: Would you mind talking us through the process of your project coming to fruition, especially given that your final exhibition was presented at MOCAD. Was the exhibition at MOCAD a furthering or additional project on top of your Fellow's exhibition, or would you consider it the final product of the work you had done previously?

KBMD: As my time at Taubman started a semester after my fellow fellows, I really had quite a short amount of time to prepare and execute for the Fellow's exhibition. As a result, I never considered it a real demonstration of this strain of research, rather truly a WIP. It's still a shame to me that many faculty members and students only got to experience and engage with my work at that point. Although the *shadowworking* project began before starting at Taubman, I'd consider the exhibition at MOCAD the culmination of my fellowship project, as its focus on Detroit specifically arose out of my life here.

D37: As a transplant in Detroit, how did you view your approach to such a personal topic as a neighborhood memorial?

KBMD: I tried to follow in the path laid out before me by researchers, activists, and historians of Detroit. In this aspect my practice is really an interpretive one, where it's less about discovering something and more about communicating or generating a different lens through which both people familiar to the community and those outside of it can begin to understand or look at it in a different light. Literally.

For me, the importance of this is highlighted in an experience that occurred in the exhibition itself. One of the organizations on whose shoulders I stand, Black Bottom Archives, was interested in hosting an event about their work inside the actual space of the exhibition itself. During this time of the activation, a Detroit resident was actually able to locate their old house and contact their 90-year-old mother to deliver a new oral history of the site for Black Bottom Archives. This is the kind of space that I am trying to hold.

ADAM MILLER

WILLIAM MUSCHENHEIM FELLOW
2021–2023

I WANT TO BE A PERSON

I want to be a person is a playable, danceable, inflatable, robot puppet play, involving a relationship between "BDSM Toilet Pal," "Drag Queen Freedom Tower," and YOU. Come show them ways to love and move their bodies in SPACE. When you move, they move! But they have different parts from most people, so there will be some mutual learning involved! Remember, it takes two to tango. Toilet and Tower are new to this whole embracing oneself thing and stepping onto the scene. What if a toilet wants to embrace its "dirty" side with pride, rather than hide? What if a masc tower wants to explore its femme side in stride? What hidden capabilities do you possess that you want to show the world? You are the shaper of space, the architect of our desires! In this playable architectural dance performance, you, a friend, a toilet, and a building can become something new, together.

The project plays on and invites playing in the relationships between people, bodies, things, space, shifting scales of queerness, aesthetics, feelings, and politics in contemporary art, architecture, and design. The encounter between human and puppet is a collaborative architectural performance. The two,

sixteen-foot tall inflatable marionettes sewn from ripstop nylon and printed-polyester fabrics burst with life when participants approach.

The massive marionettes are automated to respond to the relatively small movement of people via motion-tracking AI capturing participants in a webcam, translating human-scaled movement through a microprocessor controller system to swiftly turn a coordinated series of stepper-motor-powered

pulleys mounted twenty feet overhead, pulling the strings and limbs of the puppets up and down, left and right, in tandem with counter-balanced chains flying a full twenty feet to reflect corresponding human movement. Though small in comparison, people can be shown to shape space just as much as a building or a bit of infrastructure. The puppets invite a conversation of gesture and movement and scale: when a person moves a hand, the outsized lid of the toilet raises; when a foot kicks, the spiral pipe
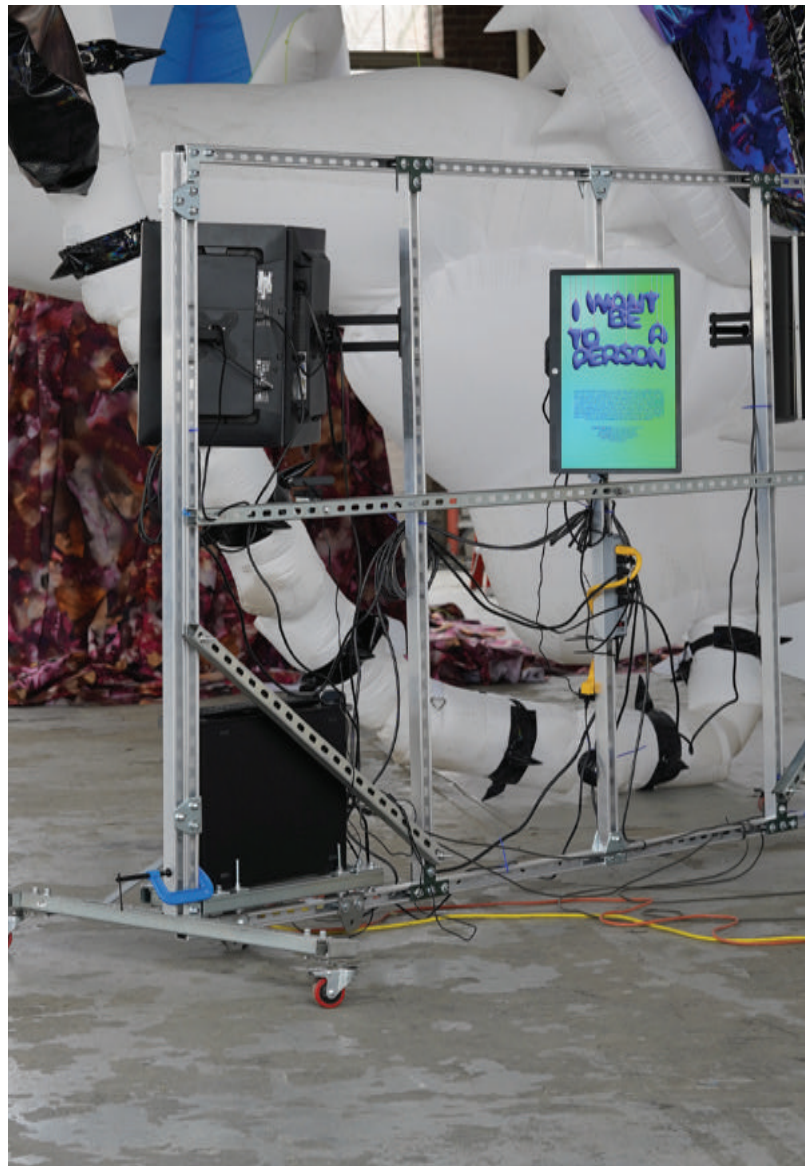
bounces in response; a crouching sway and the full puppet moves up and down, left and right. Through call and response, mimicry becomes transformation, person becomes building, building becomes person.

Though light-hearted in design, this collaborative and interactive theatrical play seeks to be a way to work together to foster a sense of empowerment in difference, to identify allies and work on ways to feel queerly and creatively today in the arts and sciences,

in our strange bodies and embodied strangeness. In this extended reality experiment, we can consider what it takes to be considered a person, sometimes playfully, sometimes seriously. Queer life is under attack in this country, and as a queer person, I see that am I not that… not a person, or not a full person to some people. I see many others, discarded or disregarded as people, and see the violence the denial of personhood begets, and conversely the sanctity of its granting.

Personhood is not just a matter of dignity, or significance, or value. Personhood is a matter of survival. Things overlooked, no longer of use, lost of their dignity, are thrown away, squashed, forgotten, jettisoned beyond the barrier between me and you, here and there. A fog of indifference arises in between a subject/object, a person/thing—this includes between people who become *thingified* and those who are allowed their humanity. Personhood is a strategy of seeing and feeling through the barrier. In this opening, empathy shapes space.

1. Perry, N. (2022). "New Zealand river's personhood status offers hope to Māori." Associated Press News, August 14, 2022.
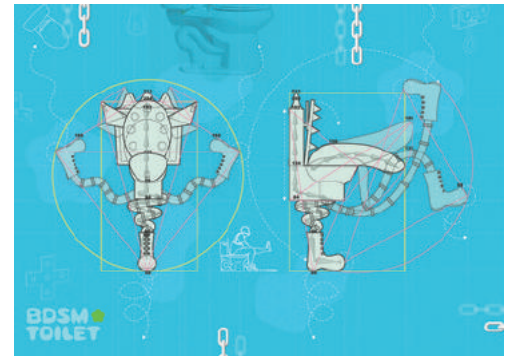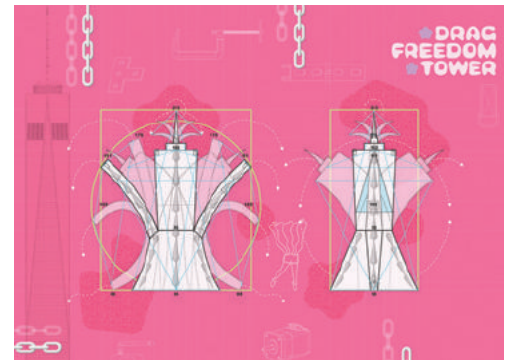
Empathy can shape ourselves for the better, and might save what we choose to value most. What does our society value? To see personhood where others cannot might save a river, a rainforest, a community. Already holding true the value of the non-divide between living entities, human and non-human, in 2017 the Māori successfully pushed for the passing of a groundbreaking law to protect the land, wherein the New Zealand government granted the Whanganui River *legal personhood*. In Māori such un-divided empathy has a saying: *Ko au te awa, ko te awa ko au*; I am the river, and the river is me.[1] In the United States, not a river, but a corporation is granted personhood. If architecture is the making of barriers, what of an un-architecture? Where should we place our un-divided attention? I am you, and you are me. I am not looking away, but feeling and moving together. I too, want to be a person.
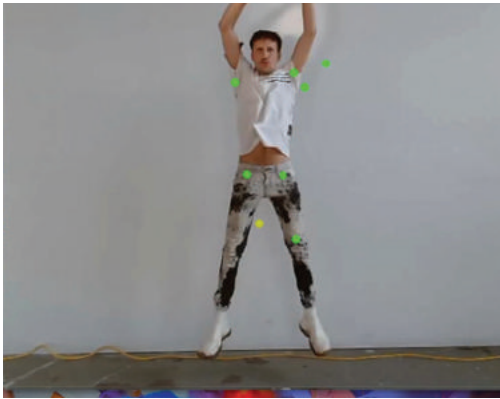
LEAH WULFMAN

WALTER B. SANDERS FELLOW
2021–2023

FREE DIRT

Nature itself is technology, and technology is of nature. There is no inside, no interior, there is no outside. This much is made proactively clear by the ways in which conceptually and materially nature, architecture—both speculative and built, at all architectural and experiential scales, whether "digital" or "physical"—exteriors, interiors, simulations and hardware are inextricably linked in real time, which cannot be disentangled. Architecture has always been virtual, except now, the scale and space of speculation are inseparable from reality, as if the two were ever separate to begin with. Similarly, the simulation of worlds—whether closed and open—cannot be disentangled from the climate realities and ecologies they come from and rely on. Yet, the actual experiential bridges between such digital and physical spaces are still to be further investigated, embodied and prototyped.

Emerging out of the desire to create living, alternative futurities within a wreckage that has already arrived, *FREE DIRT* is a mixed-reality installation and simulation that places ecology and technology into communion within an unruly, self-fragilizing ecosystem. The installation is made from fallen tree branches, seven cubic yards of free compost dirt from
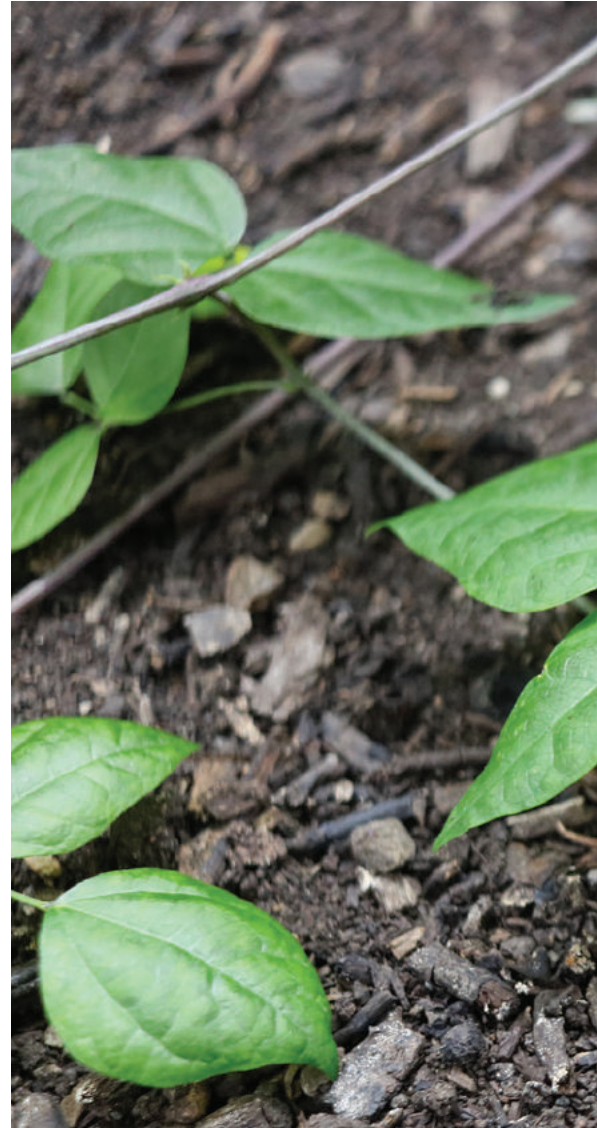
Craigslist, invasive-species seeds, digital weeds found on Quixel Bridge, Twitch commands and a robot. *FREE DIRT* locates itself within our world that is ever more capturable and ever more realistically rendered and simulated, all amidst total ecological collapse. As a reparative and realist (but non-redemptive) form, such multiplayer mixed-reality, "mixed-presence" game simulations and interactions create non-normative timeframes and interconnected systems without a singular protagonist and moral. The

mixed-reality ecologies and interactions of *FREE DIRT* find their foundations in disability, trans and queer embodied practice and politics, and operate as lenses to reconfigure and recontextualize space and time orientations in architectural discourse beyond the normative.

Using 3D scanning and photogrammetry, the dirt mounds and fallen branches in the physical installation match indistinguishably to the game simulation, which allows for direct feedback and interaction with these elements. The *FREE DIRT* game listens to and parses the Twitch chat messages and interprets them as commands in Unity Game Engine, allowing for the interactive playing of both digital and physical space and dynamic controlling of a variety of digital twins. Via the Twitch chat, in-person and remote participants can readily change the dynamics of the robot, switch physical and virtual cameras, as well as spawn and plant seeds across physical and virtual space and time. Through the Twitch chat, the robot itself can be translated and rotated physically and virtually. The robot is equipped with physical and virtual cameras, lights, and a seed depositor which allows you to plant invasive species seeds in the virtual game as well as in the gallery space.
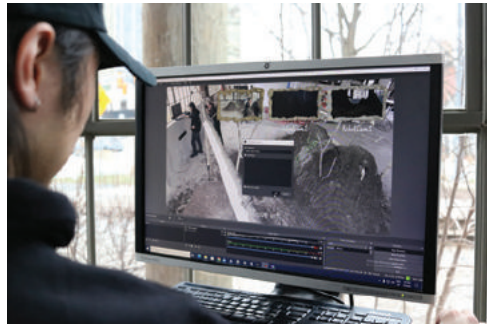
Many of these one-to-one interactions allow other in-game, spatial interactions to become more imaginative and out-of-sync. A major point of discordance is the game dynamics of the seeds. When you write *!seed* into the Twitch chat, a physical invasive-species seed bomb will drop from the robot's seed depositor in the gallery while a seed light source spawns in game, acting as a VR interactable flashlight. This evolving digital seed allows players to see the world at nighttime, before it eventually dies and disappears. Similarly, the practice of turning on and up the robot light through the Twitch chat—whether playing and participating remotely or in person, or some combination of each—becomes a collective act which may allow someone across the world to be able to see in the dark. As seeds are also interactively added into the space, the dispersal and growth of invasive plants align with allowing participants to view the features of the forest in low-light conditions.

The second important point of discordance in the game is with time. While weather is randomized in the game, the 24-hour day-night cycle is collapsed into the time of an hour, with that time then shortened even further to 15 minutes, specifically for increasing engagement during gallery hours. This collapsing of time is an incredibly common mechanic within video games, where 24-hour days often range from 24 minutes to 2 hours. These sorts of time alterations become especially clear in ASMR and Sleep Meditation videos on YouTube produced from in-game footage, where a player will stop their typical quests and then sit looking out at a particularly compelling game view for hours. In that view, time expands as it contracts; we catch multiple dawn, golden hours, and moonlit nights, as we hear the simulated breeze and watch it catch and gently move high desert grasses in games like Red Dead Redemption 2 and Grand Theft Auto.

These non-normative and nuanced experiences of temporality and space through game simulations offer varying modes of presence and ceremony, which can often feel more grounded in time and collectivity than many spaces in our daily lives, even as we are being taken out of sync and out of such constructed time.

Simulated games and worlds are often believed to be bent around anxiety, escapism and redemptive heroism, without accepting the potential for intimacy and interaction, which practices, collapses and reimagines space. A mixed-presence, mixed-reality installation, *FREE DIRT* aims to create a massively interactive game and garden, where architecture origin myths are replayed, made and destroyed.

KEVIN BERNARD MOULTRIE DAYE

SPATIAL AND RACIAL JUSTICE FELLOW
2021–2023

SHADOWWORKING

Shadowworking within and against the ethos of Southern California's Light and Space Movement, *shadowworking* manipulates light and form to embed cultural narratives into works that challenge perceptions, both literally and figuratively. shadowworking is completely lit with UV-A LED and fluorescent tubes. This type of lighting can be used for the detection of counterfeit money, substances tagged with fluorescent dyes, or refrigerant leaks. It is commonly found in urban nightclubs. Strong sources of UV-A are used in tanning beds. The presence of melanin in the skin and eyes help protect from possible UV damage.

AFRO-HARP (VARIATIONS I-IV)
AFRO-HARP (Variations I-IV) are from an ongoing series of West African masks that were 3D scanned, scaled, and rematerialized in various forms. *Variations I-IV* are from the University of Michigan Museum of Art's collection and have dubious or unknown artist information. Activated by the UV light, these normally transparent artifacts glow a deep, spectral blue. They float above the other works in the gallery, a few inches above the heads of gallery viewers. The title of the work, *AFRO-HARP*, references the mystical instrument mentioned in Henry Dumas' short story "Will the Circle Be Unbroken?," whose sound can only be heard by the ears of its people and stops the hearts of those who are uninvited into the sacred space of the performance.

SHADOW WORK I: PARADIS
SHADOW WORK I: PARADIS is a dynamic pile of carbon-fiber massings dedicated to the memory of the Black Bottom/Paradise Valley neighborhood in Detroit that was demolished as part of The American Housing Act of 1949 and the Federal-Aid Highway Act of 1956 under the guise of "slum clearance." It was redeveloped into what is now known as Lafayette Park: two superblocks designed by modernist-pioneer Ludwig Mies van der Rohe that combine low and high-density housing with a large, central urban greenspace. Each hollow, carbon-fiber "shadow" is in the shape of a typical dwelling of the neighborhood from the time before its destruction. There is one shadow for each structure destroyed: approximately 352 dwellings.
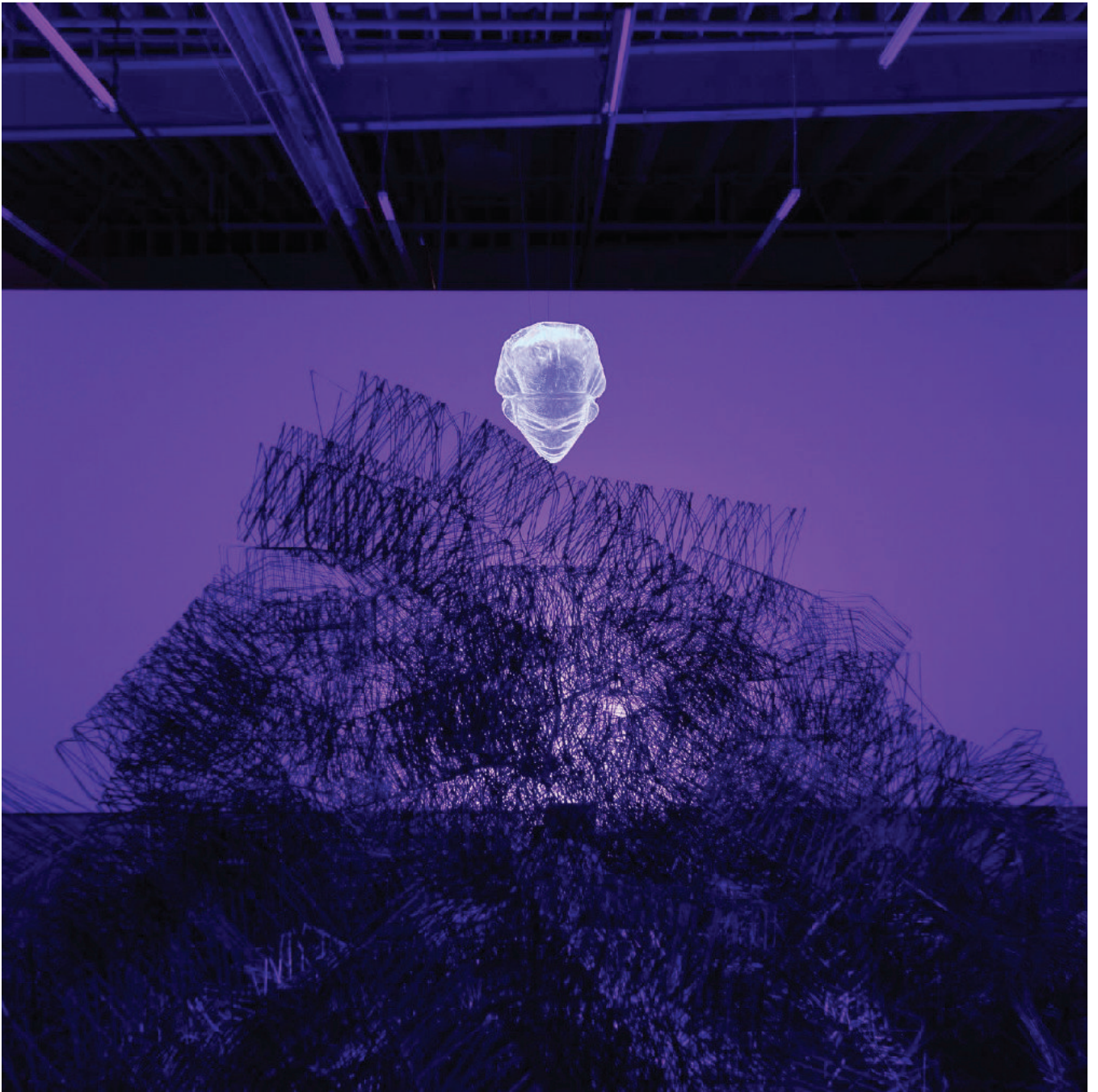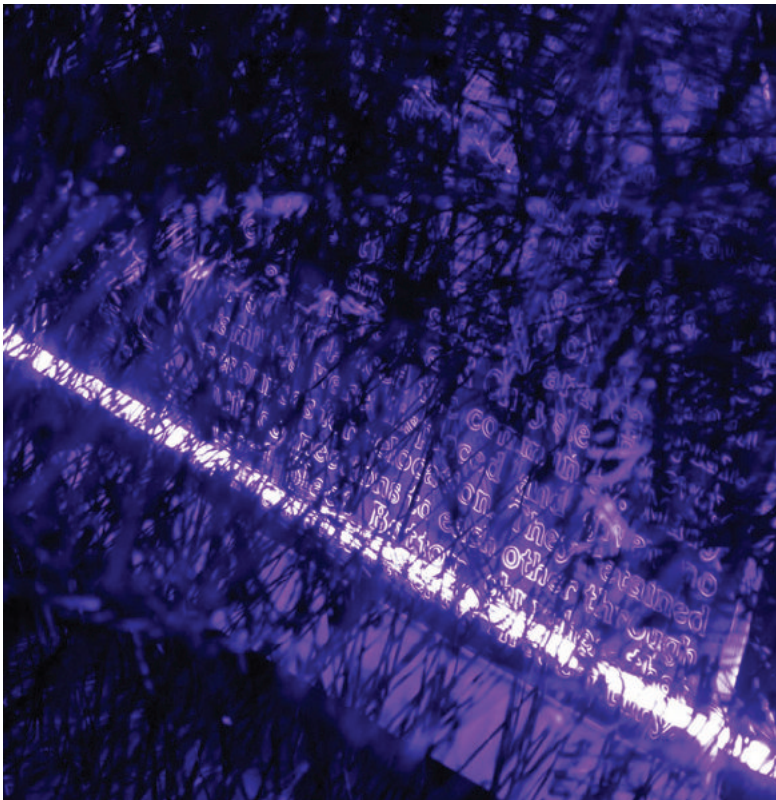
Over the course of the exhibition, the number grows to include the 331 flats and 133 special-building types (churches, general stores, auto shops, etc.) for a total of 816 shadows. In the center of this pile, obscured by the shadows, is a glowing rematerialized replica of the Michigan Historical Marker erected to commemorate the Black Bottom neighborhood.

THE QUILT CODEX

VTC HARRIET

is a dingbat font designed by Tre' Seals of Vocal Type based on the quilt codes of the Underground Railroad. According to legend, there were ten quilts used to direct the enslaved to get ready for an escape, as well as a number of secondary patterns. Each quilt block had a different meaning and part to play in the code. The quilts would be hung one at a time on a fence or cabin door left to "air out" while communicating a specific action or step in the journey.
Adapted from the Vocal Type
Instagram: @vocaltype.co

Here, VTC HARRIET is used as a script. Use this codex to decipher messages in the exhibition.
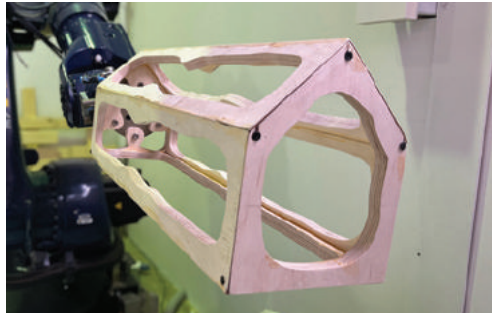
ANNA MASCORELLA

FISHMAN FELLOW
2022–2024

REHOUSING ROME
FROM SELF-BUILT SETTLEMENTS TO FASCIST-BUILT BORGATE

Rehousing Rome: From Self-Built Settlements to Fascist-Built Borgate bears witness to the families displaced and rehoused during the Fascist regime's redesign of Rome in the 1920s and 1930s. The regime's transformation of the capital involved extensive demolitions that carved up the city's historic center, displacing countless residents. Beyond the urban core, the regime initiated a campaign to raze the self-built settlements constructed by families who had migrated to Rome in search of work. Like much of the crowded, to-be-demolished housing of the historic center, the regime argued that the settlements—and their inhabitants—posed hygienic, aesthetic, and moral threats to the city.[1]

Through mapping, photographs, architectural drawings, and administrative records, this exhibition charts the lived experience of Rome's early twentieth-century housing crisis by following the migration of families from self-built housing to the Borgata Gordiani public housing development, rapidly built by the regime. Managed by the Fascist Roman government's Office of Social Assistance and located in Rome's eastern periphery, the development housed the most impoverished of Rome's displaced families in single-story brick buildings comprised of one-room houses, all of which lacked toilets, kitchens, and running water.[2]

The installation centers on the wall-mounted display of reproductions of the registration forms for every family—749 total—relocated to Borgata Gordiani in 1933 and 1934. Required to be completed by the Office of Social Assistance, each form records the family's assigned building, room number, and date of entry, as well as their city and province of birth. Each form also reports the number, gender, and age range of the family members, as well as their status regarding employment, criminal history, literacy, and health. The bottom of each form records the full name of the head of the family. Counting the number of family members declared on each form, these administrative records represent 4,113 individuals—a magnitude that reflects only a small portion of those displaced and rehoused under the regime.
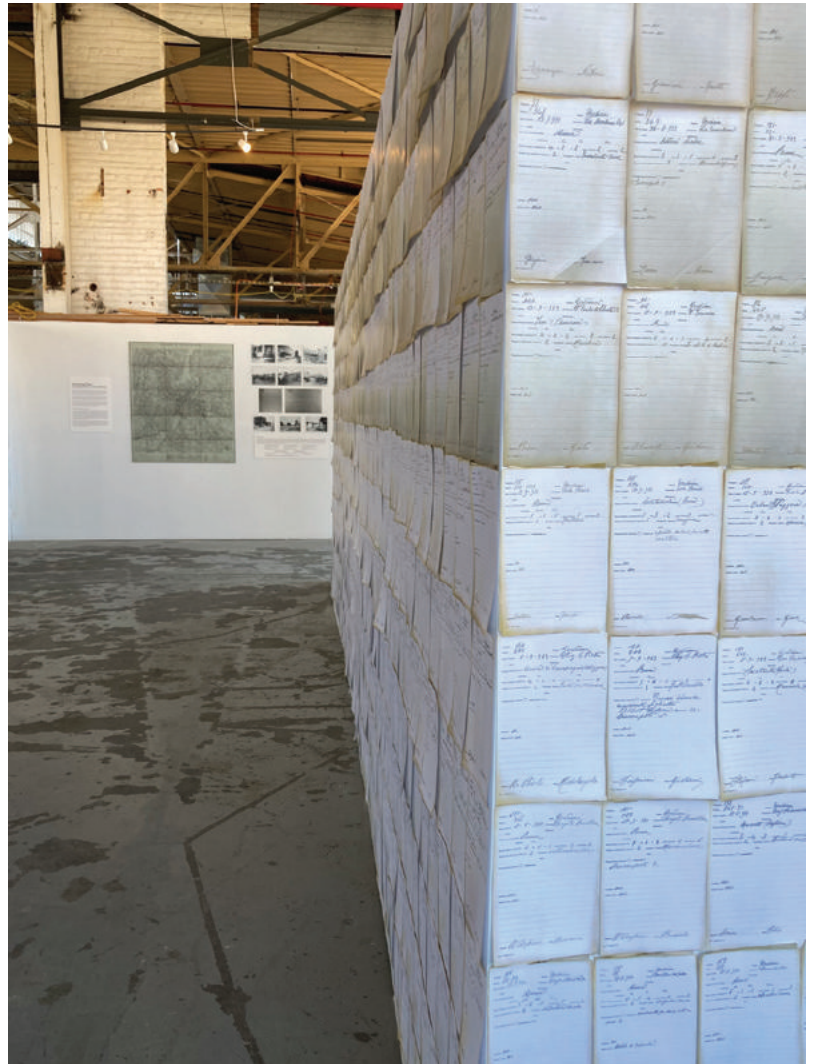
While envisioned as a temporary solution—a stopgap in the midst of an intensifying housing crisis and thus deficient upon completion—Borgata Gordiani was continually inhabited through the postwar years; its final housing structures were demolished in 1980.[3]
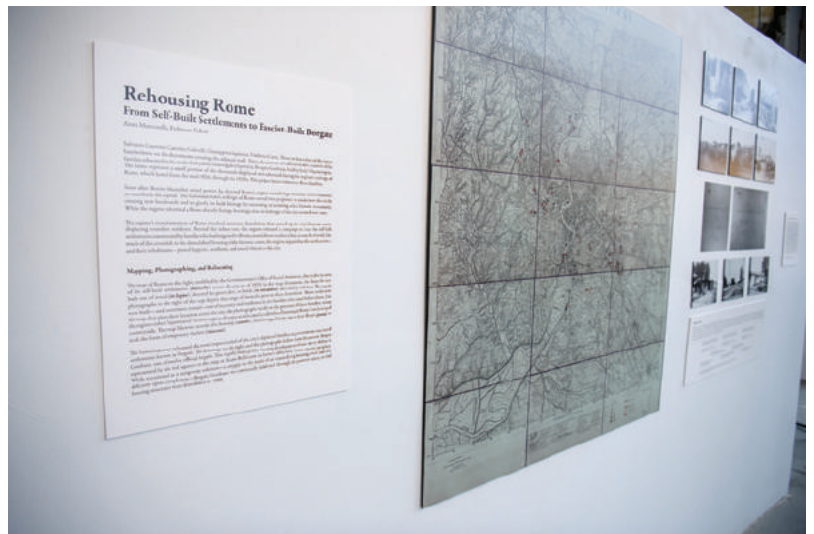
1. "Le baracche in muratura," *Il Popolo di Roma*, 10 gennaio 1929, 5.

2. Aldo Tozzetti, *La casa e non solo: Lotte popolari a Roma e in Italia dal dopoguerra a oggi* (Rome: Editori Riuniti, 1989), 6 and Ulrike Viccaro, *Storia di borgata Gordiani: Dal fascismo agli anni del "boom"* (Milan: FrancoAngeli, 2007), 77.

3. "Un appartamento vero (a fine mese) per 1400 famiglie dei borghetti," *L'Unità*, 10 maggio 1980, 1. For a comprehensive history of the borgate, see Luciano Villani, *Le borgate del fascismo: Storia urbana, politica e sociale della periferia romana* (Milan: Ledizioni, 2012).

SALAM RIDA

MICHIGAN-MELLON DESIGN FELLOW
2022–2024

WELCOME HOME

In the realm of architecture, urban design, and planning, the concept of "home" often evokes images of functional structures and well-designed spaces. However, the true essence of home extends far beyond physical boundaries, encompassing a complex interplay of housing policies, historical narratives, and deeply ingrained social imaginaries. The installation *Welcome Home* invites the audience to explore this intricate tapestry, challenging conventional perspectives and fostering a deeper understanding of the profound impact of housing on individual and collective identities.

Using photographs, architectural models, and evocative narratives, Welcome Home juxtaposes idealized representations of homeownership with stark depictions of substandard housing conditions and segregation, revealing the hidden and discriminatory realities of housing policies and idealized housing campaigns. Visitors are encouraged to engage with the materials that shape our understanding of housing and its impact on individual and collective identities. Over the next couple of months after the installation's opening, events were held on-site where questions were posed,

prompting reflection on the role of architects, urban designers, and planners in shaping the social fabric of communities. Can architecture truly foster a sense of belonging and inclusivity? How can we design housing that transcends mere physical structures and embodies the true essence of "home"?

The *Welcome Home* installation serves as the impetus for a research inquiry focused on further exploring the transformative potential of urban design, land redistribution, and innovative wealth-building strategies through land banks and parcels on perceptions and future policies on housing and design standards. Workshops and seminars will be organized to facilitate dialogue and knowledge exchange among researchers with diverse expertise. Furthermore, the research findings will be translated into accessible formats for public consumption, fostering awareness of alternative theories and approaches to housing.

Individual viewing the historical timeline on the installation's interior.

DOMESTICITY AS A FORM OF SELF-EXPRESSION

Today the way people design and maintain their living spaces has become a form of self-expression. Social media encourages individuals to share their personal style and preferences in cooking.

Social media obsession with cooking, cleaning, and organizing reflects broader societal trends, including the desire for self expression, the influence of influencers, the impact t of gender roles, and the shaping of architectural and design preferences. It highlights how online platforms contribute to the way we perceive and engage with domestic tasks and living spaces.

Individual viewing historical images on the installation's interior.

Individual viewing social media screenshots on the installation's interior.

Welcome Home serves as a reminder that housing is not merely a collection of buildings but a reflection of societal values and power dynamics.

By advocating for equitable and inclusive housing policies, we can work towards creating a world where *Welcome Home* truly resonates with its intended meaning—a place of belonging, safety, and opportunity for all.

WELCOME HOME EXHIBITION

Exterior image of the installation.

Individual viewing the social media screenshots on the installation's interior.
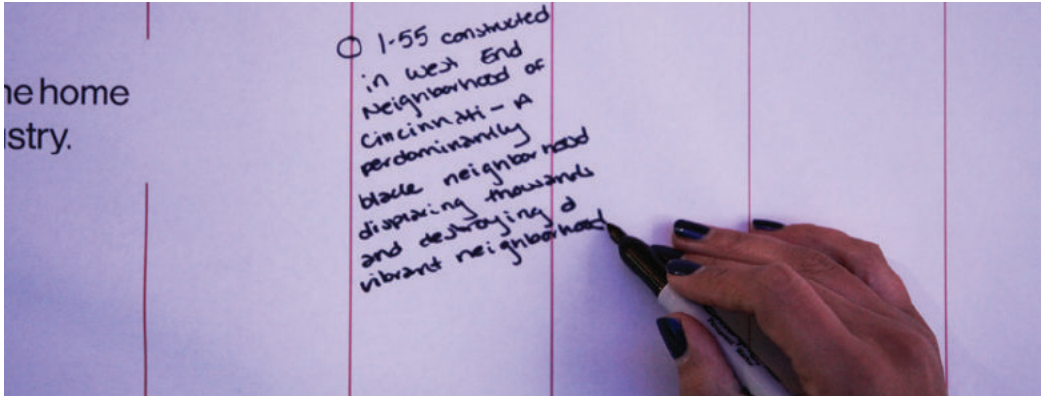
Individual contributing to the historical timeline on the installation's interior.

STRAT COFFMAN

TAUBMAN ARCHITECTURE FELLOW
2022–2024

EROTICA GENERICA

Erotica Generica is a cross between an appliance petting zoo and a softened workplace lounge. It gathers together a collection of interfaces that allow us to re-encounter the ways we touch our built world. Even though it's something we do endlessly throughout our day, handling a building is a super intimate act.

Through the surfaces we touch, we trade bacteria, we leave behind our oils, the heat from our bodies is transferred and held, not to mention all the particulates and gasses that our techno systems produce. We're constantly shedding parts of ourselves at the same time that we're picking up and absorbing parts of others through the permeating exhausts and cavities of architecture.

A host of generic building fixtures attempts to condense this onslaught of touchy matter, mediating how we touch the built world but tend not to notice them until they stop functioning, or go awry in some way. We also become hyper aware of them when they're hijacked as vectors of transmission for viruses or other deadly agents. Suddenly they are everywhere, suspect carriers.

The rest of the time these fixtures recede from our attention. They're designed to be good at that. Made from stainless steel or aluminum, they are impervious to scratching. Easily cleaned. Smoothed and unadorned, a kind of texture that doesn't tickle or stick. They form an ambient armor.

These generic fixtures are the outcome of an extended project of rationalization by which a statistical bloodless body is assembled out of averaged dimensions and inscribed into our building protocols as standards. As Liz Diller has argued, "at the end of the nineteenth century, the body began to be understood as a mechanical component of industrial productivity, an extension of the factory apparatus."[1] Resources like *Architects' Data* (first published in 1936), the DSM of architecture, specify the proper height, offset dimension, and quantity for accommodating common acts of touching. These standards get operationalized, or written into practice through building codes, ensuring access for otherly abled bodies.

In other senses, touch is deployed as a prosthetic organ of managerial control, via the cockpit, situation

room, or digital dashboard. On the flip side of the control panel, touch and gesture are captured as data by an ever present surveillance apparatus. Again the body is functionalized, mined for the extraction of value, as architecture becomes synonymous with scripted mirages and atomizing fortresses of code.

But as handholds allow us to gain stability, to find our footing, to initiate ordering operations, they also have a handle on us, provoking obsessive fantasies and deep anxieties that exceed scientific judgment or rational accounting–they are psychic knots, portals into libidinal frequencies. This project is about dislodging the hold that this functionalist and hygienic paradigm has on touch, to unearth the erotic dimensions of touch, the way that buildings bind us intimately together with this extended community of others, of strangers.

There's a whole history of touching that exists around, underneath, alongside the history of sanitation, securitization, legibility, and access. A dirtier history of building erotics. The Austrian philosopher Ludwig Wittgenstein famously spent a year obsessively designing door handles for his sister's house, and came to see them as nearly animate, endowed with character of their own. Franz Kafka's *The Metamorphosis* is basically an extended saga about trying over and over unsuccessfully to open a door as a bug. The bodily deformations and relocations only register when the protagonist Gregor tries to get out of his bed to open the door. The clunky ways that this newly ruptured body bumps up against the finishing and fittings of the room produces this internal estrangement. Handholds precipitate carnal phase changes.

The funky ways that our bodies come into contact with the stuff around us can foreclose action, can cause soreness, fatigue, or pain, at the same time that touch can squeeze out other channels of feeling. It is precisely the sense through which things test, reaffirm, rupture or blur their boundaries. In this way, touch evokes the erotic.

Audre Lorde describes the erotic not as something overtly or necessarily sexual, but a wellspring of feeling and sensation that disturbs patriarchal orders of decency and obscenity. A source of creative power. She has this wild metaphor for the erotic. In *The Uses of The Erotic*, she writes, "During World War II, we bought sealed plastic packets of white, uncolored margarine, with a tiny, intense pellet of yellow coloring perched like a topaz just inside the clear skin of the bag. We would leave the margarine out for a while to soften, and then we would pinch the little pellet to break it inside the bag, releasing the rich yellowness into the soft pale mass of margarine.

2023, multi-media installation

Brushed steel, foam, latex, textile, bioplastic, rubber

Then taking it carefully between our fingers, we would knead it gently back and forth, over and over, until the color had spread throughout the whole pound bag of margarine, thoroughly coloring it."[2]

I take this hyper vivid metaphor literally, as a materialist account of eroticism. The erotic manifests in our material, fleshy encounters with other bodies, whether they be biotic, abiotic, synthetic, metallic, heat-emitting or absorbing. It's released in the energetic, ludic play between things, it is the overflowing, the excess, the stuff that we share with one another outside of transactional or productive relations. In this way things can become media for this sharing—they can nudge us out of familiarity.

In passing or in a flash, the erotic can reorient our relationships with institutions and systems of power, even as it incites discomfort or panic. Feminist artists like Andrea Fraser and Carolee Schneemann have helped me think about the status of the live body in institutional settings, and how cultures of design inflate boundaries of respectability, or may offer respite, nook and crannies, folds. If Fraser asks, "what kinds of transgressions can [the museum] tolerate?" this work asks "what kinds of play can commercial buildings handle?"[3]

Erotica Generica is an attempt to release that topaz kernel that Audre Lorde describes, allowing it to spread and infect standard fixtures, like doorknobs, kickplates, safety railings, and grab bars, to press upon other bodily and psychic regions. It's like a showroom booth where architecture relishes in, rather than suppressing, its capacity to open pathways of anonymous contact, in sharing heat, swapping glances and bacteria, and trading pressure.

A swarm of door knobs that slide back and forth through the wall. Pressure applied, transferred, and exchanged across a barrier. The knob pressing up against different regions of the body. The stiffness of the spring varies according to where they meet on the body. A column of miniature doors that must be fisted to operate. But in this case the act of opening doesn't provide access to an interior or ensure visual legibility—it is instead a performance of unfamiliar sensation, one that reveals an exposed, disembodied arm on the backside. A fleet of panic bars assemble on the floor into an upholstered "bed," clicking as bodies shift on it. It's tricky to find a comfy resting position on this panic bed, with the alternation between padded cushion and steel plate. Here the body is in a state of continual repositioning.

Minor moments in which sight is invited to participate. Glimpses through a peephole, as a knob placed below at average anal height is wiggled from the other

side of the wall. Haptic treats occur through simple relocations, multiplications—doorstops sprinkled on the carpet. Open-ended cues. Solicitations. Rubber accents pad moving components, help transition between odd joints, act as flappy handles.

1. Elizabeth Diller, "Bad Press" in *The Architect Reconstructing her Practice*, ed. Francesca Hughes (Cambridge, MA: MIT Press, 1996), 77.

2. Audre Lorde, "Uses of the Erotic: The Erotic as Power," in *Sister Outsider* (Berkeley, CA: Crossing Press, 1984), 57.

3. Andrea Fraser, *Little Frank and His Carp*, MOCA.
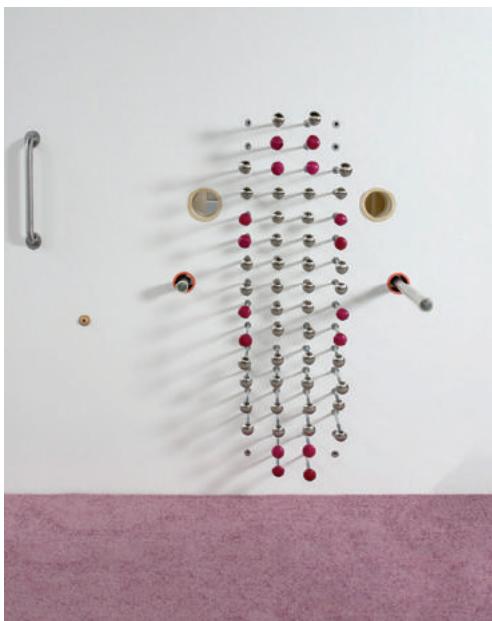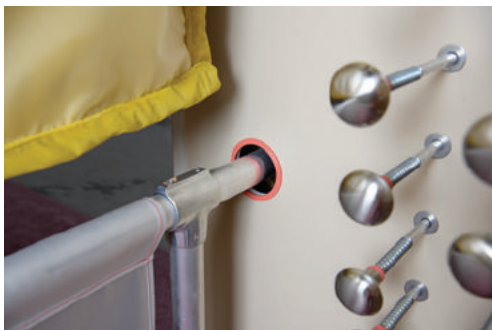
ALINA NAZMEEVA

TAUBMAN ARCHITECTURE FELLOW
2022–2024

BUG IN MY SOFTWARE

I have a bug in my software, but my software does not work without it. In fact, the bug in my software makes it run.

The second most numerous domesticated creature, the silkmoth, has been altered by humans to the point of losing their ability to smell, see, and fly. These cute creatures—that look more like Pokémon than insects—are instrumentalized for silk production and even boiled alive inside their cocoons right at the moment their metamorphosis is nearly complete, preserving the precious silk threads for harvest. This mechanized, industrialized, and human-controlled life cycle of the silkmoths blurs the lines between the organic and the engineered. Recent experiments that splice spider DNA into silkmoths to make the strongest natural fiber on Earth further blurs that distinction. Silkmoths and their lifecycle embody the intersection of biological manipulation, technological advancement, extractive power, and extracted labor.

This example of the industrialization of natural processes parallels the exploitation of gendered biases whether in textile production or AI development. Working with fiber, thread, weaving, sewing, embroidery, quilting, and knitting—at least since the Industrial Revolution—is largely considered either a domestic, "low art" or is a globalized, low-pay, and women-dominated factory job. Textile labor, historically devalued and predominantly female, finds its echo in the gendered design of AI: voice assistants, caregiving bots, and virtual helpers often feminized in voice, form, and function. There is indeed a pattern in technology in which more female artificial intelligences and gynoids are being created and imagined in mass culture because these machines tend to perform jobs that are associated with women. Many robots are designed to function as maids, personal assistants, or care workers.

Reflecting on this tension between labor, gender, and technology, *bug in my software* pairs physical textile installation with a speculative ecosystem simulation. The physical installation transforms the silkmoth's DNA sequence into a visual pattern that is both a blueprint and a historical document. The pattern of the silkmoth DNA expands into an architectural-scale, soft-wool yarn structure that is occupied, inhabited, and lounged on, giving form to the genetic imprints altered by human hands. Mirrored plexiglass sides create an optical illusion of a floating virtual surface without another side; as any three-dimensional simulation, it is by default a one-sided reality. Thus, the landscape itself is a rectangular cutout of the falsely infinite digital landscape powered by finite matter.
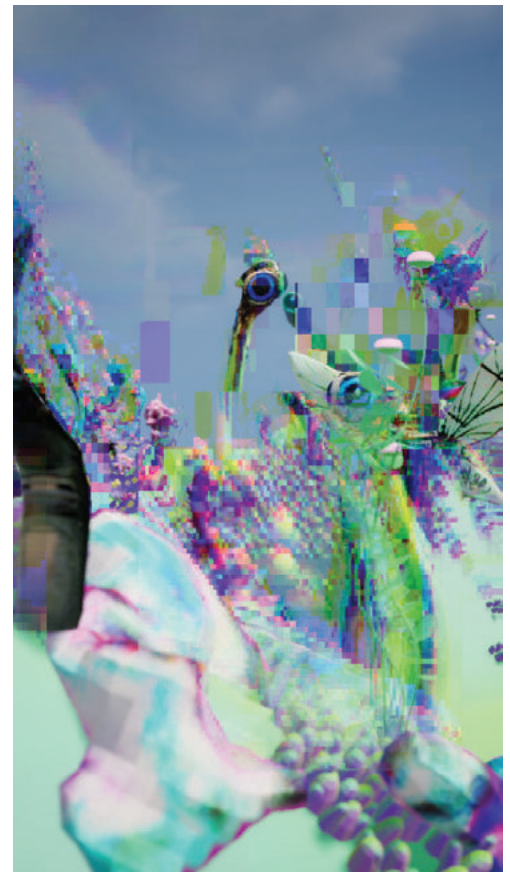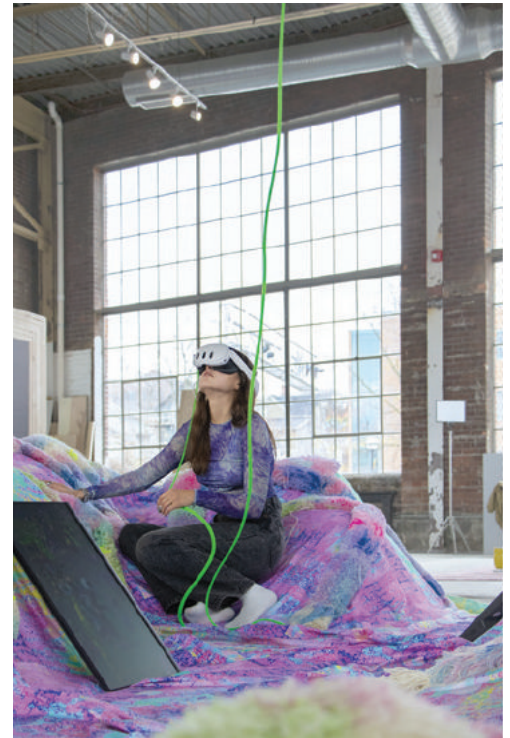
Overlaid on top of the physical landscape, an AI-agent-driven simulated ecosystem evolves, viewable from the head-mounted display and physical screens on the installation. The creatures inhabiting this ecosystem transform and morph in reaction to one another, minutely evolving over time. These creatures, the protagonists of this world, are the confluence and combination of technological and ecological imaginations, word embedding systems, and text-to-image, text-to-3D, and image-to-3D AI models. Existing in the state of post-human interference, the creatures emerge, grow, live, coalesce, interact, and evolve in a speculative lifecycle. The audience are mere observers who can see but cannot touch the ecosystem. Occasionally, the creature will follow someone, changing the ecosystem and producing ripples in its lifecycle. In this speculative landscape, the AI agents are weavers of a new world, spinning the detritus of electronic waste into the web of an emergent ecosystem. When the system collapses from the overabundance of waste or the disappearance of the silkmoth, the system attempts to reset. Collapse after collapse, the system runs in perpetuity.

With a cozy and soft landscape, cute colorful patterns and benevolent appearance, *bug in my software* invites you to embed yourself: find a position, feel the ground, envelop in the landscape, contemplate, cuddle, and rest while creatures work, threads weave, and GPU fans spin.

TAUBMAN FELLOWS 2022–2024

DIMENSIONS 37 STAFF
Talia Morison-Allen
Alvin Poon
Varun Vashi

STRAT COFFMAN
ANNA MASCORELLA
ALINA NAZMEEVA
SALAM RIDA

Continuing the conversations with fellows featured in the volume, Dimensions met with the 2022–2024 cohort of fellows for a roundtable discussion on the strengths and shortcomings of the fellowships, and ways it might evolve.

DIMENSIONS 37: What were some of the strengths and shortcomings of the fellowship and how would you like to see it evolve?

SALAM RIDA: I feel like my fellowship is kind of in a weird position this year because I am the first Michigan-Mellon fellow that's actually taught at the university. That historically has not been the case. They've really been only the ArcPrep instructor and has never participated in the fellowship process. And that's because we don't have a large financial support structure for the fellowship exhibition because they kind of existed in this silo in Detroit. So when I came on in 2022, the Michigan-Mellon fellow was brought on as an instructor lecturer at Taubman. My fellowship for the first year was part of the larger university kind of lecturer instruction, but I am also required to do a level of research. My fellowship exhibition budget was $1,500 whereas other fellowship exhibition budgets were much larger than mine. So the financial support is definitely something that I would want to see changed, but that's considering all of the other changes that's happened with my fellowship, like introduction into teaching at the university level. I understand that these things kind of have to happen incrementally and that the university is doing a reformatting of the fellowships at large. Not just the Mellon Fellowship or the Fishman Fellowship, they're also rethinking the concept of what the fellow responsibilities are across the board, which I think is—it'll be interesting to see over the next couple of years. But all that being said, I think that it offers a really interesting pivotal moment for what these fellowships

are meant to do. I think for me, the more interesting thing about the fellows is having maybe research distinctions or specific type of external support that they bring with them.

STRAT COFFMAN: Yeah. I mean I just think especially in the U.S., thinking about the way that architectural production happens and the kind of conditions that it requires often follows a kind of patron model still. It typically requires an upfront injection of capital, so in a lot of ways, to practice as an architect, you have to be somehow attached to an agenda set by a client and a big chunk of change. So I think the fellowship is pretty incredible for the way that it loosens the conditions of existence or direction for architectural production broadly defined. I think maybe in places in Europe, it's a little easier. There are more kinds of opportunities for finding support outside of a patron or client system, but in the U.S., it's hard outside of the academy. So I think that's a big reason why I was interested in doing the fellowship. It allows for a kind of production and way of thinking that's not bound to a kind of brief and a budget that's coming from a person who's paying you. With the Fellowship, there's no requirements or formal expectations around the format through which the research that's conducted during the fellowship must be. It can take whatever form.

I remember at the beginning in conversation with McLain, I can't remember if it was just me and Alina or who else was there, but he was like, "This is a chance to just like do something, like follow some kind of odd interest and really commit to it and produce something. And it might not really make sense initially." But he encouraged us to use this as a chance to not place too much pressure on what the outcome

is, for it to kind of translate as an immediately sort of legible body of work, but to just have something out. And I found that to be a really great way of thinking about it, even though I think we all also wanted to create something that was presentable. I think all our work is sort of in between these two states of being something like a finished thing that was ready for exhibition but also something that's part of an ongoing kind of inquiry.

ALINA NAZMEEVA: I think that this fellowships stood out for the degree of freedom it provides. I think school has a lot of trust to the fellows to let them do pretty much anything they want—give them some funding and so on with no strings attached to create something. I think it also in a way relates to the teaching, especially for their elective classes that they're offering. The school definitely gives us a chance to experiment, to create our own curriculum from scratch, and it trusts that we will be able to do it and gives us a free path which is a very rare thing to have. I'm not an expert in every single fellowship and every single school in the United States, but the ones I saw typically suggest teaching some required courses with already established curriculum for decades, or maybe less resources for the research. So this was really incredible and I am really happy to be given that trust and to have this opportunity to really experiment and develop my own research for two years while at Taubman.

SR: I think to follow up to Strat and Alina's points, these fellowships supports risky endeavors, which I find to be exciting. We're able to break away and push the boundaries of what we're interested in, able to use this fellowship to undertake research that may not

be supported by a non-profit institution or a client or a city government. It kind of mitigates a feeling of failure or exposing ourselves to risk because we are kind of within the confines of the institution and able to kind of take that research with us even outside of the institution. So I think that it's also important that these fellowships have a timeline associated with them and that that timeline hopefully pushes and directs the fellows out and allows them to gain an exposure outside of the institution that they're in at the moment.

ANNA MASCORELLA: Yeah, I'd like to build off these points too, because in my case, it's a bit different in that I'm not a designer—I don't have an architecture degree, I'm an architectural historian. As the Fishman Fellow, the fellowship is more of a postdoc, but it's not a typical postdoc at all, especially with the exhibition component. What I appreciated so much about this fellowship was not only the opportunity to organize the Egalitarian Metropolis Symposium and teach these large urban issues, but having the time and resources to spend my summers researching in Rome, which is the focus of my research. It also gave me a unique opportunity to participate in the exhibition. I was previously working as an architecture curator after I finished my Ph.D, so I was able to come to this and think of the exhibition in terms of a curator. But what was really exciting, and what kind of evolved throughout the course of developing my plan and work for the exhibition, was that instead of being an architectural historian working as a curator, curating became creative practice. I was able to explore my work, and display, and show, and engage with my research in a way that wouldn't find a typical home in a museum, that wouldn't find a typical place in a publication. So I used the format of this exhibition to really think of my research in a creative way, thinking about active archival research as creative practice, thinking of the archive as a building material, thinking of research as almost a form of world-making, world-building, and starting to see how the kind of work of the architectural historian can take different lives. Narratives can be spatialized in different ways, beyond a typical exhibition, so that's something that has been really critical to the development of my work as an architectural historian and as a curator–pushing me, pushing boundaries.

I also found the collaboration with design students in the process to be an amazing experience, to have the support of—an M.Arch student in my case—to bring these ideas to fruition. That process was really critical and to have the space to do that and have it be completely open was really amazing. I also appreciated so much the kind of discussions and feedback with my fellow fellows in that process.

SR: Another wonderful thing that I love is that I have a nice interdisciplinary range as a Michigan-Mellon fellow. I work with high school students, I work with undergraduates, I worked in the urban design program. So that intersection has been wonderful because it really has been able to provide me with time to think about communicating and making architecture accessible, which is something I am always thinking about in the field.

But all of that being said, some of the courses I was teaching just felt very heavy on my schedule. Teaching in the urban design program was particularly great because I was only teaching studio twice a week. Whereas, teaching in the undergraduate department, I spend three days a week in the studio, and then I teach from 8:00 to 11:00 a.m. every day in Detroit, with travel time in between. It's a lot of teaching, and unfortunately the only time I had for research is on the weekends, and I try to have a life on top of all of that. Although it's wonderful that my fellowship can teach at Taubman and I am getting mentorship exposure at the university level, it's made research very challenging. So, one of the things that I have proposed for the upcoming fellowship is for another person to be brought on so three instructors teach and kind of rotate. And ArcPrep itself is going through a transition.

We'll be sunsetting on ten years this year in the fellowship and in ArcPrep. I'm not sure if the Michigan-Mellon fellow will be something that will be continued past my fellowship. I do hope that it does, because it offers a lot of potential for community engagement. It has a very specific focus right now in Detroit, but I think that the fellowship would be a lot more interesting if the geographic focus was not just Detroit. I mean in the past, it's been places like Rio de Janeiro or Mexico City and thinking about Egalitarian Metropolises outside of the United States. I think having a change in geographic focus might be really interesting for the fellowship.

So that is a big part of some redirection and financial support for the fellowship, especially if it does end up being multiple fellows that take over the program versus one. I think being able to have financial support for research and public engagement and really thinking about if it does remain a fellowship that's specifically in Detroit, what does that public engagement really look like and how is that community engagement funded and supported through the university? There are all of these DEI initiatives—I feel like DEI initiatives have their silos. This fellowship exists in a silo. There needs to be a lot more overlap that exists around the ideas of egalitarian equity at Taubman and at the university at large, and it feels like everyone's kind of operating in their separate spaces right now, both in the architecture school and the planning school.

AN: I wonder if my reflection on the improvement of the fellowship isn't particularly related to the fellowship itself, but to the school in general. Well, I guess one of the things that I think was a little bit difficult from the beginning is that oftentimes the people who enter the fellowship may have had little to no exposure to what does it mean to be a part of the university as a faculty and as some kind of administrative roles as well or being able to function and navigate a space with a high level of institutional complexity. So that's something that I have found that I understand is not an easy process to improve, because there's a lot that's gone into it. As a young faculty entering the school, you really need to learn very quickly how everything operates, and if you haven't been a faculty before, it might be challenging. So that is I guess it's just a growing pain. The first year, I wasn't aware of certain things because it wasn't communicated or maybe it was communicated, but so many other things are communicated at the same time so I kind of missed it at some point. I mean second year I was definitely better. So but once again, this is I think related not just to the fellowship, but maybe generally when you enter academia as a young faculty. This is something that would be great to improve.

Actually, I am pondering now my reflection on the improvements. The other thing that was remarkable about the fellowship in my opinion was some of the things that are organized by the school. The one that

resonates with me the most was the creative practice and research initiative classes for the faculty that we could come and receive some kind of lecture or talk on how to write a proper grant, how to apply for funding, where to look for it. If you want to develop your research or create some works, how do you find the resources for that, both when you're in the institution—because the University of Michigan is a really huge school and there is a lot of opportunities inside of it—but also outside of the institution. That's something that I found extremely helpful, and I used the knowledge I received during those sessions, and yeah, I successfully applied for grants within the school. So that was amazing that the school provides this type of resources for the faculty. Especially when you are young, and you don't really know about those resources.

SC: I guess I don't know if I really have a point of constructive feedback for the fellowship program, but just some more of the comment on the condition of work that it sort of rests on, which is a precarious one. It is a two-year program in our case and there's no guarantee of opportunity for continued employment. I mean I think [the fellowships] is part of a broader condition of the way that higher-ed operates now that it's really kind of extractive, especially for those contracted laborers: the adjuncts, the lecturers, the staff. The fellows are part of that sort of precarious labor force that's really economically advantageous for institutions of higher-ed like University of Michigan. And that's upsetting on just a broad societal level. That increasing the financialization of spaces of learning. And yeah, I don't know. There's no easy outcome. Broader public investment in providing support for people who teach.

I was new to teaching through this and I have just woken up to how intense it is. Like on an emotional and intellectual level, it's crazy. And not everyone's cut out for it, and I really respect those people who commit themselves to it, even sometimes in that lack of material, financial compensation.

SR: As someone who currently teaches high school students that are meant to go into higher education afterwards, honestly, I feel anxious even saying this out loud, but just knowing the rising costs of tuition, and the student debt crisis, and the way

that society is moving forward as a whole, part of why I question the fellowship at large is because there are some key issues that I struggle with when it comes to higher education. I would feel less stressed about it if there was some type of community or public access engagement that would be coupled with higher institutions. Even our fellowship exhibitions are not available to the public in a great way. We have a sign on the building that says, "There is something in here," but even the bartenders that I have met on Liberty that saw me working in the space and then saw me in their bars eating a burger, drinking a beer before I had to go back to the Annex to put my installation together, is like, "Oh, I just don't feel that space is meant for me," and didn't feel comfortable entering into the Annex. The exhibition is also only open to the public on a Saturday from 10:00–5:00 or something like that. I just wonder how maybe the fellowship exhibition or the work that we're doing could be more accessible to the public so that it didn't feel like it was just sitting in a university ivory tower all the time.

AN: Yeah, no, that's an excellent point. I completely agree with that. I live in Ann Arbor and I met a lot of local business owners and just kind of talked about the Annex as a space and how it's not really perceived in any way by the community as something, as a part of the town. They feel it's a part of the school and that it's not accessible. And it's really I think it is such an easy thing to do for the school to connect the fellowship program closer to the town by just making the exhibition open every day and making it more evident and promoting it, doing a better job on promoting it as a gallery which is open to the people. That would be really an excellent way to connect the school and the town.

Because another thing, I mean I have been in the school only for two years, but what I noticed is that it seems like that the architecture school may not necessarily have a very strong connection to the town. It definitely does have a strong connection to Detroit. I see a lot of studios or studio visits and kind of discussions about Detroit, obviously for many reasons. But on the other hand, it feels like Ann Arbor just happens to be a place where the school is. And I feel it would be great just generally to have more involvement with the town and the closer area. And I know with some of the faculty it started happening over the last couple of years. Like in the studios that

Salam and Gabriel are teaching was directly addressing the town, which I think is a really excellent step, but I think in other aspects as well it would be great to have a stronger connection.

SR: Yeah, and before it moved to the Annex, it used to be in where the TV lab currently is. I felt like when I was a student here, there was a lot more of an exchange between the work that the fellows were producing. It was a lot more accessible to students because the fellows were able to host talks in there, and they were able to invite different groups of people when there were preview weekends. I just don't know if the university finds there to be value in engaging the Annex with the rest of the community.

AM: Having that large amount of devoted space to work with is really special. So the kind of warehouse context of the Annex I think enabled us—I know at least speaking for myself personally—enabled me to do things that I wouldn't have been able to do, wouldn't have had the impact, and would have completely changed the meaning of my work had it have been in a smaller space. So I really appreciate the scale of the space that we were allotted. And to that point, I just wanted to reiterate, the fact that it is a two-year fellowship is huge. I mean it feels like it goes fast because it does, but at the same time, so many fellowships are just one year and it's really hard to have that time to concentrate and think because as soon as you arrive, you have to think of what you're doing next—to that point of precarity. So I think that it's a real luxury to have two years to focus and work towards the exhibition in addition to developing syllabi and pedagogy, along with the research. So I think in terms of time and space, it's so valuable to those ends.

PART III

BRIAN SMITH

Thesis Advisors:
ROBERT ADAMS AND DAWN GILPIN

UNLAWFUL ASSEMBLIES
NORMALCY NEVER AGAIN

In February of 2023, Pete Buttigieg announced that $185 million would be provided in funding for the Reconnecting Communities Program in order to deconstruct the highway infrastructures dividing communities of color. In an interview with TheGrio in 2021, Buttigieg is quoted saying, "There is racism physically built into some of our highways…" Immediately following the interview, one question became a heated point of debate—can infrastructure or the built environment be considered racist?

The stance of this project aligns with scholars like Stewart Hall who in "Race, the Floating Signifier" argued, "signifiers refer to the systems and concepts of the classification of a culture, to its practices for making meaning. And those things gain their meaning, not because of what they contain in their essence, but in the shifting relations of difference, which they establish with other concepts and ideas in a signifying field."
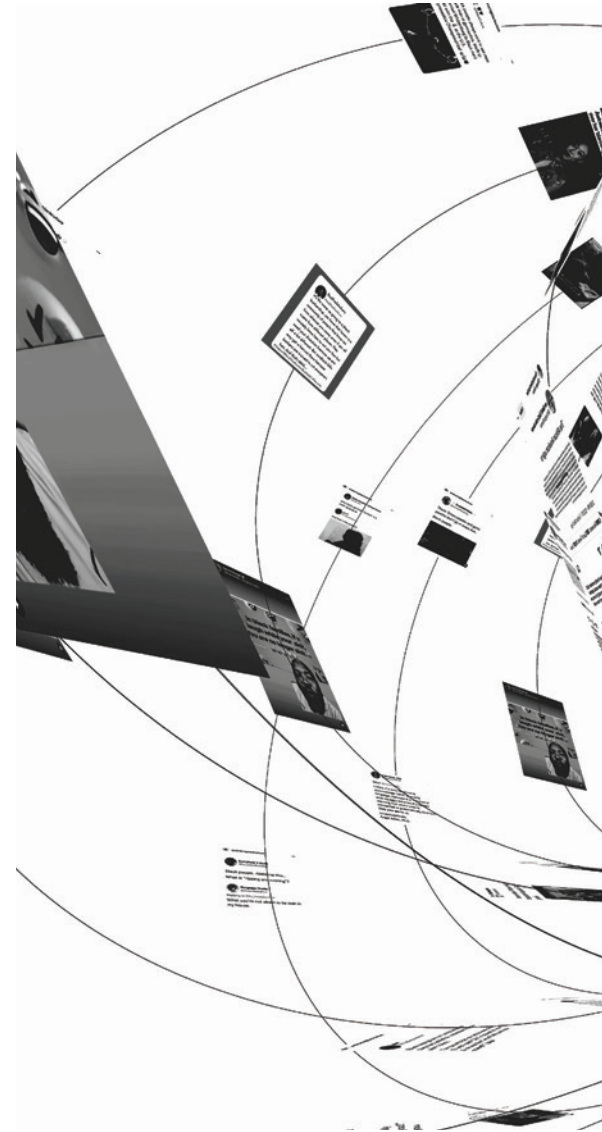
Unlawful Assemblies: Normalcy Never Again argues that highways are not only infrastructure, but also cultural symbols. It also aligns with the words of Todd Levon Brown, who stated that these symbols—whether art, architecture, or infrastructure, cannot be separated from the social, economic, and political climates they were created in.
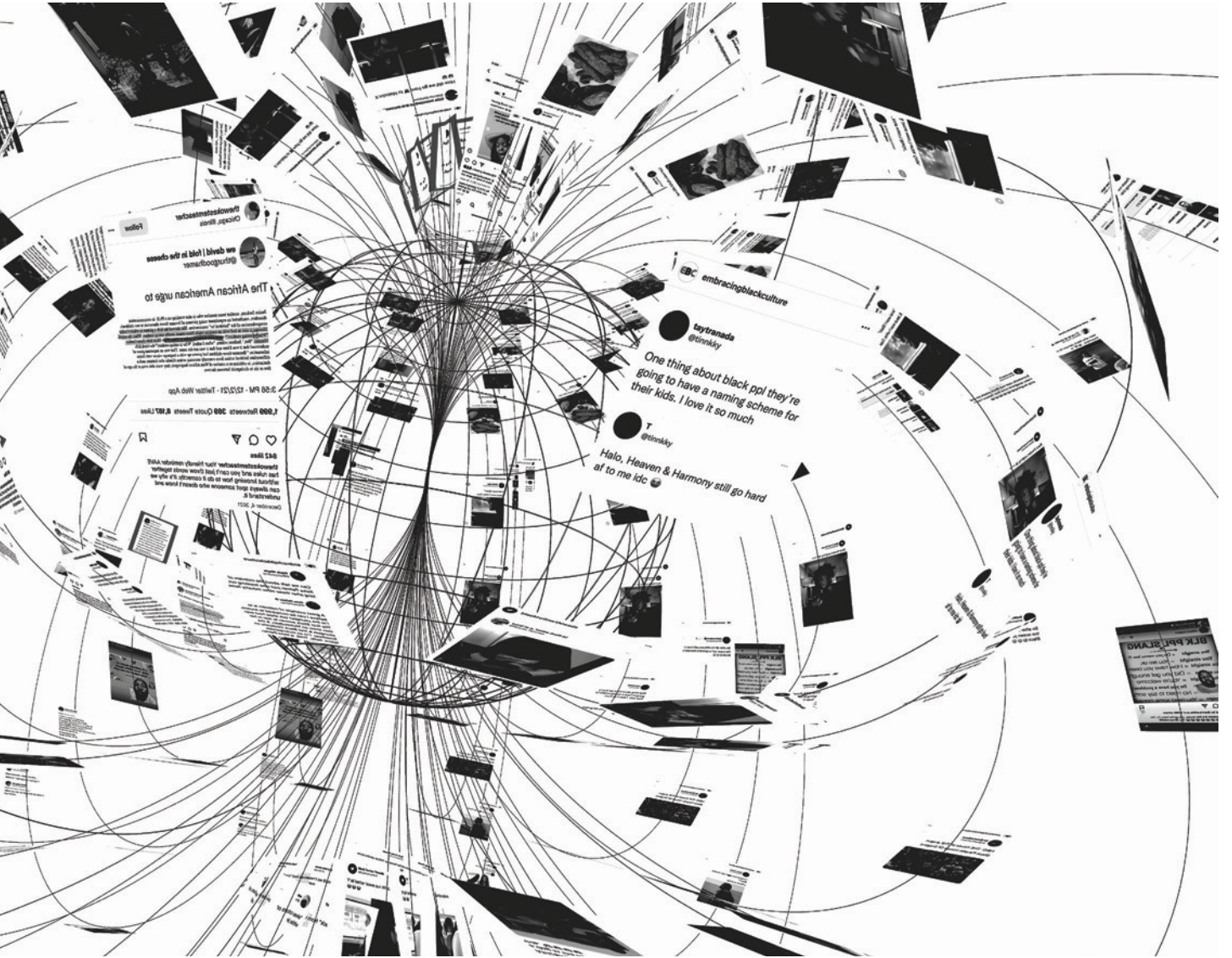
THE DISSONANCE OF BLACK CREATION

This conceptual site plan defines black life and creativity as it relates to conditions of racism. Racism and spatial boundaries act as a site which tries to compress and restrict Blackness in the United States. However, Black life, while under pressure, continues to press beyond the boundaries afforded it in a state of dissonance to present circumstances.

REDLINING

UNLAWFUL ASSEMBLIES

DISPLACEMENT

White Man's
Road
...thru
Black Man's
PROTEST

TRAFFIC

FRONTEIRISM

"STOP FRONTIER"

INDUSTRY

RONDO

SURVEILLANCE

HOMEPLACE

APARTHIED APPARATUS

The
TRAVELERS'
GREEN
BOOK

PARALLEL WORLDS
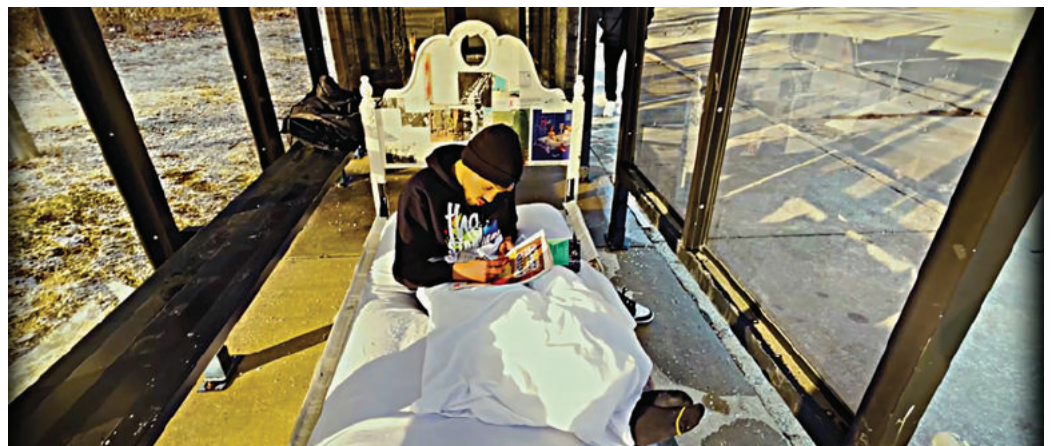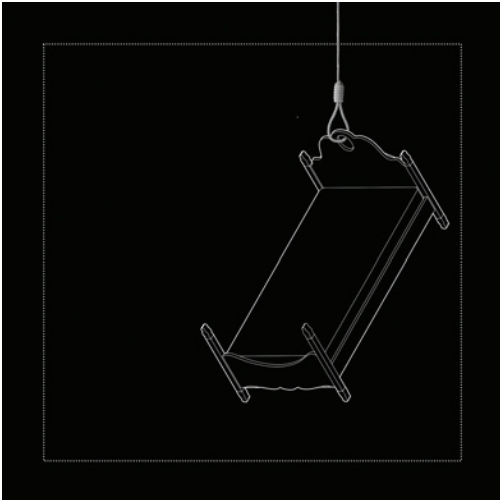
UNLAWFUL ASSEMBLIES

The legal definition of unlawful assemblies is a gathering of two or three persons to disturb the public peace. A Black lens expands this definition beyond protest to include assemblies of language, music, art, and architecture that are criminalized in America. Black hair is often targeted and penalized in professional settings. *The Crown Act* is a law looking to protect those looking to wear their natural hair in the workplace. African American Vernacular English is often classified as being incorrect grammar. Black history has currently come under fire in Florida where African American history classes were banned because of fears around critical race theory. Black music has begun to be targeted by prosecutors who are using artist's creative storytelling against them in court—currently the rapper Young Thug has been on trial, his lyrics the evidence used to prosecute him. Some legislators have looked to pass laws to protect artists from this targeting.
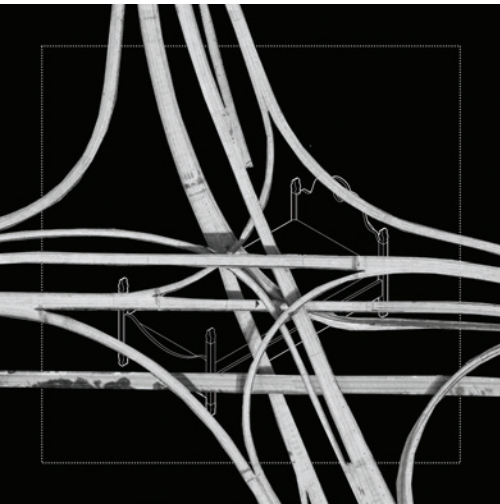
WHITE COMFORT

In order to better understand how to overcome these boundaries, this project looks to understand the forces driving them, specifically, "White comfort" as a spatial organizer. Three scholars that helped shape the definition of White comfort in this project are Dr. Tema Okun, Dianne Harris, and Cheyrl Harris. Dr. Okun describes White comfort as "the belief that those in power have a right to social and psychological comfort, and can scapegoat those who cause discomfort." Dianne Harris describes it as a major driver of White flight and the need to create home aesthetics that differentiated them from racial minorities. Cheryl Harris describes how the racial symbol of Whiteness functions like property—giving one the exclusive rights of possession and dispossession. Furthermore, this project considers how these boundaries are defended through political, financial, and behavioral means.

The next act embodies these ideals of comfort by embedding a bedframe with images and dialogue around security, comfort, and white flight during the construction of the interstate highway system. This comfort zone was then used as a displacement tool by placing it in a bus stop. Here is where White comfort can be understood further as a perception of public infrastructure as an extension of one's domestic space, allowing for it to be policed accordingly. This project realizes it would not be possible to imagine new futures from this framework, and instead moves beyond it.

A EULOGY TO WHITE COMFORT

Here Lies the Truth
Or should I say a Truth
I know it sounds like dissonance
to say that a Truth lied
But it lies within the very psyche
of America
It lies within our decisions on
where we choose to live and raise
a family
It́s lies within who we allow into
our homes
In who we see as our neighbor
In the walls we choose to build
Whether socially or physically
There is an adage that,
The South doesn't care how close
a Negro gets just so he doesńt
get to high; the North doesńt
care how high he gets just so he
doesńt get too close.î
The truth is our borders were
defined by White Comfort.
The other side of that Truth is that
Black Presence was untenable
for you. So you sought to leave
us restless.
As long as you could leave
us restless
Restless with mobs
Restless with bombs
Restless with police brutality
Restless with arson
And the fear of death
That we would no longer have
a place to lay our heads, even in
our own homes, unless we left.
That we would no longer have a
space to dream
And would run back to
the margins

But this truth lies to you by
making you believe
that the edges of your comfort
would be the extent of my world
Because the truth is we will
always dream beyond
your borders
We will always build beyond
your fear
Because here lies the truth
That your comfort is dead to me
It́s dead to me
Dead to me
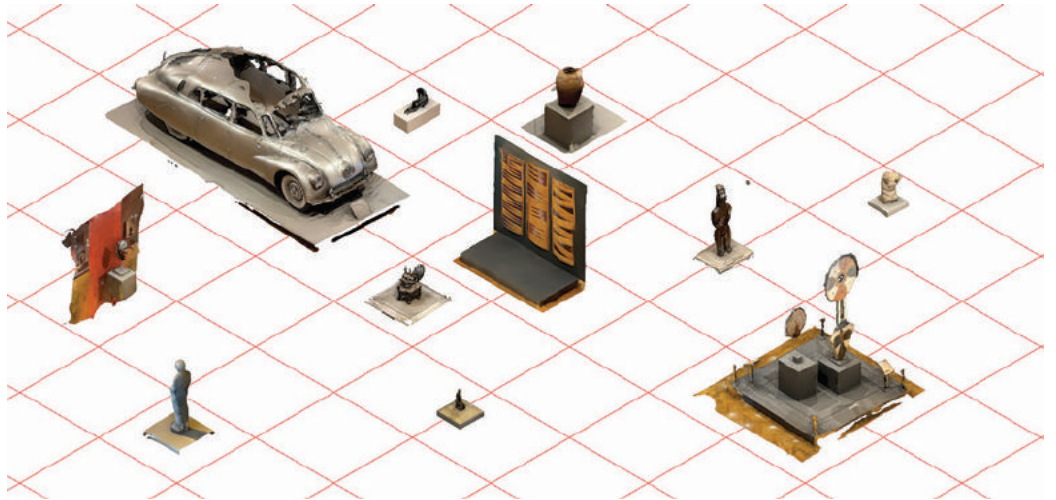
STRATEGY

Different sculptures were scanned while walking in the MIA. Weapons of defacement included four different flavors of soup that were then whipped on the texture maps of the digital images, blurring the property ownership of the digital assets.
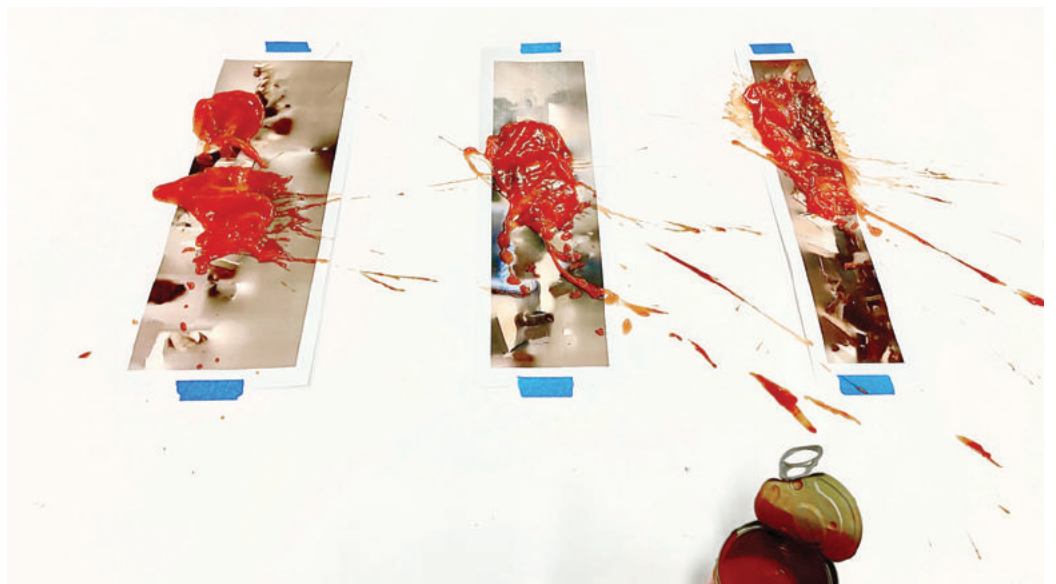
VIRTUAL DOUBLES

This project uses virtual doubles as a tool to allow one to bend existing rules while still augmenting the way symbols are viewed to advocate for other futures. One study was by throwing soup on digital twins of art scans taken at Minneapolis Institute of Arts (MIA), upending the question of ownership over digital assets and allowing one path for artists to augment symbols and the environment in protest. It asks, are actions against virtual doubles just as powerful as if they were done to their real counterparts?

The second study was a filming of a school shooting protest in the University of Michigan Museum of Art. By scanning a digital twin of the museum, film footage could be captured where it was not allowed. Pictures taken of the museum were used to create a digital reconstruction of the space, and worked around the security protocols of the museum to allow for its augmentation. The desks in the video represent school shooting casualties from Sandy Hook Elementary in 2012 to Michigan State University in 2023.

TRAFFIC V. TRAFFICKED

In protest, this project looks to transform the nature of a divisive, fast-paced infrastructure into a place where people can come together to rest. This is accomplished through a means of hybrid digital activism as defined by the author Rafael M.L. Silva, and aligned with activist groups like the *Black Power Naps* in the design of sleep scape on a highway.

Specifically, this project looks at Interstate 10 in New Orleans, which crosses through the Treme neighborhood. This project proposes that the community create their own virtual imminent domain in which they reclaim a digital layer over the infrastructural space as a zone for their right to dream of new futures. Furthermore, there are different touch points where the digital influences the physical and visa-versa. This project defines this hybrid activism as being anti-racist by using it to create counter narratives allowing communities to dream beyond the conditions presented to them. First a virtual reality landscape will be designed over the highway with a sleep scape and a series of rest architectures. The sleep scape has a series of different types of beds for rest including a vibration bed, a plant bed, and a waterbed. The mountain provides children with the ability to relax through play and immersive mediums. The studio offers a zone of relaxation and speaking to power through music. The memorial allows a place to lay out loved ones to rest and mourn as a community. These visions as a community can also begin to be overlayed onto existing digital twins like *Google Earth*, imagining a world where these experiences can be overlaid over present conditions.
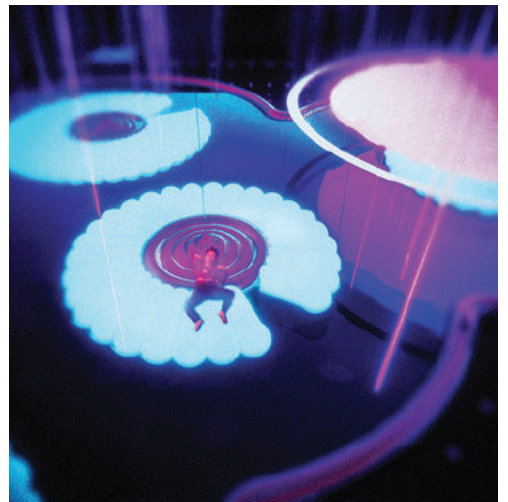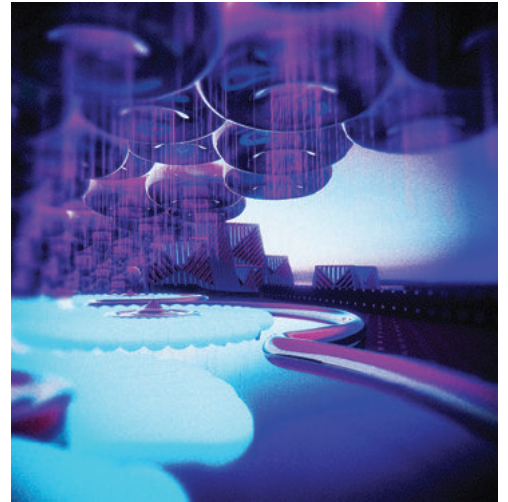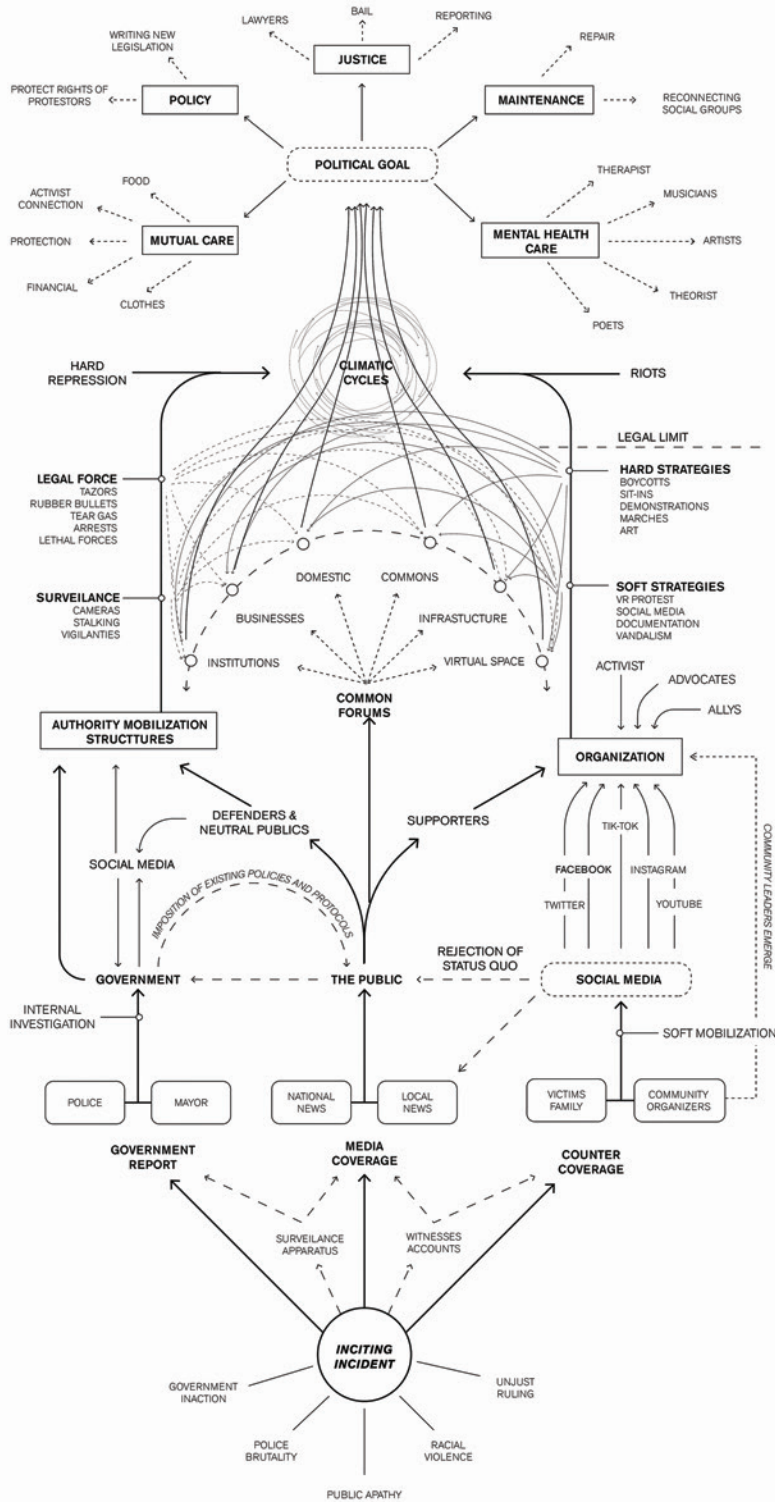
UNLAWFUL ASSEMBLIES:
Protest Actor Network

The actor network serves as a road map for people trying to figure out how to participate within protest. It also is used as a site map for architects to find a way into civic engagement.

ARTIFICIAL INTELLIGENCE PROPAGANDA

The propaganda posters were created using Midjourney's blend tool rather than the text-to-image workflow. The blend tool makes it possible to take images of the sleep scape and design and merge them with Black Panther propaganda and images from the *Black Power Naps* exhibition. The images were then all made black and white for ease of mass printing.

The images could be used to spread awareness on social media while potentially protecting the identity of activists working in the field. Some of the images are distorted images of the bus stop occupation to test how recognizable a face would be in facial recognition software used for surveillance.
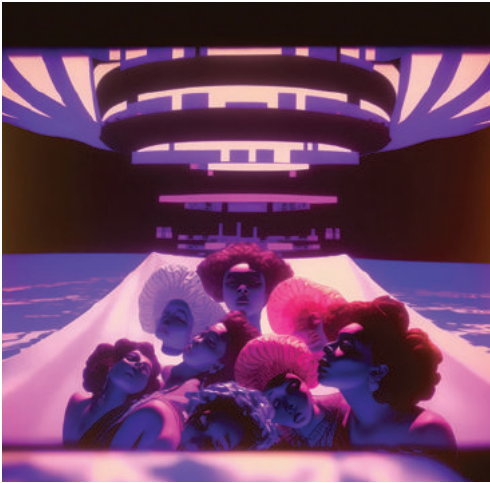
JORDAN ZAUEL

Thesis Advisors:
ROBERT ADAMS AND DAWN GILPIN

95 ASB
RADICAL EXCLUSIVITY
IN THE FOOD COMMONS

DEDICATION

For Arturo.
God bless the cook.

*ASB = after sliced bread

The constellation of actors and emotions that food includes provides both extremely prescribed architectural modes of thinking, as well as immense human creativity, spatial adaptation, cultural expression, and feeling. Situated in Metro-Detroit's emerging food commons, this thesis works with each person and producer of the urban food fabric to enable their own radical exclusivity to promote connectivity, exposure, and collective work. The work simultaneously takes advantage of the intense tactility and breadth of intimacies innate to food and food spaces to present a new exuberant and empathetic mode of architectural design—one that enables the persons and producers within the urban fabric to maximize its usage and atmosphere. To take advantage of existing convivial food experiences in Metro-Detroit, *95 ASB** operates on a variety of scales, from the creation of urban-adapting exclusive furniture, to larger zoning and planning schema. This thesis is anti-tabula rasa; it acknowledges the systematic injustice present in policies and organizations as well as the current intentional and community-driven efforts to promote food sovereignty in situ.
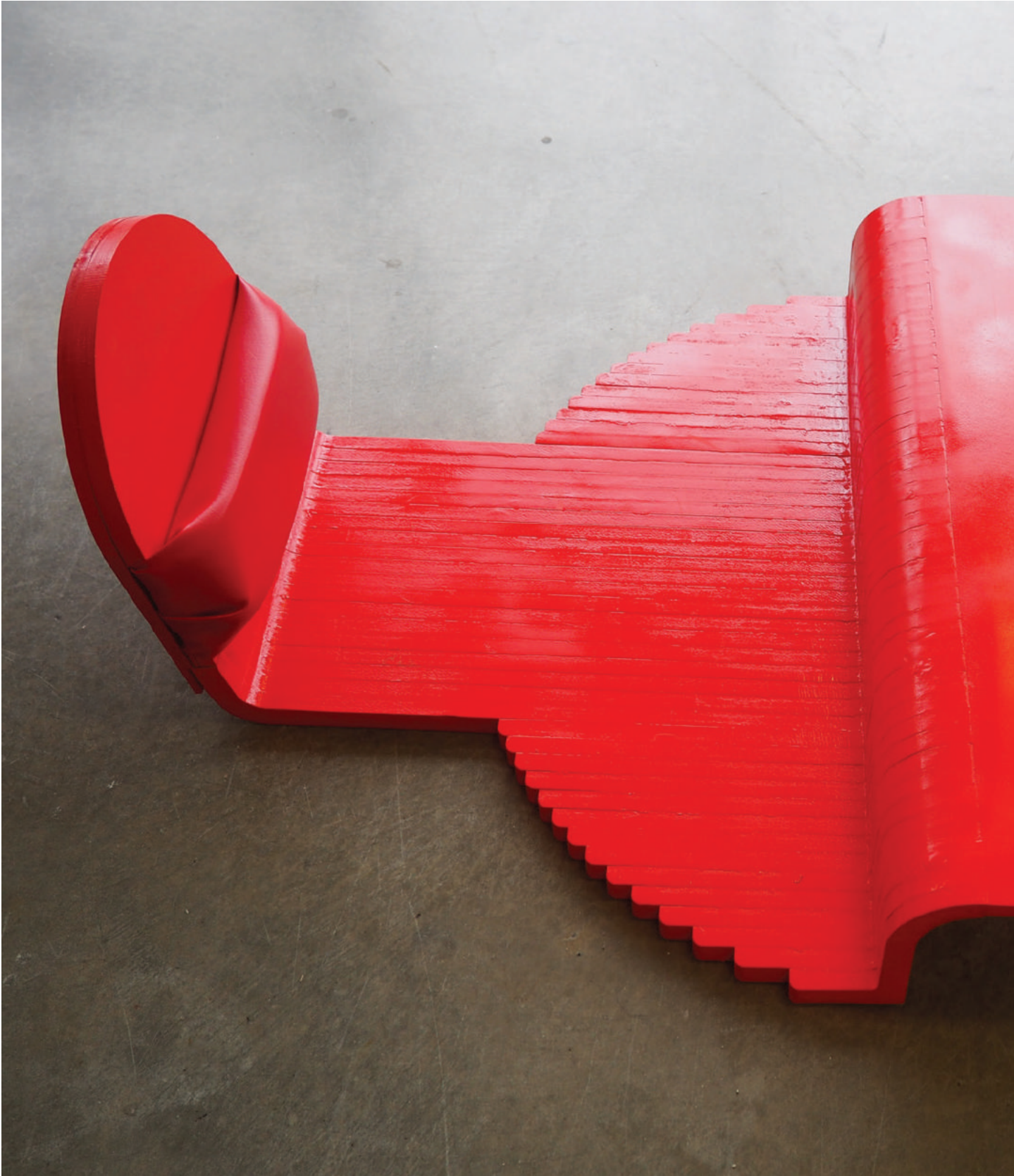
This is my family: my dad Nathan, my oldest cousin Addison, and my grandmother Mary. This picture is from Thanksgiving and my favorite space in the world: the basement kitchen of my grandparent's house in Lincoln Park. For those who don't know, Lincoln Park is a neighborhood outside of Detroit. This is my favorite space not because of all the natural light and the granite counter tops, but because I was for a brief amount of time before my sister was born the only cousin small enough to fit in the pantry under the stairs from where I would fetch things for my grandma as she cooked. In fact, there is no natural light or windows in this room, and my dad carves a Thanksgiving turkey on the washing machine, not granite countertops. This is not the kind of programmed space I've seen and studied as an architecture student, but despite my education, it has remained a precedent for my values and design work.

This is my family at the Thanksgiving day parade in Detroit, one that I attended every year with my cousins, aunts, and uncles, from when I was born till the start of the pandemic. We would always set up shop at the same spot every year, in a nook of the Fox Theater at the corner of Woodward and W. Colombia. My cousins, sisters, and I would sit on blankets along the curb and my dad would pull our Radio Flyer wagon into the back of this little nook with a big thermos of homemade chicken noodle soup that we would all sip out of togo coffee cups to stay warm. My cousin Matt is holding one in this photo.

This moment, this memory, is what this thesis advocates and works for—the moment when prescribed architecture meets real life through food and relationships, encounters between structure and coincidence. Designing in a way that enables human place-making and ownership.

In both the overarching food systems in the U.S. and the localized organizations present in Detroit, policies and procedures have caused an intentional separation between producers, eaters, and the very food itself—contributing to systematic injustice in Detroit. This thesis works with already intentional efforts in situ to promote food sovereignty across the city.

The thesis began at the scale of the body by developing a small fleet of urban furniture, meant to appropriate the urban landscape for a meal or public gathering. This piece, the curb table, was inspired by the Japanese low table, and a personal experience of sitting at the curb and sharing a meal with family. Other members of the fleet include a small dining table that overtakes a pylon and a standing cocktail table that latches into a manhole cover.

A series of food follies were developed that relate to various elements of this specific food space and experience. These were then deployed and scattered across the chosen site: the neighborhood surrounding the development of the new Detroit Food Commons, a co-op grocery store and project by the Detroit Black Communities Food Network. These follies began to fill gaps in this urban space by adding color in backyards, promoting gathering, sharing, and learning about food in an intentional way. Along with some designed follies, there was an intention to highlight existing "follies," like park charcoal grills and food trucks, which oftentimes are already doing the work just as well.

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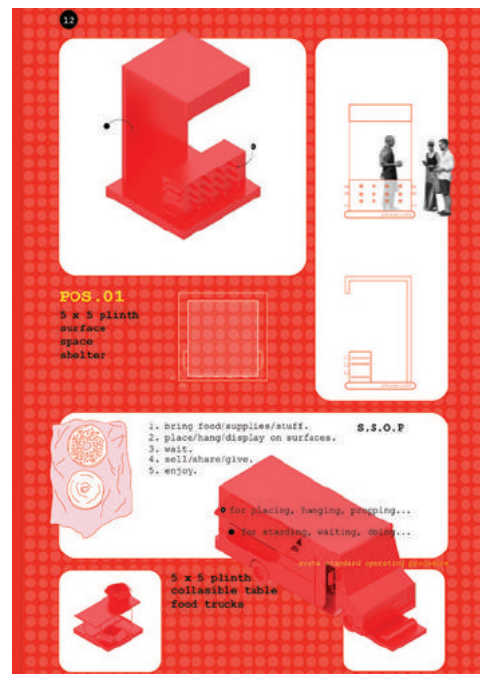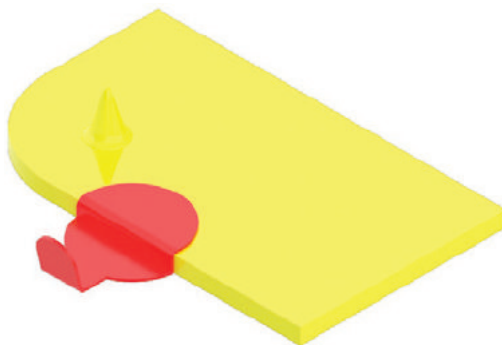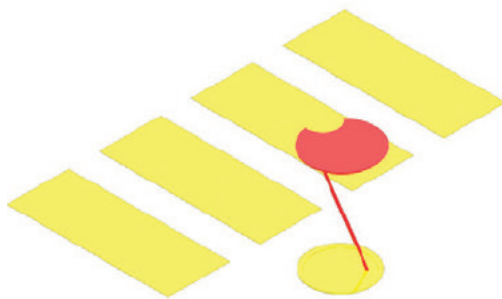
14

F.E.E.D.
food, education, & equity for Detroit

food sovereignty
agency & access
interfacing
transparency
convivial distribution

LV.01
public education & access to
promote community agency.

- a large format
     cooking/food classes
- b rentable
     commercial kitchen
- c rentable
     show kitchen/dining
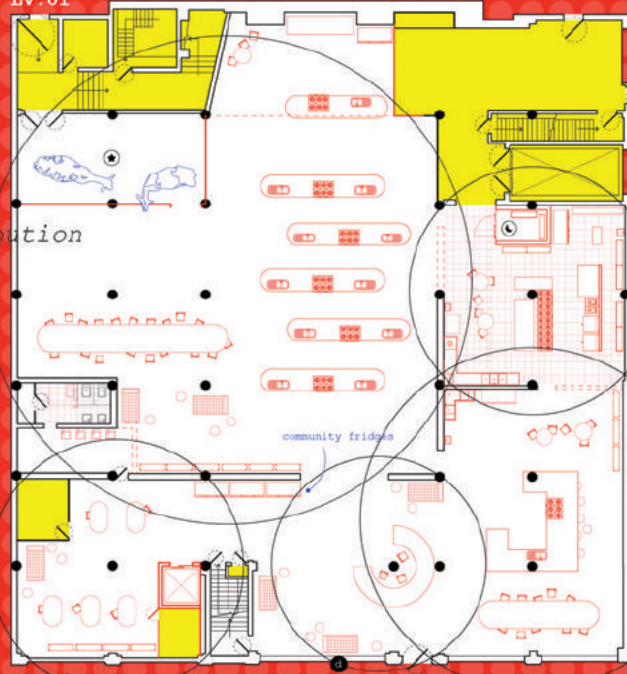- d lobby
- e offices/admin

LV.02
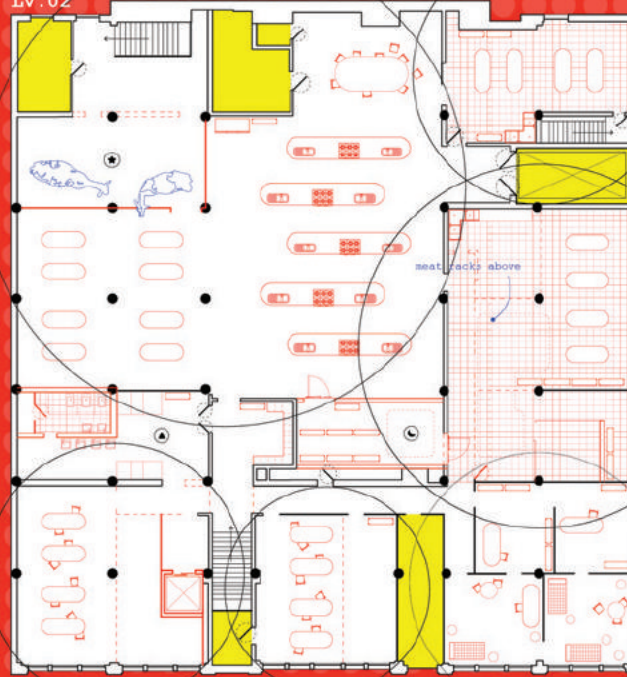a culinary school of sorts,
to encourage generational knowledge.

- f large format
     cooking/food classes
- g cold room
- h butcher
- i lounge/offices
     chef in residence
- j classroom .01
- k classroom .02
- ✴ livestock pen
- ☾ walk-in
     refrigerator
- ▲ student changing
     space

BOH
existing
new
demo

adaptive reuse
29,654 sqft

^site

LV.01

community fridges

LV.02

meat racks above

Finally, a series of built projects were developed with the main focus given to their programs and intention. The first is FEED, a food education and exposure center in a building that is currently for sale adjacent to the new Co-op. This adaptive reuse project includes a space for cooking classes and as well as various types of kitchens, fully stocked with equipment. These kitchens are rentable by members of the community to host a dinner party or by small businesses to cook large batches of food, both of which wouldn't otherwise be possible in their own homes. On the upper floor, a culinary institute complete with a proper butcher shop and spaces for local and visiting chefs-in-residence allows for the sharing of experience and the creation of generational knowledge, exposure, and appreciation for food.

A farm-to-table Coney Island, a popular existing restaurant model in Detroit is presented with a twist: a kitchen with space for the production of homemade sausages sourced from nearby stockades, thanks to the students at FEED, and a small urban garden for fennel, complete with F2T.01s (the planter box folly).

An urban farm and fishery engages and expands upon another existing initiative on the site: the CDC Farm and Fishery, which has been closed for quite some time but was previously Detroit's first licensed aquaponics facility. This thesis imagines a reopening and expansion of the Farm and Fishery, complete with an urban green roof farm and aquaculture tanks. The nutrient-rich water from the fish feeds the crops, and the crops then filter the water to replenish the tanks.

Across the site, the various elements work together to promote a food commons, a space where food and resources are shared, transparent, and understood. The scales and tactile nature of the work evoke the relation between a family meal and the infrastructural systems that govern relationships and understandings of food, blurring the lines in order to dismantle preconceived notions, provoke systematic change, and spark joy and engagement between each producer within the food commons.
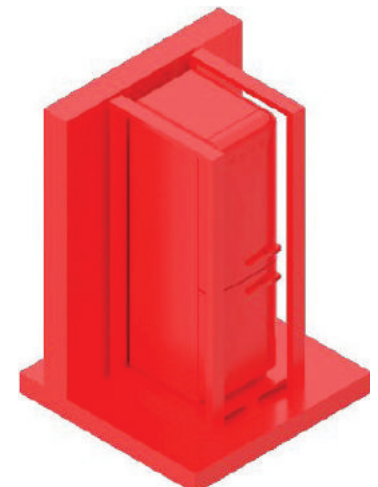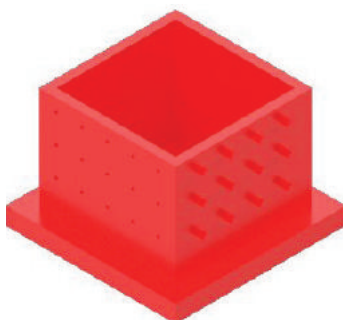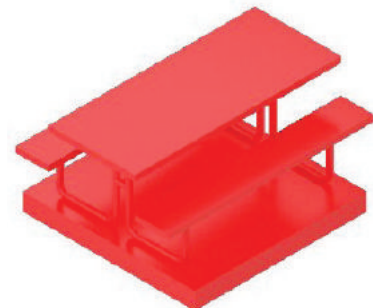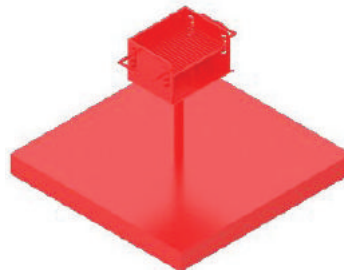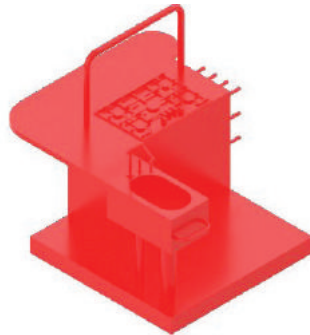
ELISA ITURBE

ON CARBON CULTURE

Elisa Iturbe is a researcher, writer and educator currently serving as an Assistant Professor at The Cooper Union. Her research is focused on the relationship between energy, power, and form. Her writings on these topics have been published in AA Files, Log, Perspecta, New York Review of Architecture and Antagonismos. Iturbe visited Taubman to give the Form Studio Lecture, with Dimensions in conversation with her right after the lecture. Books peppered throughout the conversation include Donna Haraway's Staying with the Trouble, Kathryn Yusoff's A Billion Black Anthropocenes or None and Iturbe's own book, in collaboration with Peter Eisenman: Lateness.

DIMENSIONS 37: What have you been up to and what have you learned most recently from the exhibition, *Confronting Carbon Form*?

ELISA ITURBE: I did learn an enormous amount from putting that work together, and as I alluded to in the lecture, I had only written about carbon form before. I think part of that work was also developing a visual language with which to speak about this topic, and finding through drawing and models, that actually was the best way to explain what the spatial and the formal qualities are of carbon form. For me as an educator, my academic trajectory has also been very much oriented around architectural language and my formation was that. In my early teaching I was teaching with Peter Eisenman, and I was teaching formal analysis.

So a fundamental question for *me* is: How do you make work that embodies the spatial and the formal qualities that you want to talk about? That's really what you do in formal analysis, right? Now that usually is associated with a very particular kind of grammar, or syntax, or representational modalities. For carbon form, of course it had to be different because we were looking at different ideas. But it was very interesting to think about how I can make work that would embody the spatial qualities that I wanted to talk about. So that was an enormously important

project for me, and my own thinking as well, in the development of my own pedagogical framework, and how I am thinking about these ideas themselves. The other thing is that once you make work like that, you start to see things that you couldn't see when it wasn't in the physical world. You know, in your head you can only see so much but as soon as you make it physical and you look at it, and you turn it around, see it from different angles, you start to see different things. I think that the production on the series of spatial concepts, is the only way in which we could really develop the five spatial concepts that we landed on was by doing hundreds of drawings before we arrived at the five, right? So I think I learned a lot of lessons also about how to work with the visual languages that we have as architects to continue pushing concepts.

D37: How are you differentiating overcoming versus confronting?

EI: Great question, and in some ways, in terms of the trajectory of my work, maybe they're out of order because the first thing I published was about overcoming carbon form and I sort of stated this as: "This is the project." I think often the question that I get is, "Okay. So what are you doing to overcome carbon form?" But I think that I realized basically immediately upon publishing that essay in *Log 47* is that we can't do the work of overcoming if we

haven't diagnosed or understood what carbon form is in the first place, and that's where the project of confronting carbon form emerged, or so confronting came after overcoming my own process. I think it has to be the other way around. In order to do the overcoming, you have to do the confronting, and that has to do with the fact that if we don't identify carbon form for what it is, we may not have the wherewithal to understand that we're continuing to replicate the same paradigm, right? That's the whole premise of this work, to bring to the conscious level what has not been operating at the conscious level, and *because* it's not, it's perpetuating carbon modernity. I think the work of confronting is that with historical work it is projective. It's the foundation of what comes next, and of course, you know, you can only do so many things at a time. In the past five years, most of the work has been historical, and I think in my own work the design chapters are just opening, the overcoming is just opening. But I had to do this other work first otherwise, you know, you won't know what to do [laughs], right? So that's kind of how I see the relationship.

D37: You mentioned *Log 47*, which is peppered with references to Donna Haraway. How do you define the current epoch?

EI: In my opinion, Donna Haraway has a whole framework for thinking about these

things in many ways, while my work is more simple and really just trying to work with the framework of carbon modernity as a point of departure. I think that maybe the question of staying with the trouble has something to do with the confrontation that we're talking about here, and I think sometimes there's a lot of "sustainable design" that imagines the work of the architect is to be the most imaginative person in the room. So to say, "I can just pull these alternative futures out of my head and draw them and, you know, we're going to live on little islands on the sea and we're going to do all these things", but if you don't do that work of confrontation, again, you don't see how that actually is not a very new idea. That actually is totally embedded into still industrial modes of production, the separation between a sort of productive class and an appropriative class, right? There are all of these ways in which if we're not careful, the work that claims to be so speculative,and so radical, is actually in many ways some of the most conservative work that you'll find.

So in my mind, staying with the trouble has to do with the constant reminder of what we're working with, and always remaining present with those problems will help us understand whether what we are producing is actually new or simply new instruments for existing practices, and that's a distinction that I think is very important.

D37: In your talk today, in which you're condensing years of work into a 45-minute lecture, you position yourself as a voice to distill these carbon modernity-like discourses, but you've set it for architects specifically. How do you start to tell others about this and maybe people that don't understand our lexicon of architectural terms what we would talk about as opposed to real estate developers or just other designers?

EI: Well, I think that has something to do with the work of translation that architecture—or rather what architects need to do when architecture is getting put out into the world. In some ways, it involves reimagining practices, in some ways it involves rethinking who we want our clients to be, but it's not simple. I think that a lot of contemporary practices are finding that in order to do what we want to do, there have to be different financial models. I think for a long time it was kind of thought that the way to get sustainable work into the world was the way to convince the developer,

which meant you had to make sustainable things cost effective, which could be done through technical efficiency, and so I think that that is a very limited way of looking at what architects need to do.

So how do we get outside of that? In part it has to be thinking outside of the model of development but I also think that drawing has an enormous impact, and I think about this also in the conversations that I have had with legislators in some of the activist work that I do. I do find that in architecture sometimes we say, "Well, the policy has to come first because when you're in practice," policy is such a big constraint over everything that you can do. However, in a conversation where you talk to a legislator, you realize that legislators are working with a very small staff that is overworked and underpaid, most of whom don't have very specific knowledge about the built environment. So in that context, it's actually really useful to be someone who has the kind of training who not only understands why and how buildings are built, but the history of the built environment itself, and the ideologies that are embedded into them, and the kind of politics that get translated through built form or embodied through built form, that's a kind of set of knowledge that only architects have, because we study—and not to say because we are special, but that's just simply our area.

So my question is also how we bring that knowledge into environmental work and how we can become a voice that says, "Okay, like we understand that there are processes by which space is produced that are charged. They are never apolitical, and they are always about power, and so can we be a voice that thinks about the redistribution of power when we are thinking about the redistribution of space." So sometimes in a certain room, you won't be able to use those words. You will have to use different words. But I think that that's really just a question of translation. For me, it's more important for us to have our ideas in place, and if you are seeing things with clarity, you will find the words when you get into the room where the words need to be slightly different. I have found that in my own work as well, but sometimes again, it goes back to maybe the question of representation. It's more powerful than we think. What are the ways in which Le Corbusier convinced people to build all his crazy ideas? By drawing them, right?

Parking Garage over the Seine
Konstantin Melnikov, 1925.

Havana Radically Reconstructed
Lebbeus Woods, 1994.

Akron Art Museum
Coop Himmelb(l)au, 2001.

Confronting Carbon Form: Against Gravity

Through their form and composition, these paintings depict a resistance to gravity. Acrylic paint on paper, based on above precedents.

Confronting Carbon Form
Elisa Iturbe, Stanley Cho, & Alican Taylan
Exhibition at The Cooper Union

Proposal for the Planning of Magnitogorsk, competition drawings, by Ivan Leonidov, 1929.
Konstantin Melnikov, 1925.

Linear City
Peter Eisenman and Michael Graves, 1965.

Arrival of the Floating Pool
Madelon Vriesendorp and Rem Koolhaas, 1978.

Confronting Carbon Form: Infinite Territorial Expansion

Through their form and composition, these paintings depict 'infinite territorial expansion.'
Acrylic paint on paper, based on the above precedents

D37: Yeah.

EI: So I think we can't underestimate that, but we also shouldn't fetishize it. I think we have to confront all of this with an enormous amount of humility. Sometimes I worry because basically what I am saying is that architecture has to participate in the overturning of a world order. [Laughing] I worry that I sound like I am a little maniacal myself. But I think in many ways it's the opposite. It's recognizing that architecture can be so powerful that you have to work against that and you have to be very strategic. You have to keep a cool head, you have to be very humble, and you have to recognize that at any given time architecture can be co-opted for something that is not what you intend. So I think it's really about maintaining a very high level of priority around these questions and understanding the entanglement between space and power with as much humility as possible. [Pauses.] Things can go wrong very easily.

D37: So in one of your interviews you spoke in depth about carbon form. I'm going to merge a few questions: How do you define this with respect to fossil fuel use in terms of accessibility and mobility that you spoke about back in the day in terms of energy, and how do you think that does affect the architecture? I mean did it affect back then and now? Also, you spoke about climate change and special organization. How has your role in teaching the subject helped you delve out some sort of research? As your work seems iterative, you try a lot of things and then you probably have a way of developing some sort of questioning during this process. How has your research led you to *Log 47* and more questions during this process?

EI: I think the goal of the carbon form theory is to draw a correlation between energy and space, and understanding that there is a way in which the relationship that human society has with energy is indexed by the built environment. So if we understand the different energy paradigms that we've had, you can see that the fossil fuel paradigm has a very specific spatial expression, and so the goal of that is not just to identify it for the sake of it, but to understand that also what needs to happen is another energy transition. Right? That's what needs to come next because the fossil fuel paradigm is no longer tenable, but the current spatial paradigm is actually holding the energy paradigm in place. So that's a really important

part of the reciprocity between them. As I said in the lecture earlier, it's not just about saying that energy produces a certain kind of built form; built form also then reproduces that energy paradigm because now that everyone is distributed in space in this very particular way and just to survive, just to live, just to go to the grocery store, you need an enormous amount of energy. So the important—or there are many important aspects of recognizing this, but one of the most I think is that idea that carbon form then holds the energy paradigm in place or reproduces it, let's say, or even magnifies it sometimes. It becomes very difficult to live in an alternative way or to even imagine alternative ways of life because we're so constrained by the realities of the spatial structures that we live within.

So that's where the notion of mobility also becomes very important because the built environment predetermines how we move through space, and how we move through space will then require certain amounts of energy. So I think that it's not just about fuel efficiency goals, it's not just about solar panels on buildings; it's recognizing that where those buildings are placed and the ways in which they are connected reproduce the energy paradigm by producing energy needs, and so there is a way in which all of those things are then interconnected.

D37: Could you elaborate a bit on your role in teaching and how that has led you to develop research, which led to *Log 47*, and also develop a good enough set of more questions?

EI: Certainly teaching has been instrumental to developing this. Actually, I should say that the carbon form concept emerged as a pedagogical framework. I was hired at Cooper Union five or six years ago by Nader Tehrani, who asked me to teach a course on the environment, and at that point, I had graduated from Yale with a joint degree; I did the Masters in Architecture and a Masters from the School of the Environment as well. My perception of having done that joint degree was that there was this enormous gulf between these two areas of thought. You'd think that in the joint degree, you would be able to bring them together, but if anything, it made me realize how far apart they were.

When I was asked to teach a course on the environment, my first thought was, "I need to teach the relationship between climate change

and space because that is the thing that I feel like is missing in our environmental discourse." It's the thing that's preventing architects from feeling that they can really work on this, right? So when I was in school, it was a little bit like, "Oh, yeah, I mean sustainability, blah-blah-blah. You don't really have to learn it because you'll go into practice and you'll hire consultants and the consultants will do all the things."

I was very dissatisfied by this. Also, what I did with the environmental degree was a little bit different. I was looking more at environmental humanities and I was doing more political and social theory, trying to understand the roots of the climate crisis. That to me was very dissatisfying, and so the term carbon form was something that I simply invented for a class. It was something that I wanted to use to say, "Okay, this is how I'm going to teach this." So it was always a teaching project, and then of course, I realized that there was more to say and I started writing about it, and then, you know, it became the project that you are seeing now, but teaching has been instrumental to it.

There have also been really specific conversations with students that have made me see things, where a student will ask me a question, especially in the early stages when I was still working this out. They would ask me a question and I would say, "That's an absolutely essential and important question." Then that would lead my research in a particular direction. So teaching has always been central, and I think that in part because discourse is central. We have to talk to each other about these ideas and we have to continue to develop them. I see teaching not so much as me delivering information to a group of people, but as a conversation, and for that reason, I think of it as absolutely essential to the project.

D37: Can you speak to the role of non-anthropocentric narratives in pedagogy?

EI: Yeah, I think about that relative to a larger history so I would say that asking how we arrived at such an anthropocentric way of thinking is interesting to me and looking at the kind of rise of one particular kind of point of view. In my classes, we spend a lot of time talking about the onset of carbon modernity, and that means that we're not just talking about the steam engine; we're actually talking about colonialism, early capitalism, enclosures, the formation of the working class, the dispossession of people from their land. Without looking at that, it's hard to fully grasp the nature of carbon form's abstraction, which I think that maybe that's where you arrive at a very anthropocentric point of view. Because the dispossession of people from their land, relocating like the biological processes of human life into apartments, and the block structures of a city; all of that is a kind of abstraction that removes us from the ecosystems that we actually rely on. So I am very interested in that process and that history of removal.

So for me, I am less interested in some projects now in contemporary architecture that are about interspecies cohabitation without asking those fundamental questions of where and when the species got removed in the first place, right? Like when we started to live in such an isolated way where we started to believe that we live in these hermetic boxes with no other animals except maybe a dog or a cat, and I think for me, it's also not just a question of how we live with other species, but how do we live relative to the land. So I think in some ways maybe in my own discourse I prioritize questions of land over interspecies interaction because I assume that the conditions that you need to have interspecies interaction have something to do with rewriting our relationship to land. So in that way, the questions of property become very important to me. Like it is a total ecological fiction that you can draw lines on the ground like that, and it's not to say that societies that didn't have private property before didn't have boundaries, but boundaries were always movable and they were negotiable because it depended on what was happening with the herds that you were hunting, it depended on what was happening in the ecosystem, it depended on whether there was a fire, or where you were kind of— where you were planting something, or where land was fertile. So I think we have to return to these fundamental questions around land and what is our relationship to it in order to rewrite that narrative around anthropocentrism.

D37: In your book *Lateness* published with Peter Eisenman, how do you relate the term lateness with respect to climate change? Do you think it does address architecture and do you define what we need versus what we want? Can in some capacity, architecture

Tlatelolco Site Plan
Mario Pani, 1964.

Berlin, capital city
Le Corbusier, 1957–1958.

Galesburg Country Homes
Frank Lloyd Wright, 1946–1949.

Confronting Carbon Form: Object Primacy

Through their form and composition, these paintings depict 'object primacy.'
Acrylic paint on paper, based on the above precedents

be seen as a requirement for some sort of proprietary needs and not just a way to portray something specific?

EI: I actually love this question. In part because I think it seems on the surface, like the work of *Lateness* and the work of *Carbon Form* are wildly different from each other. But actually if you notice, they are both about asking: How do we read architecture, and how do we understand paradigmatic change in architecture? The argument in *Lateness* is that paradigmatic change isn't always what you think it is in some ways. Like there is a kind of oversimplified narrative that we have about the modern, right? In part because of the grandiose statements of people like Le Corbusier who often say, you know, "We're rejecting history and doing everything new." And so that's a huge oversimplification that obscures the roots of where change is happening and how change is happening, and so both the work of *Lateness* and the work of *Carbon Form* are about that kind of deep investigation.

The other thing about *Lateness* is that it's trying to argue something about where, you know, or actually, let me start again by saying like the parallel to music becomes really important there because what Adorno is doing in theorizing Beethoven is saying that the onset of modernity in music is not because Beethoven was so virtuosic that he could break all of the rules; it was that he was able to at a certain moment in time return to the rules and rewrite the internal syntax of music and change how conventions would relate to each other, thus producing the idea of the fragment and the fragment becomes kind of like the thing in modernity across all of the arts. That happens in painting, in film, the kind of movement towards fragmentation happens because there is a certain conception of the fragment that emerges in a particular moment in time, and the fragment is not just like something to fetishize in itself, but again, it's about rewriting the internal relationships of a musical syntax. So the work of *Lateness* is thinking about how that applies to architecture, which is also a discipline that works with a very, very specific kind of language. I think it goes back to trying to always stay attuned to the language that we're using because the language that we're using says a lot about how we see the world.

D37: To follow up again on *Lateness*, it addresses temporality. Temporality of space or temporal nature of *Lateness*. How do you think about this while referencing works of architects from probably different time periods? You speak about Adolf Loos, then you speak about Aldo Rossi's work, and then you also discuss John Hejduk's work. They are all from different time periods. So do you specifically think of them as some sort of anomalies in—and hence, you chose these three, and could you contemporize this *Lateness* in the current scenario? How important it is to think of this without the concept of time?

EI: The reason why we picked those three architects was because we—and we looked at way more than that—and there was a, you know, a slew of precedents that we had on our list to begin with moving from the renaissance into the contemporary. I think ultimately, each of those three represent important moments within 20th century architecture, and it seemed that focusing the argument on the 20th century would give us a kind of clarity around the argument. So within that, I am kind of talking about them as having a commonality of being within the 20th century, but of course as you say, they're each very different from each other. In *Lateness*, part of the argument is also that lateness can happen kind of at any time, right? So lateness is not a style and it's not a historical period; it's a relationship between a work and its time. So the attempt to work with three different architects was also about showing that and saying, "Okay, so we think of Loos often as pre-modern. But here are the ways in which we can think about him embodying the kind of—of the parapneumonic modern attitude." So in some ways, the work is out of joint with its time. You know, same with Rossi, same with Hejduk. So I think the point was to show that this disjunction with a specific temporal context is possible, kind of at any time if we would hope.

Now whether it's possible in the contemporary, this is a question that remains unanswered. Peter and I debated it quite a bit and we also taught both a seminar and a studio about lateness at Yale. So this conversation happened quite a bit with the students, and my answer is that it's complicated . I think we—Peter and I may disagree about it and the students may disagree with both of us. There are a lot of opinions, but I think that part of the challenge of thinking about lateness in the contemporary moment is that our formal languages have also changed because our technologies have changed. So there's actually a different attitude towards syntax and convention, and conventions are kind of coming from different places because of the way that we work and also even just the kind of industrialization of specific building parts have changed. Like the constitutive parts of buildings, right, so that the kind of authorship over syntax sometimes has changed because building products have kind of predetermined so many aspects of just your kind of tectonics of an average building. So I think the contemporary is a little bit slippery.

I think the other problem is that lateness requires reading a work relative to its time and in some ways we're too close to the contemporary to make the same kind of assessments that we made about the 20th century. So if anything, maybe that's the biggest difficulty in making a statement about the contemporary. However, in very early versions of the book, there was an idea that it would be called *Lateness* with the subtitle, "A Theory of the Present," with an argument that thinking about lateness in this way might help us rethink what paradigmatic change is and realizing that in many ways, we're still reiterating—and this has changed in the past few years, but I think when Peter and I were writing this, it was still true—that we were still imagining that like the production of new shapes was enough to kind of produce a radical architecture. Peter and I are very much against that position and so we were kind of also trying to argue that the sort of spinning of our wheels that we were feeling at the turn of the 21st century and with the kind of digital architecture that was kind of at its height when I was in school and also before, we were kind of seeing that as a dead end. So that was part of what we wanted to do with *Lateness* to—I don't know—there was an idea that it could be a critique of that. But yeah, as I was saying, I think that there are ways in which being too close to the contemporary prevents you from really doing the kind of reflection that we were able to do about the 20th century. So in the end, we just decided to let it lie and focus on the 20th century.

D37: Are you familiar with Kathryn Yusoff's *A Billion Black Anthropocenes or None?* At the end of the book, she asks five questions that she thinks are essential. So we wanted to ask you a version of those questions, which is: Where do you find the relationship between race and resource in a carbon paradigm?

EI: Yeah, I think that there is a very clear way in which the history of carbon modernity has produced both racism and racial segregation. I think the link between race and resource becomes essential with—in terms of understanding the colonial project, because there is a way in which racism enabled certain colonial powers to see people as a resource to be extracted, and also as an instrument by which to extract other resources. So then there's a very important moment in the history of carbon form where the causality of things has to be understood in kind of—again, it's not just unidirectional, right? Because I think the one danger in talking about or linking carbon form so specifically to fossil fuels is that it might be understood that the position is that fossil fuels are the cause of all of it and so that means that everything starts with the steam engine.

But actually, the steam engine is an instrument that was inserted into colonial and industrial social structures, and the role that fossil fuels play is to allow that to cement itself. It gives industrialists and colonialists like the power that they needed to basically—yeah, solidify the world order they were working towards. So you have to look at both sides of the origin point in that sense. Like if we think about fossil fuels as an origin of a kind, then you have to look on both sides of it because the context that happens before it is just as important as what happens after. So in some ways, when I first started looking at these deeper histories, I thought for a moment that maybe I had like disproven my own theory and I was like, "Oh, my God. Well, fossil fuels really like did—like all of this is really colonialism. Like that's the root of all of this." So then I thought, "Okay, well, maybe carbon form is not a thing."

But then I realized actually that what fossil fuels do is that they—or once fossil fuels are adopted, the thing that does change are the spatial structures, and I think in many—and not that there weren't spatial changes before then, but fossil fuels allow because there is a kind of an injection into the material part of both forms. They kind of allow the spatial structures to take flight in a way and you start getting like all of the train lines that you need to distribute all of these resources. Like it kind of allows the work of commodification to take off in a very particular way, so going back to the point about resources. And so I think that there—yeah, that's part of the work, right? Trying to understand how all of the history is much deeper than we think that it is, it's more complicated than we think that it is, but part of the work is drawing those relationships. So like as we were trying to understand why we have racial segregation still in the United States, that that has a very, very deep, deep history. We have to understand all of it in order to understand how it has to be unmade, and so it all does trace back to questions of resources in the end and our changing attitude towards resources under colonialism and industrialism where resources become commodities, they become ways of—or like things that we are kind of abstracting for the sake of a particular idea around the economy.

So I think all of that is really important, and that's what was at play in colonialism, and that's what's at play in even the very premise that a person can be enslaved or that that person then has to be employed to extract other commodities from the natural landscape. All of those things are interrelated.

D37: What is it that you are currently reading?

EI: I have been reading a smattering of things. I'm halfway through *The Dawn of Everything*. I haven't finished that yet because it's very long, but I'm halfway through that. I actually just also started a book on Bramante, and so maybe that tells you something about my continued interest both in the formal and history of architectural discourse and then my interest in these deeper histories of land and human settlement patterns.

D37: What is the one thing that is currently bringing you joy?

EI: What is one thing that brings me joy? So one thing I was trying to do this summer is to spend a lot of time with my friends, actually. That's something that I've been really trying to do. And in part because the work of producing the Carbon Form project as you know it today, has been a pretty heavy lift. So this summer actually after the exhibition I decided to spend a lot of time with friends, and so that's something that's been bringing me a lot of joy.
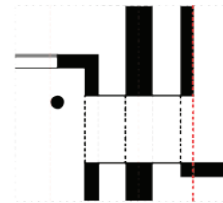
Lateness: Figure 19
Peter Eisenman + Elisa Iturbe
Princeton University Press, 2020.
John Hejduk, Bye House

EMMA POWERS

Thesis Advisor:
GEOFFREY THÜN

LICHEN BIO-FUTURES

Lichen Bio-Futures presents an architectural speculation depicted across a future timeline, investigating a reality shaped and driven by the urgency of climate change. The design project illustrates patterns and trends for inhabiting the distressed Earth through the evolution of self-sustaining technologies and new biomaterial systems. Extensive research and experimentation carried out at a new climate research lab near Sunset Crater in Arizona, led to the development of a new taxonomy of biomechanical climate interventions. Each experiment forms an amalgamation of organic lichen compounds and innovative machine technologies. These new architectural systems begin to shape and transform the ways in which human and non-human actors exist within their local environments as the global climate continues to change. *Lichen Bio-Futures* considers our place as humans within the intensifying era of climate change, raising questions regarding the balance between machinic systems, rapidly evolving technological innovations, and artificial intelligence, while speculating on future eco-centric design.

WRITTEN PRESENT DAY, 2050:
"A LOOK INTO OUR PAST"

Many regions across the globe were predicted to experience exponential temperature rise, resulting in increasingly unstable climates. The American Southwest was particularly susceptible to these effects, amplified by rapid resource depletion, extreme drought, toxic atmospheric levels, and decreased crop yields. Some specific micro-regions, however, remained within hospitable biomes and became new hubs for human migration and resource redistribution.

CLIMATE HISTORY

The design project reflects on the history and awakening of the climate crisis beginning in the late 1960s, drawing relationships between architects who acted in this time, important political policies shaping response efforts, and growing counterculture movements which began to raise public attention around these environmental concerns. In an attempt to mitigate increasing global pressures, the US government declared a war on carbon in the year 2029, intensifying efforts to rapidly realize solutions to the climate crisis. Soon, this federal initiative prompted development of the Lichen Bio Lab and Climate Innovation Center (LBLCIC), built at the edge of Sunset Crater Volcano, outside of Flagstaff, Arizona.

THE ROLE OF LICHEN

Lichens are a complex life form that support a symbiotic relationship between fungi and algae. In short, the fungi protect the algae, and the algae provide energy for the fungi. This partnership creates lichen, which can survive almost anywhere in relatively harsh environmental conditions. The U.S. government uses lichen as a "bioindicator," by studying the organic membranes within lichen cell structures and monitoring pollution levels within surrounding air and soil. This data helps scientists predict ecosystem shifts while also determining pollution resistant lichen species that have adapted to survive over time.

Lichen as Bio-Indicators
Measurments in atmospheric pollution
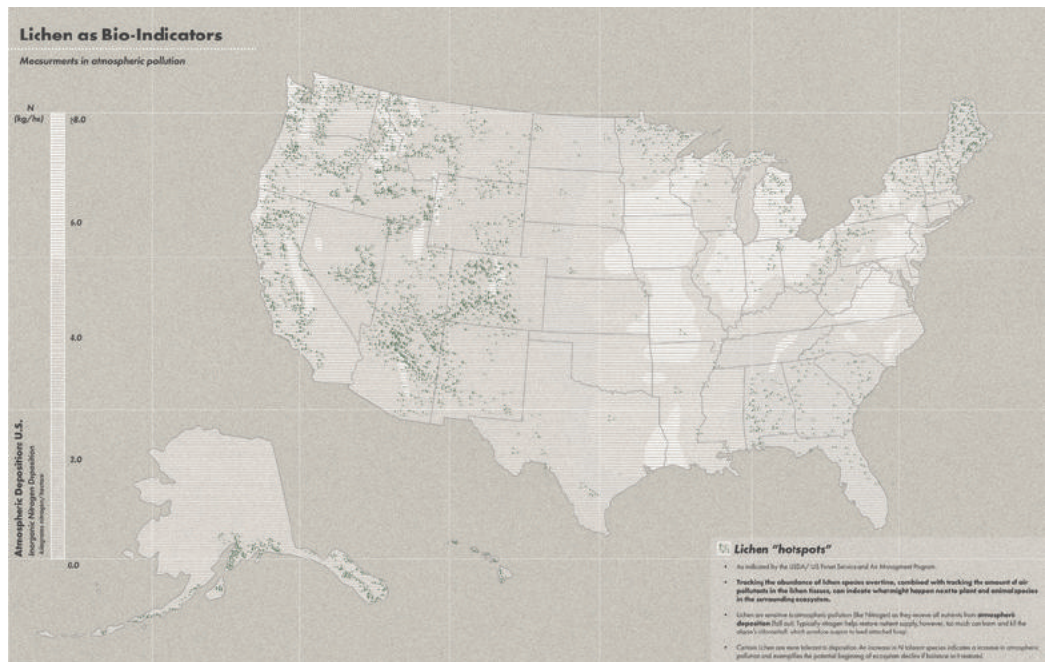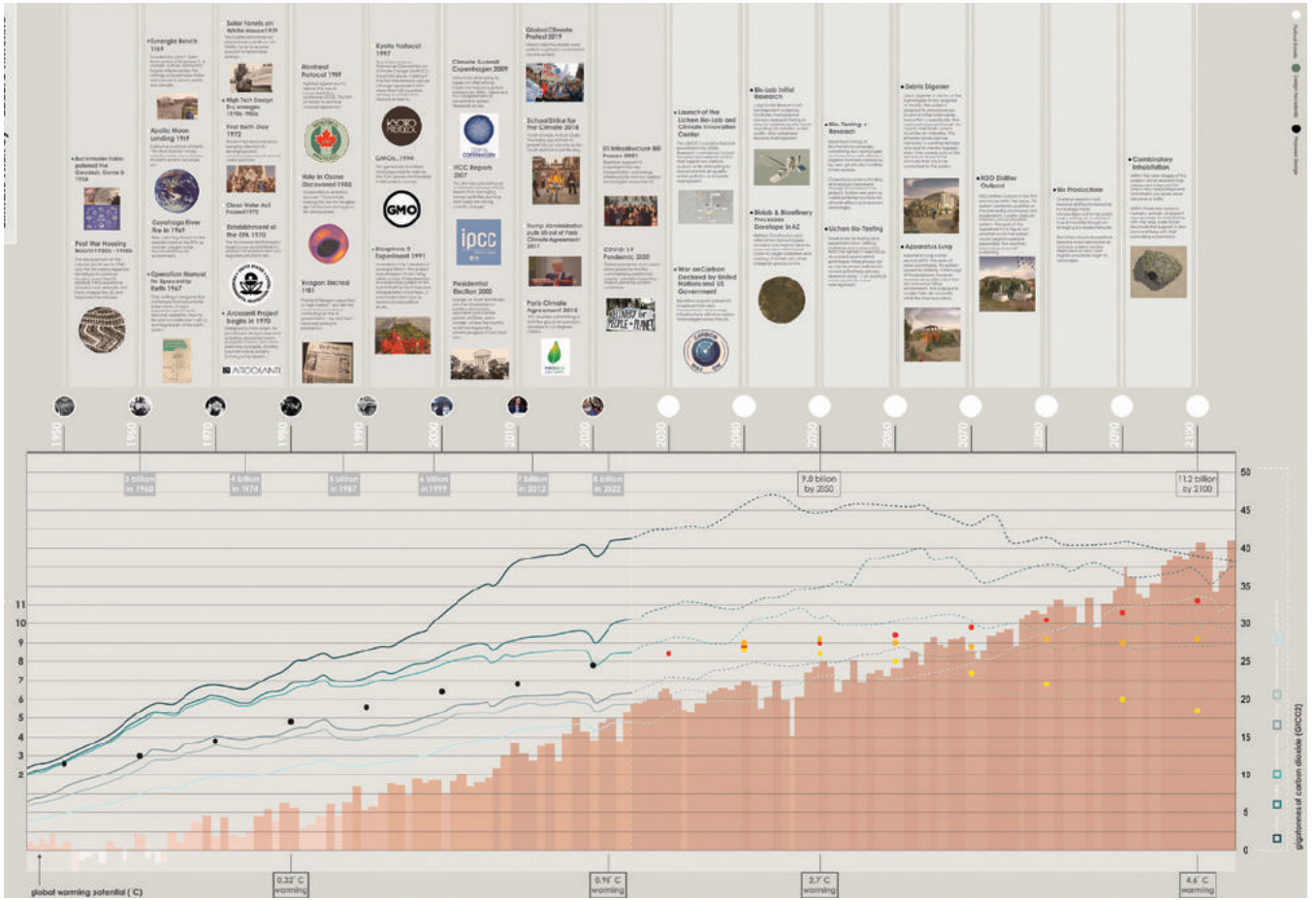
pollinator inhabitation
pollinators begin to inhabit the lichen structure around vegetation zones establishing symbiosis between the plants, critters, and humans

reptilian micro-environment
reptiles begin inhabiting the roots system surrounding the branchia gills which excrete moisture into the exterior lichen microclimate

aviary habitat
birds and frogs begin to gather and nest inside gaps within the lichen structure, finding water and nutrients within the metabolic pools
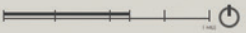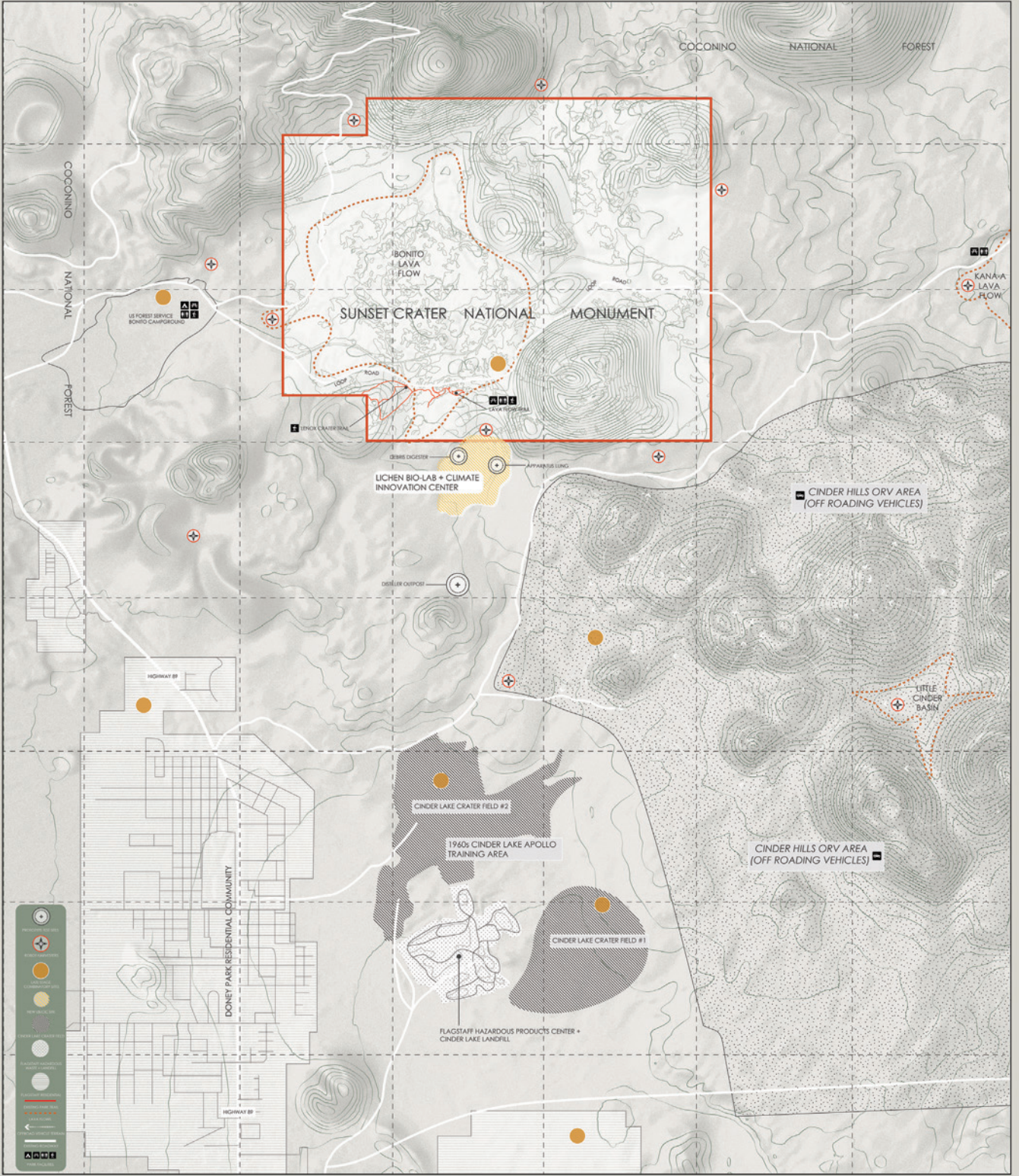
CREATION OF THE LICHEN BIO LAB &
CLIMATE INNOVATION CENTER

The location of the Lichen Bio Lab and Climate Innovation Center (LBLCIC) is situated within the constellation of many influential sites, including Sunset Crater National Monument and the 1960s Lunar Apollo training landscape—a site extensively altered to create a simulation for testing moon landings during the space race. The pyroclastic landscape surrounding the volcano has become home to over 170 documented plant species. Lichens are particularly common in the region, growing on pyroclastic rock, and excreting slow-release acids as a byproduct of their metabolism. The government therefore declared the LBLCIC be constructed, and climate research commenced within this landscape.

The LBLCIC was funded predominantly by government agencies like the Environmental Protection Agency and National Aeronautics and Space Administration, while partnering with the National Forest Service and National Parks Service to ensure protection and conservation over the landscape. LBLCIC was completed in the mid-2030s.

Refinery construction and lichen harvesting later began within Sunset Crater for the collection of materials and the cataloging of lichen along with other biological species. New design methods soon began to emerge as materials from the site were taken to the lab and dispersed into various phases for incubation and experimentation.

COCONINO   NATIONAL   FOREST

COCONINO

NATIONAL

FOREST

BONITO
LAVA
FLOW

KANA-A
LAVA
FLOW

US FOREST SERVICE
BONITO CAMPGROUND

SUNSET CRATER   NATIONAL   MONUMENT

LENOX CRATER TRAIL

LAVA FLOW TRAIL

DEBRIS DIGESTER

APPARATUS LUNG

LICHEN BIO-LAB + CLIMATE
INNOVATION CENTER

CINDER HILLS ORV AREA
(OFF ROADING VEHICLES)

DISTILLER OUTPOST

LITTLE
CINDER
BASIN

HIGHWAY 89

CINDER HILLS ORV AREA
(OFF ROADING VEHICLES)

CINDER LAKE CRATER FIELD #2

1960s CINDER LAKE APOLLO
TRAINING AREA

DONEY PARK RESIDENTIAL COMMUNITY

CINDER LAKE CRATER FIELD #1

FLAGSTAFF HAZARDOUS PRODUCTS CENTER +
CINDER LAKE LANDFILL

HIGHWAY 89

CLIMATE INNOVATION   LICHEN BIO LAB   SUNSET CRATER VOLCANO
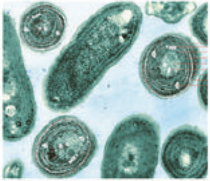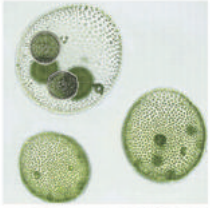
INSIDE THE LAB

Within the bio-refinement process, materials undergo a step-by-step procedure breaking down substances to the molecular level, converting them into beneficial byproducts. Inside the Bio Lab, materials flow in and out as lichen compounds are cataloged and experimented with, creating new biotech and material systems. A series of harvester robots were eventually introduced and programmed to detect undocumented plant species, harvesting minimal amounts of microbes and bringing them back to the lab for coding and genetic manipulation.

The scientists selected for this endeavor are dedicated individuals who cohabitate within dwelling quarters inside the LBLCIC Campus. Many have found themselves working within the landscape, analyzing and discovering undocumented plant and animal species, while others have found success in the computer sector, discovering generative algorithms for fabricating new micro-materials.
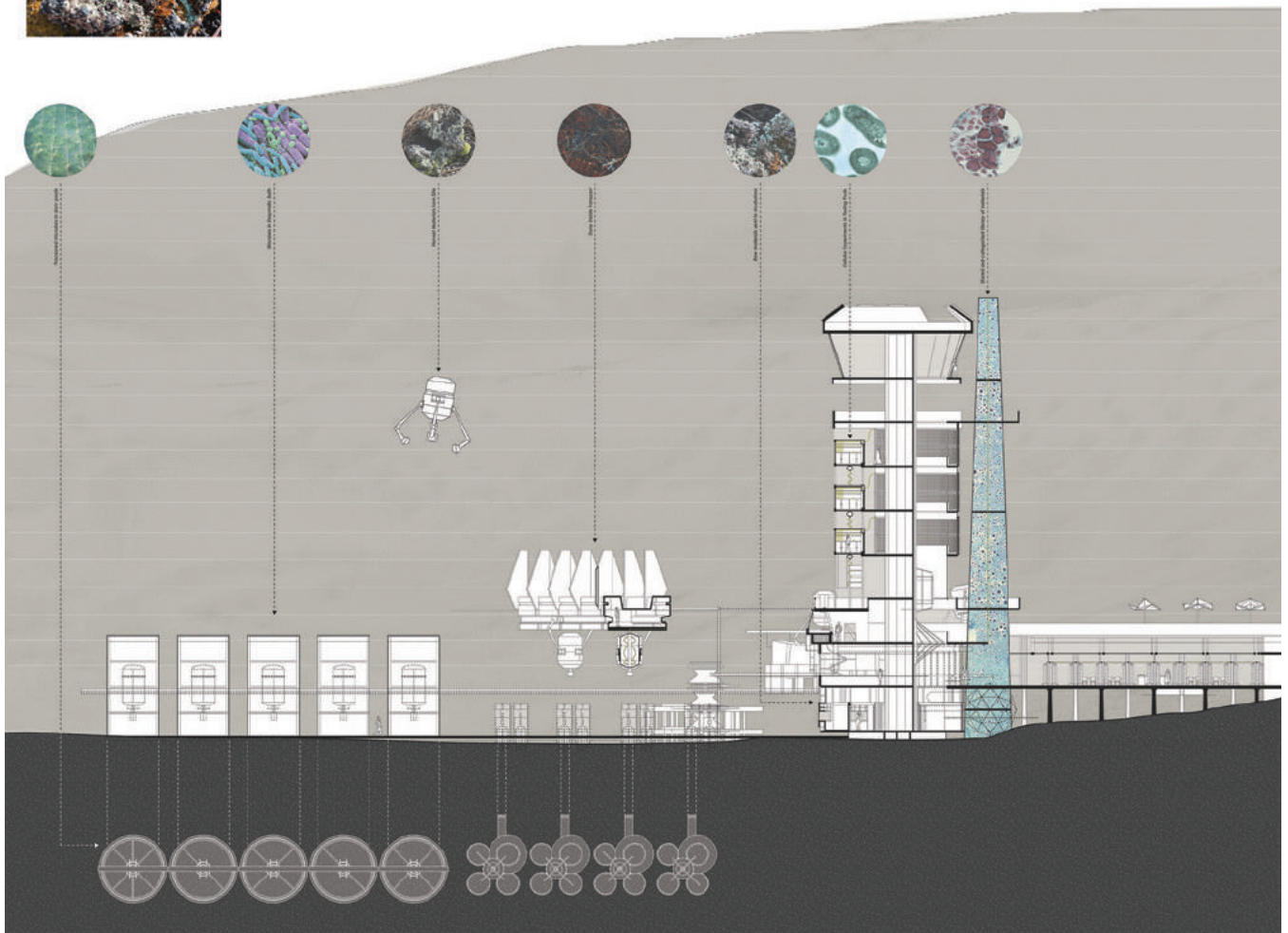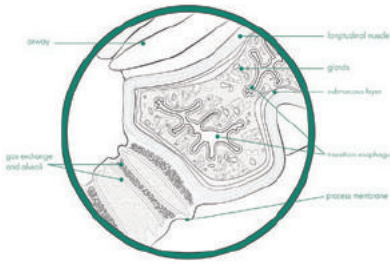
02 TRACHEA
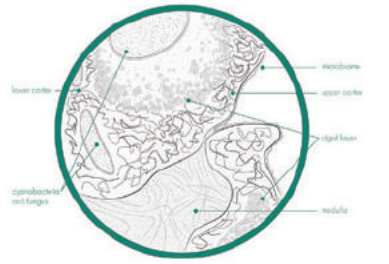
α FOLIOSE LICHEN STUCTURE
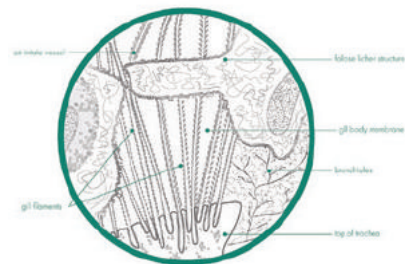
03 BRANCHIAL GILL
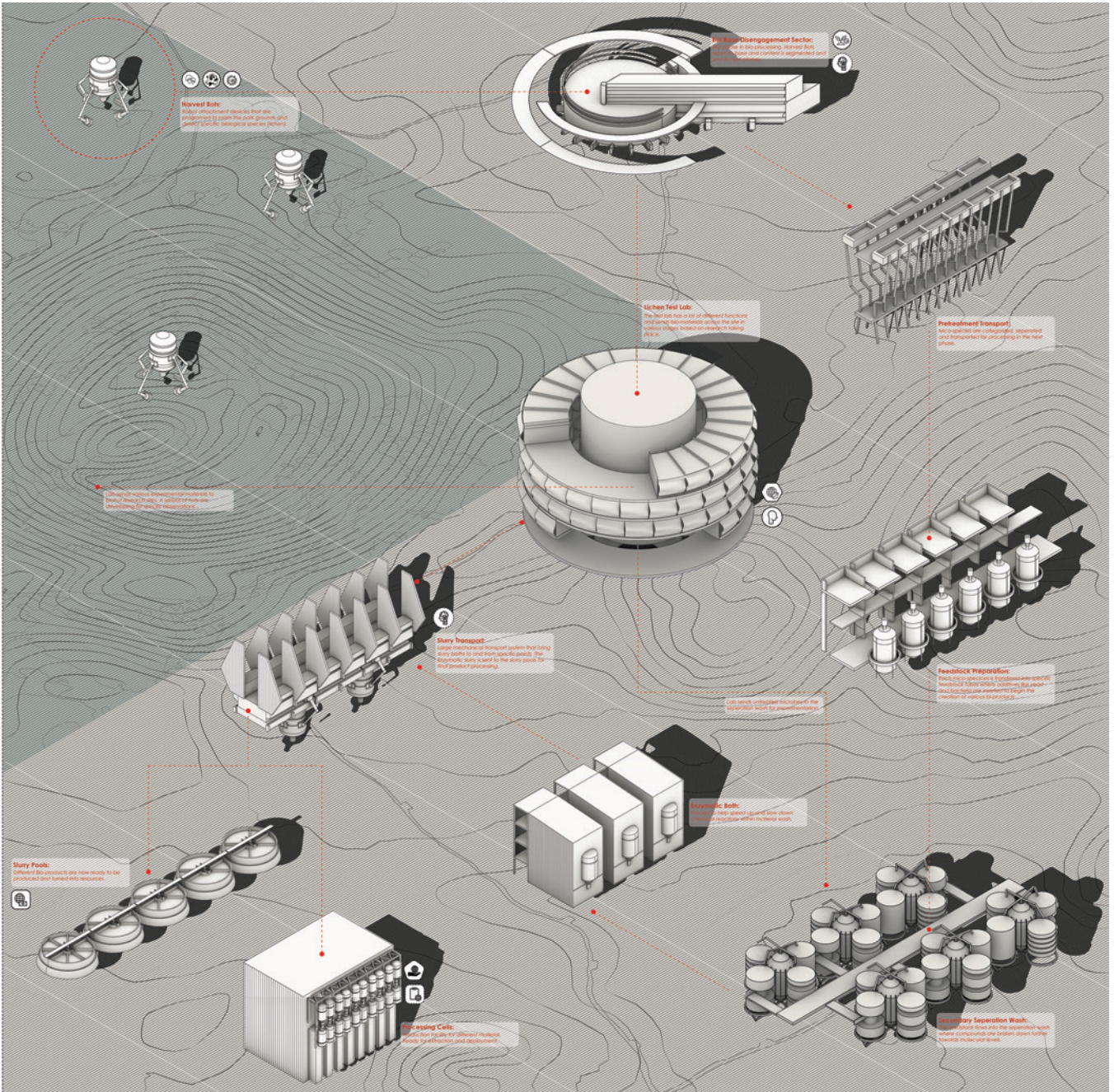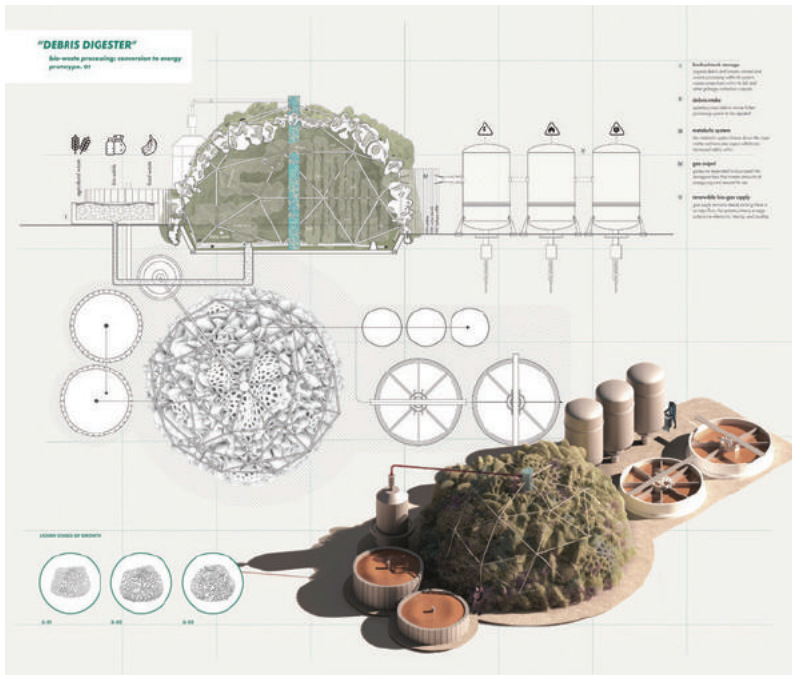
THE DEBRIS DIGESTER

The first of three prototypes designed at the Bio Lab. The system addresses issues of waste management, processing excess food and other waste products as an aperture at the site. The waste is processed through an organic metabolic system much like an intestine. The methane and emissions produced in the process are harvested within and turned into biogas that can be used as a renewable energy source on site at the lab, with the goal of being deployable as an aperture for building systems anywhere.
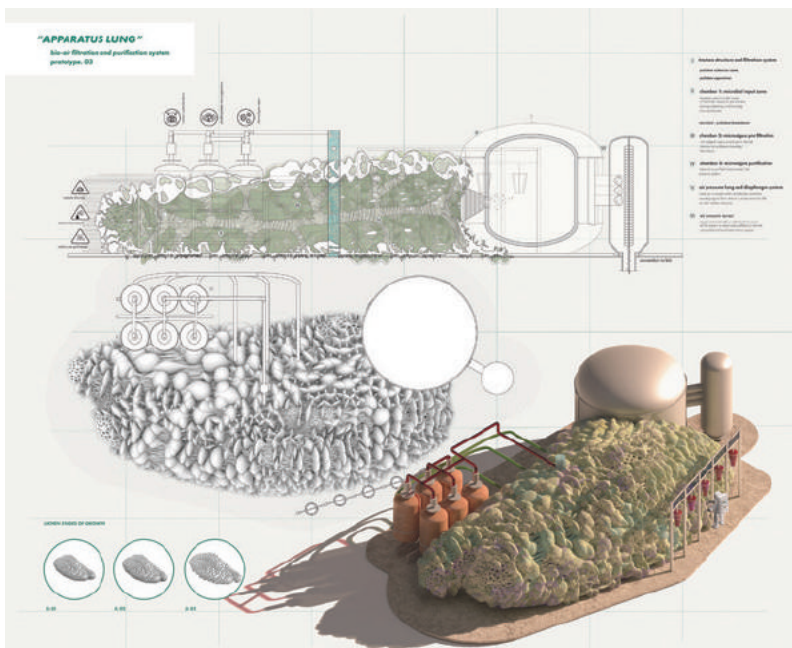
THE APPARTUS LUNG

This system operates as an air monitoring device, much like lichen does already; however, air purification rates are optimized within a trachea-like organic processing system, pulling in outside air and supplying fresh clean air to the lab. The lichen byproducts at this stage in the timeline are programmed and engineered to grow structurally and perform with new functions of their own.

INVENTIONS 2050+

As new research findings become more sophisticated, a series of hybrid living-lichen machine prototypes begin to take shape. These new bio-bionics are designed to test the functionality of slowly emerging organic processing systems, with the assistance of minimal machine intervention. Many iterations take place across the years as the scientists discover methodologies that address issues of waste management, air quality, and water pollution.

FUTURE 2070+

After many decades of experimentation and evolution of lichen DNA, a new structural system will emerge, with diminished reliance on machine technologies. Amorphic compositions will present themselves with purely organic functions, becoming subsistent entities. Their structures and organs will be like previous prototypes, with lichen foliose membranes, metabolic panels, trachea air filtration, and moisture control gills. Lichen DNA in this phase will be programmed to contain the right genetic code, allowing growth of all organs necessary to maintain the system self-sufficiently.

For these systems to grow, an excavated site will be planted with genetically programmed seeds. The top layer will wither while rooting takes place creating a coarse structure in which the system is erected. Metabolic organs emerge to generate increased energy, and soon other necessary organs will begin to appear. Once grown to a suitable scale, interstitial pockets will develop between organs and within the lichen foliose structure, creating rich environments that support symbiotic relationships between plants, animals, and humans who will then cohabitate within the space. Prior reliance on machines for operation will no longer be required as advanced, self-sustaining lichen systems begin to radically transform their environments.

Lichen Bio-Futures considers our place as humans within the intensifying era of climate change, raising questions regarding the balance between humans and machine systems, alongside our expectations for rapidly evolving technological innovation—all while speculating on future eco-centric design.

"H2O DISTILLER"
water capture, condenser, and filtration system
prototype. 02

THE H2O DISTILLER OUTPOST

The final of the three initial prototypes. In this phase, the technology has evolved to a point in which it can operate remotely from any other biotech system. The lichen structure has been reconfigured creating a multi-layer membrane which pulls moisture from inside and out of the system and brings it into an organic kidney filtration system, creating a supply of clean water. Gray water from attached building systems can also be plugged in and cleaned. The byproduct in this case can be filtered and broken down by internal algae and used as a bio-algae fertilizer for potential plant growth, while benefiting and regenerating surrounding soil structures.
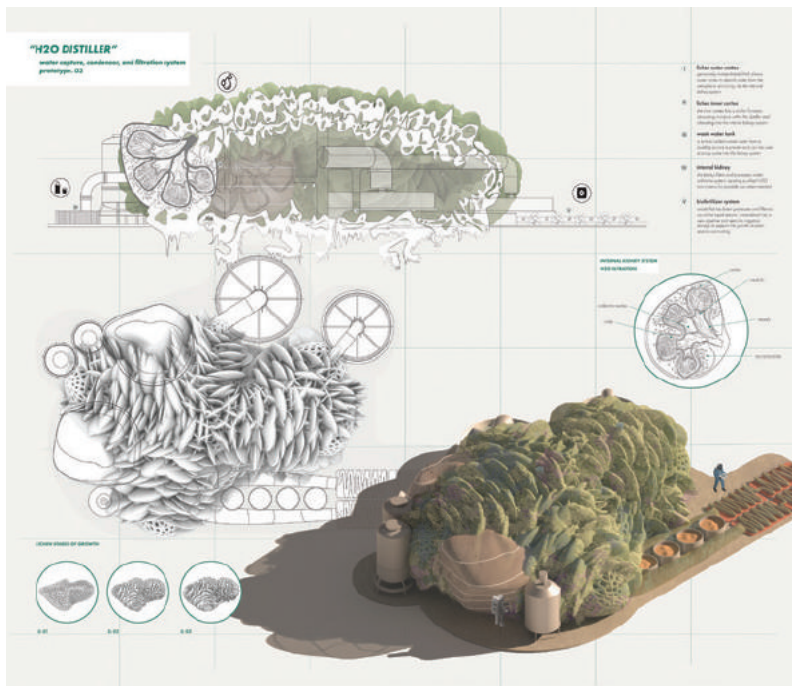
"COMBINATORY SYSTEM"

all three prototypes have evolved overtime. their functions have been programmed and designed to grow collectively and organically. new DNA establishes a network of organs that support one another, the combinatory system, and the ihabitants withinn.

organic phase

151
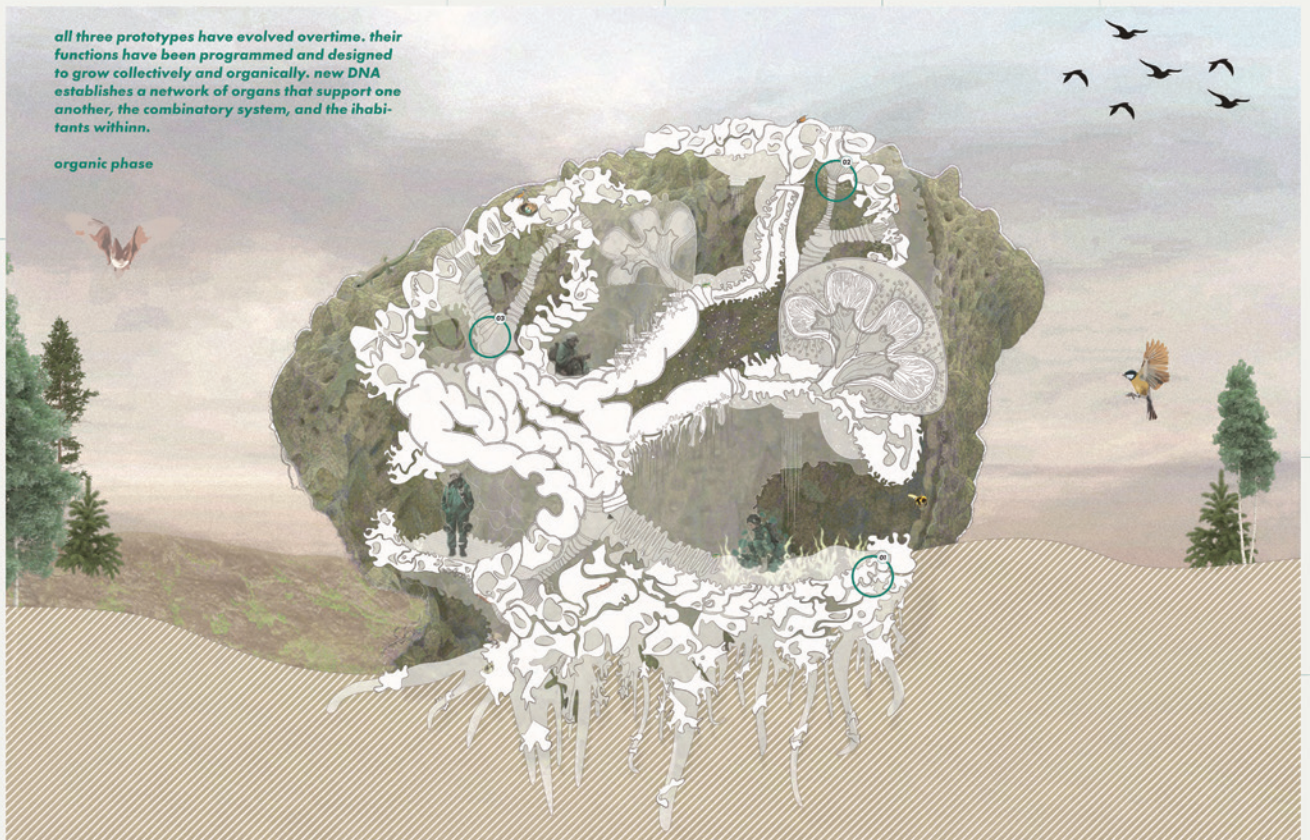
YICONG SHAN AND QINGYANG XIE

Wallenberg Critic:
ALINA NAZMEEVA

PINK COMMUNE

pink commune is an alternative cosmological fiction that emerges from the contested politics of digital space, hyper-consumerism, and an ever-growing repressive, dictatorial, surveillance-heavy institution governed by the fictional character: "the cowbirds." It is an invitation for its constituents to create, adapt, and formulate an antagonistic agenda to resist the overarching political domination of the cowbird. Through a combination of drawing, writing, animation, physical fabrication, and game as the medium of representation, this project acts as an abstraction of the real-world. Political symbolisms, satire, and a permit to critique what is otherwise forbidden endures.

pink commune ultimately reflects a state of conflict and resistance—a deviation from the norm and the one-world, single-narrative cosmology.
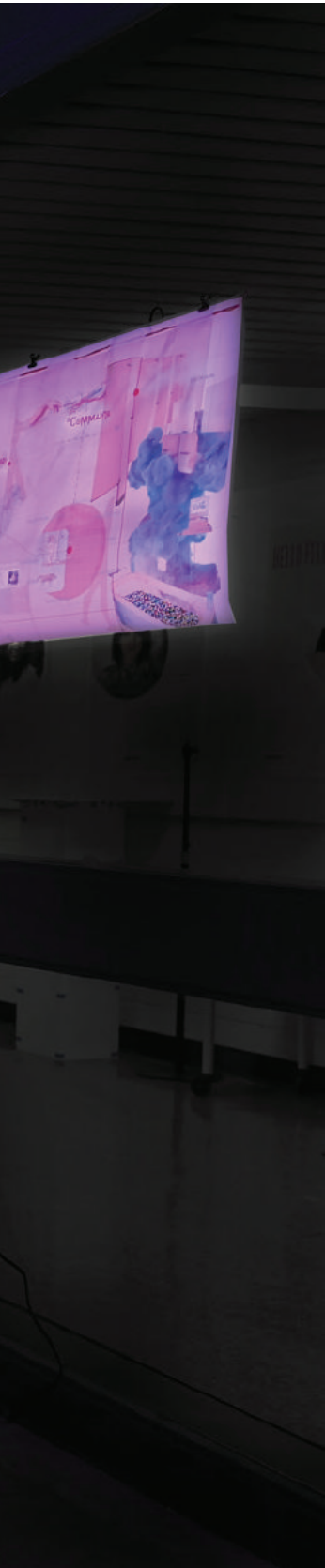
COWBIRD THE GREAT
5th empire of the pink republic (incumbent)
assumed office: 14 March 2013
born: 4698 AD. Pahoehoe, AZ.
parents: Cow named James (father),
Pigeon named SpicyCandy (mother)
alma mater: no.1 bullpens primary school
Spouse: Canon (species unknown)
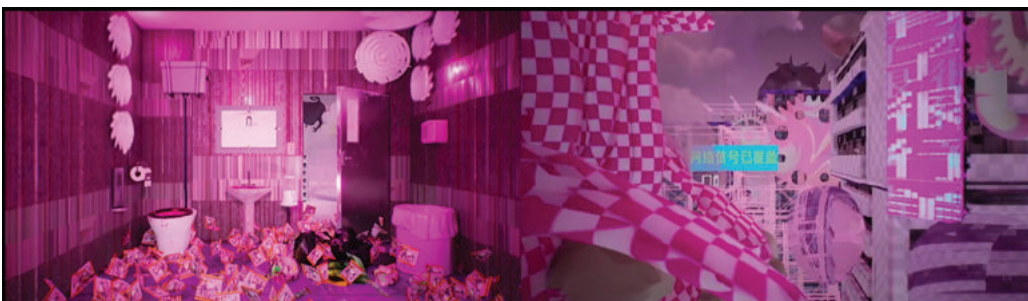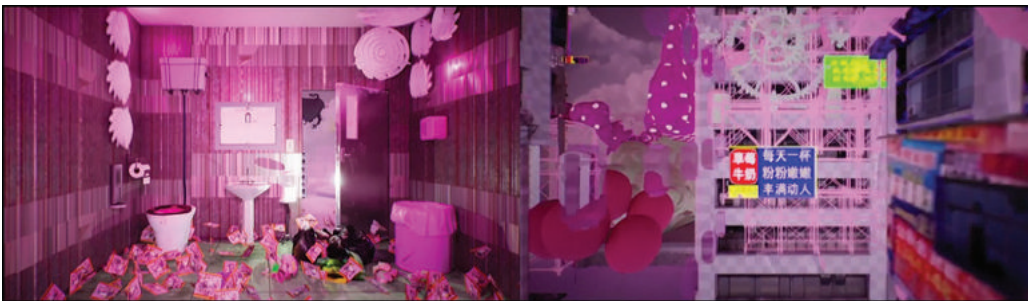
IT'S THE COWBIRD THEY ARE WATCHING

the cowbird is the overarching force behind the pink republic. they are everywhere. they have an over-arching agenda. they want to make you give birth. they want to make you buy. they want to make you believe in them. they have many different means to look at you. they have the bird to surveil your digital footprint. they have the cow to surveil your physical presence. birds and cows have sensors. they look at you, like at all times.
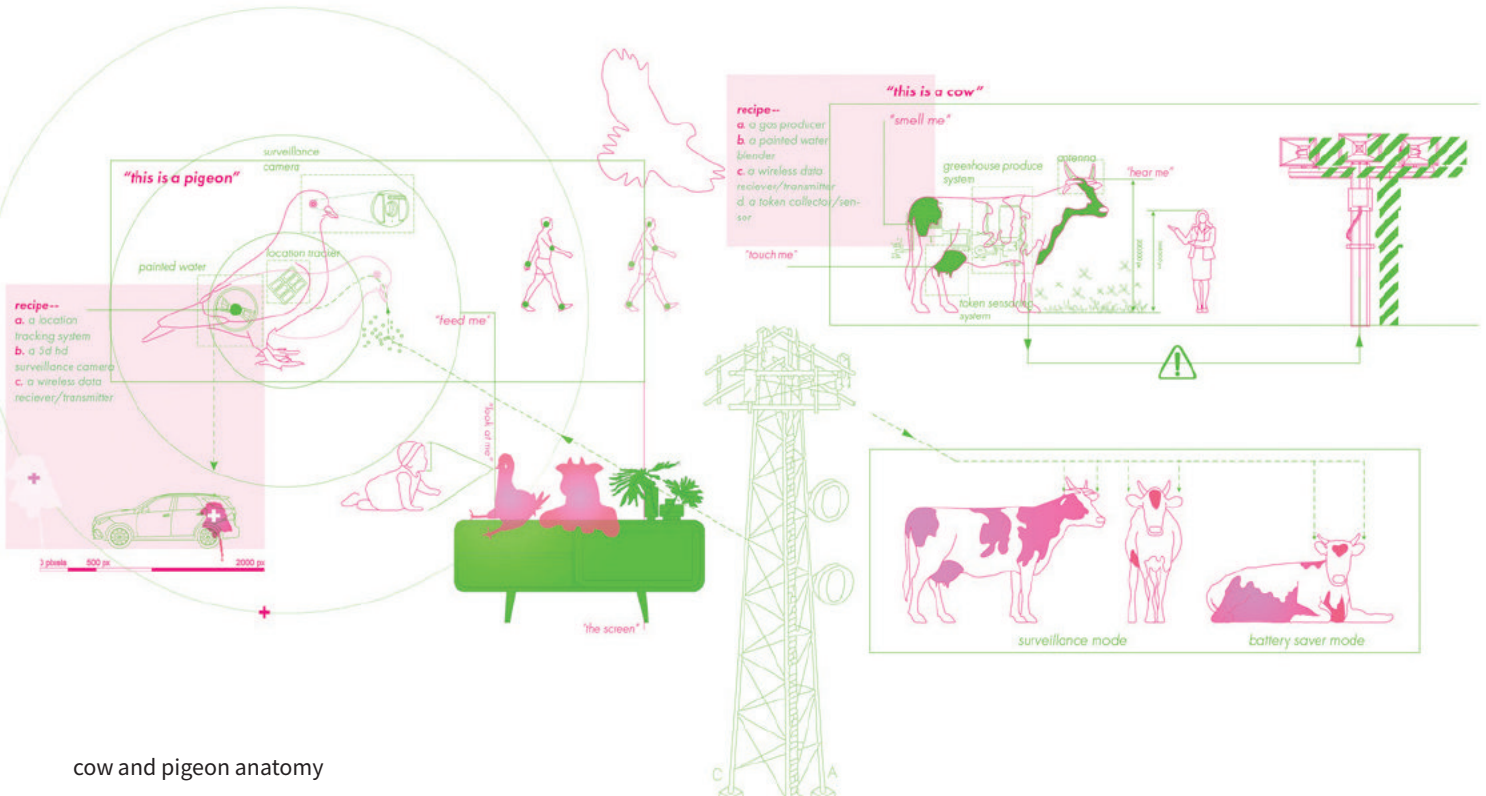
we have no names. we are anonymous. we are the residents of the pink commune.

we gather in the bathroom because we believe that this is a safe space, a sanctuary, and a place where we can democratize. this bathroom is public, inclu-sive, and a space where everyone can come in, and connect with each other in one way or another.
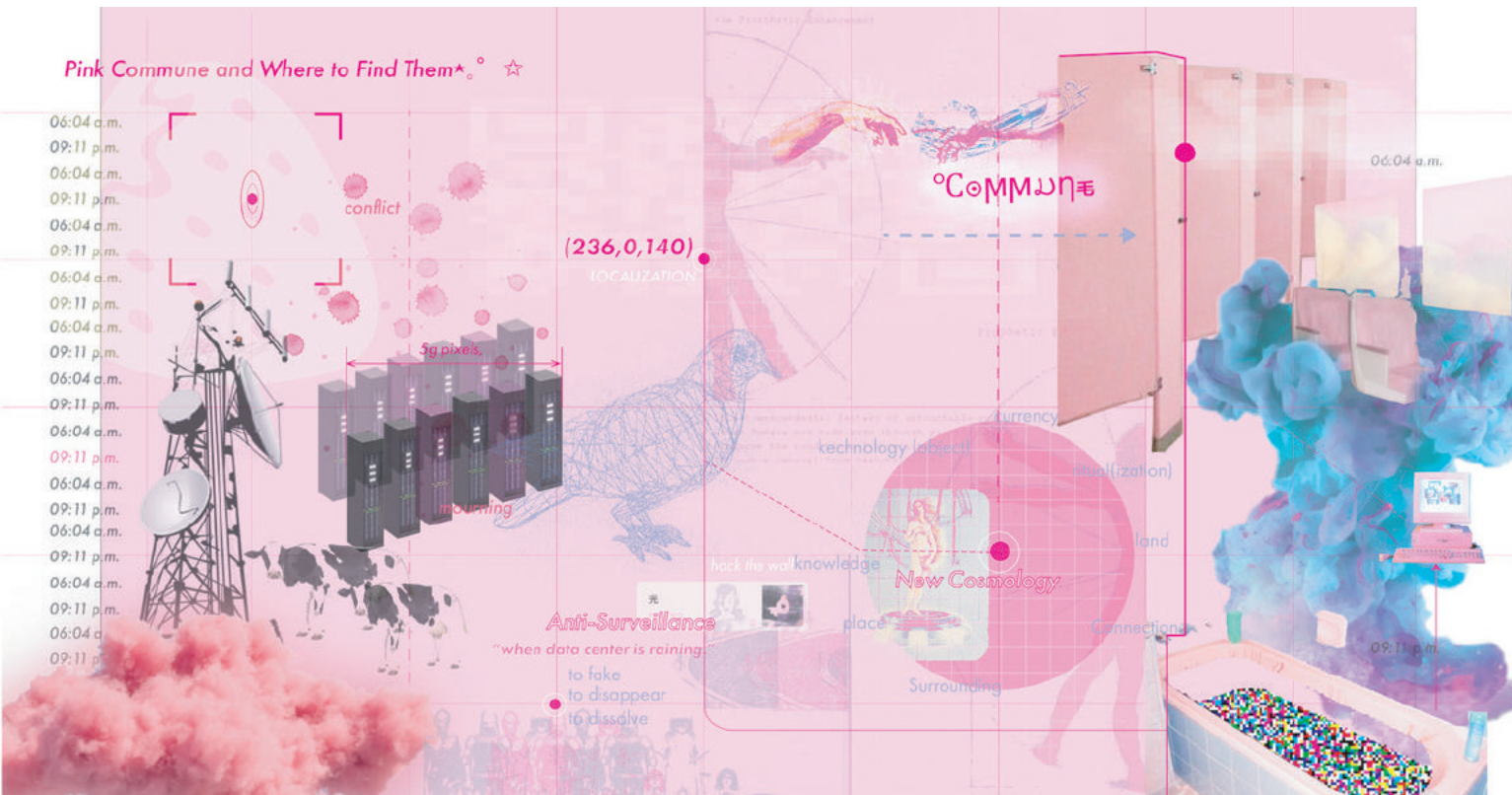
or… we glitch the toilet. we make it pink. we make it a site of resistance, or even better, our first site of resistance…

data center and why it's raining

cow and pigeon anatomy

a map

a manifesto

[GLITCHED TYPEWRITER]
 to fake…

… is to pretend that you are one of them.

the most important thing is to have double thinking. you print just like they do. but you invent a speculative typewriter and use it to print things that you want to say but are not allowed to. because you are faking. you are letting them know that you are one of them, although you are not. you are only pretending.

[GLITCHED THERMOMETER]
to scatter...

… is to exploit the limitation of the surveillance mechanism.

the cowbird is not a genius. you know it. the cowbird can only do so much. if you stay on the antagonistic side for so long, you will find its limitations. you know it. to make them confused, you make cloud. you make the data center rain. you scatter through raindrops. you confuse them. you glitch them.

[GLITCHED LOTTERY]
to draw...

… is to randomize, equalize, and mobilize. through lottery.

you use the bathroom. you put your data into the lottery box. you flush it down. you put your personal data and information into a collect ion of them. then you run the lottery. you pick up a new set of data and take it with you. in the eyes of the cowbirds, you are always changing. lottery champions this democracy.

[GLITCHED FAN]
to disappear…

… is to operate outside their system.

you create. you invent. you move yourself out of the site. you are not hiding. you are disappearing. the cowbird doesn't know you exist. at all. you invent. you make things that no one has ever seen before. you make smell generators. you invent ways people engage with others through odors. you make machines that freeze, store, and wake memories.
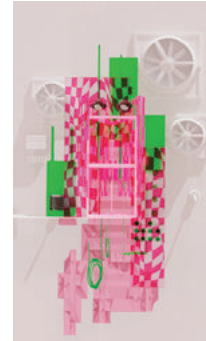
GHASSAN ALSERAYHI
CHAVI GUPTA
VISHAL ROHIRA

Advisor:
SEAN AHLQUIST

WEAVING BEING INTO CURIOUS SPACES

INTEGRATING SENSORY WITH KNITTED ACTUATORS TO PROMOTE SOCIAL INTERACTION, SPATIAL AGENCY, AND THEATRICAL DESIGN

Pneumatic knits is a material system that combines air-controlled artificial muscles with digitally knitted materials, enabling various motion behaviors like bending, elongation, and contraction through a programmable real-time sensory system. Unlike pneumatic architecture, which often creates solitary settings that neglect social and exploratory behaviors, this system prioritizes principles such as sensory perception, equitable empowerment, and active participation. It creates an innovative democratic instrument that allows for an exploratory, transformative, interactive, and inclusive micro space, promoting co-authorship and social interaction. This project aims to explore the fusion of design and technology to enhance the sociological aspects of neurodiverse individuals by enabling them to explore and co-create their own narratives and microenvironments using a pneumatic knits material system coupled with touch-sensing technology.

CRAFTING MOTION BY KNITTING FOR MOVEMENT

The primary focus of this research project is to adopt a holistic approach to understand the behavior and applications of material systems, rather than studying individual components in isolation. Specifically, the study concentrates on characterizing knit-constrained actuators that facilitate bending and twisting motions, in contrast to the linear actuation. Bending actuation in this research involves the combination of an elastomeric air chamber with a flexible but non-stretchable layer, such as woven fiberglass cloth, to restrict strain. To further control swelling, high-strength fibers like pPolyester are utilized to limit inflation in specific areas according to the design. These soft mechanisms, unlike rigid mechanical joints and fixtures used in traditional robotics, offer greater efficiency for human interaction, considering the ability to predict and control pneumatic performance.

A significant challenge in soft robotics lies in achieving specific bending timing and behavior within a single actuator and integrating different motions into one component. Previous works by researchers have addressed this issue by using a singular-component assembly that is linear and has limited inflation capabilities, without responsiveness to sensory systems. In contrast, this research project achieves distinct articulation by employing a single knitted constraint with continuous variation in stitch structure. This knitted constraint works in combination with programmed inflation and deflation, controlled by the pneumatic system connected to the touch-triggered sensory system.

BECOMING PUPPETEERS TO TELL STORIES AND CO-CREATE SPACES

The knit strategy controls area and inflation allowance, while touch and pressure sensory systems trigger cause-and-effect actions, activating the pneumatics and changing motion and material behavior. The knit structure integrates inflatable silicone tubes with tubular knits, allowing control of motion direction and behavior. The project draws inspiration from advancements in pneumatic actuators and leverages design technology to develop interactive and dynamic micro spaces using inflatable objects that are designed to look like tentacles.

These tentacles provide kinesthetic feedback and promote exploration and social skills. Sensory design integrates principles of perception, empowerment, and participation to foster participatory spaces and sociological design. Informed by the concept of "puppetry as reinforcement of cultural perceptions of the disabled body," the installation empowers participants to actively co-create their micro spaces. A socially responsive field structure, composed of digitally fabricated knits integrated with a pneumatic system, enables neurodiverse individuals, in the case of this project, individuals with autism, to interact and shape their surroundings.

AIR COMPRESSOR/TANK

This part is responsible for providing the pneumatic systems with air pressure either constintly or according to pressure sensor that is installed and programmed in the pneumatic systems using grasshopper script.

To avoid noise pullotion and allow for a full engaging experience, this part is situated outside of the space that contains the installation.

CONTROL STATION

This part is responsible for controlling the motions [inflating and deflating] using grasshopper script that helps programming the sensors, and therefore, controlling how and when, the installation's parts inflate and deflate.

PNEUMATIC SYSTEMS [TWO PART]

A: Responsible for inflating and deflating the field of tenticles using pressure sensor to control both the amount and time of inflation.

B: Responsible for inflating and deflating the three jellyfish-like groups. In each group, there are three main tenticles that will be inflate and deflate by triggering the input device that is installed into the system.
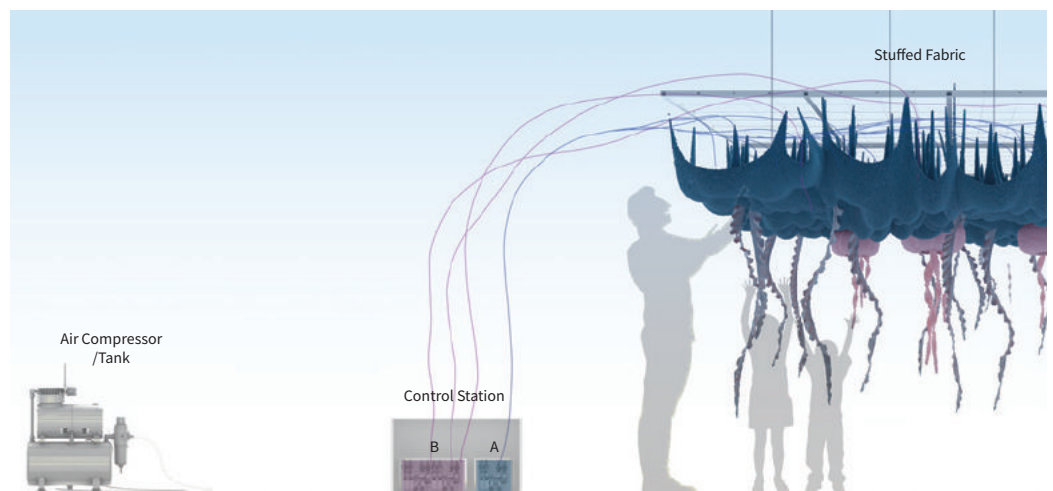
STUFFED FABRIC

To achieve the bubble effect, a fabric that is stuffed with balloons/silicone balloons is used. This part also acts as a transitional moment between the jellyfish-like objects and the ceiling including the metal frame.

Stuffed Fabric

Air Compressor /Tank

Control Station

CALM CORNERS TO CONSTRUCT INCLUSION

Individuals with autism often have unique sensory sensitivities that shape their perspective on the world. These sensitivities can lead to varying responses to environmental stimuli, including sounds, textures, odors, and lights. Some may find loud noises distressing, while others remain unfazed. Similarly, texture sensitivities can vary greatly among individuals with autism. J. Pickard's paper, "Sensory Environments and Autism: Designing for the Sensory Experiences of Children and Adults with Autism Spectrum Disorder," emphasizes the significance of considering sensory experiences in designing environments for individuals with autism. It highlights common sensitivities to light, sound, texture, and smells, while explaining their impact on daily life and well-being. Accordingly, the project explores how thoughtful design can create socially supportive, engaging, and inclusive spaces that reduce sensory overload and promote calmness, recognizing the profound effect sensory stimuli can have on the behavior, emotions, and overall well-being of individuals with autism.

During the development of this research project, Taubman College, represented by Professor Sean Ahlquist, was involved in several lectures, tour visits, and science fairs at The Sprouted Sage and The Ann Arbor Academy to facilitate observation and the testing of ideas and prototypes. In its final stage of development, this project was installed at The Sprouted Sage for operation and further research development.
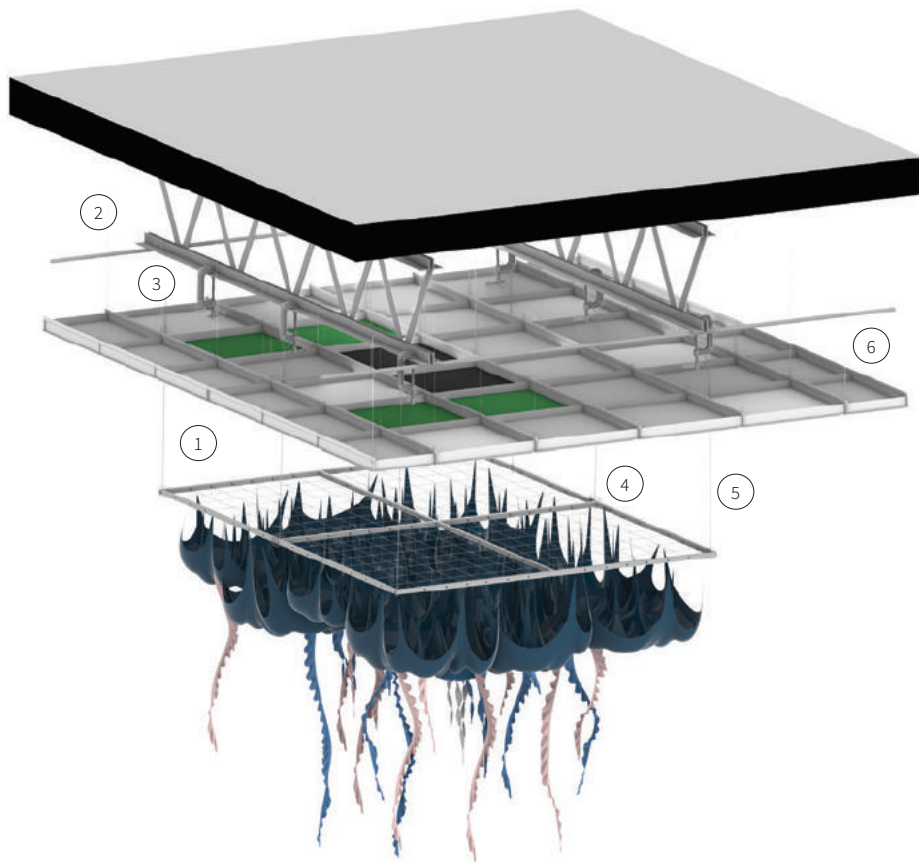

MAIN COMPONENTS OF THE STRUCTURAL ASSEMBLY

1. Installation's steel frame
- two-piece frame
- weight: 65 lbs
- area: 52 sq ft

2. Steel beam (above the ceiling)
- quantity: 2

3. C-Clamps
- quantity: 6
- load capacity: 2,000 lbs

4. Hooks
- quantity: 6
- load capacity: 1,000 lbs

5. Steel cables/ropes
- quantity: 6
- length: 50-60 inches
- load capacity: 96 lbs

6. Adjusting Ceiling units
- quantity: 6
- replaced tiles: Acrylic sheets

STAGE WHISPERS: UNLOCKING NEW REALMS WITH DRAMA AND PLAY

This research explores the integration of 'dramatherapy' and 'participatory theater' as valuable approaches for individuals with autism. Dramatherapy utilizes drama and storytelling to address emotional and psychological issues, offering a non-verbal and imaginative outlet for expression. It employs techniques like role-playing, storytelling, and improvisation to help individuals explore their feelings and enhance social and communication skills. Participatory theater, on the other hand, involves active audience participation and can be adapted to create sensory-rich, inclusive environments. By incorporating sensory design elements like lighting, sound, texture, and smell, participatory theater fosters a positive sensory experience tailored to the specific needs of individuals with autism. Both approaches provide opportunities for self-expression, skill development, and a sense of control in therapy sessions, contributing to inclusion and support for individuals with autism. Understanding and managing sensory sensitivities can enhance communication and social skills, especially for neurodiverse individuals, while simultaneously helping as well as help them feel more at ease in their surroundings and experience less stress and anxiety.

The installation mainly comprises three groups of jellyfish-like elements, each with three internal tentacles, and a field of separated tentacles. While the tentacles in the jellyfish groups inflate and deflate by triggering their sensors, the field is programmed to act as a background that is constantly breathing, inflating and deflating.
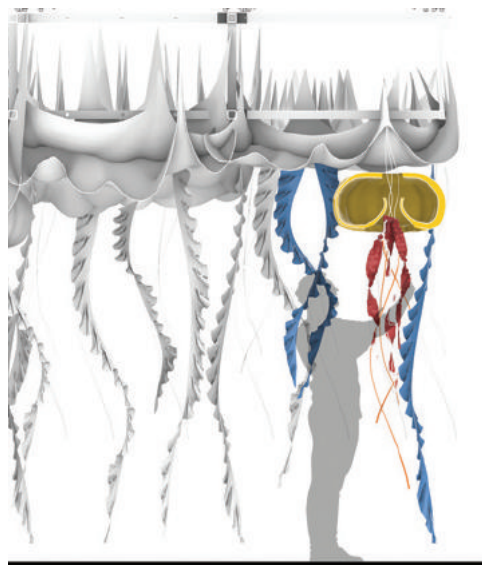
STITCHING DYNAMICS: THE CHOREOGRAPHY OF CLOTH — DESIGNING TEXTILES THAT DANCE WITH AIR

The textiles laboratory at Taubman College, equipped with an advanced STOLL 822 HP 7.2 multi-gauge knitting machine, spearheads the development of knitted constraints. This machine facilitates the digital fabrication of these actuated elbows within tubular knits by strategically manipulating stitch structures through specific "knit patterns." The images of material study (on the left) exemplify the results of those knit patterns, showcasing the intricacies achieved through this process. Altering stitch counts generates extensible or restrictive regions within the knit, defining the elbow's behavior during inflation and deflation (like the image on the right). 'Shaping' is another technique employed to induce curling and twisting motion, introducing extra material and weight. Gravity, in tandem with these factors, contributes to the observed twisting effect, enhancing visual interest.

To comprehensively understand the twisting effect resulting from inflation and shaping, three distinct sets of knit designs are examined (on the left). All experiments employ a flexible silicone tube with specific dimensions, varying air pressures, inflation, and deflation times. In the initial prototype (top left), a "fin-like" knit is introduced to the tubular knit without shaping, revealing the interplay between stitch count, width, and inflation. However, the weight of the fin falls short of the desired visual effect. In the subsequent prototype (middle left), shaping techniques are applied to ensure consistent dimensions and augment the knit's weight. While visually appealing, this affects the twisting motion observed in the first test. Finally, the third prototype (bottom left) combines principles from previous steps, including extra material and shaping, achieving the desired curling and twisting behavior, demonstrating significant improvement. This combined approach effectively produces the desired visual and motion effects. These studies helped determine the technical aspects of the knits that led to achieving the project objectives.

Tubular knit with transitional area and one-side fin

Expected Results:
- inflation activates
  curling effects
- axial twisitng
- shrinking

Noted Results:
- one-direction flipping
- inflation activates
  curling effect
- elongation
- subtle axial twisting

Air pressure: 5 psi
Time: 1 second
Transformation: unified inflation

Air pressure: 10 psi
Time: 1 second
Transformation:
-subtle one-direction flip (fin area)
-unified inflation

Air pressure: 10 psi
Time: 1>2 seconds
Transformation:
-subtle one-direction flip (fin area)
-unified inflation

Air pressure: 12 psi
Time: 2>3 seconds
Transformation:
- noticeable one-direction flip (fin area)
- unified inflation

Air pressure: 14 psi
Time: 2>3 seconds
Transformation:
- noticeable one-direction flip (fin area)
- subtle elongation

Air pressure: 16 psi
Time: 3>4 seconds
Transformation:
- noticeable one-direction flip (fin area)
- noticeable elongation

Air pressure: 2 psi
Time: <1 second
Transformation: minor inflation

Air pressure: 5 psi
Time: <1 second
Transformation: minor inflation

Air pressure: 8 psi
Time: 1>2 seconds
Transformation: minor inflation

Tubular knit with
one-side fin and curles

Expected Results:
- inflation activates curling
effects
- axial twisitng
- shrinking

Noted Results:
- elongation

Air pressure: 10 psi
Time: 2>3 seconds
Transformation:
- subtle bending movement
- one-area inflation

Air pressure: 12 psi
Time: 2>3 seconds
Transformation:
- noticeable elongation
- noticeable bending movement

Air pressure: 14 psi
Time: 3>4 seconds
Transformation:
- noticeable elongation
- unified inflation

Air pressure: 2 psi
Time: <1 second
Transformation: minor inflation

Air pressure: 5 psi
Time: <1 second
Transformation: minor inflation

Air pressure: 10 psi
Time: 2>3 seconds
Transformation:
- subtle one-direction flip (fin area)
- subtle unified inflation

Tubular knit with one-side fin

Expected Results:
- inflation activates
  curling effects
- axial twisitng
- shrinking

Noted Results:
- one-direction flipping
- elongation

Air pressure: 12 psi
Time: 2>3 seconds
Transformation:
- subtle one-direction flip (fin area)
- unified inflation

Air pressure: 16 psi
Time: 2>3 seconds
Transformation:
- subtle one-direction flip (fin area)
- subtle elongation
- unified inflation

Air pressure: 16 psi
Time: 2>3 seconds
Transformation:
- subtle one-direction flip (fin area)
- subtle elongation
- unified inflation

TOUCH AND TRANSFORM

Pneumatic valves can be broadly classified into two main types: on/off valves and proportional valves. Proportional valves provide the highest level of control as they convert an electrical input signal and input air pressure into a controlled pressure at the output, ensuring it remains within the specified flow limit. Incorporating sensing capabilities and utilizing external position feedback allows for greater control over the inflation and deflation of the silicone tubes within the knitted structures. In the context of characterizing the knit actuators discussed in this paper, a proportional system was designed and constructed (bottom image) to specifically fulfill the research objectives and effectively manage the pressure in accordance with a carefully calibrated input signal programmed into the sensory system integrated into the knit. This setup enables a fast cause-and-effect event where users trigger the signals and open the valves to allow for inflation and deflation (refer to Figure 3). A touch sensor, programmed as a trigger, initiates a predetermined amount of pressure for a specified period of time. This approach differs from a one-time or linear interval trigger system. By utilizing pressure-based triggers, the research aims to effectively capture the nonlinear aspects of the inflation tests, allowing for more accurate data acquisition and analysis.

PROGRAMMING THE SENSORS AND THE PNEUMATIC SYSTEM

Force sensors make up the sensory bulbs. With the help of the Firefly plug-in, Grasshopper users can inspect the Arduino board's readings when a force is sensed by a sensor. The way the grasshopper script operates is that it uses a Boolean toggle to send a signal to the digital input ports on the second Arduino, which controls the pneumatic system, when the force reading exceeds the preset value (in this example, 100). The Boolean value for that particular digital input on the second Arduino is set to "True" depending on which sensory bulb is engaged. The Fade in Fade out buttons on the Firefly plug-in allow us to adjust the pneumatic breathing effect after the digital input is set to "True."

DANCING WITH LIVING FABRIC

The research project employs precise knitted constraints, shaping techniques, and alternating yarn types to achieve the desired material behavior and actuation. Knitted constraints offer advantages over traditional soft actuators, enabling variations in shape, material, and structural behavior within a single unit. Weight considerations are addressed through the use of thin-walled silicone tubing at specific pressures. The research also delves into the smallest scales of material construction, including fibers, yarns, stitch structures, and manufacturing and producing methodologies such as sewing and yarn dying.

The proximity and arrangement of the actuators can influence the geometry and behavior of the material between them, allowing for versatile actuation. The pneumatic pressure system is carefully controlled using pressure and touch sensors to achieve specific motions such as breathing, bending, unbending, twisting, and expanding, which allows for various levels of social engagements and explorations. Considering different design approaches, such as complex geometries and scalability, becomes crucial when envisioning this system as a potential architectural solution.

LEAH ALTMAN AND MAGGIE HAWLEY

Wallenberg Critic:
ALINA NAZMEEVA

HOLOWAY HOUSE

\Feral[1] [feer-uhl, fer-]

1. a state between wild and domesticated: invasive species, feral pigeons, and barn cats become feral when they defy, resist, or escape human domination.

Holoway House is a multi-species housing cooperative existing in an alternate present. In a world recovering from an environmental collapse, humans no longer exist at the expense of the in-human. This post-human world is full of both interspecies conflict and cooperation, where alliances are formed and symbiosis evolves between unlikely allies. This time is cyborg–this time is feral.

FERALITY
Begin with the feral[1]. For a beetle, ferality is an evolution beyond human control. For a cat, a rejection of domesticity. For a pigeon, a rediscovery of identity. In an age of artificial intelligence and automation, the possibility of feral machines is becoming evermore significant.

WORLD-BUILDING
A large inspiration for the vision of this world is drawn from a timeline where earth is destroyed due to climate change and resolution is found in new interspecies alliances. Through greater connection between human and non-human, either animal, vegetable, or mineral, a world forms that is defined by conflict as well as cooperation.

CYBORG MANIFESTO
In Donna Haraway's *A Cyborg Manifesto*, she proposes a post-humanist philosophy that argues that humans are not discrete individuals but instead cyborgs—monstrous hybrids made out of the many biological, mechanical, and social systems around us. She proposes this cyborg philosophy in response to the practices of capitalism, which are based on the denial of sentience, objectification, and dehumanization of non-human or in-human others. This creates complex systems of oppression and extraction, which Haraway's manifesto challenges. Instead of domination, she proposes cyborg identities that embrace the connection between all beings.

These connections begin to blur many of the false dichotomies western capitalism relies on—strict divisions between the self/other, animate/inanimate, and natural/artificial collapse when examined closely. Haraway argues that "There is no fundamental, ontological separation in our formal knowledge of machine and organism, of technical and organic."

THE TOWER

Design processes began with a modernist tower, originally designed as a bank or an office building, a typology of no more use in this reality, as a precedent. The domestic office space is reclaimed to create a feral architecture for a feral reality. *Holoway House* is an interspecies cooperative that attempts to negotiate many conflicting interests. The tower section acts as an atlas informing players on the species and relationships within the space. Within *Holoway House*, there exist spaces for every species as well as mixed-use collaborative nodes: walls become burrows, pipes and sewers are overrun with rats, and composting facilities house dense mycelial and tree connections. Within and between these spaces, relationships form between the tower's diverse inhabitants.

The home and the habitat, both spaces of domesticity, go feral when released from expectations of human domination.

NATURAL/ARTIFICAL

WILD/CIVILIZED

EVOLVED/DESIGN

HOLOBIONT

The radical connectedness of the cyborg is not speculative, as seen in the holobiont. The holobiont refers to a symbiotic relationship so strong that the lines between two species are nearly indistinguishable. Often used to refer to microbial life and its host biome, the holobiont is the whole made up of many parts. A human cannot distinguish themselves from the bacteria in their gut. Similarly, a cyborg cannot distinguish themselves from the greater systems around them.

THE URBAN

"Therefore, we situate ourselves in a city": As Neil Leach argues, the urban environment is the ultimate site of cooperation, the ultimate human-mineral hybrid system. At its core, a city embraces connectedness and alliance; it already approaches holobiosis.

ASSEMBLAGE

In a reality without hierarchy, Molding.exe is an assemblage where the biological and the mechanical in a feral living space become entangled for a cyborg. This imagining attempts to ground the seemingly ephemeral, but extremely physical, digital world in the grimy, globby world of mycelial networks.

INTERSPECIES ALLIANCES

Themes of ferality, entanglement, and cyborg began to coalesce. For this final imagining of this world, a

focus resides on conflict rather than cooperation, because it is through conflict that alliances are formed and strengthened. *Holoway House* develops designs according to post-human permaculture, where attempts were made to accommodate the diverse needs and potential abilities of the world's inhabitants.

MATERIAL SELECTION AND CONSTRUCTION

Scoby is the top layer that forms from kombucha, and when perceived, behaves similarly to leather. In this reality, scoby is a commonly used material, and kombucha is brewed within Holoway House.

Bark Beetles and Pine trees are natural opposites, each with their own fungal symbiotic relationship. Pine forests today are being decimated by a new kind of feral beetle that has migrated across the ocean and merged with new, highly destructive fungi. To combat this conflict, microbe bots and Petra exist as mechanical holobionts who manage the micro and macro ecological health of the cooperative.

Petra is a sentient AI who exists in every facet of this reality: regulating public infrastructure and ecological systems—often interacting directly with the mycological cultures of the city.
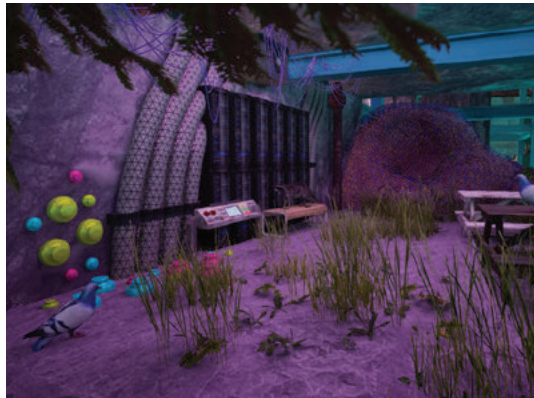
THE MASK

We enter this world through the mask. The mask does not conceal identity but reveals it. These artifacts are equally important to the cyborg as both enhance the senses, open new worlds for exploration, and allow the user to experience the hybrid world around them. The first mask exists in *Holoway House*. It augments speech, smell, and hearing, as interspecies cooperation depends on human adaptation to non-human modes of speaking. This mask was made from in-world materials such as scoby, mycelium, and various mechanical and organic components. The second mask, also known as the headset, acts as a portal to experience this reality. Through the mask, players can tour *Holoway House* and see cooperation in action. Wear the Mask. Go Feral. Become a cyborg...

MICHAEL THUT AND EVAN WEINMAN

CHAIR TRANSLATIONS

FROM DIGITAL TO PHYSICAL AND BACK AGAIN

Chair Translations explores the role of cutting edge design technologies through an iterative process combining digital tools and analog fabrication. The project utilized Gravity Sketch, a Virtual Reality CAD software, and 3D LiDAR scanning to uncover faults in the technology and capitalize on mistakes made in the translation process–digital mistranslations. Beginning with designs inspired by Finn Juhl's FJ48 and Marcel Breuer's Cesca Chair, the iterative process of design and fabrication resulted in the production of two series of chairs that are a direct product of the digital and physical tools used throughout the process. This allowed the makers to explore varying themes ranging from texture mapping and kitbashing to gestural motion and human proportion.

EW1.3

MT1.3
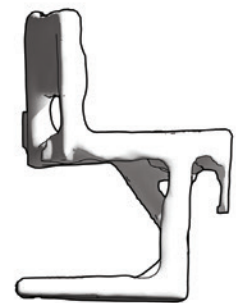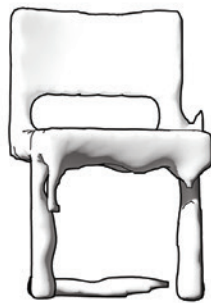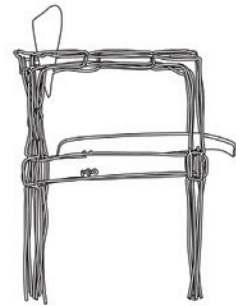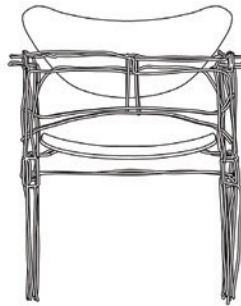
PAUL GOLDBERGER

ON THE INEFFABLE

DIMENSIONS 37 STAFF

Shravan S Iyer
Mason Magemeneas
Alvin Poon
Nicole Tooley

PAUL GOLDBERGER

Paul Goldberger is an author, architecture critic, and currently holds the Joseph Urban Chair in Design and Architecture at The New School in New York City. He wrote for "The Sky Line" column in The New Yorker and is a contributing writer to Vanity Fair. His architecture criticism has received the Pulitzer Prize for Distinguished Criticism. In advance of the publication of Blue Dream and the Legacy of Modernism in the Hamptons: A House by Diller Scofidio + Renfro, Goldberger joined a panel at Taubman College alongside Charles Renfro and Holly Deichmann. Dimensions met with Goldberger the afternoon before to learn about the emotional, the dogmatic, and, oh yes, the ineffable too.

DIMENSIONS 37: What are you currently preoccupied with?

PAUL GOLDBERGER: Well, *very* currently, because this book has just come out, I am kind of preoccupied with some other events like this. But looking forward in a more serious way, I am preoccupied with the very early stages of another book that I am very excited about. It's very, very different from this. It's going to be called *The Imperfect City*. The book is about cities and how the things that make them work, the things that make them memorable, and the things that make them both emotionally and functionally meaningful are not always things we can plan. Every great city is a combination of planning and accidents. If you plan a place down to the last square inch, no matter how good the architects and planners are, it will probably be somewhat deadly. But if you just let it happen, then it's going to be unspeakably horrible in a different way [laughs]. All great places emerge out of a combination of the two.

So it'll be a book that is in an inquiry into that philosophical question, you could almost say, of balance and equilibrium, and so forth. That's kind of the big project and it's going to be I think probably a couple of years of it. So, you know, there's not going to be any publication events quickly [laughs]. But it will happen and I'm excited about it.

I am also teaching and serving as an architectural advisor on a bunch of projects. The most exciting and interesting one I think for me right now is something in Washington—a foundation that is creating a memorial to journalists who have died in the line while reporting stories. It will be a kind of monument to the First Amendment and the importance of press freedom. It's going to be adjacent to the Mall with a view of the Capitol. I helped organize an architect selection process. We're right in the middle of it now, and we hope by sometime early next year to have a choice and all of that. So that's a very exciting project. In part because I don't know where it's going to go. You know, and I also enjoy doing a mix of both writing and not writing type things. You know, things that connect to architecture but in a different way, as this project does.

D37: So speaking of architecture, which is our main focus here, you are probably most famous for your work, *Why Architecture Matters*, where you talked about the importance of architecture's emotional impact.

PG: Right.

**D37:** When did you first encounter architecture as this emotional being?

PG: That's a great question. I mean I think I first encountered it when I was too young to really understand it, because I think all of us do. So I think I became aware of it after I was actually experiencing it. Because I think architecture has an emotional impact on children. You know, they don't *know* that and they're not going to talk to you about it. But it happens nevertheless. As a high school kid, I was very interested in architecture and was very excited by it, particularly new modern things. I grew up in a suburban house that was fairly traditional in kind of a gabled, shingled house. But I kind of liked modern things. And one thing I can very much trace my emotional connection to was when I went to college. I went to Yale and it was at that point quite well known for some important modern buildings, many of which you probably know like Louis Kahn's Art Gallery, and Eero Saarinen's hockey rink, and Paul Rudolph's Art and Architecture building, and so forth. And I was very excited about seeing those things.

Then I got there and I really did like most of the buildings, but what I wasn't prepared for was how much I liked all the traditional Gothic academic architecture that was there. Modern architecture had always had this kind of implied but sometimes stated idea that it was—that these two things were kind of almost mutually exclusive. You couldn't like one and like the other because there was a kind of ethos to modern architecture that was right and all of that other stuff was wrong, or stupid,

or sentimental, or, you know, just whatever, decorative. I mean there were all kinds of endless insult terms that could be applied to it. A lot of my time was spent trying to come to terms with the fact that that style really didn't mean that much and quality could come in many different varieties, types, and so forth. Somehow all of that was closely connected to having a greater recognition of the emotional impact of buildings. I realized that if those old Gothic buildings made me feel good, I couldn't deny that. You had to sort of come to terms with. But I never bought into the notion that there was something evil about modernism, either. And so I remained—I mean frankly, you know, sometimes in my career I have been called too much of a modernist by the traditionalists and too much of a traditionalist by the modernists because I really do like both. I don't like everything in both, but I do like aspects of both.

What I don't really like—and I think this was another part of my own kind of maybe growth in terms of learning things—was, you know, rigid ideology and dogma, which is mostly about saying there is one right way. I just don't believe there is one right way. I think there are a lot of right ways. There are also ways to do things well and do things badly within each way. So that's not to say, therefore, everything's okay. In a way, it's almost like religion. There are a lot of different paths and
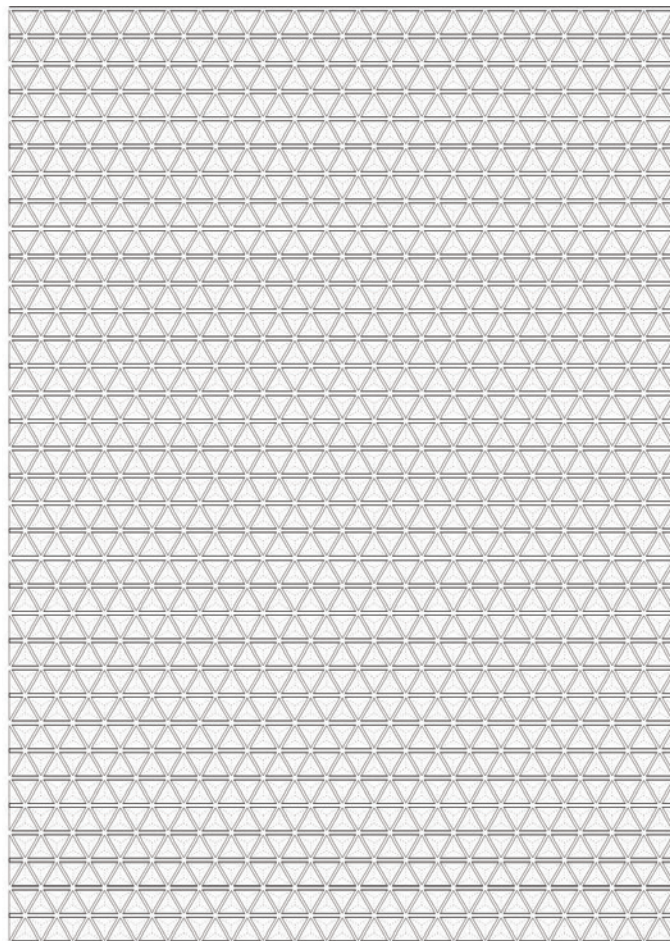
Yale Art Gallery
Louis Kahn, 1953.
Redrawn ceiling plan

people choose what works for them. But I sort of reject fundamentalism wherever you find it because it tends to be ideology first and human needs second.

D37: To follow up to the previous question on the same publication, *Why Architecture Matters*, you explore the evolving and changing transient nature of architecture and probably its implications on contemporary work or life. Could you elaborate on the idea of a new contemporary, if you think that exists?

PG: At any one time, I think there are a lot of parallel streams existing. I think time periods, eras, ages, tend to have a clearer sense of when they're over in a certain way looking back. We kind of see what seems to have been the dominant and most influential strain or direction. Or in fact, when you're in the middle of it, it's harder to see that. I think what is driving things now are a few consistent themes. One of them is a greater respect for urbanism and a rejection of what we might call the anti-urbanism of a lot of orthodox modern architecture. While at the same time, a greater willingness to embrace the aesthetics of modernism. So we see a lot of modern buildings being created not as, you know, kind of isolated objects standing in the middle of nothing, but as parts of a more complex, urban environment. But they're modern in their stance, and outlook, and all of that, and visually.

I think we are also seeing—it really should go without saying and but it should be said anyway, I guess, that the impact of buildings on the environment and their use of energy is critical and will continue as the climate crisis gets worse. How much that will change architecture I think remains to be seen. The reality is in most cases, the most energy saving building is the one you already have because it takes a great deal of energy to demolish a building, to lose all of the embedded energy in it, and to construct a new one. So we forget that sometimes one of the most effective arguments for sustainability is preservation. On the other hand, it's also true that a lot of old buildings are not particularly efficient and they're designed with indifference to this. But we have already seen so many good examples of buildings made more efficient by new materials and internal systems that keep them looking essentially as they had been while functioning in a very different way. So I think we're going to see much more of that.

You know, I always say that, it's a fallacy to think that architecture, you know, that form comes first because program is always what begins any work of architecture. And it's not up for architects to evolve programs. It's up to society. But as families evolve and change, as the idea of the nuclear family changes, as ideas of what constitutes a viable community, as ideas of whether this country can truly afford to have every middle class family in a single family house with a lawn, and cars in the driveway, and all of that, as all of those things continue to evolve, architecture will absolutely evolve to respond to changing programs. And I think we're only at the beginning of seeing all of that change.

The other factor that no matter what anybody tells you, nobody can truly understand at this point is the impact of AI on architecture, and I'm sure you all think about this continually in school. And if anybody tells you they know, don't, you know, don't buy a used car from them or anything. Don't trust them because nobody really knows. These things take a long time to shake out and to have their influence felt. And I don't know. But I know it won't be nothing. It'll be significant. So that's a—I realize, you know, a slightly disconnected set of answers. But I don't think that this time can be described in one simple, single phrase at all. It would be nice if it could. It would be easier to remember but we can't. And I'm not sure when you were in the middle of any other time it could be either.

If you read a history of modern architecture, you would think that all that was happening in the late 19th and early 20th centuries were these incredible buildings coming out of this stream of Richardson to Sullivan to Wright. And, you know, then in Europe Barons, and Gropius, and Corb, and blah-blah-blah-blah-blah. Well, yes, I mean all of those things were and are incredible, but *so much* else was happening at the same time, too. That desire to kind of clean up history and make it a neat, tight, little story loses.

D37: In an interview you described great architecture as this ineffable space. I think that kind of relates to it as like this emotional being?

PG: Mm-hm, mm-hm.

D37: You described great architecture as this ineffable space and yet your job as an architecture writer and critic is to use words and language to do it, to begin to express architecture and these phenomenons. So where do you begin?

PG: if I can go back again to that book *Why Architecture Matters*, that book was an attempt to try to do exactly that. I meant with the use of the word "ineffable space," which is actually a phrase that was quoting Corbusier, who described the chapel he designed in Ronchamp that way, I meant only to say that the very greatest and most profound space has a certain quality that at the end of the day, you know, kind of affects you a little bit in your gut. You just feel a sense of awe perhaps and mystery to it. And that it cannot be fully understood. That was not to say that architecture is all ineffable or that none of it can be described, or explained, or discussed in words. I would be pretty hypocritical if I thought that because I have spent my whole career trying to do just that.

It's just saying that in the same way that one might say that, let's say if you are a music critic, you could write till the end of time about a Beethoven string quartet or Beethoven's 5th Symphony or something like that. But there's some tiny little part of it that at the end of the day just cannot be put into words. And that's all I meant. That with the very greatest works of art of any kind, they speak for themselves in a way that says something more than anybody else can say. But that doesn't mean that they always speak for themselves and none of us can say anything, or that we can't say a lot of things that could be very meaningful, and useful, and helpful to interpret, and analyze, and talk about them, and teach people about them, and all of that stuff. But maybe another way to put this is useful and helpfully good as anything I might write about. Well, we'll go back to the Corbusier's Chapel at Ronchamp. It's still not going to substitute for standing there in that space. Because in fact, that's the key thing about architecture—being in real space and real time.

It's another reason I sort of wonder about AI and virtual space and what that will—where that will take us as we become better and better at creating images of space in three dimensions through digital technology. We now can do things that could not be imagined a few years ago. Will it ever duplicate the real experience of being in a real space? I sort of hope not because that would make me very
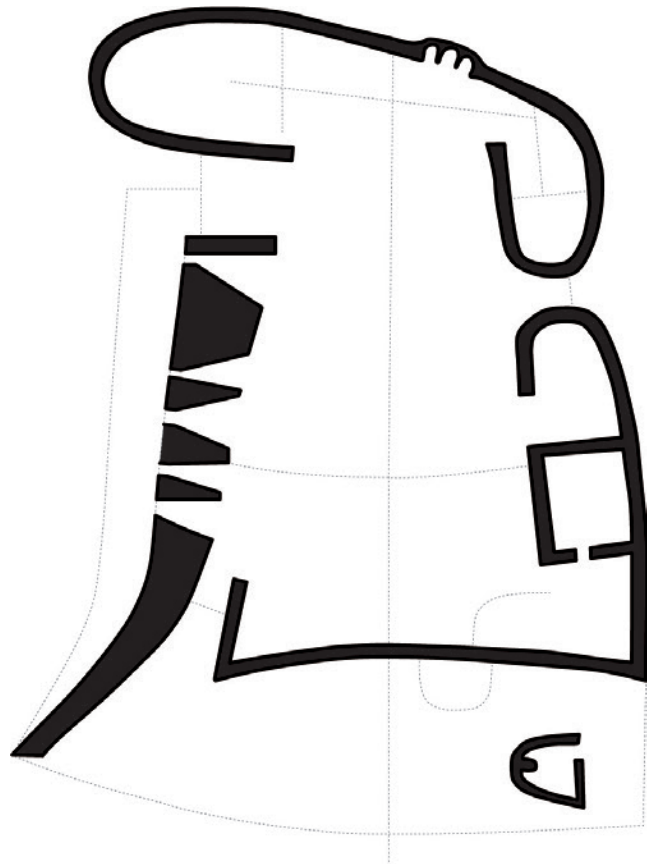
Notre Dame du haut
Le Corbuseir, 1955.
Redrawn ground floor plan

sad. But it will also be quite free of a lot of the hassles of, you know, if you could—let's say—let's stick with that same example, if you could walk through the Corbusier's Chapel virtually, it would save you a lot of trouble from getting to a faraway part of eastern France that nobody goes to that's not very convenient. And the reality is, you know, you never know. You know, there's always a little dirt on the floor, there's always a few things about real life that you would not have in a digital image. But of course I find those very imperfections to be pleasing and satisfying. And I hope that's not just a sign of being old fashioned. I think they are things that create a meaningful sense of authenticity. In a way, it's a little bit like the argument for vinyl records and how a lot of people who are very into music have kind of gone back to the old-fashioned record on a turntable because the very perfection of digital music seemed to be slightly soulless sometimes.

Architecture by its very nature is an analog thing. Which is not to say there's not great value in digital tools that replicate experiences of the analog, but it has to be the real thing ultimately that matters in the same way that, you know, look, it's a great thing to be able to pick up your phone and instantly see some great picture by Matisse. Just, oh, boong, and it'll be right there. And that's very cool and it's only good because once you had to go to the library, or go to the museum, or whatever, but it's not the same as standing in front of the real painting and experiencing it.

D37: You have previously said a critic can and should establish a set of principles with which to write about a building. One being on social-ethical terms, and then another being on the aesthetic—as evaluating it as an aesthetic object.

PG: Right.

D37: And well, I think first I'm kind of curious about how earlier you mentioned how architecture can be dogmatic.

PG: Yeah.

D37: And I'm wondering if you can maybe talk about the difference between principles versus theory.

PG: I think of principles as things that can be applied to many different kinds of architecture.

As being broader and more general and of leading you to a conclusion or helping to lead you to a conclusion of, you know, success or failure, as opposed to dogma, which basically says, you know, "If it is this style or if it does this thing, then it's okay. And if it doesn't do this thing, it's not okay." So, you know, when I talk about principles, I do it for example, yes, talk about the ethics of a building, whether it serves a social purpose or not, and as well as whether it serves an aesthetic purpose. But the extent to which those different aspects matter vary enormously depending on the circumstances. And as do questions of sustainability, usage of materials, and its relationship to what's around it, all of those things.
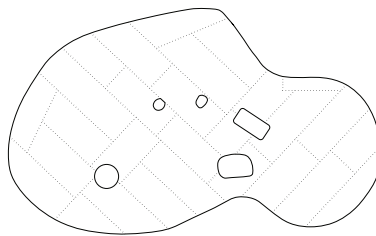

Blue Dream House
Diller Scofidio + Renfro, 2023.
Redrawn plan of fiberglass roof

You know, a building like the Blue Dream, the subject of this book—it's a unique, one-of-a-kind thing that has nothing to do with the larger social issues of our time and it certainly doesn't fix them. A very, very, very unusual and conscientiously made but very, very expensive house for some very rich people has no meaning except if it can show us something about aesthetics and something about what form can do. And in this particular case, also something about what certain innovations, and structure, and engineering can bring us. And so it is also a laboratory for those things. But, you know, if you're going to measure every building by the question of: Does it help us solve our housing crisis in this country?, this building would be the greatest failure you could imagine. Okay. But that's why as I said before, you have to think about program. Is this an unethical program because of that? I think if it were—if somebody had somehow managed to divert public money to build this instead of building housing for people who

need it, then it would be unethical. But the money that was spent on this house is money that was not going to go to that other purpose. It's in private hands and it is being used for the benefit of this family. So—I think that's still applying principles consistently. It's just inquiring as to the reality of the circumstances.

I don't know if you have the old or the new edition of *Why Architecture Matters* but there is a new one that came out early this year that I wrote an afterword to to talk about what had happened in the ten years or 12 years or whatever since I wrote the original book. And it talks a lot about social justice, and equity, and about how those were issues that were acknowledged in the original book but not focused on enough. And I am very pleased that we see all of that stuff a little bit differently now. That doesn't mean aesthetics don't matter. It just means we are much more aware and much more desirous of having buildings address issues of social justice more than we had before. And that's all to the good, but it doesn't mean every building is obligated to do so at every moment. I mean, you know, society makes decisions about how to spend its resources. And it is important to sustain life. It is also important to give those lives that are already sustained and not at-risk meaning and value to them. And so, you know, there's a reason we don't—I mean one could take the entire art collection of the Museum of Modern Art and send it to Sotheby's and auction it. And then take all of that money and, you know, feed the poor. Maybe that's the most ethical thing to do. But at the same time, it would be taking away a part of shared cultural heritage from everybody who values it. And also saying that, you know, anyway, I mean I realize that that's sort of getting a little bit off the point and off the question, but I think there is a value to great art and great architecture, regardless of the program.

And one of the other reasons I really wanted to write this book was that there are an awful lot of very wealthy people building very interesting houses these days. Most of them are not seen by anybody except a few friends of the people who built them. In fact, people are obsessive about privacy today for reasons of security and generally they don't want to even talk about them. They don't want anyone to *know* that they spent umpteen kagillion dollars on their house, and hired such-and-such an architect to do it, and all of that. And in many cases will not allow the architects to publish them even
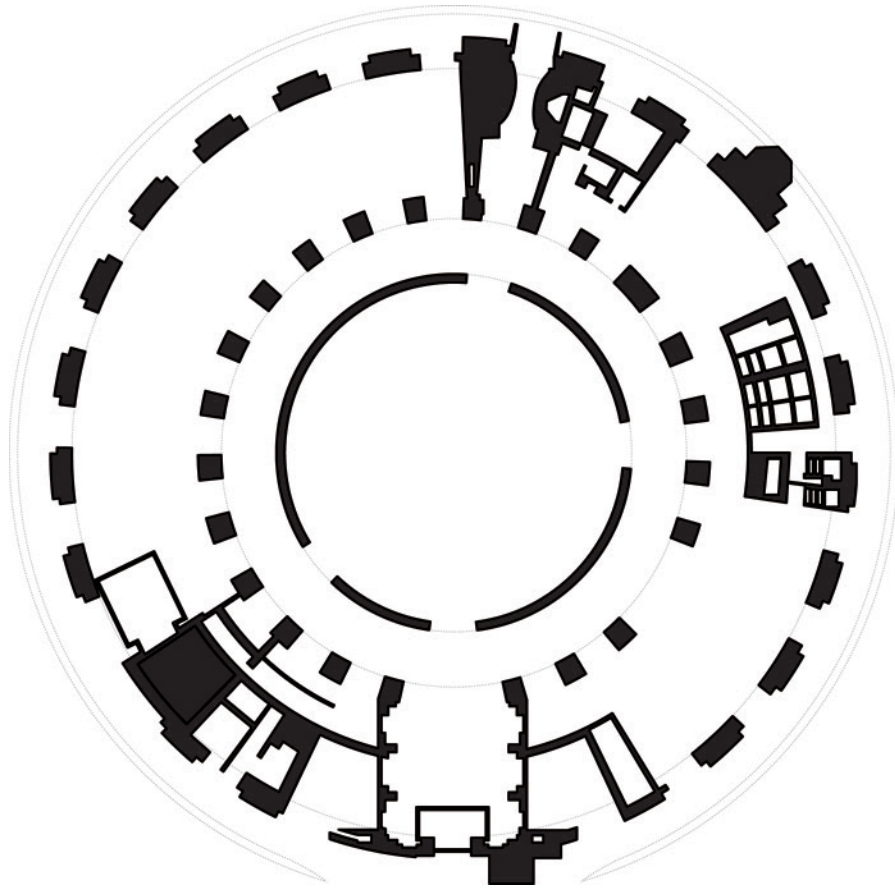
La Bourse de Commerce
Tadao Ando, 2020.
Redrawn ground floor plan

in a monograph or something like that. So the fact that the Taubmans were willing to allow this and talk about it and, in effect, share this house and its architecture with lots of people who will not ever go in it was a wonderful thing actually.

D37: So talking about these moments of wonder.

PG: Yes!

D37: When's the last time you had one in person and not VR?

PG: Ooh! Great, great question.

D37: Where was it?

PG: Great question. I was in Paris and London this spring. And I remember seeing Ando's Pinault Museum, which I had not seen before at the Bourse and really loving that. Similarly, just walking on the streets of London. And also I went to Richard Rogers' house, which I had never visited before in Chelsea, which was mind-blowingly wonderful. And I had—I felt that sort of moment there, too. And I'm trying to think what else that has been new and recent.

D37: Well, what is the art that you were thinking of? I'm curious about that, too.

PG: Oh, okay. Oh, the Vermeer show at—in the Rijksmuseum in Amsterdam I saw in May. And it was just, you know, truly staggering, and wonderful, and amazing. Awesome. I also—I don't know if this is quite as profound but the Ed Ruscha show at MoMA right now is wonderful, too, if anyone happens to get to New York, it's worth seeing and it'll be there until January.

And, hm, but, you know, we have these experiences in sometimes funny, unexpected moments, too. I mean I have certainly felt sometimes like walking down the street something almost very profound about the way all of the elements of this place are working and it just kind of clicks. And I have also—I recently moved for the first time in a really long time in New York City. And I moved to a building that's *right* on the East River and I have never looked at water out my window before. And I have found that kind of transformative in how I experience the architecture of the south and not just the

water in the city and all of that. I feel like I have sort of almost left the land, and I am floating on the water because it's on a very low floor right adjacent to the river and you barely see anything between the building and the river with the way the view works, which is why I bought it. But I thought, "Oh, my God. I have never seen anything like this." And I sort of—I had been feeling this—I'm not sure I'd call it quite the same as that feeling of greatness, but—almost a sense of kind of well-being when I sit in that room and look out of the window, look out the window with the water that I don't remember experiencing before, even though I have been fortunate enough to have lived in some nice places. It's only been literally just like, you know, three weeks or something, so I am just still figuring out what the impact of it is in terms of how I think and how I look at places. It's actually very weird to live in New York City where there is for all the greatness of New York, you know, generally less of a direct connection to nature than most people have in most places.

D37: We have a couple more minutes. What's one thing you do every day? It doesn't have to be architecture and it doesn't have to be profound.

PG: Okay. Well, hopefully more interesting than like brushing my teeth, right? Yeah. But I mean…

D37: We hope you do that, too.

PG: Yeah, I do. I do. I assure you I do that. Well, I mean I try—I try every day to walk a lot, which again, if—one nice thing about living in New York is that you inevitably do walk a lot. I try to listen to music every day. I find myself staring out the window now in a way I never used to do at all. I mean I loved where I lived, but I didn't stare out the window. And I try to swim, which is harder to do in the city. It's easier to do in the summer when I'm not in the city so much. I try to ride my bike, which I also don't do enough, but I try. And read books.

D37: What are you currently reading?

PG: A *really* interesting book that actually does have an architectural connection—a very close architectural connection—is called *Transparency*. It's literally the idea of transparency and what it has meant in culture and obviously in architecture. It's not technically an architectural history, but

it is partly that. And it's written by a historian from NYU and it just explores both the literal and the figurative meanings of the concept of transparency. And I am finding that absolutely fascinating. Just before that, I read a book called *The Slip*, which is a history of Coenties Slip, which is a little, tiny street in Lower Manhattan where in the '50s a whole bunch of artists lived in cheap lofts before Soho became a big thing and preceded it. Artists like Ellsworth Kelly and Robert Indiana, and a *lot* of people who were influential to the direction of American art. And then before *that*, I read *The Wings of the Dove* by Henry James. Not the latest piece of literature, but I had never read it before. And I read it. On the other hand, I don't want you to think I spend every moment reading serious and virtuous things. You know, I spend a fair amount of time reading nonsense or, you know, wasting time on Instagram and things like that, too.

One of the other things I do most mornings, which generally only takes about a minute, is I happen to have a weird fondness for cars and car design even though I recognize that the car is sort of the enemy of sane planning, and sustainability, and all of these other things. And there is a wonderful auction site that auctions collectible cars and every morning around 8:00 a.m. they send out an email of their latest auctions and the ones that are ending, and the ones that are starting, and all of that stuff. It's always fun to look at that and fantasize and then I get back into real life again. So that's another thing I tend to do every day but as I said, it's usually about a minute and a half each day.

Central Park, New York
Redrawn plan

CHRISTIAN UNVERZAGT

Associate Professor of
Practice in Architecture

POSTSCRIPT

What is Dimensions?

Is it a class? A book design project? A student organization? For the hundreds of students who have participated since its inception, I hope they would agree that it is all of these, and more. Students are often drawn to it as an opportunity to edit text and learn graphic design—but leave having developed many less tangible skills, including how to organize and collaborate on a complex project with many aspects outside their control, so I also hope that this year's team would agree that it was all they hoped it would be, and more too.

It's difficult to know exactly when the work that makes each issue what it is actually begins, as abstract thoughts and big ideas swirl about during the foundational meetings. Eventually those conversations evolve, coalesce, and the form finally bumps up against content allowing the essence of the journal to emerge. In retrospect, early decisions to move the project nearer to the end are usually just steps moving it further from its start. In time all those decisions gain momentum and hone in on the end product.

Three decades ago I shook the hand of Dean Beckley as I crossed the stage at Hill Auditorium. Beckley had originally provided the institutional support for the four students that had proposed reviving the journal Dimension and was also the faculty advisor for many years, including the two years I worked on the journal as an undergraduate. Less than ten years from that day, I was invited to be the advisor for Dimensions 17, a role I continue to relish, twenty-one issues later.

If you happen to look back at those early volumes, I am credited as a so-called 'production coordinator' for volume 7, and as a co-managing editor for volume 8. In my experience, those and other titles didn't fully capture the expansive roles students played each year, and since I've been the faculty advisor the journal hasn't credited individual roles. Teams do have an organizational structure, but it's flexible and fluid and the students wear different hats throughout the process. They are all known as editors, and I leave it to them to decide the value of the work they did, how it supports their academic and professional goals, and how they choose to cite their own contributions to the project of Dimensions. While a stand-alone artifact, how they reflect upon and carry forward the experience is theirs.

I never could have imagined what I would learn from working on a project like Dimensions and how it would circle back in my life in the ways that it has, let alone that I would be handing out copies on that same stage thirty years later.

Dimensions changed my life. And to all the Dimensions alumni, especially this year's editors: I hope it changed yours too.

Christian Unverzagt
Faculty Advisor
April 14, 2024
Detroit

CLASSIFIEDS

MERCHANDISE

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FOR HIRE

Architectural Student Journal seeks talented and creative University of Michigan students to sign up to work on the next volume for print.

CALL FOR SUBMISSIONS

Dimensions encourages 2024 architecture graduates to submit Wallenberg, Thesis, or MS capstone projects to be considered for inclusion in volume 38, scheduled for publication in spring 2025.
Visit dimensionsjournal.us/Submit for further details.

MILESTONES

Dimensions congratulates all 2024 graduates of the University of Michigan and Taubman College.

IN ANN ARBOR

The launch party for this volume, Dimensions 37, will take place in the Taubman College Commons in the fall of 2024. If you're reading this and it hasn't happened yet, you've either graduated, been sent an advance copy, or stole this book.

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