





TELESIS ADAPTIVE PRACTICE.

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EDITORIAL TEAM.

Telesis Vol. V 2023

Telesis: Adaptive Practice

The Gibbs College of Architecture Student Journal at
The University of Oklahoma

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Declaration

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tel•e•sis

(te-lə-səs)

Progress that is intelligently planned and directed : The attainment of desired ends by the application of intelligent human effort to the means.

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AN ADAPTIVE PRACTICE.

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Architects, designers, engineers, artists, and others are constantly participating in processes that shape our world. The word “adaptive” invokes ideas of fluidity and change, an ever-present evolution of ideals and methodologies. Adaptation has long been a human practice. Whether innovating agriculture, designing new urban environments, or communicating across great distances, we’re always seeking new ways to survive and thrive in light of changing conditions.

Telesis: Adaptive Practice called for contributions from interdisciplinary problem solvers who reject the status quo and redefine “business as usual” through their work.

As society develops strategies for responding to social injustices and preventing environmental decay, contemporary professionals must also explore the role of their practices—how and where they work—in imagining a more just and sustainable future. Adaptive Practice features work that aids in the restructuring of current practices, addresses the ever-changing socioeconomic and political climates, and dives deep into the ideals of adaptive practice in the built environment and beyond.

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Illustration by Kayarash Karami
Poster for Call for Submissions

Adaptive Practice in Context

Following *Telesis: Habitation*, which addressed the need for belonging and the sense of place as something intrinsic to the human experience in the creation of our own habitat, *Telesis: Adaptive Practice* wrestles with the notion that as our environment is in constant change, in a similar way our practice as architects, designers, and planners must adapt according to new modes of production, and consumption of the contemporary world. However, the important questions considered in both volumes are how is this adaptation and use of our habitat taking place? And how sustainable is it for the future of our planet? Given that the built environment, as well as nature, is in constant evolution, an adaptive practice in design advocates for processes that are moldable and respond to changing factors including but not limited to the user needs, the environment, and technological progress. Likewise, ideas about the design field as a profession are not fixed but are frequently guided by social, political, environmental, and economic circumstances that demand constant reformulations in how we imagine, create, and experience our surroundings. However, how can we define “adaptability”? While the term seems too broad, we believe “adaptive” invokes ideas of fluidity and change, an ever-present evolution of ideals and methodologies in design. For example, this idea of adaptability can be evidenced in the creation of transformable structures, capable of being modified by their users or their environment, or easily reused as circumstances require, without compromising their functionality, their aesthetic appeal or structural integrity over time.

French architects Anne Lacaton and Jean-Philippe Vassal have been at the forefront of the adaptive practice movement in terms of reusing materials, repurposing existing spaces, and incorporating simple and cost-effective solutions. For instance, the architects use simple solutions such as natural light, ventilation, and green spaces to enhance the well-being of users and reduce the building’s ecological footprint. However, they are not the only group of architects who have thought about the need for spaces that are adaptable and sustainable. In particular, Le Corbusier, indeed, was one of the pioneers of modern architecture but also a significant contributor to

the development of an adaptive practice. He believed that architecture should be functional and efficient but above all, “adaptable to the changing needs of society.” Likewise, Rem Koolhaas, founder of the Office for Metropolitan Architecture, argues that architecture should be flexible and responsive to the constantly changing conditions of contemporary society. Koolhaas seeks to create buildings that can be easily adapted and repurposed as circumstances require, without sacrificing their structural integrity or aesthetic appeal. Adaptive practice, then, emphasizes flexibility, sustainability, and innovation in architecture. These architects have each contributed unique perspectives to this evolving field, helping to shape the way architects design buildings and spaces in the modern era.

Moreover, it is important to consider that adaptive practices in the modern world have been driven by the incorporation of cutting-edge technology and innovative materials into the design process. By leveraging advancements in digital modeling, computational design, and building information modeling, architects can create highly detailed and accurate models that simulate real-world conditions and enable them to test and refine design solutions before construction begins. However, this does not imply that local solutions or low-tech hybrids are undesirable; rather, they are encouraged and crucial for the preservation of local cultures and the development of environmentally responsible design.

Design

The contributions to *Telesis: Adaptive Practice* focus on crucial topics pertaining to the evolving landscape of theory, design, art, construction, and education in the field. To discuss adaptivity as a practice, it is important to first understand how non-architects perceive adaptation. One way to gauge this is through interviews and sketches with individuals in various fields, by which Jordan Fields suggests potential ways to adapt for the future. For Fields, adapting means changing one’s natural way of life to accommodate unrelenting changes. However, relying solely on adaptive architecture will not sufficiently address the urgent issues that endanger everyday life. Instead, only collective efforts from entire communities can make these

changes feasible. Achieving this social transformation must begin with collaboration between practices and professions, with architects reaching out to those who possess the power to enact necessary changes.

In an interview with Abigail Janka, Brian Phillips, principal at Interface Studio Architects (ISA) and OU alumnus, highlights the importance of mixed-use, multifamily housing for the sustainable growth of cities. To achieve this, ISA proposes addressing the need for “missing middle housing,” which refers to accessible and modest housing offered by the market. In contrast, Benjamin Jawad and Fadi Kandalaf, a team of OU students, propose to solve one housing problem by designing affordable tiny houses for specific users. A concept of compactness, efficiency, and adaptive functions within the basic unit. In both design examples, standardization and systematization of planning, design, and construction processes are essential for meeting the demands of an industrialized and globalized market. However, Ben DeCuyper emphasizes that current efforts at standardization overlook community engagement, which DeCuyper deems a vital foundation for future architectural design processes.

Aneesha Dharwadker’s article “The Imagination Station” provides a compelling example of an architectural practice that adapts to and is shaped by community input during the design and construction of an open-air pavilion for Chicago’s inaugural Sukkah Design Festival, which celebrates the autumn harvest of Sukkot. Similarly, the nonprofit Open Design Collective strives to foster social and spatial change by bringing together underrepresented communities with design and city planning resources. In an interview with Abigail Janka, Open Design Collective co-founder Deborah Richards and architectural designer Errin McKnight emphasize the importance of actively listening to community voices and centering them in their practice, as well as learning alongside community members. Their approach reflects the growing trend in the design field of prioritizing not only aesthetically pleasing buildings but also ones that genuinely reflect the voices and aspirations of those who will inhabit them.

Natasha Brand and Sam Slaton discuss the power of community engagement to advance health and the built environment through an interdisciplinary approach. According to Brand and Slaton, geographers could engage with health professionals and educational institutions to envision safe and healthy communities for the next generation. One of the ways to promote a healthy environment is by creating space for diversity in our profession. Christopher Le, for example, indicates that diversity, equity, inclusion, and belonging are crucial and should be required components in architectural practice when working with communities and institutions in order to evolve and enhance our human experience.

Adaptability, according to Tom Kundig, means embracing uncertainty to propel us forward. In Kundig’s project “Turning the Museum Inside-Out,” he breaks down traditional museum barriers between public and back-of-house spaces, integrating collections and research labs with traditional galleries and circulation pathways. Likewise, Ravideep Singh describes Creative Designer Architects’ adaptive reuse of older, depleted, or vacant buildings, like the firm’s project La Midas Wellness Centre. The efficacy of adaptive reuse, especially in healthcare, is gradually gaining meaningful acceptance. Taller Vertical dwells on deeper problems concerning our society: How can we answer design problems when we are in a financial crisis? Their solution involved making small-scale architectural interventions such as “the pill,” a small and low-cost architectural intervention that solves problems with multifunctional parts. In contrast, at a bigger scale, Kayarash Karami proposes repurposing public space for current needs by reutilizing alley networks and making them safer. According to Karami, old functions need to evolve to suit the needs of the present.

Theory, Education, and Practice

As the design field continues to evolve, so too does the concepts around it. Soumya Dasgupta explores how critical theory can be applied in architecture and the importance of using it to better understand the power structures that impact our discipline, pedagogy, practice, and industry.

This knowledge can inspire architectural practice and design activism by encouraging us to imagine alternative perspectives that challenge dominant narratives.

Kevin Michael Ozmun focuses on adaptability in the present moment, not only in the future. He argues that we need to create environments that allow the earth and humanity to coexist. Using various media, he presents a series of futuristic cities designed to help society thrive in extreme conditions. However, he also highlights the importance of ethical considerations when it comes to using artificial intelligence, as the laws and restrictions surrounding it have yet to be fully established.

Meanwhile, Trey London discusses the evolution of the American School of Architecture, which originally prioritized creative freedom and individuality over strict doctrine. The school continues to encourage the development of creative individuals who can produce architecture that is both indigenous to its place, time, materials, and spirit and meaningful to its people. Overall, the goal of this school of design remains to encourage people to make their own unique contributions to the field.

Art

The pursuit of balance lies at the heart of adaptive practice. John Wolfe achieves this balance in his artwork by exploring the boundaries between different elements and their relationship with the space they occupy. He also emphasizes the importance of minimizing components to reveal the true essence of a form. Similarly, the architects of Path Arch uses abstraction through illustrations to educate the local population about their architectural heritage. In contrast, Ryan Robert Schnirel's "A Proposal for Underdevelopment" emphasizes the need to preserve and respect our environment through minimal-impact approaches.

Nick Lillard's Design Team creates art using reclaimed objects, aiming to make it accessible to everyone. Through adaptive practice, the team has come to understand the

importance of climate change and systemic oppression, which has influenced its aesthetics, concepts, and business practices. Lillard and his team believe that equity and inclusion should be core values in their work. The development of art, including the creatures and worlds it portrays, is closely connected to how we treat each other.

Conclusion

Any practice claiming to be adaptive must prioritize meeting the needs of both people and nature. Whether in art, theory, or built works, many contributors to this issue argue that true adaptability requires community participation and a conscious use of resources. With the environment changing at an unprecedented pace, this issue serves as a wake-up call to prioritize the needs of the community over the individual in order to create a more harmonious, equitable, and free world.

ARCHITECTURE + URBANIZATION

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A Conversation with Brian Phillips

The architectural field's approach to housing spreads across many timelines and areas. Traditional neighborhoods are often seen as the primary housing option, but the suburban lifestyle is limited in many ways. For instance, those who live in a suburban area often must travel great distances to reach basic destinations such as shopping centers and places of employment. The resulting abundance of vehicles, as people must commute in order to survive, is evident across America and contributes greatly to pollution and natural disasters brought on by climate change. To meet the needs of a changing society, architecture must also adapt and create environments that are best suited for the people who inhabit them.

One design firm doing this work in urbanization and housing is Interface Studio Architects (ISA), a design and research office engaged with projects in cities across

the United States. Its founding principal architect, Brian Phillips, earned his bachelor's degree from the University of Oklahoma in architecture and his master's degree from the University of Pennsylvania. He has lectured widely on urbanism and housing within his practice. Phillips was awarded the 2011 Pew Fellowship in the arts and was named an Emerging Voice by the Architectural League of New York in 2015. ISA leverages the opportunities and challenges of its home city of Philadelphia to drive an innovative and thought-leading practice that takes on the complex context of the American city. ISA designs buildings, master plans, installations, and conversations that address the changing climate, lifestyles, technologies, and urban environments. I sat down with Phillips to discuss his practice and the firm's approach to urban design as it relates to our look into an adaptive practice.¹

1

The interview has been lightly edited for clarity.

AUTHORS

Interviewer

Abigail Janka

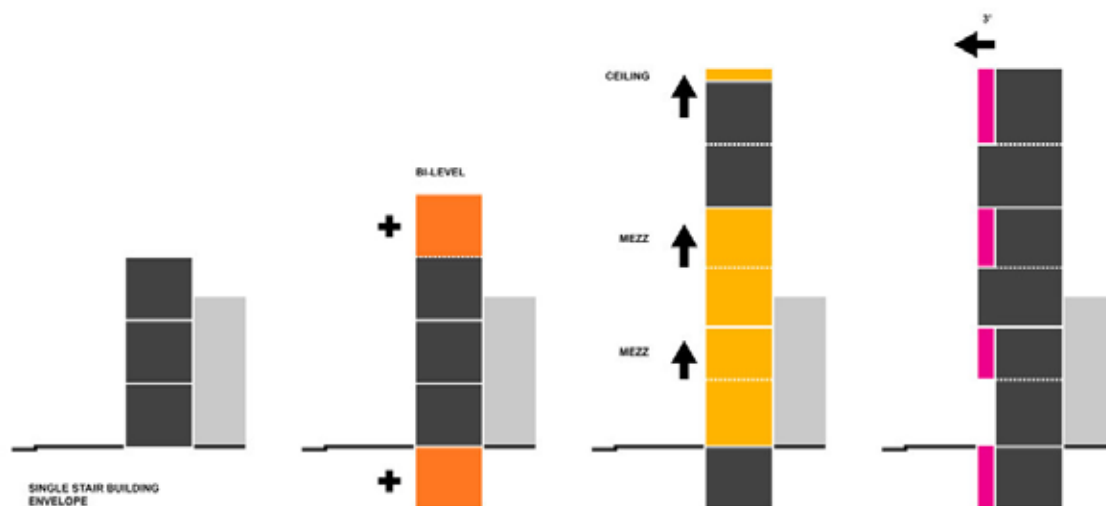
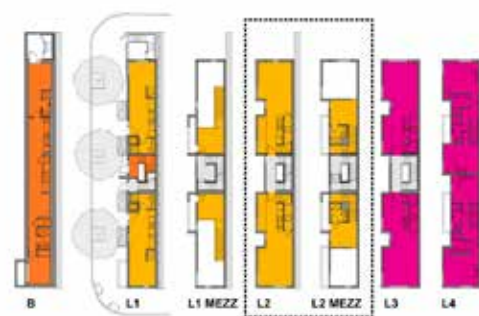
Undergrad Architecture Student
University of Oklahoma

Interviewee

Brian Phillips

Founding Principal + Creative Director
Interface Studio Architects

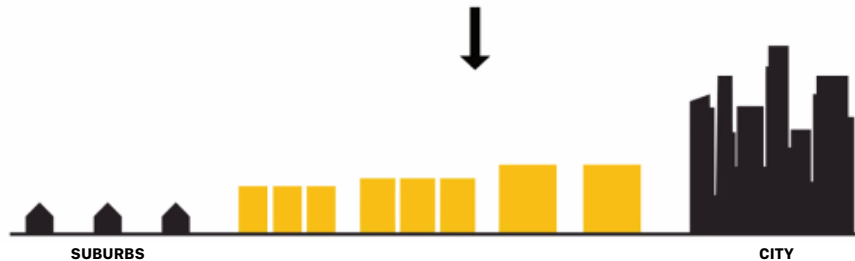




*Opposite - Exterior Photo by ISA
XS House, Philadelphia, 2019*

*Above - Floor Plans & Diagrams by ISA
XS House, Philadelphia, 2019*

"THE MISSING MIDDLE"



Abby Janka (A): Mr. Phillips! It's so good to have you here. *Can you tell us a little bit about yourself?*

Brian Phillips (B): Yes! I'm Brian, I'm from the Pennsylvania area, not from Oklahoma. I went to OU straight out of high school as an undergrad and came back to the East Coast to the University of Pennsylvania for graduate school, and started my practice here. Most of our work is in Philadelphia and is focused on mixed-use multifamily housing and the exploration of missing middle housing. We're very interested in attainable, modest housing that is provided from within the marketplace. We aimed to carve out a practice that addresses this kind of housing.

A: Thank you so much. We want to start this conversation off with a few questions to get to know you a little better. *Do you prefer hand-drawing or model-making?*

B: This answer has changed over time. Starting out, we built more physical models when digital tools were less robust and affordable. We've moved more and more to digital model-making on the screen in Rhino and Revit which I take very little role in. Hand drawing is where most of my design input lies in the process today.

A: *Is architecture an art form?*

B: I understand why people want to call architecture an art form—but deep down for me, I think the right answer is no, it is not. There's a bit of art, but there's also science, engineering, urbanism, and so on—and I think in this sense, architects have given away their agency a bit by

relying too much on the idea of "art" form. Architecture is a complex process that is equal measure creativity and pragmatism that derives social, economic and cultural value as well as artistic expression. I think sometimes architects have given up a bit of their value by focusing too much on the art. The art in architecture usually happens on its own—it naturally embodies the quality and elegance of the thinking.

A: That was a very interesting and thought-provoking answer to a complex question. *Moving on, what gets you out of bed on most days?*

B: I think what gets me out of bed is, first, really wanting to take care of our staff who are committed to working at ISA and being a part of the vision. I also enjoy being a citizen of Philadelphia and working to take care of my city. You know, because of the pandemic, it's been a rough few years. COVID revealed a lot of new perspectives on urbanism, equity and democracy that need to be fully explored through the work of designers.

A: *What made you choose Philly and how has it affected the way you design?*

B: When I graduated from Penn, Philly was still recovering from a massive population decrease and was at the bottom of its curve. Some of my peers were going to LA and New York for work, and so in a funny way, my path to Philly wasn't very deliberate at all—the result of what I didn't do. As I began working, I really grew to appreciate what a gift the city was to a creative person. Thinking about

some of the more complicated issues within the city really got me committed to it, and that's when I decided to open my practice.

A: *Can you connect your practice back to your time at OU? How did that experience influence where you are today and how your practice has adapted?*

B: One thing that OU did for me was provide an incredible change of scenery—socially, politically, environmentally, everything was different. The vast prairies make it seem almost like a radically decontextualized landscape. And so going from this to a city (Philadelphia) where every site is covered with constructed objects and layers of history was interesting - it challenged me to make new connections and

to unpack the context of my new place.

A: *How does architecture as a whole need to adapt to contribute more and better solutions to affordable housing issues? Can you share some examples from your own practice?*

B: I think this depends on how we define "design." I think sometimes there's this idea that somehow being clever with something like material or form can help affordable housing be better. But architecture is not, as simple as just making something that looks nice or interesting or different. One of the biggest things is to understand is where the money is going and the costs of the elements that we're working with – both physical and regulatory.



TRADITIONAL STOOP



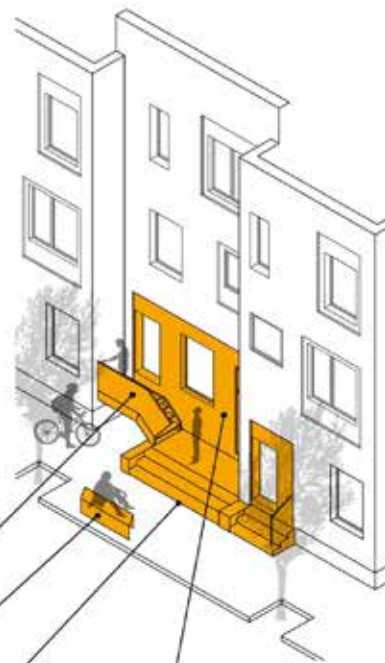
SUPER STOOP

DECORATIVE RAILING PANEL

SIDEWALK BENCH

SITTING STEPS

WOOD CLADDING



Opposite - Diagram by ISA
The missing middle rise tower

Above - Diagram by ISA
Powerhouse (super stoop) at Philadelphia, PA

The most important thing is to acknowledge architecture's complexity, the amount of effort and conversations required, and to be open to seeing the answer come out in a way that you weren't exactly expecting.

A: *What are the largest challenges facing adaptive reuse?*

B: We're very committed to the sustainability of reusing existing buildings, and Philly is full of many old buildings that are made too easy to just tear down. One of our recent projects involves an old church in Evanston Illinois, and one idea was to tear it down or build on top of it, but we successfully advocated to renovate the existing church and make a completely new building next to it. So on one hand, it's a loss of social function that the church congregation that once existed there no longer is able to use the space. However, the connection to context and that history remains within its walls. We always advocate for the idea of keeping what's already built from an energy and sustainability standpoint. Philadelphia has a vast amount of old brick buildings where it is literally the brick wall, a layer of plaster, and no insulation. There is an ancientness about them, but still, finding ways to use what is already built is incredibly important.

A: *What role do you think research can or should play in the future?*

B: When we design, we're designing with and around the lives and stories and histories and experiences of those who inhabit these spaces. Sometimes, we get caught up in trying to get the most out of a design from an architectural perspective. It's a careful balance between functionality and accommodating the different kinds of aspects of everyday life, making sure that the people we're designing for feel embraced by the project.

A: *What do architects need to know about partnering with community members to adapt their practice to suit community's needs?*

B: Community engagement in architecture used to too often mean sitting down with a menu and asking people if they like option 1 or option 2 better, without any real collaboration. Expectations from all sides have really

evolved on this. In whatever way possible, it is important to include community stakeholders as partners in the research, conception and design of a project. The best methods for community engagement maintains contact throughout the process, sharing the processes of planning and making architecture so that stakeholders can give meaningful and impactful input. I think that a successful community engagement not only reflects the stated needs of the community, but that the architect brought something surprising and unexpected that the community didn't know was possible, and can solve their needs in more powerful ways.

A: *Any closing thoughts on the future of practice? And, as a final question, how can young architects get into this niche of community-led design?*

B: Design what you know and get to know your city, your place, adopt your community and become deeply embedded in the issues. I recognize that while doing our project called 100K Houses, when we started to take ownership over being a Philadelphia firm was when we were able to get comfortable and consistent with how we design. And then, funny enough, this allowed us to work better in other places outside of Philadelphia. Start in your place and get really good at understanding the context, and then what happens is that other places notice that. You bring information and knowledge that is completely different in this new context, and I think that is a really interesting way to be local and thoughtful and be able to flourish within other contexts.

A: These are some very thoughtful and meaningful answers. I think we've reached the end of our time together. Mr. Phillips, thank you so much for meeting with us and for these very fruitful conversations. We so appreciate your contributions in helping us understand what it means to be adaptive in our designing. Boomer!

B: Sooner!



FROM STANDARD- IZATION TO COMMUNITY- INSPIRED DISTINCTION.

Standardizing architectural design has been a dream for many. Recent key players, however, haven't advocated for standardization when compared to the design giants of the twentieth century. The exemplar is Le Corbusier, with his Five Points and attempts at standardization in urban planning. Of course, while simultaneously being lauded as one of the greatest architects of the twentieth century, his efforts have come to be intimately associated with the failures of the Modern Movement. Maybe this is the reason recent voices in the profession have distanced themselves from standardizing design.

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Rather than a succinct manifesto of points or rules, architect Christopher Alexander attempted to devise a "language" of architecture in *A Pattern Language*. This resource, which Alexander wrote during the 1970s while teaching at the University of California, Berkeley, contains more intimate rules of thumb, or patterns, and relies on a system that establishes degrees of invariance. Some examples of invariant rules include the requirement that balconies be no less than six feet deep, plaza edges contain activity pockets, and workplaces strike the correct balance between exposure and enclosure. When viewing Alexander's built works, it quickly becomes clear most of the patterns lack invariance, as many become unrecognizable. Of the 253 patterns, 84 are invariant and 115 are mid-invariant.¹ Regarding the patterns that lack invariance, Alexander explains, "we believe it would be wise for you to treat the pattern with a certain amount of disrespect—and that you seek out variants of the solution which we have given, since there are almost certainly possible ranges of solutions which are not covered by what we have written."²

A more recent example is American architect Stan Allen's "Field Conditions" essay, published in 1996. Allen's publication bears similarities to Alison Smithson's 1974 article, "How to Recognize and Read Mat-Building," in which she coined the term "mat building." While Allen's field conditions are not explicitly related to Christopher Alexander's project, both aim to craft a design process while paying very close attention to architectural elements. Allen's process is a welcome advancement from previous attempts to craft a design process in that it never explicitly names or defines the elements of architecture. Rather, it concerns itself with the overall governing system, while advocating for each self-contained unit (or element) to maintain its unique character.³ This process seems far more forgiving since the previous processes entail endless instances of rules needing to be broken or bent to implement others deemed more important on an ad hoc basis. Field conditions embrace this need, accounting for it in the overall system. There's only one problem: Allen realized over time that field conditions rarely—and arguably have never—translated into a single building. He claims they are more appropriate for projects of an urban scale.⁴

Considering design standardization a proclivity unique to postwar minds is limiting. For many, design standardization has developed not from sciences engaged in warfare but from sciences concerned more directly with evolution and biology. Jean-Nicolas-Louis Durand may be considered the progenitor of the systematized process in architecture. His 1801 book *Recueil et parallèle des édifices de tous genres, anciens et modernes* (Collection and parallel of edifices of all kinds, ancient and modern) displays drawings of significant architectural works, categorized by program. By analyzing the progression of their spatial elements and configurations, Durand proved building types did not adapt toward their respective apotheoses. Rather, his publication visualized the abandonment of given truths or principles in design. Durand wished to improve upon this history. From 1802 to 1805 he published *Précis des leçons d'architecture données à l'École polytechnique* (Summary of architectural lessons given at the École Polytechnique), the communiqué of his career-long pursuit of standardizing design. When lecturing at the École Polytechnique, he advocated for a socially responsible, streamlined architecture, predominantly by working in plan following the establishment of primary and secondary axes.⁵ Ultimately, this top-down approach is made possible through the use of a grid, starting with the overall composition, then "handling the constituent elements of the building."⁶

Leandro Madrazo likens Durand's *Recueil* to Linnaeus's *Species Plantarum* (1753) and Buffon's *Histoire naturelle* (1749), collections of biological data that epitomize the "spirit of classification that dominated the epoch."⁷ Durand exemplifies architects who adopt modes of research belonging to scientific disciplines, in this case biology. When considering this link between architecture and adaptation, architects should act similarly and reference the works of biologists, as biologists have at times illustrated points of their own through architecture. In "The Spandrels of San Marco and the Panglossian Paradigm: A Critique of the Adaptationist Programme," biologist Stephen Jay Gould claims that our being, as deep as our evolutionary biology, yields byproducts, or traits of little to no use. For example, according to Ed Young, the human chin is an example of a biological spandrel, or non-selective trait.⁸ In "The Spandrels of San Marco...." Gould makes his

case regarding the existence of non-selective biological traits with the help of Voltaire's *Candide*, anthropological anecdotes, and architectural metaphor via spandrels.⁹ Gould's deep cut of architectural elements to visualize non-adaptive traits causes a student of architecture to consider what else Gould might have leveraged as his metaphor; a host of spatial negotiations might be drawn from architecture.¹⁰ If we wish to get technical, the structures Gould referenced were actually pendentives, but true spandrels are appropriate for his argument. Spandrels are the material, often forming a triangle, between joined arches. Many architects today will be most acquainted with the term "spandrel panel," and the word "spandrel" is also used to describe the triangular, or sometimes irregular quadrilateral, space found under stairs. People have attempted to leverage such architectural byproducts, whether as substrates for mosaics at St. Mark's Basilica or, in J.K. Rowling's case, an expository space for her disenfranchised main character.

Myriad anomalies employed to contend with architecture's infamous corner problem could visualize Gould's evolutionary theory. Take, for example, Michelangelo's Siamese scroll corbels at the Laurentian Library. Roofs are another likely realm for visualizing Gould's concept, given how resultant they feel if one isn't careful while working in plan. Glimpses of odd roof cheeks and dropped eaves come to mind. As one continues to zoom out, however, it becomes increasingly difficult to draw the line, which may be due to architecture's ill-defined scope. In *Species of Spaces* Georges Perec writes,

At a time too remote no doubt for any of us to have retained anything like a precise memory of it, there was none of all this: neither corridors, nor parks, nor towns, nor countryside. The problem isn't so much to find out how we have reached this point, but simply to recognize that we have reached it. . . . There isn't one space. . . . There's a whole lot of small bits of space.¹¹

The most important takeaway is the nature in which spandrels arise. They are byproducts, not clearly selected traits. They are the result of negotiations, the exact nature of which may not be understood from the onset. Perec's

yearning to recognize the species of spaces is something architects should learn from. When considering the concept of spandrels in architecture, one questions if standardization for the sole sake of efficiency should be the end goal of any designer. This mindset for considering adaptation helps us to move past the assumption that such adjustment processes yield only what we anticipate. Instead, adaptation will occur regardless of our intentions, and it will often come with non-selective traits that we must recognize and determine how to leverage.

Nearly a century after Jean-Nicolas-Louis Durand's passing, in the mid-twentieth century, another Frenchman, Jean Renaudie, would combat similar ideas of architectural standardization. If any architect's work can be characterized by the occurrence of spandrels, it is Renaudie's. As described in the Congrès International d'Architecture Moderne's 1933 Athens Charter, the functional city would consist of standardized building materials and methods through the adoption of new industrial techniques. But Renaudie insisted that differences radiate throughout each of his housing projects, such as Ivry-sur-Seine and Givors. His work engenders spandrels by eliminating repeated unit types via odd triangular layouts. He turns on its head Rowling's interpretation of the spandrel as a no-man's-land. Pynchon's description of the Delaware Wedge in *Mason & Dixon* seems an appropriate literary comparison:

Here at the northeast corner of Maryland, the Geometrickal Pilgrim may well wish to stand in the company of his thoughts, at this purest of intersections mark'd so far upon America. Yet, Geomancer, beware,—if thy Gaze but turn Eastward by an Eye-lash's Diameter, thou must view the notorious Wedge,—resulting from the failure of the Tangent Point to be exactly at this corner of Maryland, but rather some five miles south, creating a semi-cusp or Thorn of that Length, and doubtful ownership,—not so much claim'd by any one Province, as priz'd for its Ambiguity,—occupied by all whose Wish, hardly uncommon in this Era of fluid Identity, is not to reside anywhere.¹²

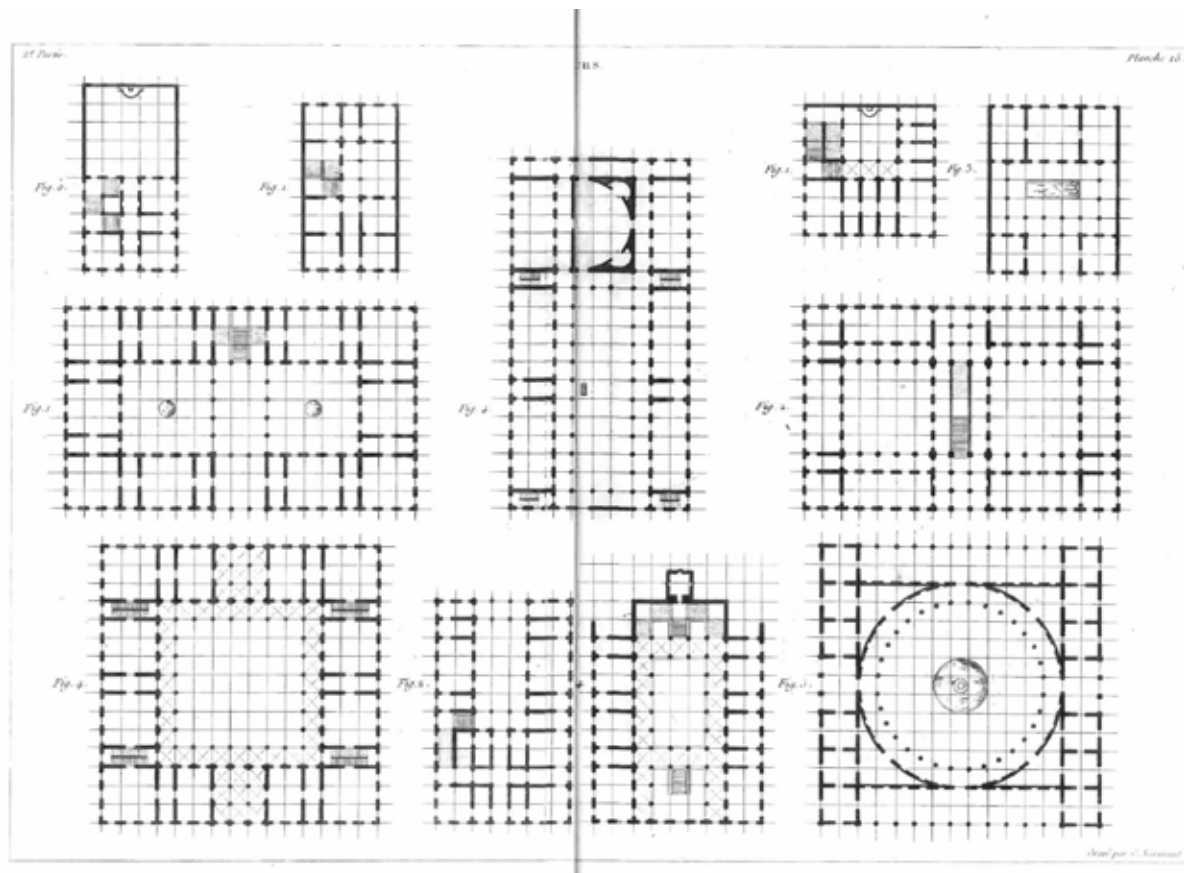


Image courtesy of Senses Atlas
A spread from Durand's *Precis*

Each of Renaudie's unit layouts evokes this odd, pie-shaped piece of unclaimed land. One-off units were unheard of in housing projects but greatly contributed to the residents' sense of individuality. Although the buildings appear complex, admirers of the design claimed ease of constructability wasn't compromised. Unfortunately, by the mid-1970s,

What had been an interest in systems (one shared by all the human sciences) now passed for a compulsive concern with systematization. . . . Drawing was the engine, the generator. The passion it inspired caused the gradual disappearance of the system that had controlled it at the outset. No rules, not even shifts in scale, prescribed the next move. At every moment, drawing was made to correspond to the concrete aspects of the problem under consideration. This, according to Serge Renaudie [Jean's son], distinguished the process from that of fractals. . . . To those who were neither its designers nor its inhabitants, the work appeared systematic in a pejorative sense. The criticism was so common that, toward the end of his life, Renaudie was opposed to the very idea of system.¹³

This conscious effort to reduce standardization became recognized by citizens, though not residents of Renaudie's projects, as a repeated housing design. His vision was so unique that people saw his acts of avoiding repetition as an act of repetition.

Not a single one of these design processes includes community engagement as a required step in the design process. Considering the time it requires for projects to come to fruition, our profession is a slow, reactive one. What are we reacting to, if not our previous efforts? Designing in a vacuum is rarely successful, and even when it achieves a certain amount of success, such as in Renaudie's case, it risks being misunderstood by the public. Who can blame said public, since community members weren't included in the architecture's conception?

In *How Buildings Learn*, Stewart Brand raises a brilliant point in response to Louis Sullivan's axiom "form follows function." Brand explains that Sullivan "adds a proviso that has been little noticed and never quoted. . . . 'Where function does not change, form does not change.' What about when function changes?"¹⁴ To challenge Sullivan's quote further, I'd argue we don't exist in a cyclical arrangement with "functions," a word that evokes performance, profit, and Lefebvre's "everyday."¹⁵ Rather, we are in a cyclical arrangement with people and their needs. It is time for us to dismiss this long-held desire to standardize design. The surefire way to adapt to nearly any brief is not to have a preconceived, all-encompassing design process but to incorporate community engagement as the sole fundamental of architectural design processes.

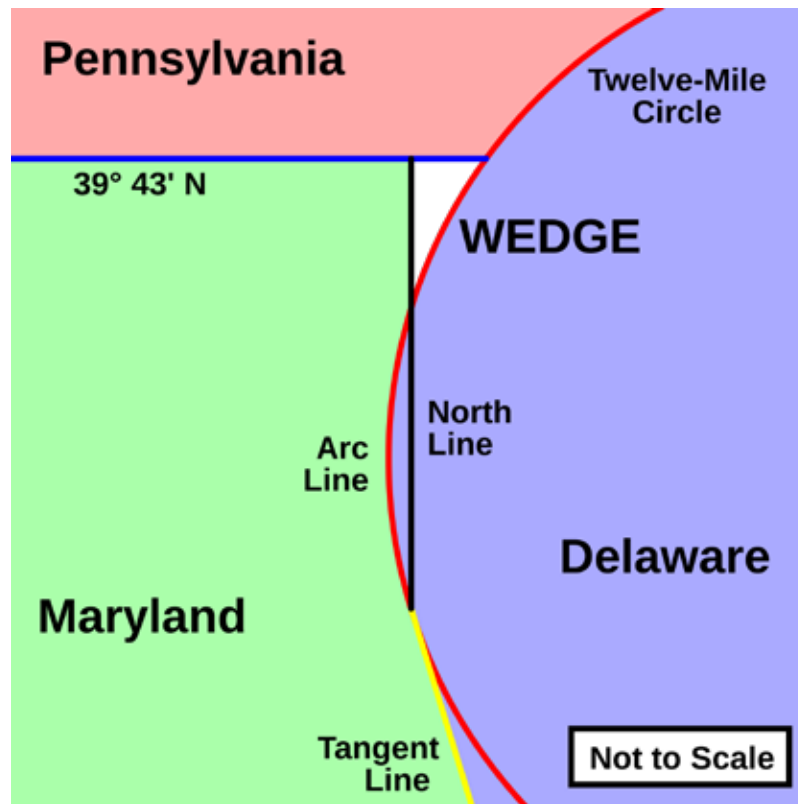


Image courtesy of Lasunncty at English Wikipedia
Diagram showing the Delaware Wedge

PATCH ARCH.

Finding the Pieces in the City

Editor's Note:

Patch Arch is an esteemed collective of Ecuadorian architects who passionately craft visual representations of architectonic environments that possess both a profound sense of cultural identity and exceptional structural significance. Their noble mission is to democratize access to these magnificent creations by sharing them with a global audience, thereby fostering a profound appreciation for architectural masterpieces across borders.

As architects we decided to investigate about architectural projects and recreate them using illustration.

Why do we use illustration?

For us this type of visualization is perfect to show a project, encourage people to search for more about it and give an architectural project a more dynamic aspect.

Our objective is to share our knowledge about international, local architecture, and our city, Quito, Ecuador. We show a summary of the object or place, we explain it in a simple way, and let the user's curiosity complete the experience. We think that if you better know a building or a city you will take better care of it.

Telesis Vol. V 2023

Following pages

Overleaf, left - Image courtesy of Patch Arch
Japanese Tea Garden
San Francisco, CA

Overleaf, right - Image courtesy of Patch Arch
Museo Nacional de Antropología
(National Museum of Anthropology)
Mexico City

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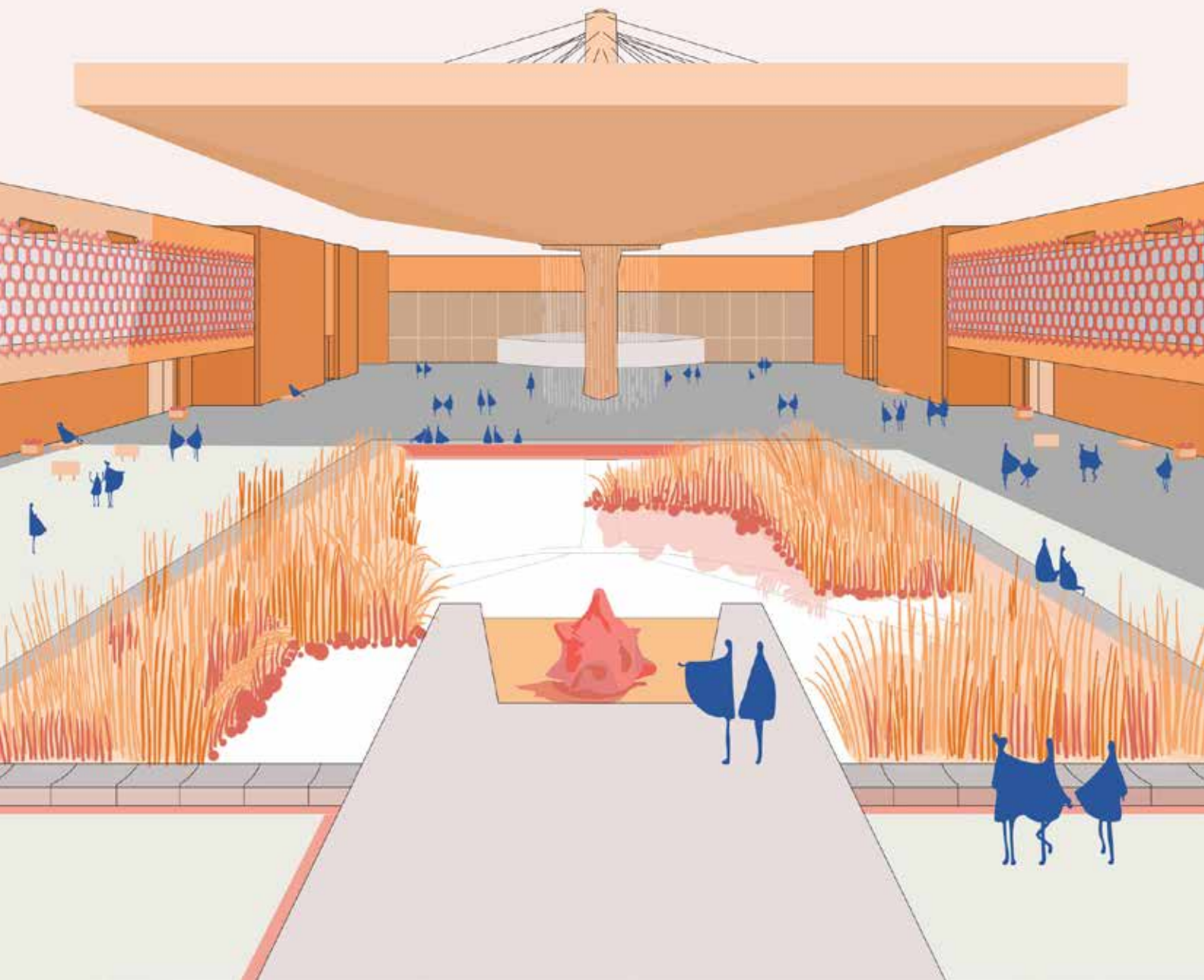
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NAVIGATING CRITICAL THEORY AS AN ARCHITECT.

One can be a competent and compassionate architect without delving into any critical theory, and reading critical theory books does not necessarily lead to critical and empathic design skills. However, critical theory, a vast, ever-expanding, and formidable body of knowledge, can be a valuable intellectual tool. Historically identified with the Frankfurt School of 1929, the term “critical theory” suggests a mode of inquiry that seeks to reveal, critique, and question social power structures.¹⁶ One can use it to understand the configurations of our discipline, pedagogy, practice, and industry in larger societal, political, economic, and cultural contexts or question conventionalized norms, disturb or subvert them, and articulate pressing social issues to an academically oriented audience. It can help architectural practice and design activism and provoke us to imagine things differently, often in ways that oppose the dominant narrative, and give us clues about what might or might not work. As a doctoral student, I have had the time, opportunity, and privilege to explore this complex world of texts. Today I would like to share how, as a non-native speaker of English, and someone unaccustomed to Western philosophy and American university culture, I approached critical theory and navigated the challenges I faced.

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First, the world of architectural design education is predominantly visual. Our design pedagogies train us to understand spaces visually; we learn to design by sketching, drawing, and making models. In most cases, discussions in the design studio surround a design developed visually through plans, elevations, sections, renderings, and models. The domain of written expressions is limited, used mainly to delineate the graphics and sometimes to explain design concepts that are difficult to present with diagrams. We also like to choose what font we should use and whether the paragraphs should be left-aligned or justified in our presentations. Hence, to some extent, one may argue that even our texts act as graphical elements in our predominantly visual representations to a certain degree. While many schools offer excellent architectural history and theory courses at undergraduate and graduate levels, they often do not invoke critical theories. Integrating critical theory into more mainstream design studio discussions is also challenging. Moreover, while some experimental design studio approaches are emerging in the gap between the written and the drawn, they mainly do not include more extensive critical theory reading.

On the other hand, critical theory is primarily a world of texts and dialogues. Few images or visual aids are available to navigate this field because what it offers is challenging to explain in drawings. Exploring critical theory demands extensive and, at times, exhausting reading of page after page of lengthy, complicated sentences, encountering complex and unfamiliar words, often with multiple possible

interpretations. Further, grappling with the complexity of this world demands engagement in the form of verbal discourse, listening to long and, at times, stern lectures, and discussing things at length with colleagues from our neighboring disciplines. Imagine showing the construction drawing of an airport to a friend in philosophy and expecting them to understand the details of the HVAC system in a mechanical section diagram. I faced a similar level of complexity when I accidentally walked into a lecture on Henri Lefebvre as an architecture student. While architecture and critical theory are intimately related at a conceptual level and can benefit by engaging with each other, they speak and draw in different languages. Transitioning from the visual to the textual world thus is the first challenge, followed by returning from the verbal to the graphic.

However, I want to persuade you today that, as architects, we need not fear the world of thick books and long lectures. Once we overcome the initial unease with this unfamiliar terrain, critical theory can be quite an intellectually refreshing, if not rewarding, pursuit. At the same time, I want to caution you about the incredibly enticing, even seductive, effect some of these theoretical texts might emanate. While we need not stay away from them, we also need not be indoctrinated by them. Consider the alluring effect good rendering software often has on us and how we overcome that allure to master the software as a tool for our work. Similarly, we should approach critical theory as a tool to analyze and critique our profession and pedagogy and imagine a way forward.

The first lesson I learned in approaching critical theory is that it is crucial to read about the author before engaging with the books they wrote. Every critical theory text—be it Fanon's *Wretched of the Earth*, Foucault's *Discipline and Punish*, Lorde's *Sister Outsider*, Gramsci's *Prison Notebooks*, Bhabha's *Location of Culture*, or Stiegler's *Technics and Time*—can be read and reasonably made sense of, to start with, by considering it as a text produced by an author in conversation with society at a particular time.¹⁷ In other words, the author is saying something they deem necessary to say in their time and, in many cases, against the hegemonized notions in their surroundings. In this sense, these texts provide us a portal to understanding the world in a way that differs from and challenges the conventions of that time. Every book has an author, a human being who thought of something they were willing to share and did the laborious and often very delicate task of putting it down in ink, and as readers, we should know who that author is, what geopolitical context they are coming from, and also to which audience they are primarily addressing their works. Sometimes, prefaces or forewords written by other scholars that bookend such texts provide richly articulated accounts of the author and the work's historical context. Look at, for instance, Gayatri Chakravorty Spivak's "Translator's Preface" to Jacques Derrida's *Of Grammatology* to learn about the debates around 'prefaces' themselves.¹⁸ Additionally, googling the author and skimming their biography online never harms.

Almost all works have some set of core arguments. However, these core arguments are only sometimes

presented upfront. Some recent scholars, especially those from the United States, provide the overarching schema like a parti diagram at the beginning. On the other hand, older texts, such as those written in the second half of the twentieth century, tend not to provide schemas that are easily accessible to a global audience. Sometimes they are intentionally hidden behind a camouflage of convoluted writing, as they may contain politically unsettling ideas. However, if one discusses them with a professor, a critical theory scholar, or friends in disciplines such as literature or philosophy, one might find clues about how to find one's way in such a daunting literary labyrinth. Further, referring to reading guides or video lectures explaining these texts while reading the core texts can also help.

However, in older texts, such as those written in nineteenth- and early twentieth-century Europe, a structure of the work might be available directly in the table of contents. Hence, thoroughly reading the table of contents is imperative to understand how the author develops their ideas and core arguments. Equally important is to be aware that as a reader, one does not have to agree or disagree with the authors' views (much like one does not have to like or dislike a piece of architecture). I have read many texts that I find problematic and prejudiced, if not outrageous and unacceptable in our present moment. Thus, it is vital to keep in mind that the context in which the author said something might differ from the context in which we interpret the text, which can differ between readers. Moreover, it is always okay not to read something if you do not find it appealing.

The second challenge I faced, as a non-native speaker of English, is that of language. Most critical theory texts are available in English, either written in English or translated from European languages such as German and French. Here, from my colleagues in literature, I learned about two preexisting problems: first, the problem of translation, and second, the issue of representation. The first problem is that a translation always carries an unavoidable loss of meaning, often called "lost in translation." Hence, the translation might not accurately reflect the original text's meaning. For instance, *Aufheben* is a German word that appears in Hegel and Marx's works, which have contradictory English translations. It has been translated as both "sublate" and "abolish" and also as "supersede" and "transcend." The use of the word "abolish" was authorized by Engels in the English translation of *The Communist Manifesto* (a highly controversial if not world-altering political text, with propositions unacceptable to many). This perhaps led many to misunderstand Marx and think that he called for abolishing family" or disregarded the necessity of faith. In other translations, the word "supersede" was used, which closely resembles the German word, suggesting perhaps a more nuanced approach of transcending or superseding that does not have the same connotation as "abolish."¹⁹ *Aufheben*, as the online encyclopedia of Marxism suggests, literally and originally meant "to pocket." But does that mean Marx suggested pocketing the institution of the family? That does not make sense at all! Since I have not yet learned German, I can never quite understand what Marx suggested

precisely because my reading is limited to English. This difficulty in understanding what the author said through the translator's mediation remains an unsolvable problem. However, we must allow ourselves to learn that we may never know to the fullest extent what the author intended to say. This is why it might not always be helpful to take these texts by their literal meaning; better to interpret them as we see fit.

Related but distinct from the problem of translation, the second problem, representation, mainly concerns scholars and researchers from or working from the Global South but might also be considered by others. Since "critical theory" is born out of what is known as the Frankfurt School, what is considered critical theory, or how critical of the contextual circumstances a theory needs to be to be considered critical theory, does not (and cannot) have a universally agreed-upon criteria. One might argue that a literary work produced in a formerly colonized geography meets all the criteria of critical theory. However, it might not be considered a critical theory because it is already identified as literature or does not resemble European critical theories in its appearance or form. So while there might not be any debate that Max Horkheimer was a critical theorist, whether some writing of Rabindranath Tagore (primarily considered a literary figure) could be regarded as critical theory remains to be argued. Currently, the world of this theory is predominantly a world of Western thinkers and thinkers operating from or within the West. Looking at the content page of the *Norton Anthology of Criticism and*

Theory would substantiate this point.²⁰ However, I think what is or is not critical theory is a subject of the critical argument itself, so what is not considered critical theory today might be included in its annals tomorrow.

I began with the proposition that one can be a competent and compassionate architect without reading thick books and listening to long lectures. However, this “avoiding theory” model can only sustain if the architect is reasonably aware and continues to inform themselves of societal-political issues of our world and potentially respond to them through their work. If we go back only a few decades, we will encounter an architecture school in which a reasonable doubt persisted whether societal-political issues mattered to the architect’s education. Indeed, we are slowly moving forward from the era of dismissive questions such as “What has race got to do with architecture?” or “How is a space gendered?” After centuries of intellectual and political struggle, the last few decades, in particular, are evidence that not only do these issues matter to the architect, but they are pertinent to the future of our practice. Issues of indigeneity and decolonization, relationships of globalism and colonialism, reparations, antiracism, migrations, and indentured labor are slowly becoming visible in the frontiers of architectural research and education today. However, merely reading about the spatial histories of racial segregation or how Modern architecture can act as a colonial enterprise does not necessarily lead to a rebuilding of our design pedagogies. We need to keep asking how much our

profession and education are responding to the issues of social injustice and spatial precarity and keep inviting criticisms of our industry. Arriving at and reflecting on such questions are necessary and perhaps the only way to be a socially responsible architect.

Critical theory cannot, in my opinion, help make a better architect by default. However, it is a valuable intellectual apparatus that can enable the architect to navigate multiple understandings of the world and have a broader understanding of how their creation, that is, architecture, affects people. Emerging platforms such as *Aggregate Architectural History Collaborative* or *Who Builds Your Architecture* can be starting points for delving into such questions. *Foundations of Modern Social Theory* on Open Yale Courses can also be a handy reference for a more rudimentary introduction to European critical thought. Most importantly, knowing about the author, noting the year and place of the original publication (often different from those that appear in citations), and paying attention to the content page can be game-changers in approaching critical theory.

THE EVOLUTION OF THE AMERICAN SCHOOL OF ARCHITECTURE.

In the 1940s, architect Bruce Goff founded the American School of architecture at the University of Oklahoma with a unique vision for the curriculum. Rather than following the established approaches of other universities, Goff sought to create a program that was based on alternative principles. Goff's vision for the school was to create an environment "where we [stress] creative individual development for our students so they will be able to produce a vital and indigenous architecture for our people, place, time, materials, and spirit."²¹

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Photograph courtesy of the OU
Libraries Western History Collection
Bruce Goff, "Eugene and Nancy
Bavinger House," 1950, photograph
by Robert A. Bowlby.

The vision of the American School was to “teach no dogma”²² and to have students explore their own architectural style. All over the country, at the time, there were primarily only two architectural curricula taught at design programs: the French Beaux Arts and German Bauhaus philosophies. These curricula incentivize universality and imitation, disregarding organic forms and the intimate, personal relationships architects should have with their design and the client. When asked about his thoughts on these design pedagogies, Goff stated, “in matters of proportion and cleanliness and the nice use of materials, . . . there seemed to be something very dead about it, too, that didn’t account for human beings. It was an abstract exercise and beautiful just to look at, but not to live with, or to be with, or to grow in.”²³

But at OU, Goff preached that students should be able to express their creativity in their designs freely, and should not mimic their professor’s work or style. While lecturing at Mies van der Rohe’s Illinois Institute of Technology architecture school, Goff rhetorically asked, “Who do you follow—Mies, Frank Lloyd Wright, or Goff? Our students [at OU] were amazed at this question because that isn’t a concern in our school—who do you follow? They don’t even think about that. They were dumbfounded that such a question would be asked.”²⁴ His goal for his students was not to become “little Frank Lloyd Wrights or little Le Corbusiers or little anyone else”;²⁵ the goal was to make your own you.

*In the minds of the Ivy Leaguers and big city critics, the jump was from Beaux-Art to Bauhaus, because it allowed them to retain their umbilical cord to Europe. The American School let OU cut that umbilical cord.*²⁶

—Susan King

National Attention

As Goff developed the American School at OU, the school gained national attention from notable architects, critics, and students for its different approach to the default architecture curricula. For example, critics of Goff, like “the distinguished English historian Reyner Banham[,] defined Goff as ‘a sort of hipster . . . without

formal academic training, he has devoted much of his life to a socratic teaching relationship with the young[.]’ [Landscape architect] Charles Jencks, making a backhanded compliment, described Goff as ‘The Michelangelo of Kitsch. ‘Architect Louis Kahn described Goff’s work as ‘an architecture of Coke bottles and old locomotive parts’”²⁷

Goff answered such criticisms by justifying his “abnormal” curriculum: “We believe that here in this school we are very different, and I guess we are. In fact, we might even be called ‘odditects’ at times. We do seek to do something that is creative in architecture—at least, we are branded for that. We are condemned or praised accordingly. Not all of us are guilty. But we do, I think, try to do something creative in our own work.”²⁸

Goff stressed to his students the importance of designing empathetically for their clients, regarding the uniquely American values of considering people, place, time, materials, and spirit. A close relationship with the client and figuring out all the little details in making uniquely beautiful, innovative American architecture was incredibly distinct to OU’s curriculum. This is why most American architecture is remarkably “modest in scale and scope: residences, local branch banks, small office buildings, [and] churches.” To truly have a close relationship with who, what, and where you are designing, the spaces you are creating almost have to be at this scale.

This idea directly contradicted other schools’ curricula, which focused on creating environments that could house anybody and anyone, anywhere, with little recognition of various cultures, unique landscapes, or times. Instead, the American School taught that the spaces we design should be directly unique to whom we are designing for and where we are building. Thus, Goff encouraged his students to observe the natural world surrounding them “by analyzing the designs of plants and animals to better understand how buildings might be made to adapt to their contexts and do so beautifully.”²⁹ By connecting our designs to the landscape we are building on, we can think about how we can design directly for our clients and create meaningful and beautiful architecture: the hallmark of the American School.

All this attention focused on the American School's unique architecture curriculum and its students' work through showcases and media spurred students from universities around the country to transfer to OU. Goff organized his best students' work to draw attention to the new curriculum he was developing at OU. They "participated in 'round-robin exchange exhibitions'"³⁰ along with other midwestern architecture schools. Following these, OU received many transfer students to join Bruce Goff and the American School. For example, "after the opening of an exhibition organized at Kansas State University, John J. Schultz, a former student at OU who taught at Kansas [State], sent Goff a telegram describing the reactions of the faculty and students: 'Academists baffled, hopefuls inspired, doubters convinced, majority pleased, some mad, all upset, many transferring!'"³¹ Following that event, nine students transferred to OU.

The attention didn't stop there; famous architect Frank Lloyd Wright noticed the creative work done at OU. Though a harsh critic of many architecture schools, he felt differently about what was happening at the University of Oklahoma. Out of request from the students and being an acquaintance of Goff, "Wright gave public lectures to OU students in 1946, 1952, 1954, and 1958."³² It was one of the few schools of architecture he supported: "'I myself, once upon a time, believed the function of a university to be to awaken the sleepers and the School of Architecture of the University of Oklahoma has encouraged that belief by its teachings. This is already well established by its own young architects' work which has done more to put Oklahoma in the front rank of educational pursuits than anything else it can show.' If students were determined to study architecture [at] a university, Wright often encouraged them to attend OU."³³ For example, Takenobu Mohri, a student of Wright's who moved from Japan to work at Wright's famous design studio, Taliesin, discovered that he could not obtain a student visa without enrolling in an accredited architecture program. Consequently, "Wright encouraged him to transfer to Oklahoma."³⁴

When I arrived at OU, I thought I knew everything about Organic Architecture. I was informed by the students at OU that Wright was the old way and Goff and [Herb] Greene and others were the new direction.³⁵

—James Schildroth

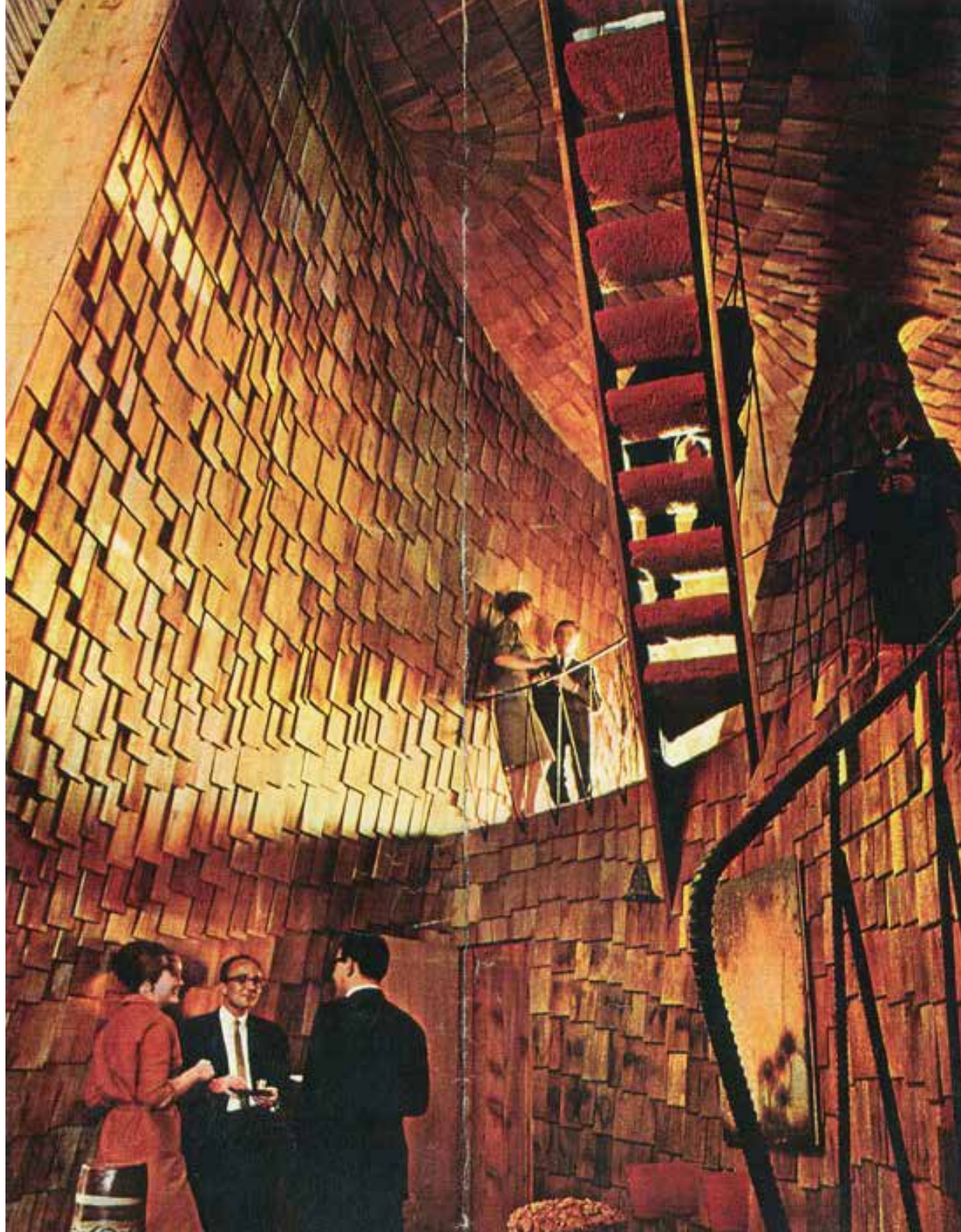
Bruce Goff's Legacy

But after this significant movement started under Bruce Goff, was it able to keep to the innovative and experimental standard from what it was originally intended? I began to investigate this question by analyzing the evolution of the curriculum from when the American School first started to today and by interviewing OU architecture alums from throughout the school's tenure, including OU Associate Professor Dave Boeck (1975–1980), OU Assistant Professor Andrew Stone (2005–2010), and Populous Norman architects Farzan Mahmoudzadeh (2017–2020) and Blake Adams (2016–2021).

After Bruce Goff left OU, his name recognition seemed to fade, but the legacy he left with such a unique design pedagogy was not forgotten. Dave Boeck recounted that while he was there, "there was not an emphasis of doing a certain style or a certain type of steer or certain kinds of materials. The emphasis was more on the creativity process and experimenting . . . and that's what the American School is all about, is experimentation."³⁶

But after Boeck graduated, even that idea started to fade from the school. OU's architecture program needed help with retaining its creative curriculum along with its accreditation status from various national architecture institutions. Boeck recounted his thoughts on the evolution of the American School: "There's a period from about '85, or '88, to probably 2000 . . . [where] there probably wasn't as much emphasis [on experimentation], I think, we lost that even implied identity of creative thinking. And it may have been more of a prescribed program that we have to do this, this, and this."³⁷

*Opposite - Photograph by Julius Shulman
Herb Greene, "Prairie House," 1962*



Eventually, the school had to choose whether taking a hit to its American School pedagogy was worth more than providing students with an accredited degree. Boeck added that “over the last . . . twenty years, the emphasis has been on how do we meet those [accreditation] standards and still allow for creative thinking?”³⁸ So although it would be a long process, OU had to adapt its architecture program to keep its accredited status along with maintaining its American School identity.

But from when Boeck graduated up until Andrew Stone attended OU (1980–2005), I was surprised to hear, OU had changed very little regarding this dynamic between its curriculum and national accreditation standards. OU’s architecture program still had a creative and independent aspect to it, relating to its students, but it was different from Goff’s vision for the American School curriculum. Stone explained that his experience at OU’s architecture school “was based on the professor, but it was very creative . . . guided creativity, really.”³⁹ And speaking specifically about how the American School approached teaching architecture, Stone said there wasn’t much other than that guided creativity. Stone explained that if students wanted to research the school’s history independently, they could, but “there wasn’t as strong a connection as there should have been, and there certainly wasn’t the term American School floating around. . . . There were kind of general ideas about Goff, and we certainly weren’t going deep. . . . We just knew him to be this very creative person.”⁴⁰ And although this doesn’t prove that the school at the time didn’t have underlying American School values, it does show that the student body mostly only had a base-level knowledge, at best, of what the American School was. And can you truly understand what the curriculum was initially intended to do if you know only very little about it?

But shortly after Stone’s time at school, there was a shift in attitude toward how Bruce Goff’s legacy should be treated at OU, along with a deliberate effort to reinforce the values of the American School within the architecture curriculum. Stephanie Pilat, director of architecture, and Angela Person, director of research initiatives and strategic planning at Gibbs College of Architecture, with the help of other faculty, co-edited a 2020 book called *Renegades*, a history of Bruce Goff and the American School of

architecture. This accomplishment sparked enthusiasm among the faculty and student body to amplify the American School’s values within the program once again.

The book ended with a mission statement for the architecture college going forward:

Today, we find the tactics of American School iconoclasts prevalent in both architectural pedagogy and practice. Designers now routinely consider how to design resourcefully and work sincerely with clients and sites; organic form is once again the subject of creative exploration; design-build programs are now ubiquitous and celebrated as a means of teaching students firsthand through the labor of construction. The imagined and built work of the American School architects suggests that we can achieve bolder solutions when we embrace the specificity and individuality of the conditions at hand. . . . We need students of agency who are personally and collectively invested in resourcefulness, in not only how to create but also how to make the future with one’s own hands.⁴¹

Farzan Mahmoudzadeh and Blake Adams echoed this notion when I asked them about their time at OU during this period of enthusiasm. Adams put it perfectly:

*There was definitely a lot of freedom, but the intent was always there to embrace the American School of thought. . . . We saw what younger students were doing and how it differed from our class. You can see where the emphasis is being put on this a little more or sometimes a little less. It’s just that they were actively looking at each class, how they moved along, what went right, what went wrong, and how it’s just a constant evolution. . . . And with Telesis and with this book *Renegades*, there were several things on the side that we were encouraged to at least take a look at or be part of... If you wanted to, you could really get more of a taste of that American School than if you’re just kind of going through the motions.*

But the intent was always there, to get that information across to you, and to show us examples. We got opportunities to go and visit these places. . . . That's where you see it the most, is they're trying their hardest to get that across to keep the American School the American School. . . . They wanted every student to learn as if they were in Bruce Goff's time. It's harking back to the days when he was teaching. And that is really, really unique.⁴²

—Blake Adams

The University of Michigan program at the time was dry, doctrinaire Mies and you can imagine the stir that Goff's work created. Towards the end of the academic year, I decided to leave Michigan; but what were my alternatives? A student friend said that Goff was now head of the department at Oklahoma; that was all the suggestion I needed to start hitchhiking across the country to see what this new school was like.⁴³

—Jim Gresham

The American School Today

Adams's account of his experience at OU sounds a lot like my current experience. The faculty at Gibbs College of Architecture are actively trying to implement a curriculum to the effect of what a true American School would look like today. In my first semester of college last year, all of us first-year architecture students took a class called Methods 1, taught by Dr. Angela Person and Dean of the Gibbs College of Architecture Hans Butzer. The course introduces new students to the American School and its place in the architecture curriculum at OU. This was my first introduction to the American School and my first realization of how unique our program is compared to any other architecture education I could've been getting.

The principles of the American School are very valuable for OU's architecture program, its future, and its broader importance within the general architecture community. We produce uniquely creative and thoughtful architecture to whom we design contrary to other philosophies. This



Image from Facebook, University of Oklahoma
Bruce Goff and Frank Lloyd Wright, Fred Jones Jr. Museum of Art



Image courtesy of the OU Libraries Western History Collection
Takenobu Mohri, "Orchestration of Materials. Aluminum, Copper and Glass,"
Takenobu Mohri Collection, The American School Archive

speaks to what architecture should be about and defies what is becoming increasingly popular today as architects imitate others and forget that they are designing for people, not exclusively their own portfolios. That is what excites me about being a student of the American School during this revival of something like what Bruce Goff might have wanted. Bruce Goff offered an alternative to how we have perceived architecture for years, and it isn't making little Bruce Goffs or little Frank Lloyd Wrights; it is encouraging you to make your own you.

The evolution of our curriculum and revival of American School principles gives the program room to grow to more than what Bruce Goff could have imagined. OU can return to a time where, in Frank Lloyd Wright's words, we can "awaken the sleepers" and "put Oklahoma in the front rank of educational pursuits"⁴⁴ while simultaneously creating a uniquely beautiful and innovative American architecture.

Image courtesy of Andrew Stone
Andrew Stone, model, Second-Year Studio assignment, 2006





AN ENCOMPASSING TAKE ON AN ADAPTIVE FUTURE.

In our current era, certain issues that pose a threat to our future are becoming increasingly prominent. These problems transcend any specific profession, affecting people from all walks of life. Architects are expected to confront these issues fearlessly and with confidence. However, the reality is disappointing. Green initiatives often prioritize funding over the greater good, and harmful practices persist without signs of slowing down. Architects have fallen short in igniting an eco-movement. The primary reason for this failure is the lack of communication between architectural practices. Architecture alone cannot solve the urgent challenges that jeopardize our daily lives. This movement can only take shape through collaboration and engagement with other professions that have the power to effect necessary changes.

AUTHOR**Jordan Fields**

Undergrad Architecture Student
Gibbs College of Architecture
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To better understand where non-architects stand on adaptation for the future, I conducted an exercise involving the surrounding community. The purpose was to explore the mindset of those outside the architecture profession regarding necessary adaptations. I set up a booth on the University of Oklahoma campus and provided participants with sketch paper and three prompts: "What is 'Adaptive'?", "Sketch a Futuristic City," and "Sketch a Futuristic Home." Twenty sketch responses were received from OU students.

The results varied significantly from person to person, but they shared common elements across the collection of sketches. From shared living concepts to towering cities, it is evident that many individuals have adaptation on their minds. The following summarizes the sketches created by participants as well as some reflections on the exercise.

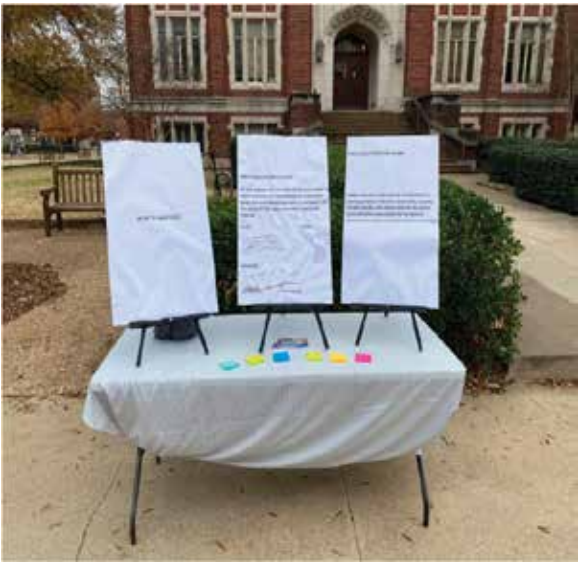


Image by Jordan Fields
The author set up a participatory sketching booth on the University of Oklahoma campus during the fall 2023 semester. The exercise received twenty sketch submissions in response to three prompts.

"What Is 'Adaptive'?"

Interestingly, this prompt was selected least often (three responses). Perhaps it was too vague, but even after I explained the purpose of it, participants still disregarded the prompt. It became clear that very few professions delve into the topic of adaptation, so when given the choice, participants preferred not to answer. It was most likely ignored because the topic is not glamorous or easy to contemplate. It requires deep thought and planning to answer. Nevertheless, the responses received perfectly summarize traditional ideas.

One design depicted two flowers moving around a tree to ensure they receive the sunlight they need to survive. This simple idea is thought-provoking when we realize it happens every day around us, yet hardly anyone takes the time to notice. This lack of attention is reflected in the minimal responses to the question "what is adaptive?" Adaptations often go unnoticed until they fail to occur. We expect things to adapt and survive without giving them much thought. However, it is precisely the process of adaptation that enhances their chances of survival.

Another participant provided a piece of writing, rather than a drawing: "Use things based on your surroundings" and "Be able to reconstruct with what's available." Their definition emphasizes the use of local materials instead of importing from distant locations. This approach aims to shift reliance to nearby materials that are better suited according to the local climate and needs. In future designs, adapting to the climate and local conditions must be a focal point for the health of our planet. Human survival has long been associated with the idea of conquering nature, bending it to fulfill our desires. But what if society adopted a different approach to adaptation? What if we designed with local materials to blend in and adapt to local environments instead of destroying them? This may seem like an extreme departure from current practices, but it could also be the solution to the current issues we face in the built environment.

"Sketch a Futuristic City"

This prompt, "Sketch a Futuristic City," included this language: "As time marches on, the cities we live in will need to adapt for expected and unexpected conditions. Based on your perceptions, sketch a futuristic city on one of the three possible landscape choices."

Futuristic cities have always fascinated us through popular media, with countless depictions in movies and video games, and this prompt was popular, receiving seven responses that can be divided into two thematic groups. The first group of sketches can be best described as "Hollywood-esque." They depict enormous skyscrapers that dominate the skyline, requiring flying vehicles to access the various levels. These designs assume a continuous population boom that promotes vertical growth instead of horizontal sprawl. They envision a future where transportation adapts to a world without flat roads. The next sketch stands out as it portrays a ghost town as the future. This could suggest that cities might be abandoned and replaced with better-adapted living situations, or it could indicate a failure to adapt to the changing environment. Adaptation is an inherent part of life, as every living thing has adapted to reach its current position. Humans are no exception; we must be willing to adapt rather than attempt to conquer.

The second group of sketches vary in detail but share a common interest in the surrounding environmental context and how it can enhance comfort. One sketch depicts a desert city with a stucco material finish, emphasizing the thermal, economic, and stylistic benefits of local materials. The last drawing is highly detailed, breaking down a semi-circular city design with careful consideration given to the placement of industry, business, and residential areas. The city adapts to natural processes like snowmelt to harness energy and other resources. It is fascinating that these fully developed ideas are floating around in the minds of fellow students who have the potential to turn them into reality in the near future. The most important thing is to share these ideas and correct past mistakes, adapting as needed.

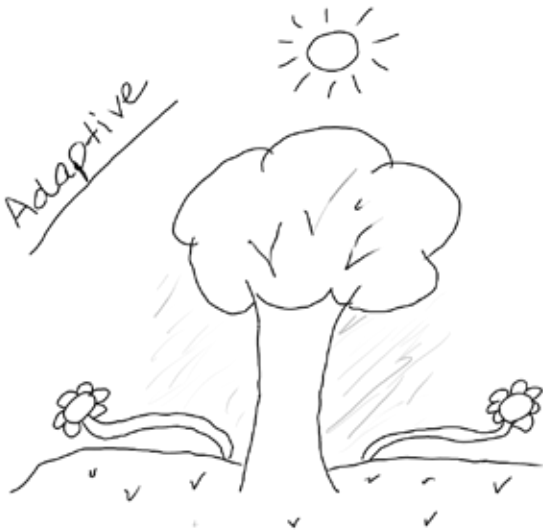
"Sketch a Futuristic Home"

The final prompt, "Sketch a Futuristic Home," included this language: "Homes have had a long history of adapting to particular needs. Even now, traditional housing options in rural and urban areas of the United States are being challenged on the basis of ineffectiveness. Sketch the ideal home of the future."

This prompt garnered the most interest (ten responses), and rightfully so. Everyone has envisioned their future home, whether it's in the near or distant future. The first group of sketches represents more unconventional designs, almost alien-like. They feature odd shapes intentionally distinct from traditional homes. One sketch resembles a disco ball house, which enhances playfulness but may compromise effectiveness as a dwelling. The next sketch appears otherworldly, like something out of a Dr. Seuss book—an elevated home with stilts resembling landing gear, possibly suggesting that future homes may not be limited to Earth. The last sketch in this group looks unfamiliar, but has a clear design rationale focused on eco-friendly elements such as solar panels, natural lighting, and native plants. Another grouping of sketches showcases relatively normal homes with unique touches and some adaptive features. This may indicate that these individuals do not believe significant changes will occur that would require drastic adaptations in housing. Two more sketches depict more traditional housing options adapted to maximize their benefits. One blends harmoniously with the landscape, causing minimal disruption while utilizing contextual elements and natural materials. The other is simple yet demonstrates potential additions that can be made to existing homes, such as incorporating gardens and rainwater collectors. These small steps can contribute significantly to the overall adaptation of housing options in a positive and achievable way, without relying on futuristic and distant possibilities. Any step forward is a step in the right direction.

**An Encompassing Take on an Adaptive Future:
Sketching Adaptive Solutions**

This exercise aimed to engage the surrounding community at the University of Oklahoma to assess their awareness of the potential for adaptation and how it could enhance the built environment. The sketches collected from the participants demonstrate that these principles are present in their minds in various ways. Some participants delve deeper into the adaptations required for individual dwellings, while others envision the potential for redesigning cities to be more effective. Architects should take away from this exercise that other professions are also preparing for the future and the impending changes. Architecture must recognize that adaptive practices are not mere add-ons for the sake of checking a box. Instead, adaptation is a holistic movement that impacts the way of life for everyone, and thus, everyone should be included in these ongoing discussions. It seems that the entire history of the built environment has led present-day designers into uncharted territory, requiring them to collaboratively reinvent design practices to meet a new set of needs. However, once these needs are documented and understood, the process of adaptation can begin.



"What Is 'Adaptive'?"

This participant described "adaptive" by showing two flowers growing toward the sun from underneath a tree.



"Sketch a Futuristic City"

One participant envisioned a city that worked in concert with natural systems, including changing seasonal and weather patterns.



"Sketch a Futuristic Home"

Another participant imagined a home that includes native plants and adapts to natural light cycles to harvest energy.

A PROPOSAL FOR UN- DEVELOPMENT.

We watch our environments homogenize, and we participate. The monuments of our era become larger, more ubiquitous, and globalized. We call it progress: "higher" standards of living, modern comforts, better homes and gardens. We fill grasslands with subdivisions, mountains with chalets; our forests fall, and concrete covers ancient living webs. How do we restore, respect, and honor a vision that genuinely incentivizes preservation, "un-development," and minimal impact approach? What if we offered the earth a moment of reprieve? How would our communities evolve? What if we built habitats with impermanence in mind and heart? If we watched the birds, we might construct our "nests" with materials we could carry only in our hands. How would these actions inform our structures? How could these shifts transform culture? As a maker, a poet, an artist, a student, a teacher, an architect of culture, I'm asking myself and fellow creatives to pause, and deeply consider the health of all species inhabiting our planet.

AUTHOR**Ryan Robert Schnirel**

Artist

University of Oklahoma

My personal evolution as a creative merges a studio art practices with architectural elements, and ecological focus, uprooting a traditional background and opening space for an adaptive practice. The work becomes varied expressions of "radical" transformative thinking. It takes all forms, from hand-dug earth shelters in the hills of California to upcycled chicken coops in contemporary art museums. Teaching advanced architecture students about local clay and brickmaking plants affirms that just because you can build a structure doesn't mean you should. If we moved the earth with shovels, molded bricks by hand, and fired kilns with wood, how would our shelters evolve? Slow building may challenge efficiency and cut into profits, but offering space for an alternative ethos grows increasingly necessary in the evolution of a sustained ecosystem.

In a recent body of work, I explore the expectations of a material artist. The Western tradition of ceramics supports a narrative that clay is harvested, bagged, constructed into "art," fired to vitrification, displayed, bought, used, broken, landfilled or shard-piled, repeat. I seek to subvert this process and offer a conversation that challenges while presenting an alternative. Suggesting a shorter life expectancy shifts the direction; clay returns to the hillside, and the platelets realign. I ask the earth for a moment of collaboration, but I assure her that my efforts will not be solidified into towers of patriarchal achievement.

I'm considering a future that includes the land's perspective. We must listen to the land, rivers, and trees. They all speak; we've simply forgotten how to hear their voices. This paradigm shift challenges a human-centric reality. I'm asking how we become comfortable with the uncomfortable. How we recalibrate to a higher law, and expand our possibilities while creating more equitable and just environments. The task may seem daunting, but I feel we have a wonderful opportunity to toss a monkey wrench into the cogs and restore the wheel of life to a more harmonious pace.

As we pause, we recognize our proximity to the ledge. We need not panic, but rather step back and calmly recall ways we've simply forgotten existed.

—Ryan Robert Schnirel

Opposite - Photograph by Ryan Schnirel
"Just 25." Local clay, fired bricks, unfired pot, fired pot, blue thread, ink on paper. 22 in × 30 in. Fall 2022.



LIFT HOUSE.

Park City, Utah

"As second home owners push low-wage workers further and further from the lifts, the very character of any given mountain town is at risk, character that's so often built by the local workers who can no longer afford to live there. No one suffers more in this scenario than ski area employees themselves."

—Colin Clancy, Ski Journal

Our project responds to this pressing challenge.

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The Housing Shortage

Park City Mountain, the largest ski resort in the United States, received 5.8 million visitors in 2021 alone.⁴⁵ Alongside its large number of eager seasonal skiers, a substantial cohort lives near the slopes year-round. While the permanent residents of Park City occupy much of the housing in and around the resort, the remaining housing, much of it large-scale projects for wealthy residents as temporary second homes, occupies the remainder of the real-estate space. These homes are rented during the off-season, leaving only 32.6 percent of the cities' houses occupied year-round, while 43 percent of the city's available houses are listed as Airbnbs.⁴⁶ The vacant properties drive up the housing prices in the Park City area, even as the number of short-term rental properties grows at an alarming rate.

As a result of this housing problem, the gap between the working class and the middle class is growing steadily. This ultimately leaves the ski resort employees, whose average wage is \$17.15 per hour, at an immediate disadvantage. Although the employees are essential for the general upkeep of the resort, they don't have affordable housing options near their workplace. Many of them have been forced to relocate to the nearby Wasatch and Summit Counties; only 15 percent of the workforce lives in Park City itself. Workers forced to commute to the resort pay large amounts of money just to park every day: parking at the resort can cost employees up to twenty-five dollars per day, while some houses in Park City can be purchased for as much as \$100,000.⁴⁷ Fortunately, abundant money is being directed toward affordable housing projects via American Rescue Plan funds, low-income tax credits, and public or private funding.

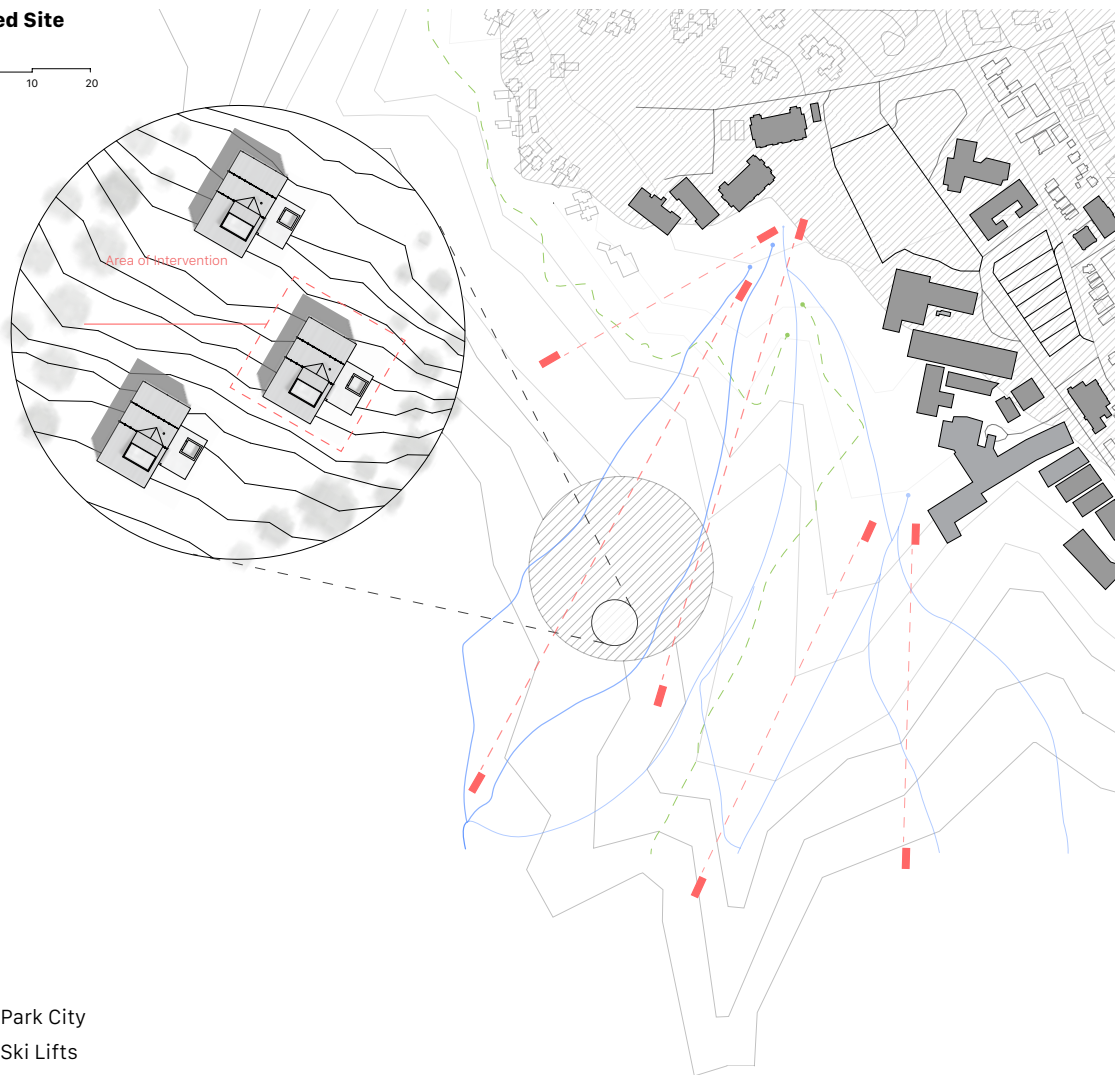
With an average age of twenty to thirty,⁴⁸ of the Park City ski resort employees are extremely active and adventurous. They enjoy outdoor activities such as mountain biking, hiking, climbing, going out to the city, and, most frequently, skiing. Because of the rapid increase in the prices within Park City, we intend to aid adventure-seeking ski resort employees by providing an affordable, innovative housing concept that immerses them within their environment.

Proposed Site

Located between the Three Kings Terrain Park and Three Kings Ski Slopes, the proposed units can be accessed via the First Time or Three Kings lifts. Employees can ski directly from their homes onto the slopes, providing convenient access to the wide network of ski lifts leading to any point on the resort. From their location near the base of the mountain, the units provide access to grocery stores, retail stores, parks, bus stops, restaurants, bars, and many other amenities, greatly reduces the costs of construction, and promotes ease of access to the units. A balanced distance between units provides privacy in a constantly active environment but encourages gathering between employees when desired. A stunning view of Park City is presented to the northeast of the units, where employees can overlook the slope into the city.

Housing Prototype

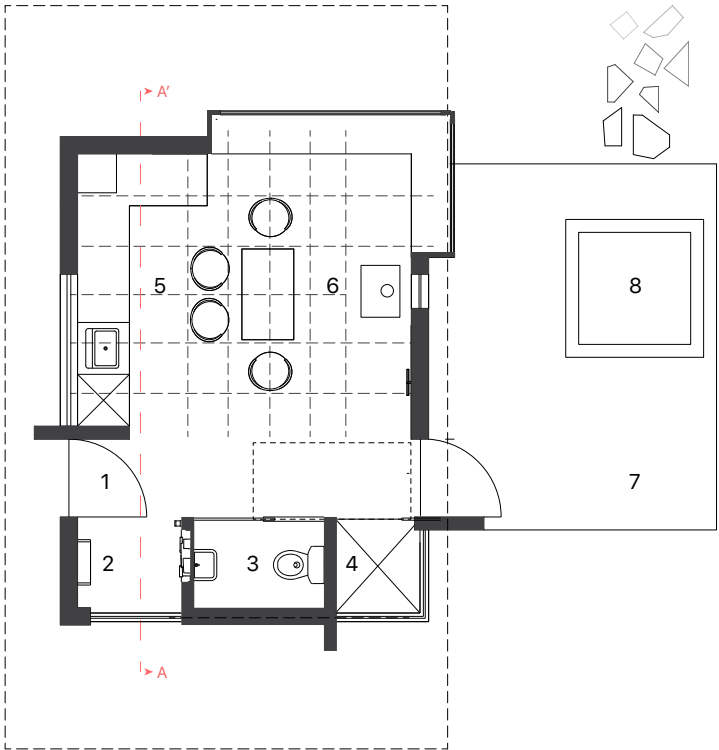
A private cluster housing the entry, bathroom, and loft transitions into an open lounge with views of Park City and the mountainous terrain nearby. Wide views through large windowpanes immerse the user in the natural landscape while allowing a healthy amount of sunlight into the space. Incorporating suspended pod-like chairs, a retractable table, a net for lounging, and a wide windowsill, the lounge serves as a multipurpose area without the limitations of a fixed organization. A pellet stove with a slender glass opening behind it invites views toward and over the outdoor hot tub, into the frosted wilderness. A sleeping loft is accessible via a slanted rock wall. Within the loft, an overhead roof extrusion permits enough headspace for comfortable movement while housing a slanted skylight, allowing indirect sunlight to illuminate the space below. An indentation into the exterior wall provides additional storage space for personal use.

Proposed Site

- Park City
- Ski Lifts
- Ski Slopes
- Hiking Trails
- Resort Lodging
- Proposed Site

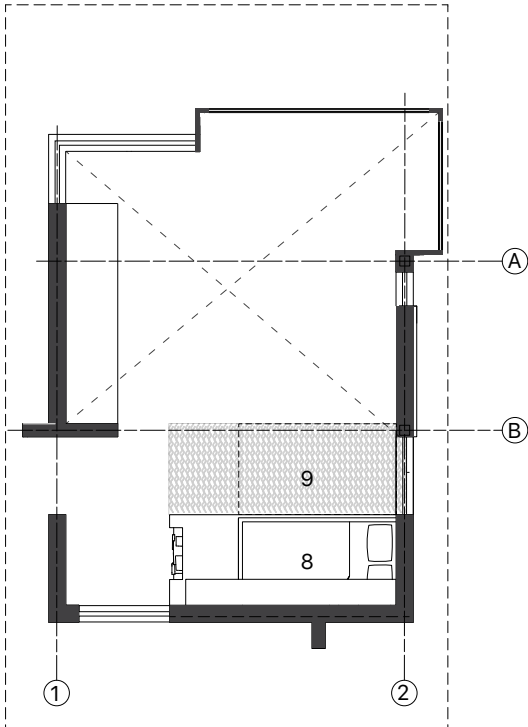
Site Plan

First Floor



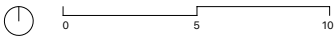
- 1. Entry (13.5ft²)
- 2. Mudroom (15ft²)
- 3. Bathroom (17.5ft²)
- 4. Shower (12ft²)
- 5. Kitchen (60ft²)
- 6. Multi-Purpose (142ft²)
- 7. Patio
- 8. Hot Tub

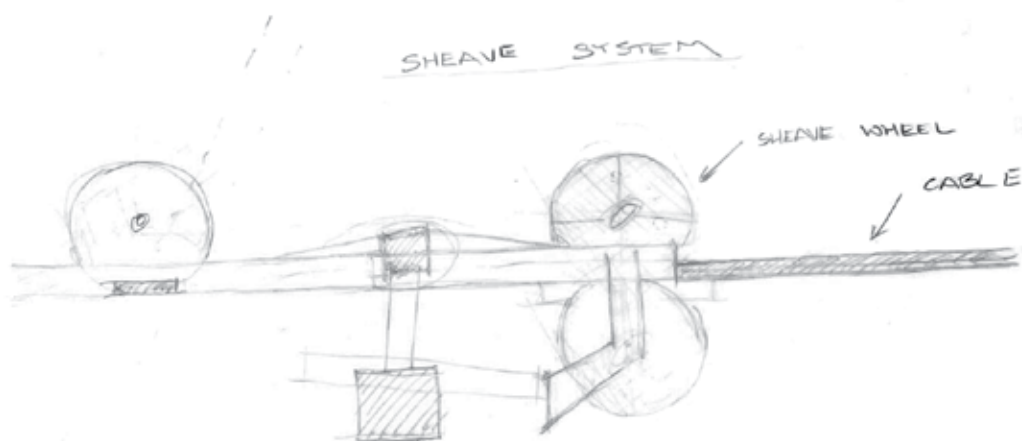
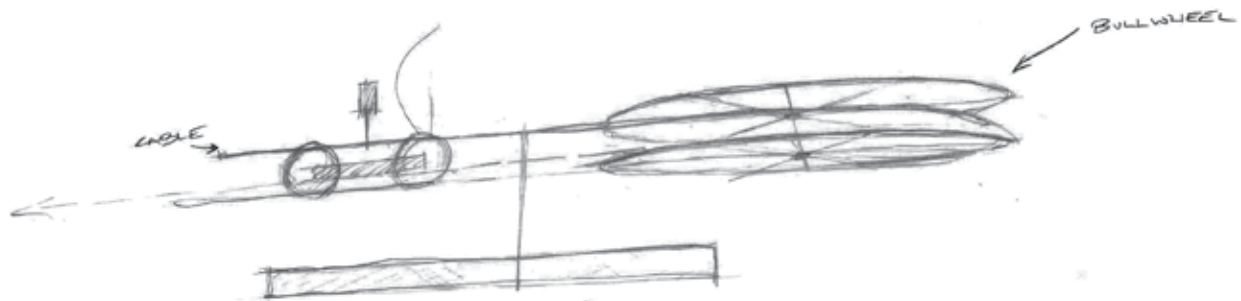
Mezzanine Floor



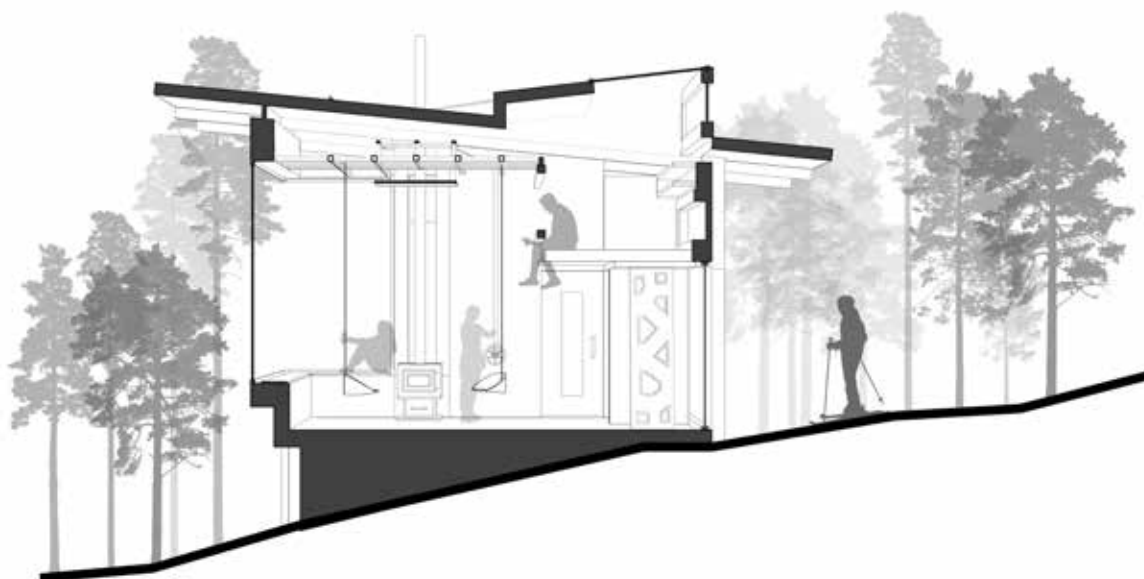
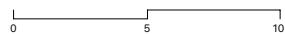
- 8. Loft (30ft²)
- 9. Net

Total: 290ft²

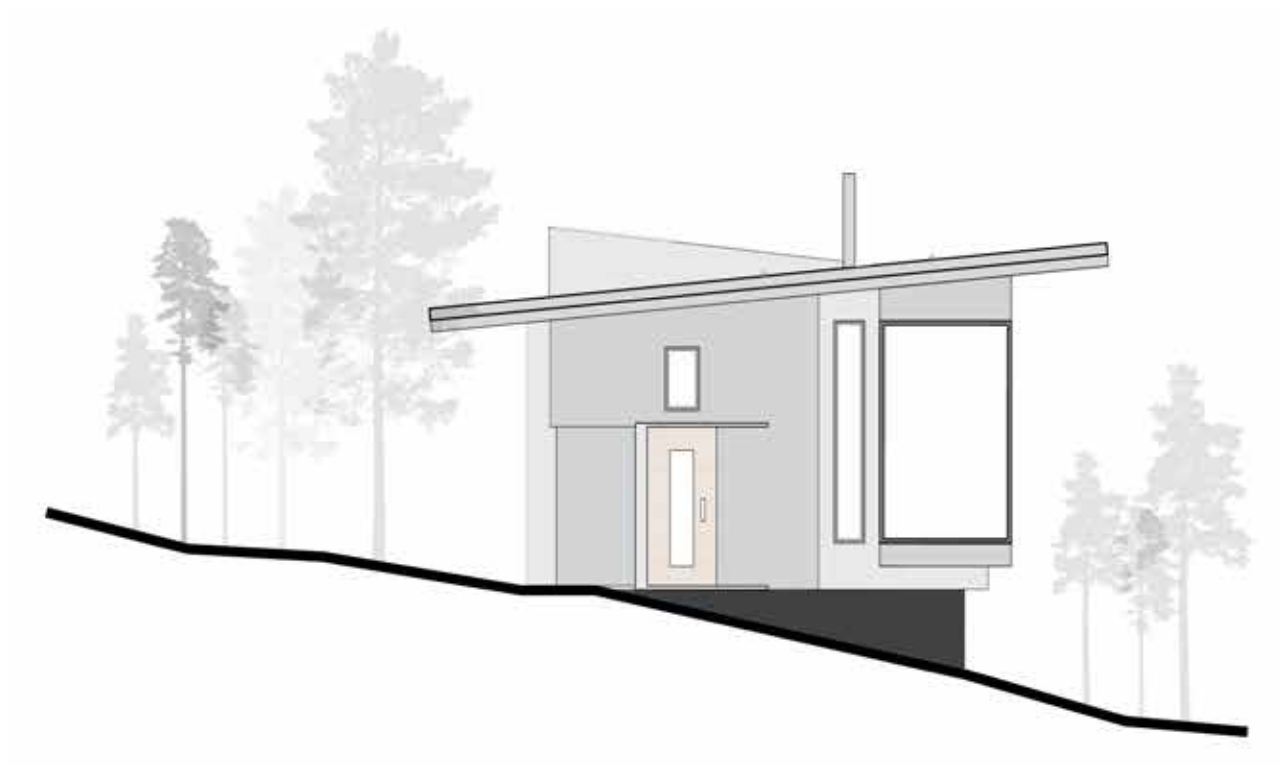
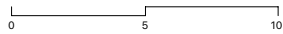




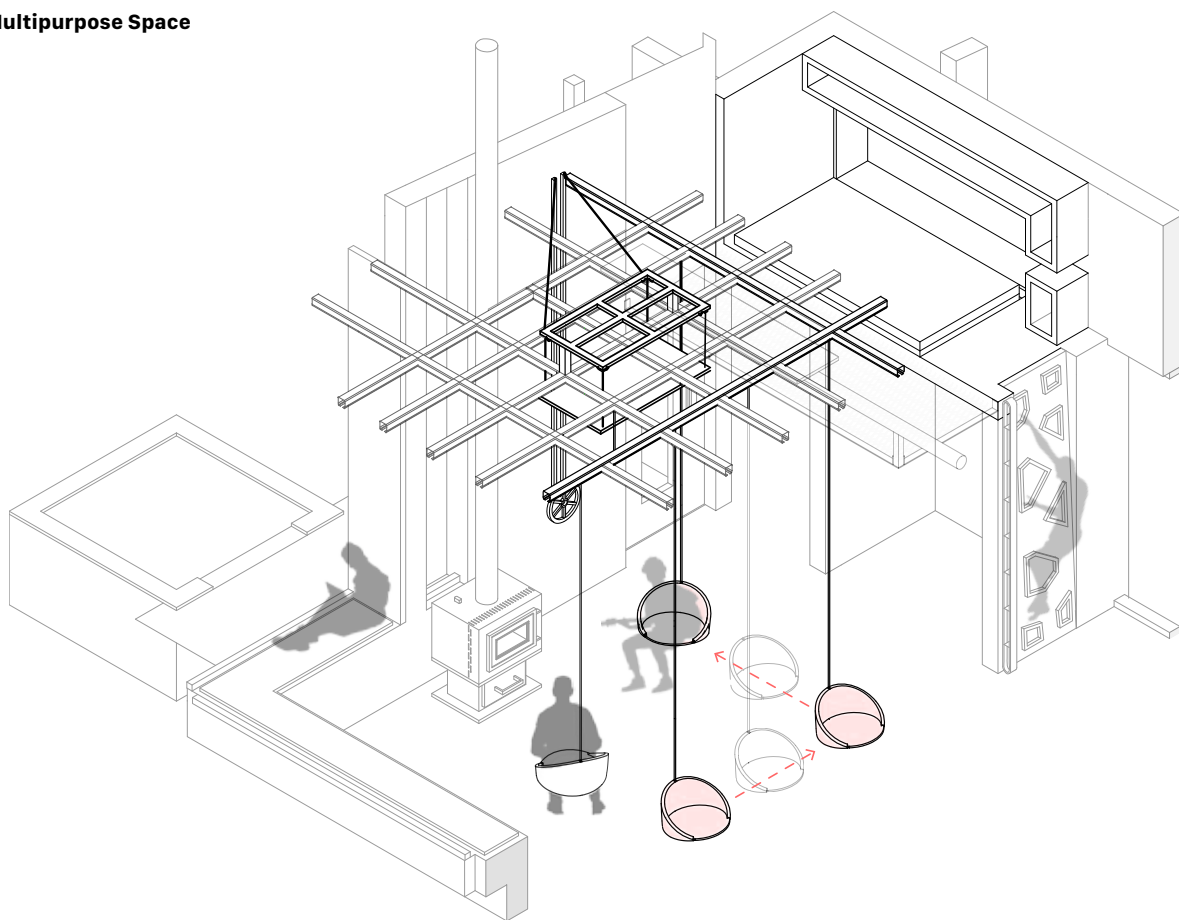
Section A-A'



North Elevation

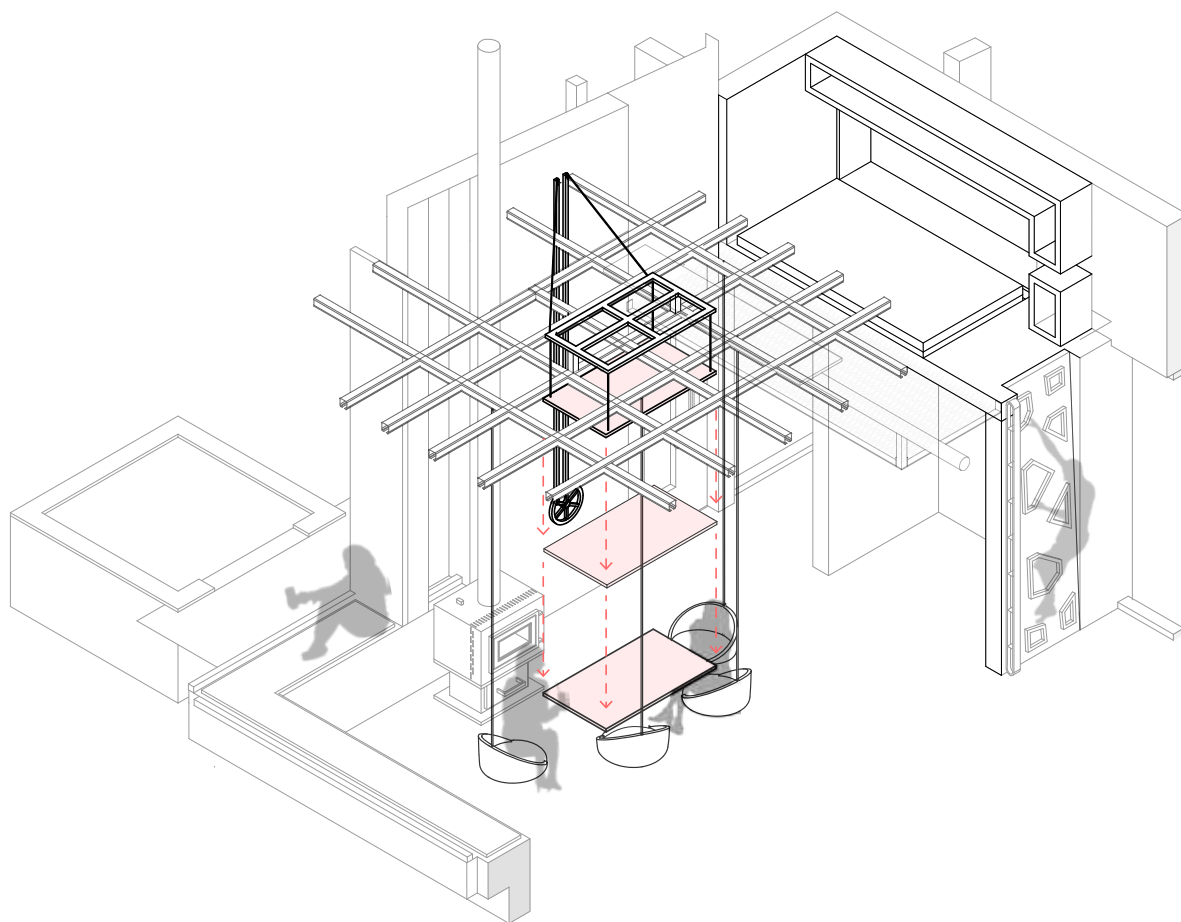


Multipurpose Space



The Lift House reflects the ski employees' environment by implementing mechanical systems used in the ski lifts around the resort. Channel beams connected to the roof structure create pod-like furniture suspended above the lounge floor, much like a ski lift chair. The suspended

chairs can be moved easily across the space to form any orientation. The lounge space within the house transforms into a gathering area with numerous possibilities. The tracks run in a grid system surrounding a pellet stove to create an intimate gathering environment. Adjacent spaces

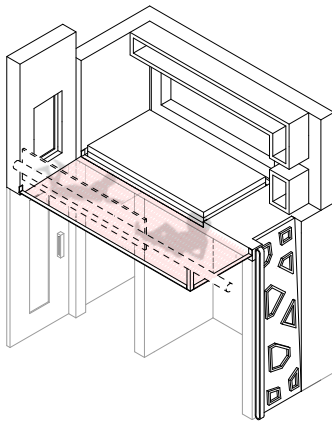


like the counter space in the kitchen and the windowsill allow for extra multifunctional use.

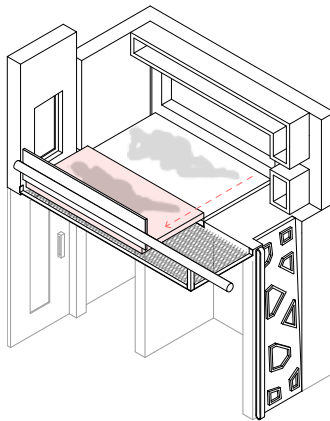
A retractable coffee table is suspended by a pulley system, controlled by a bullwheel attached to the wall adjacent to the lounge area. As the wheel is turned, the

table lowers into a fixed position for stable use. The table, paired with the suspended furniture running along the track system, and a wide windowsill for various seating arrangements, all come together to support a lounge with no set program.

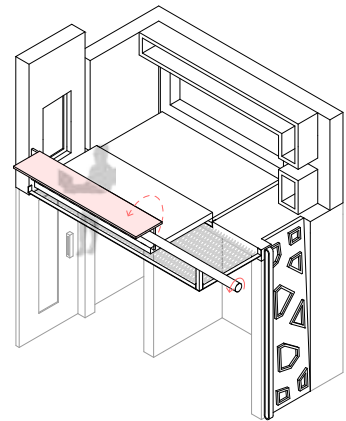
Loft Configurations



A net extends from the loft providing an opportunity for inhabitants to rest from an elevated space overlooking the house and environment.



An expandable bed from the loft gives ample space for two individuals to sleep comfortably.



A circular beam connecting to a wood table serves as a railing and workspace for inhabitants.



MIRAGE CITIES: SYNCHRONICITY.

A Progressive Dialog with Nature, Art + Computers

As humans on earth, we are interwoven into the energy network that expands outward beyond our universe. Every action breathes throughout the cosmos with ripples that reach out like the fading echoes of red-shifting stars. Intentions are revealed without words, as actions and decisions speak for us in this blanket of resonance. Our relationship with our planet has been complicated since the birth of industrialization, but in this new age, we may be able to see clearly if we cease using solely our eyes—if we take a moment to stop, breathe, and listen.

Environmental designers and architects must be in tune with the space around them to achieve total immersion that translates to a livable design. Sensory stimulation is a large part of interacting with a space. In this matrix of space-time, we can count on one thing to be tangible, malleable, within our comprehensive grasp:

The moment of Now. The result of a long path behind us, looking forward with a bright future ahead of us, if we manifest it.

AUTHOR

Kevin Michael Ozmun

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Considering a space's history is only the first step in creating a sense of place for design, we may consider societal factors and many lists of ideas and specs when building. However, our overall attitude to design has been regressing to a cold, manufactured standard of gray boxes made of near-stock assets, which does not promote a positive sense of place, energy, or well-being.

It is time for a new standard, one that considers the source and other relevant factors most designers might overlook. Today's stagnant state of architecture was brought on with the inception of computer-aided design (CAD), but computers are not to blame. Humans sometimes tend to accept solutions without respecting the tradeoffs that come with convenience. CAD took the element of pen and paper off the table. In order to better understand nature, we need to enter a conversation with her. If we have forgotten our means to communicate, we might have to listen to an indifferent observer, one echoing the universe constantly. We may be able to learn the language of nature again as humans interact with Artificial Intelligence (AI).

Of course, AI is not the sole answer to our situation—but it is also not a cop-out. Developing AI artwork to promote a new design idea requires just as much human input as other leading design technology, but the methods are unfamiliar to many of us because they are so new. If you view AI artwork like you are talking to the computer, having a conversation, the way you listen might teach you what you need to elevate your design.

The connection between AI and humans is symbiotic to a degree. The AI can do many things but needs direction. It does not necessarily know what is good or bad, accurate or abstract, but it has an educated idea. The computer needs us to input that organic touch and intention to outline our goals as clearly as possible, so the AI will be able to help as best as it can. If you see it as you and the computer working

Opposite- AI-Generated Image by Kevin M. Ozmun
Interior Lobby of Mirage City

Top Right- AI generated Images by Kevin M. Ozmun
Atrium of Octagonal Pyramid Structure

Bottom Right- AI generated Images by Kevin M. Ozmun
Potential Lighting Solutions Resembling Crystals



together to achieve a goal, it becomes a lot less scary because you understand that in this instance, one part cannot achieve true innovation without the other.

The discussion, however, is not solely about our interaction with AI. AI exists to promote open-minded thought about what design standards could look like in the future through adaptive practice. With climate change, energy consumption, scarcity and distribution of resources, housing scarcity, migration, geopolitical theater, and other factors in play, we must align our interests with the planet as we continue to evolve as a species. Roadblocks are being destroyed as we take steps forward. It is up to us in the moment of Now to rewrite the code of design to create an environment (a creative space) to allow earth and humanity to be synchronous. Not unit conversions, but unique convergence.

The technology available to us is improving rapidly, opening new doors in design technique. The AI systems we use are mainly trained on databases of human-collected information. However, some scientists believe we should not restrict machine learning, as doing so would prevent many medical breakthroughs the programs might discover exponentially faster than humans could. On the other hand, although the calculating power of AI is massive, many do not wish this technology to be further developed.

The possibility of AI surpassing us technologically, establishing a central network and rendering humanity obsolete, is a risk, but the laws and ethical restrictions regarding AI have not yet been fully discussed or determined. For now, we should embrace the tools we have and work with AI that requires human input and comparison to other accessible data to push boundaries of design. I understand the scrutiny of AI art for the detachment of the human creative element, physical process, and soul of the work, but if

Top Left- Painting by Kevin M. Ozmun

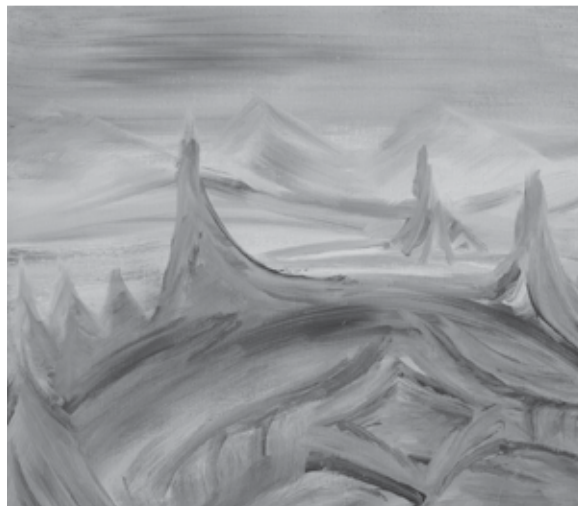
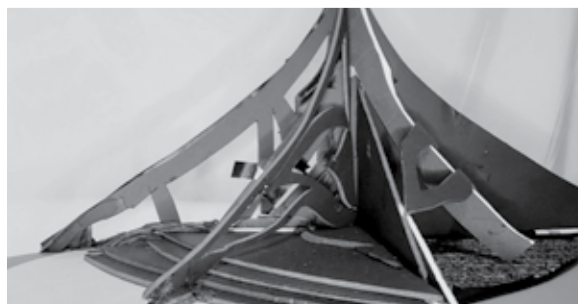
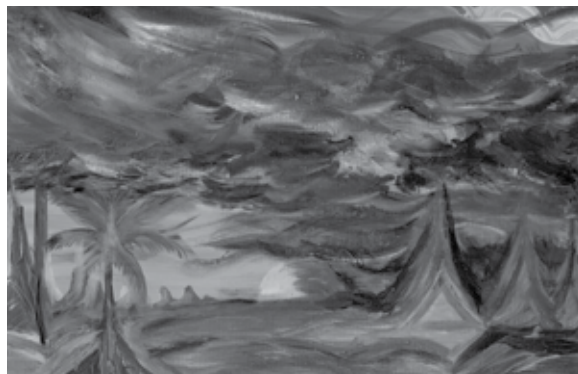
Aquatic/tropical city concept: Coastal scene showing the sun setting over a bay, with units constructed on a peninsula reaching out over the bay, across from a beach populated with elevated prefabricated units, with necessary modular connections to allow adoption to a higher sea level in the area if the ocean continues to rise.

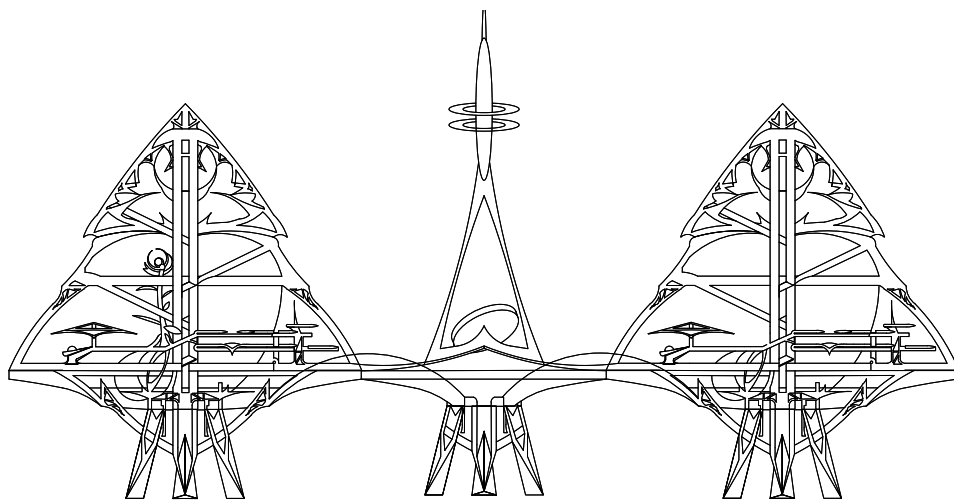
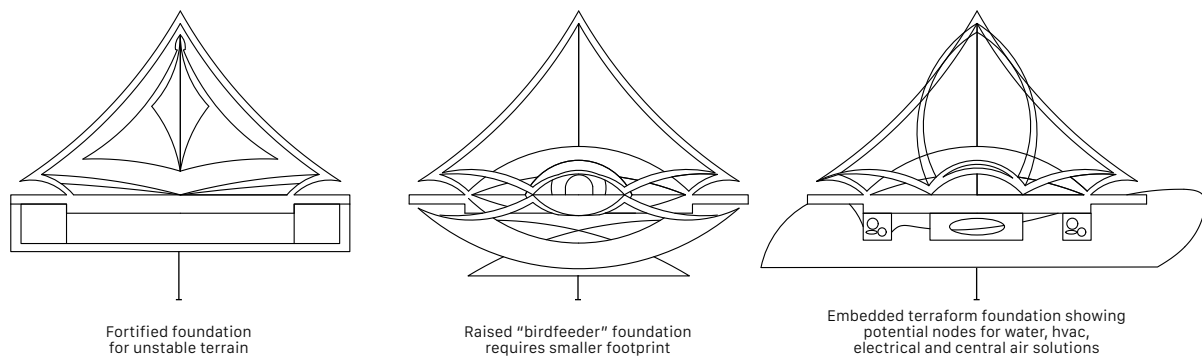
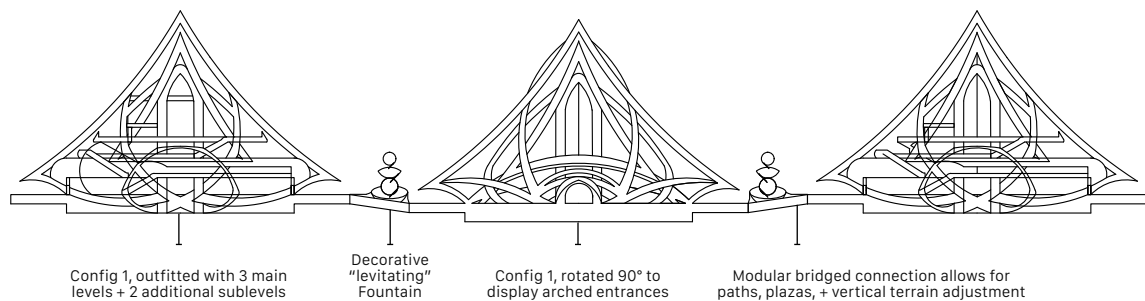
Middle Left- Painting by Kevin M. Ozmun

Tensile frames form a tetrahedron with concave/convex subframes depending on configuration

Bottom Left- Painting by Kevin M. Ozmun

Painting envisioning my desert city plaza





Drawings by Kevin M. Ozmun
Cross section of aquatic structures linked with
fortified plazabridge donning a sensory tower



AI-Generated Image courtesy of Kevin M. Ozmun
 Evolution of AI concepts as I train the computer by rendering multiple variants, then choose the images that correctly represent the provided prompts. Over time the images visualize the function and aesthetic I imagine

I choose to use an available tool that brings a different approach to my creative process, that will not mean I am no longer an artist.

I am a multifaceted and self-taught artist. Working in drawing, painting, watercolor, digital design, photography, video, music, and mixed media I change my artistic flow and style based on my mood and inspirations. Using AI, I've been able to see more outside perspectives on possible executions of my concepts. I wanted to realize a creative vision by integrating multiple design and concept-rendering processes and styles. In adaptive practice, we look for ways to solve immediate and anticipated problems; I tried to think of scenarios where climate and environmental factors could benefit inhabitants of communities built in the mind-set of *Adaptive Practice*. I considered the vast expanse of the Mojave Desert, with solar energy beaming from above and a lush aquifer underneath. To create contrast and variation, I envisioned a tropical city, elevated high above the land with a bay area to combat rising sea levels.

Nature has a lot of things figured out, including elements that teach us ways to increase efficiency in design. Trees, rock formations, and weather patterns follow inherent geometrical algorithms and exhibit qualities that can be adapted in creating an intentional design.

With a hankering for gonzo journalism and no regard for the fourth wall, I set out to design a series of concepts outlining the symbioses and potential outcomes of integrating AI in the design process, intending to create a vision of housing and community solutions for extreme environmental conditions. I set out on a quest, traveling three days to Boron, California. From this small mining town, I visited a private acreage and playa near the mountains. I learned how people lived out there year-round, enduring the vicious desert winds and heat of the Mojave Desert. The sand felt like bones ground to fine dust, but the view was immaculate, and the entire Milky Way was visible.

There was an atmosphere of peace about the community. I was truly in awe gazing up through the mountains at the stars and planets above me. I learned how to build temporary structures in the sand and gained knowledge of longer-term off-grid solutions for shelter, thermal comfort, and energy. Overall, being there I felt grounded to Earth—

far away from generic postmodernist design. I slept in a large teepee, observing the tensile structure as natural light poured in at indirect angles. I decided this would be the inspiration for my concept, as well as Atlantean mythology and the great pyramids.

I wanted to incorporate biomimicry via local materials and color palettes, keeping the connection to the earth but infusing modern design tastefully to achieve an aesthetically pleasing, efficient, and comfortably habitable community.

After I returned to Oklahoma, I began painting on canvas to illustrate my main idea of a sleek and earthy town square on the playa beneath a beautiful ridge. I thought about who might live there, what their day might look like. I considered the yearly heat cycles, which peak in July, with desert windstorms and dust devils that make appearances daily. The curved exterior walls allows for minimal resistance to the desert wind, while the point of convergence between buildings serves as a housing for weather sensing equipment and potentially ion concentration polarization technology.

When beginning my physical work on this project, I created two main paintings of the Desert Mirage City and the Aquatic Mirage City. From there I created a physical architecture model of a modular multifamily unit to increase my depth of perspective. Each view of the model shows different parts of the structure and different possible configurations based on the original physical model.

The internal levels, in blue, can be reconfigured based on the needs of the residential or commercial occupants. The topography of the Mojave Desert is an uneven surface, so I suggested three proposals for the foundation. Therefore, the space has a solid level underneath the structure. The middle cradles the structure like a birdfeeder. The right supports the ground-level foundation with deeper substructures resembling stubby feet that anchor into the bedrock underneath the sand. I also worked with AI to brainstorm vertical farming concepts.

When I confirmed the desert base structure was reliable, I began to create the aquatic variant meant to combat rising sea levels in AutoCAD. After laser-cutting aquatic cross-sections and comparing with my model, the design



AI-Generated Image courtesy of Kevin M. Ozmun
Aquatic concepts considering life above and below the water



concept began to come together. From here I painted many building variations juxtaposed between central sidewalks and began to think about the interior. I'm not an interior designer, but my vision was so fresh on my brain, and I decided to use AI to create alternate renderings showing the possibilities of a space. The city would be encouraging of open-minded residents who know what it means to build a community identity.

The community would need to be integrated with the U.S. capitalist system, but designed to be somewhat self-sustaining, with the main external resource being water pumped from nearby aquifers and recycled within the city's vertical indoor farms. Powered by solar panels woven about the exterior, each building shares many standard parts for the frame and skin, but community members would be encouraged to customize their units with highly modular interiors.

Architects use a few AI tools to convert plans to 3D and to render 3D models. For this exercise I used a variable algorithm to visualize my ideas of spaces before I created them myself in 3D software. This allowed me to explore multiple visual concepts before deciding on one to flesh out in detail.

Jumping into MidJourney, an open AI online software, I entered prompts related to my ideas. At first, they seemed very primitive, patched together with raw materials. I enjoyed this look, as it contributed to the image of a

vanishing city hidden in nature. However, as I spent the next fourteen hours refining my prompts, deriving variations and upscaling the ones I considered winners, I began to pick up on the way the computer listens to humans, and how it used the information I fed it. My cities were becoming more and more developed, with fountains and places for people to converse and have a snack or watch the sunset, just like in my painting. It seemed the computer and my brain were synchronized. Then, later that night, as I reflected on my work of the day, I realized how similar the computer's way of thought was to nature. I realized that observing and interacting with AI might be the way we get back in touch with nature and the animal kingdom that also lives on this wonderful planet. I'm not against capitalism or the idea of socialism, so the community I envisioned would be open to anybody who wants to live there and respects the space and their neighbors. Personal views aren't supposed to bias architecture. That is why I want to share this vision for others to expand on in their own ways, as the discussion evolves to encompass other locations with conditions preventing people from living in otherwise beautiful places. If we learn to listen to Mother Nature, we can sit in front-row seats to her beauty without disrupting the natural balance.

Opposite - AI-Generated Image courtesy of Kevin M. Ozmun
Brainstorming vertical farming and vegetation biospheres to support our food supply and preserve Earth's genetics

Overleaf - AI-Generated Image courtesy of Kevin M. Ozmun
Interior concepts of Mirage Cities







THE PILL.

Small Interventions as Surgical
Architectural Solutions

Telesis Vol. V 2023

Editor's Note:

Taller Vertical, an architectural firm situated in Ecuador, adeptly navigates the challenges posed by an economy entrenched in scarcity, thereby transforming limitations into fertile ground for innovative design solutions. Within this context, scarcity acts as a catalyst, fostering imaginative collaborations with clients and unconventional approaches to construction.

How can we answer design problems when we are in a financial crisis?

At our architecture studio, although each client and project is a completely different world, each project always appears to have the same problem: it must be done on a low budget.

When we find ourselves in a financial crisis, the most common project is the rehabilitation of old apartments, buildings, or houses. The most common solution is trying to solve the problems while decreasing the materials' quality or simplifying the project, compromising the original project.

As we started to find the same problem in different projects, we developed a universal solution when rehabilitating an old building on a low budget: making small-scale interventions that have big impact. In this case, habitable furniture that reorders and rearranges the space and its function.

AUTHORS

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Valeria Sandoval

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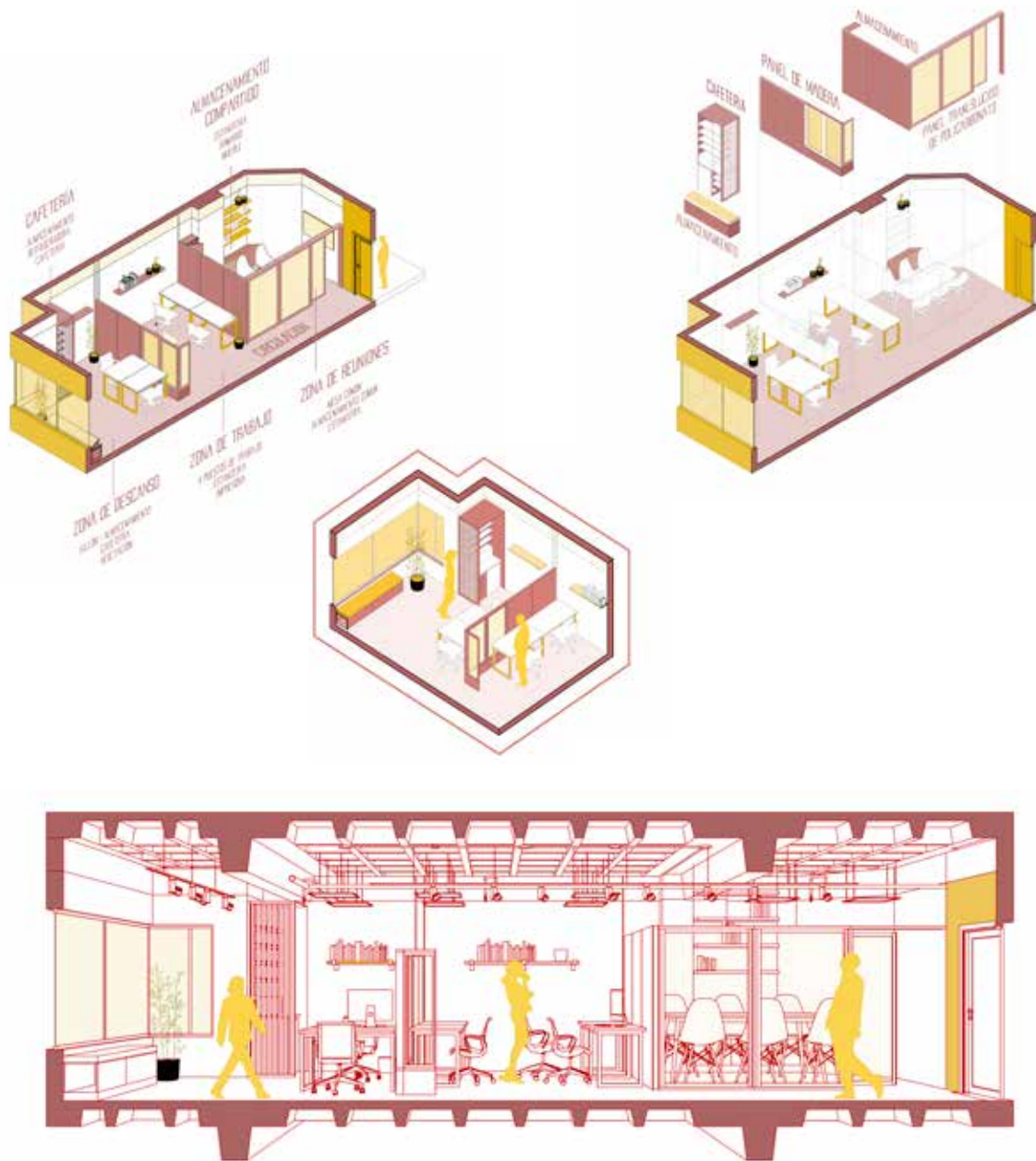
COLLABORATORS

David Quijia

Intern, Taller Vertical
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Sebastian Zumárraga

Photographer



*Above - Diagrams courtesy of Taller Vertical
209 Housing Lab, Axonometric views and longitudinal section*

*Opposite - Photograph courtesy of Sebastian Zumárraga
209 Housing Lab, Interior co-working space*

We understood it doesn't make sense to completely renovate the existing place, so we open the spaces and bring a new volume to the project, such as habitable or multipurpose furniture. Such small architecture solves more than one problem in the space, so it has more than one functional purpose.

These new elements should be placed strategically within the plans of the old building. When finding the most problematic location, we are able to solve more problems, like privacy, paths, and storage. The main idea of this kind of

intervention is to concentrate design efforts, investment, and functions in just one "pill," or solution. This pill should be designed to solve every "symptom" or problem of the original place.

We designed and built two projects based on the proposed solution. These projects were placed in Quito, Ecuador. In both cases, the financial situation was a huge limitation, so developed two types of "pills" to solve the problems.



The first project was 209 Housing Lab, a coworking office in a mid-nineties building. Our first “pill” for this project was a wall with secret compartments, used to divide the spaces and provide storage for both sides. The second one was a large furniture installment that created a coffee spot. This is made of the same wood of the walls but solves all the necessities of a small office kitchen. This furniture hides items in the same way as the wall storage.

This kind of intervention gives the office plenty of space and allows users the freedom to arrange and rearrange

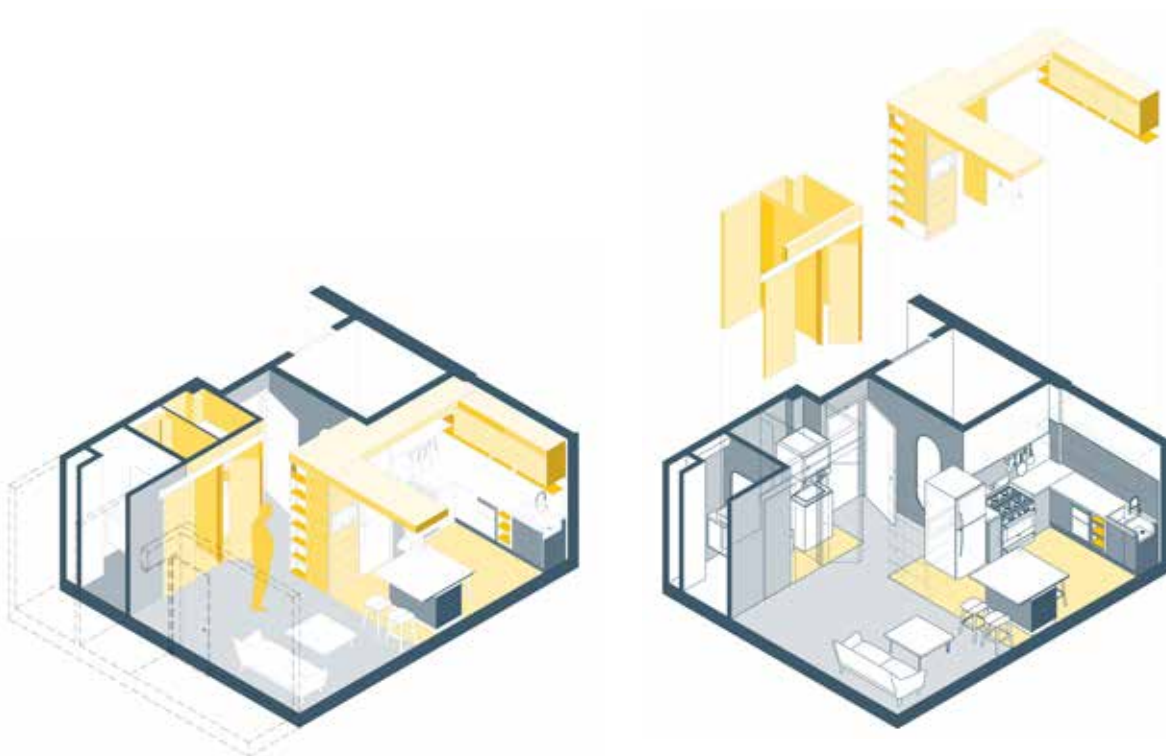
the space depending on the situation and the amount of people. These two “pills,” or solutions, are also movable. So if the clients need to change their space, they don’t need to call skilled labor to do so.

The “pills” we installed in this office are made entirely of plywood and are fully detachable and rearrangeable, taking into consideration that the principal objective was to prioritize the client’s budget in the short and long term, so they don’t need to hire architects again.



The second project was a two wooden box suite, a suite where our client needed to rearrange the kitchen and laundry zones. In this case, we solved the problem with two boxes: the main box in the middle of the space and the other one next to it. The main wooden box contains part of the kitchen appliances and storage space. It also hides the building structure and rearranges the paths inside the apartment. The second box includes a bathroom and the relocated laundry. The two spaces function together as a big wooden box inside the old walls. As in the first case, we used plywood for its cost and its ease of construction.

Those examples show how we can concentrate and simplify our design to avoid wasting financial resources. The “pill” of our small intervention solves problems with low cost, including multifunctional parts that affect all the spaces in the old building without renovating all the place and avoiding generating extra costs.



Above - Diagrams courtesy of Taller Vertical
Wooden Box Suite, Axonometric views and longitudinal section

Opposite - Photograph courtesy of Sebastian Zumárraga
Wooden Box Suite, Interior co-working space

ART COLLECTIVE.

Bell chimes from the University of Oklahoma are familiar background noises in an alleyway where an alum rents a studio. A significant amount of debris lines the outside of an old building, which has no windows, only an industrial-sized garage door. The material is methodically stacked; eventually those stockpiles are slowly digested for future artworks. This process has been the majority of my life's work, which is partly why I'm Creaturealm Oklahoma's executive director.

The art collective is comprised of six creatives who develop interactive, site-specific sculptures. We also facilitate equitable and artistic endeavors within the community. For almost fifteen years, a smaller version of this group worked on projects that primarily incorporate repurposed objects. As of March 2020, the newly formed team has been displaying, educating, or creating artwork while trying to accomplish a large goal: the completion of an immersive, transportable, room-sized installation that is currently inside my studio.

AUTHOR**Nick Lillard**

Executive Director + Design Team Lead
Creaturealm



The group's creative philosophy is partly informed by such artists as John Outterbridge, Ruth Asawa, Simon Rodia, and Louise Bourgeois. Our studies of other artists, combined with our own experiments, have coalesced into a signature model, focused on sustainable efforts that can be readily shared. We work with reclaimed objects so that the processes we implement may in turn be accessible to others, especially those with limited resources.

By working with what many deem trash, our art collective has embraced an adaptive practice from the beginning. It's a continuous expansion of an adaptive practice mindset that has uncovered relevant truths revolving around climate change and systemic oppression. This ever-evolving awareness influences our aesthetics, concepts, and business practice, which requires that equity and inclusion are core values. Even the development of the art we create, the creatures and the realms they reside in, has to do with how we treat each other. The name Creaturealm is the combination of the words creature and realm. Hence, we make spaces for what others deem to be oddities or the other.

Lawrence Kincheloe, who's been at the heart of the technology crew from day 1, said: "The name can also be heard as 'create your realm,' and we do indeed focus on creating realms for our creatures, our visitors and to inspire fellow makers. That's what the immersive build is about!"

Ashley Morrison, associate director, added to the conversation concerning our adaptive process within the community of Norman: "Our team's commitment to building high accessibility and embodied agency for our creative and marginalized community is unlike anything I've ever seen. It's the respect and admiration we have for one another as a team; it's our drive to show others that same degree of joy and freedom, for all that makes us a local leading expert on racial equity in public arts."

To understand how having an adaptive process is applicable within my group's direct, art-making actions, we can examine the current build's alterations. The task at hand is an adaptive process, as exhibited by organic shapes, some of which take the form of relief sculptures called Asteroid Leaves. These brightly colored plywood panels with customized steel frames were initially intended to be matched with another material that would have more translucency in the spots where the new cutouts are to be placed. Plans changed just this week, to allow for even more wood carving on the walls.

I was doing an entirely separate task, making molds for epoxy pours, when the white-on-white surface struck me as a great way to transition from the installation's walls and into the Asteroid Leaves. After talking with my studio mate and realizing they had the same observations, I knew that more subtle shapes within the walls would help the transition zones and that they needed to be low in contrast, soft backgrounds for the eye. So I've developed these shapes based on the Asteroid Leaves, but these outlines are different, so as to fit within the harder-to-see surface of the white walls. The context changed the shapes and the rhythm in which they're placed.

This will further spread the vibrancy of changing colors, which are coming from lights behind the Asteroid Leaves. When I was drawing these new shapes, I imagined bodies of water that spill into new areas due to erosion, thereby changing the outline. Nature is the greatest teacher when considering adaptive processes, so my work is often an abstract mimicry of organic systems. That's the reason for the scratchy, marker lines that grew into other shapes. Those outlines will solidify the final designs, which will be cut out of the plywood panels.

Another reason the outlines were continuously altered while being drawn on the wall was because I repeatedly

Opposite - Photograph courtesy of Nick Lillard
Creaturealm Oklahoma immersive installation: Asteroid Leaves and Throne Chair. Epoxy, metal, wood with LED Lights and polyethylene (November 14th, 2022).

stepped back and allowed the entirety of the space to slowly influence the dimensions being mapped out. This process was in response to the other conditions, which is what Creaturealm concentrates on more than anything else. We wish to showcase the nuances of how to creatively bend with the wind so that we all may stay rooted in what truly matters when storms arrive.

Within this grouping of work-in-progress photos there's an image of a corner, next to a throne chair, which displays the first accidental discovery of the white-on-white shapes. It's seen within the immersive space's build site. This white wall currently displays carved recesses, which will soon have colored epoxy poured into them, thereby changing the visual effect there. Yet it is currently the best example of what's planned for other locations. Another image shows marks made on the opposing wall. It will be home to the new, seemingly distant and foggy shapes.

Acknowledgments

The copper medallions set within the epoxy inside the Asteroid Leaves were created by October Merrill. Chris McDaniel's direct contributions to the space aren't pictured but are significant in other locations. McDaniel also helped conceptualize the Asteroid Leaves many years ago, as a part of the original team. The wooden and metal forms were fabricated by me. Lighting design and installation was done by Lawrence Kincheloe, with the assistance of Brandon Seekins, who also acts as an advisor. Ashley Morrison is our associate director, who provides equity and inclusion consultancy for the group, as well as facilitating infrastructure-based assistance.

Collaborators

Ashley Morrison, *Associate Director, Diversity, Equity, and Inclusion and Outreach*

Brandon Seekins, *Technology Team Advisor/Assistant*

Lawrence Kincheloe III, *Technology Lead*

October Merrill, *Design Team Member*

Chris McDaniel, *Design Team Member*

*Opposite - Photograph courtesy of Nick Lillard
Creaturealm Oklahoma immersive installation: Fern Balcony and Bench. Epoxy, metal and wood
(November 13th, 2022).*





Photograph courtesy of
Nick Lillard
Creaturealm Oklahoma detail.
Wall design mapping with
marker before making cuts,
epoxy, metal and wood
(December 1st, 2022).

Photograph courtesy of
Nick Lillard
Creaturealm Oklahoma detail.
Two different cut outs placed
together for wall design
(January 17th, 2023).



THE IMAGINATION STATION.

Adaptive Practice (in Practice) in Chicago

In October 2022, Chicago hosted its first annual Sukkah Design Festival to celebrate the autumn harvest of Sukkot. Organized and curated by Joseph Altshuler and Zack Morrison of Could Be Design, the festival took place in North Lawndale, a historically Jewish neighborhood that is now predominantly Black. The three invited design teams were paired with community organizations in the neighborhood—for whom a sukkah open-air pavilion would be designed for multiple uses—and were challenged to creatively reconsider the sukkah typology. How might a pavilion typically disassembled after the holiday live on in a different form and location? How might contemporary community needs be met through small-scale architectural interventions? And how are an architect's position and agency redefined in the context of community engagement? The Imagination Station, designed and built by my firm Chicago Design Office in collaboration with Made in Englewood, offers one example of architectural practice adapting to and shaped by community voices.

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Founder, Chicago Design Office





Opposite - Photographs courtesy of Zachary Keltner
Summer 2022 community workshops, North Lawndale

Above - Photographs courtesy of Aneesha Dharwadker
Color inspirations and building exercises by children in the Men
Making a Difference program

Our process began with understanding the traditional design parameters of the sukkah, along with the building codes for temporary structures in Chicago. We were to create an open-air space with at least two and a half walls, room for a dining table, and a roof made of organic materials with a view to the stars; we also worked within the formal constraints of two hundred square feet and fifteen feet maximum height. Our team collaborated with Men Making a Difference (which provides summer and weekend programming for North Lawndale children) and Open Books (a local literacy organization) to invent a sukkah for literacy and learning: something community members of all ages could return to again and again, filled with engaging texts and materials that expand how we define literacy in a media-rich world.

Through a series of design workshops with Men Making a Difference and Open Books, The Imagination Station became a pavilion for multiple forms of literacy: academic, artistic, cultural, and architectural. The children involved were especially creative in how they defined literacy—when asked which books were their favorite, they responded with names of characters like Arthur, Caillou, and Elmo. We realized that their primary engagement was with figures rather than narratives, which changed the way we conceived of the “library” they would eventually use.

The final structure was built at the Lawndale Pop-Up Spot for Sukkot 2022 and was then disassembled and moved to its permanent home, an open lot that Men Making a Difference manages in North Lawndale. It offers space for children and adults to engage with small-scale multi-media libraries, including fiction and non-fiction, comics, study materials, hair accessories, art materials, and more. A custom steel frame allows for different materials to infill the facade, creating multiple layers of transparency and visibility. Children can participate in the making process by applying adhesive images of their favorite book and TV characters to acrylic panels that hang along the back of the structure. The structural assembly relies on exposed nuts and bolts, allowing community members with varying levels of construction experience to join in the building process.

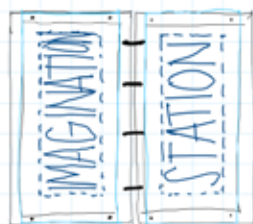
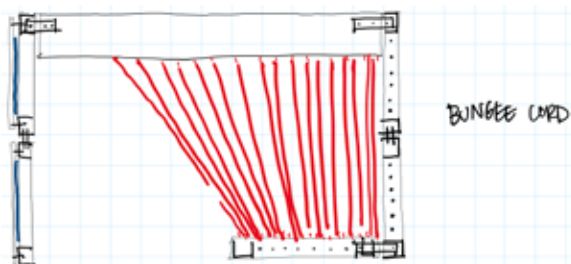
the large carbon footprint and incredible waste involved in the building industry in the United States. Adaptive, community-based architectures, even at the micro-scale of the sukkah, are one strategy to reconsider how we approach industry-wide habits. The architect's agency in this case is mutable: we oscillate between educator, curator, liaison, manager, designer, and fabricator. It is both an expansion of responsibility and a doubling-down on the notion that architects can, despite the enormous and specific technical knowledge required of us, be effective generalists. In fact, in this time of overlapping crises from multiple directions, we cannot afford not to be.

The Imagination Station Team

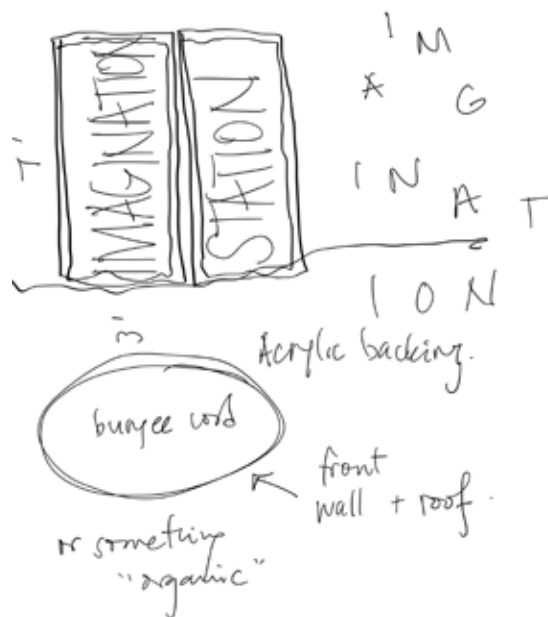
- Aneesha Dharwadker**, Chicago Design Office
- Eric Hotchkiss**, Made in Englewood
- Rock Calhoun**, Men Making a Difference
- Chelsea Ridley**, Open Books
- Zachary Keltner**, Columbia College Chicago
- C&B Welders**, Chicago

We, as designers and citizens, are acutely aware of

*Opposite - Images by Aneesha Dharwadker
Early design sketches*

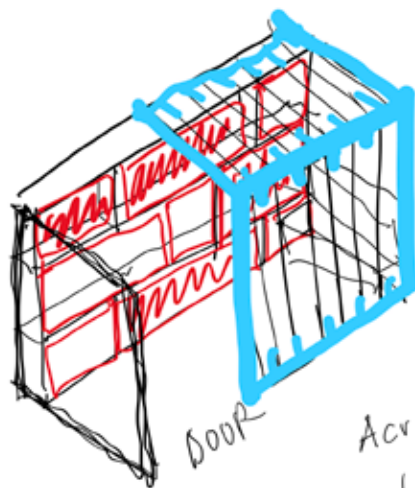


SANDWICH ACRYLIC
BETWEEN 2 THIN
SHEETS (WOOD?)

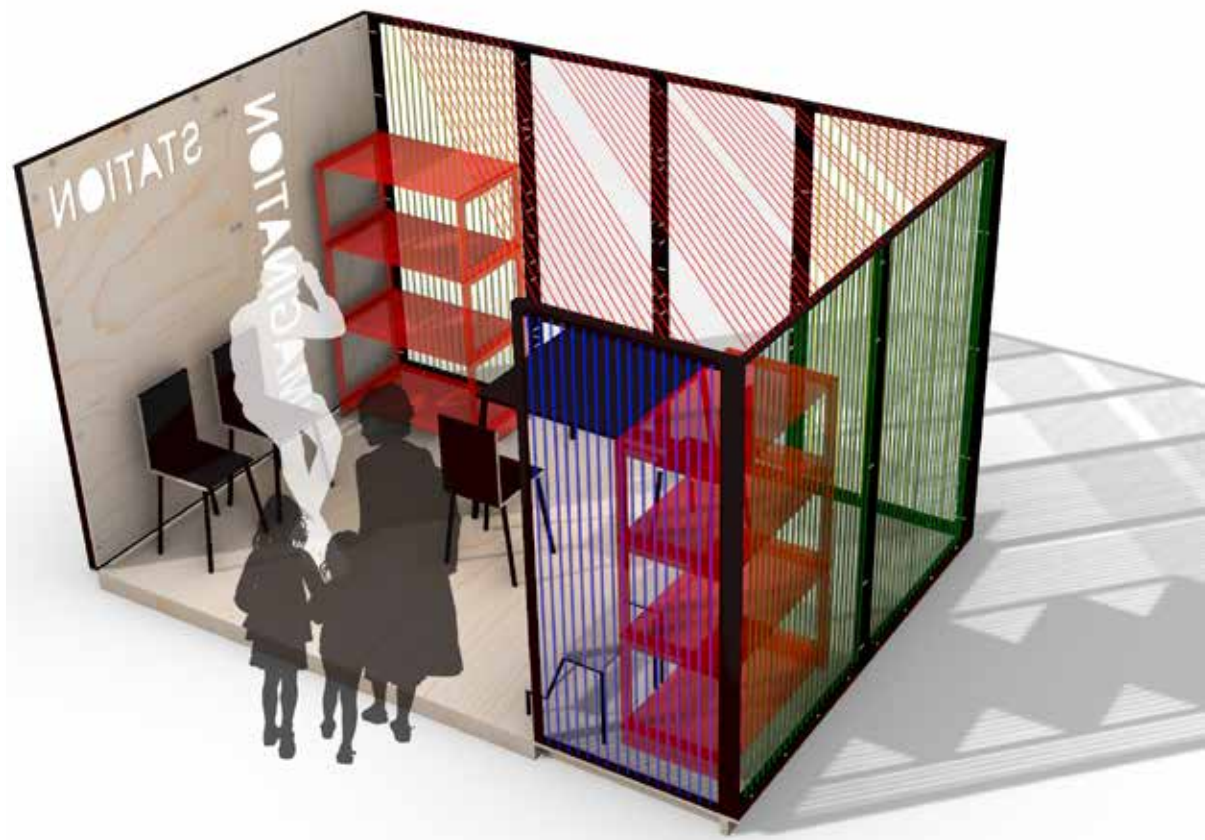


Imagination
Station.

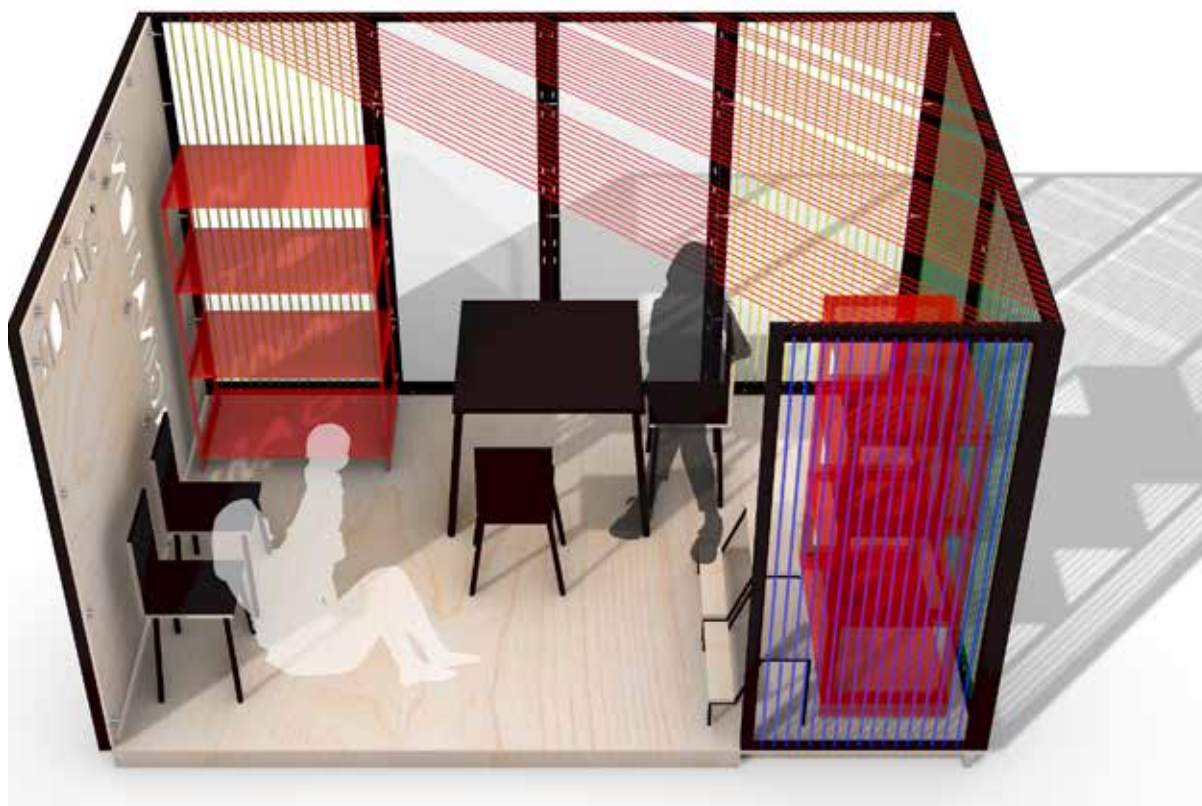
types of libraries: building material
barely books.



Acrylic
w/ image
transfer.



Images by Aneesha Dharwadker
Design development







Photos by Brian Griffin
Sukkah Design Festival, Lawndale
Pop-Up Spot, October 2022





Photos by Aneesha Dharwadker and Nekita Thomas
Sukkah Design Festival, Lawndale Pop-Up Spot, October 2022





Photos by Aneesha
Dharwadker
*Installation at final location,
North Lawndale, October 2022*

ADAPTIVE OPPORTUNITIES.

Reinvention of Campus Corner at University of Oklahoma

According to the official website for the OU Campus Corner, "In the early 1900's, Campus Corner developed to serve the needs of the students and faculty of the University of Oklahoma. Within the next 20 years, the Corner was thriving and had emerged as the center of all activities for the University community. Restaurants, clothing stores, laundry facilities, pharmacies, and beauty salons were just a few of the merchants located in the corner. Ballrooms were located on the second floor of buildings on both Asp and University with one of the original wood dance floors still in existence above what is now the Harold's Outlet." Since then, there has been little planning or adaptation on Campus Corner to make it suit the current needs of students and users. It has lost its identity, and perhaps it's recognizable only by name. Ideally, at year fifteen, plans should have been drawn for adapting Campus Corner for the next decade and beyond, as the district was built with a twenty-year vision. In the early 1900s the University of Oklahoma had fewer than a thousand students, but it had grown to a total of 28,709 by fall 2022. It is clear that the underutilized Campus Corner needs to adapt!

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Architectural Designer

121 Design Build Inc.

Founder, Zendegi Studio

Chair, Sustainability Committee

Graduate Student Senate

The district has become chaotic and somewhat of a Frankenstein's monster with each property changing hands so many times through the century. I propose to identify the underutilized alley network of Campus Corner and better utilize it via architectural design resolutions such as more suitable street furniture and small-scale infill spaces. As a secondary focus, I propose a pedestrian-oriented strategy to make it a safer place for pedestrians. I used data gathered in the field and site analysis methods to identify the opportunities within the alleyways that break the long Campus Corner block and its continuous wall of storefronts.

Boyd Street is the main hub of activities on Campus Corner, with the highest concentration of shops and restaurants. The barrier between pedestrians and vehicles is nonexistent: the only thing guarding pedestrians from the overwhelming traffic in the area are the angled parking spots. The functions and program of the street have been dictated by the businesses alongside it, which are mostly bars, cafes, restaurants, and boutique clothing stores. Naturally, bars, cafes, and restaurants are inviting environments for people to make a stop and occupy the space throughout the day. However, the existing sidewalks can't handle the number of people using them, and there's not enough room to stand and chat without disrupting the flow of pedestrian traffic.

Pedestrians' movement pattern is rather erratic, and one person might make up to five stops along the street. They came from the direction of the gas station to the southeast of Campus Corner, made a stop at the ATM kiosk, then they made their way to the Starbucks around the corner before continuing onto Boyd to make four more stops respectively at a restaurant, specialty beverage shop, student housing services, and finally at the donut shop on the northwest of Boyd Street.

One of the opportunities available for exploration are the alleyways that have been created by newer multistory developments alongside the street. Some of the user clusters could be redirected into the alleyways, making them a more function-oriented space. Therefore, these spaces can create interactions and meaningful spaces with infill projects rather than dead spaces where only the accidental wanderer might pass through. These infills need to be simple but highly usable and will connect Campus Corner to the nearly abandoned surrounding spaces. They will give users a chance to explore, inviting them to step through and take advantage of these spaces rather than avoid them. Making better use of the alleyways will contribute to the pedestrian safety as well, so people won't need to constantly cross the street or share the road with cars to keep moving forward.

Infill Plaza Design

The alleyways can primarily be made more functional by making them inviting and safe spaces for users. From the survey I distributed to a randomly selected group of students, I determined that a public shared workspace and a place to rest between classes were in the highest demand. A successful infill in this context must meet multiple user demands, from a study area during the weekdays to a hangout spot in the evening and on the weekends, without interfering with the passageway. A flexible and dynamic solution seemed the most suitable. The design prioritizes simple furniture, clear circulation, and flexible functionality. A dynamic covering accompanies the sitting areas to provide shade and aesthetics to the ever-changing Campus Corner environment.



Image by Kayarash Karami
Campus Corner figure ground map

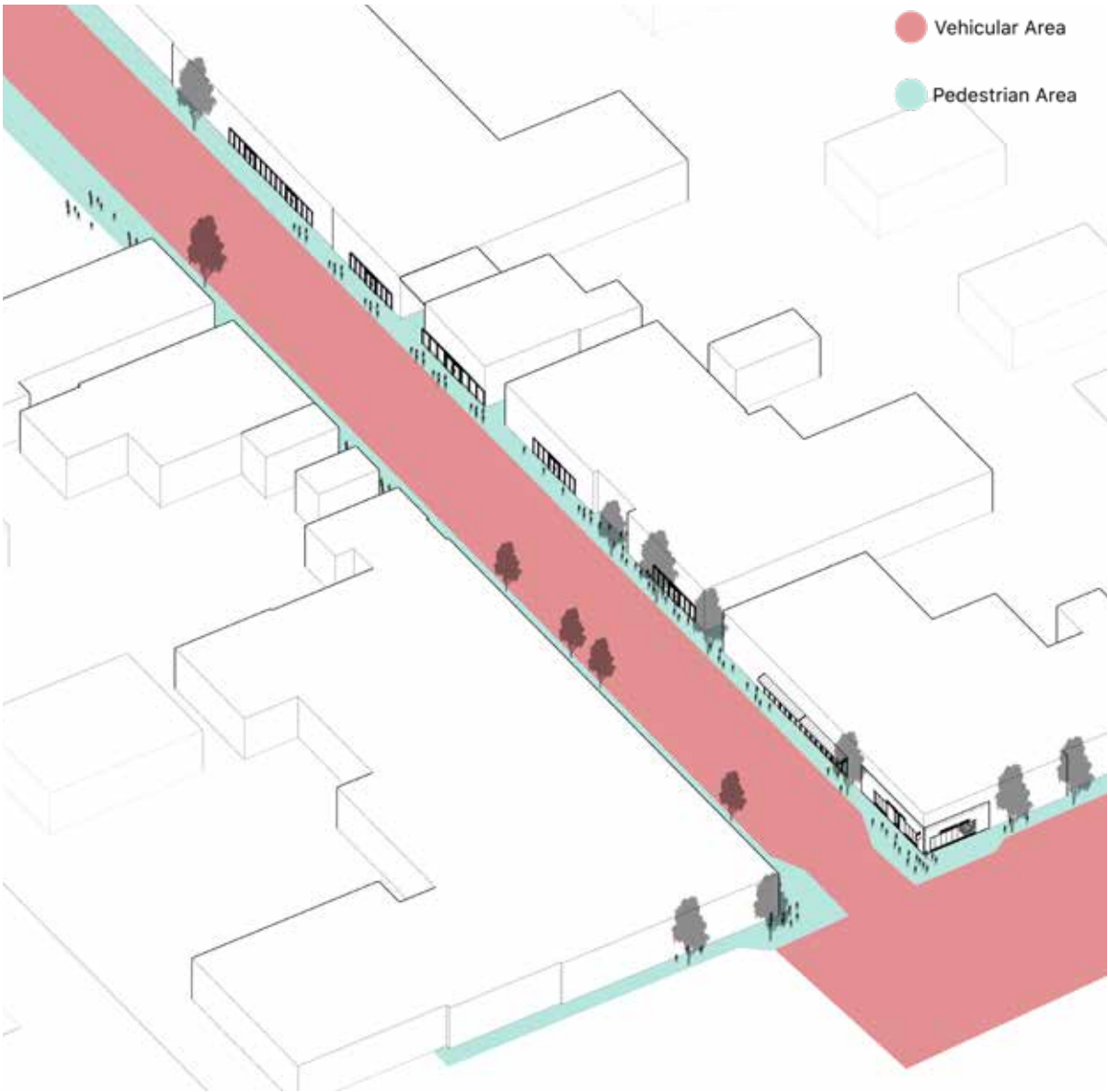


Image by Kayarash Karami
Axonometric view of Asp Avenue

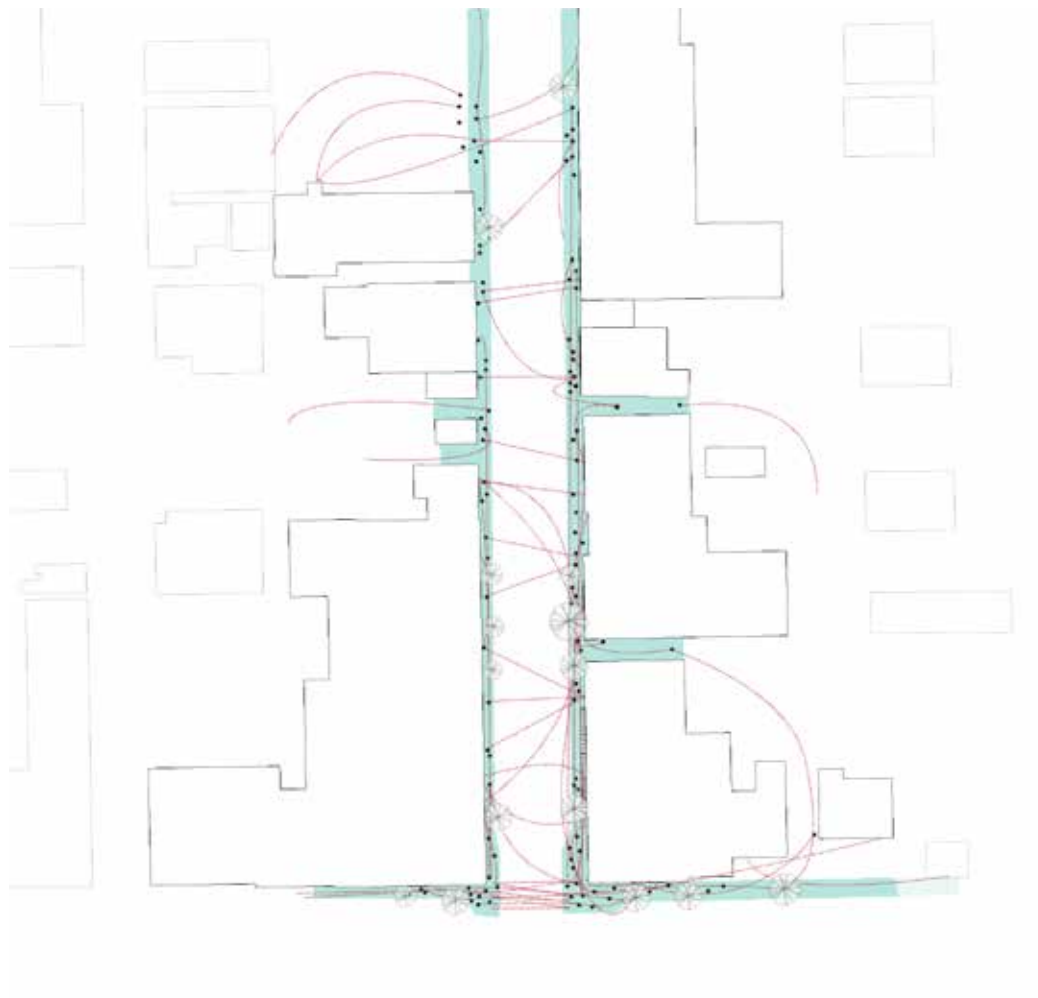


Image by Kayarash Karami

Pedestrian traffic on Asp Avenue, Tuesday, November 22, 2022, 4:00–5:00 p.m., from field observation conducted on a typical midweek afternoon on Campus Corner. The dots represent user clusters, and the dotted red lines are the paths most frequently taken by them in a one-hour window.

The Alleyway

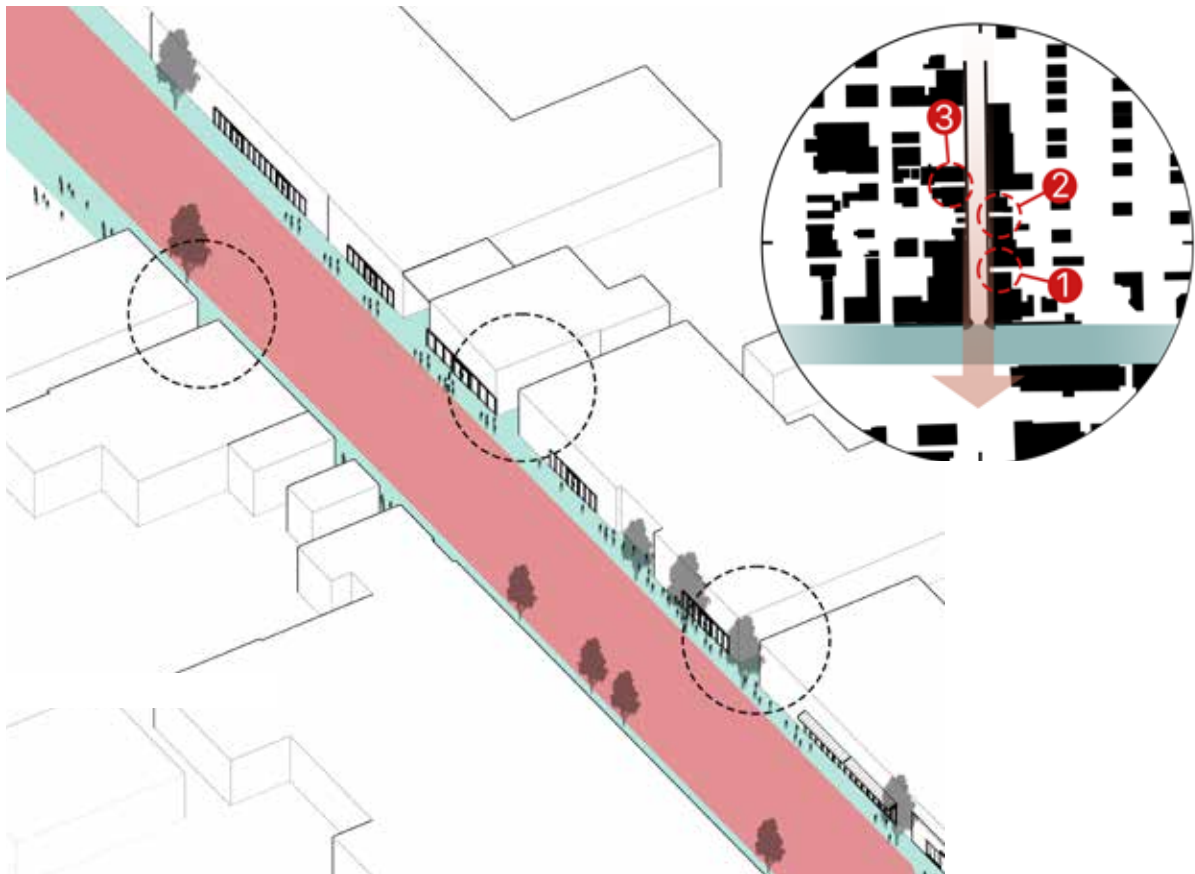


Image by Kayarash Karami
Prominent alleyway opportunities.

Infill Plaza Design

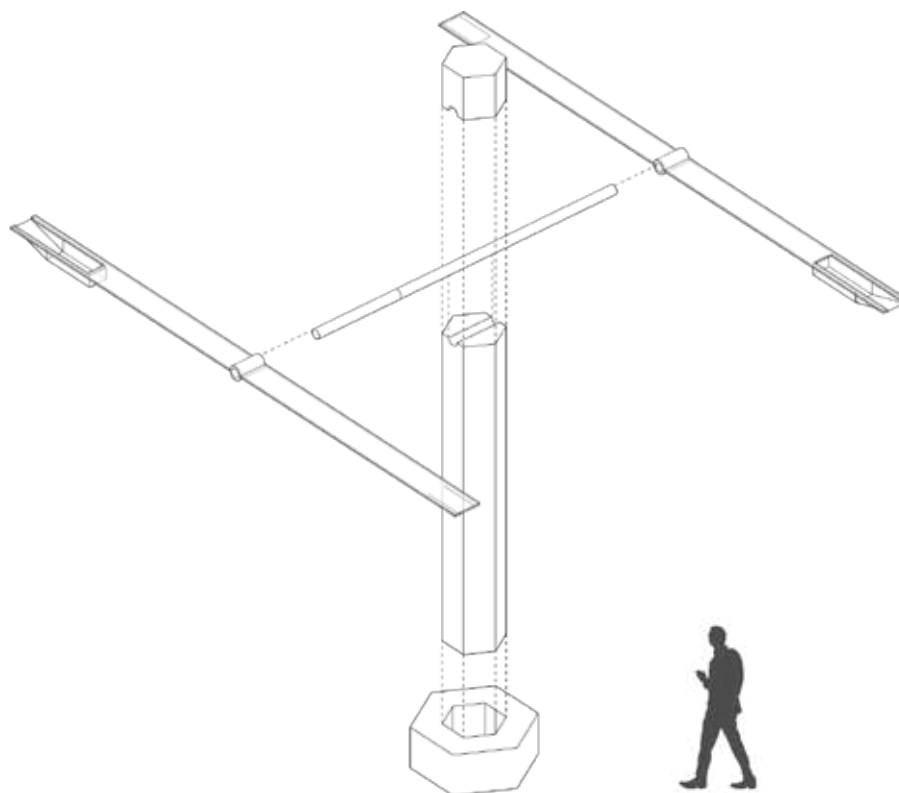


Image by Kayarash Karami
*Exploded axonometric view of
shade system central column*

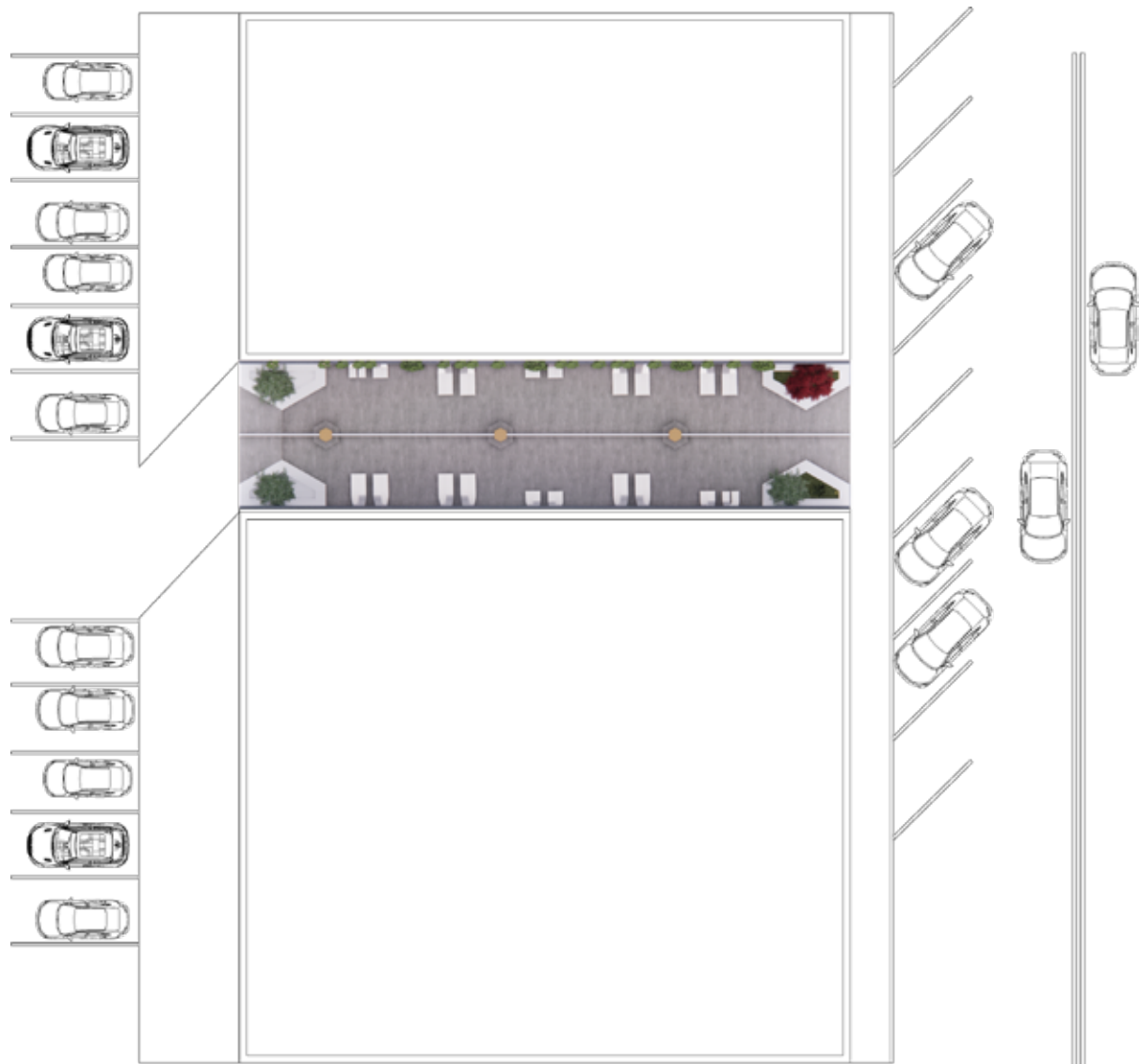


Image by Kayarash Karami
Plan view of proposed alleyway infill

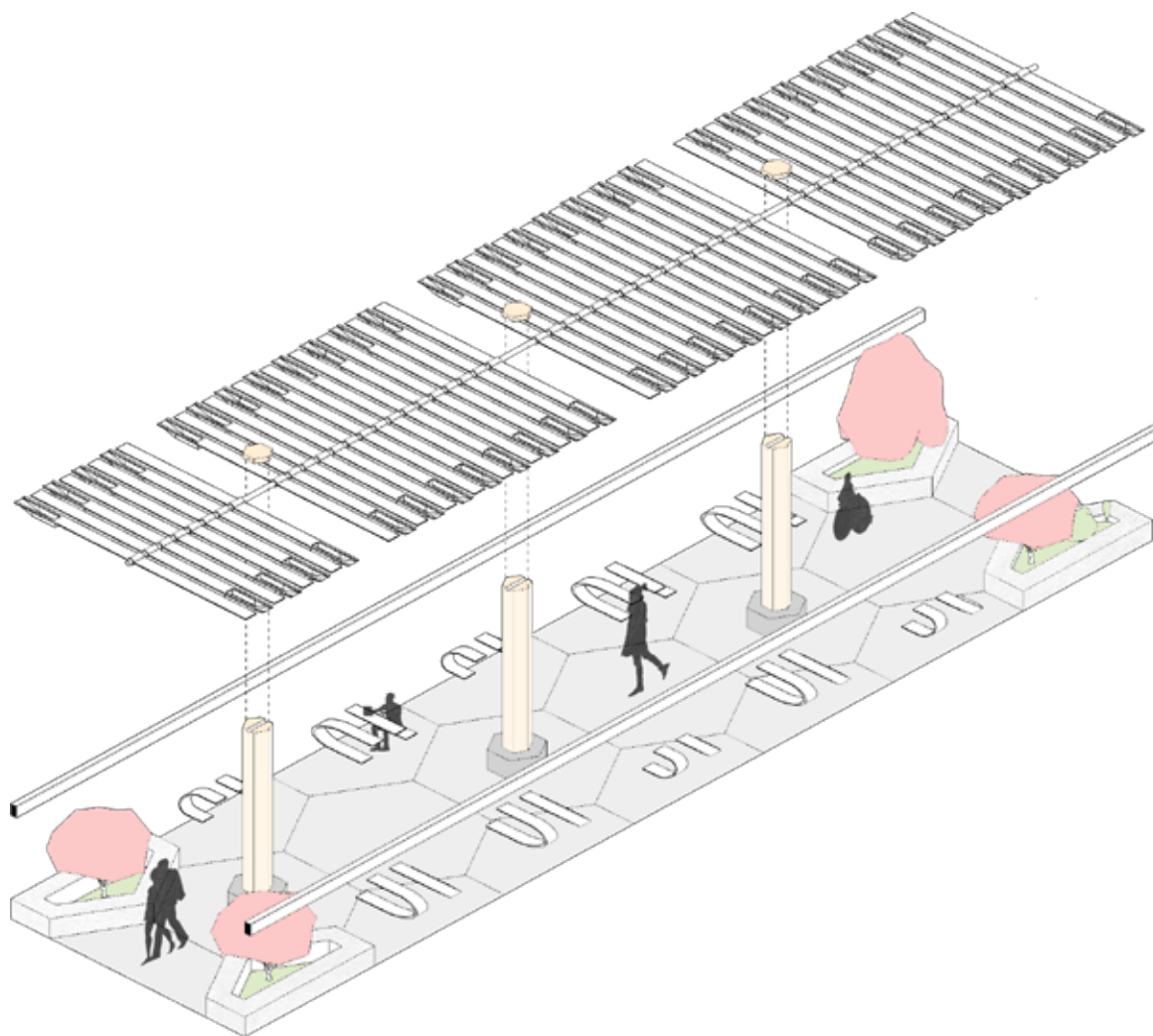


Image by Kayarash Karami
Axial view of proposed alley

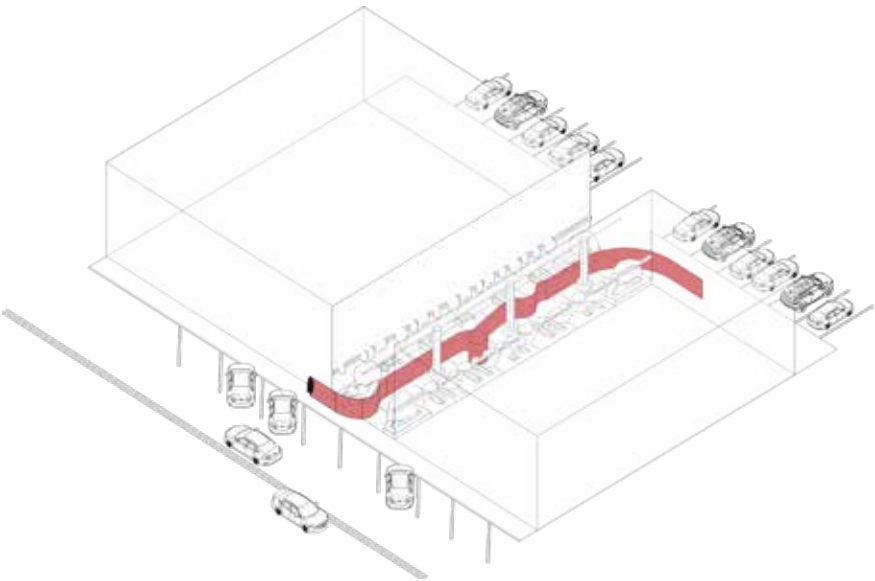


Image by Kayarash Karami
Example circulation path through proposed alleyway

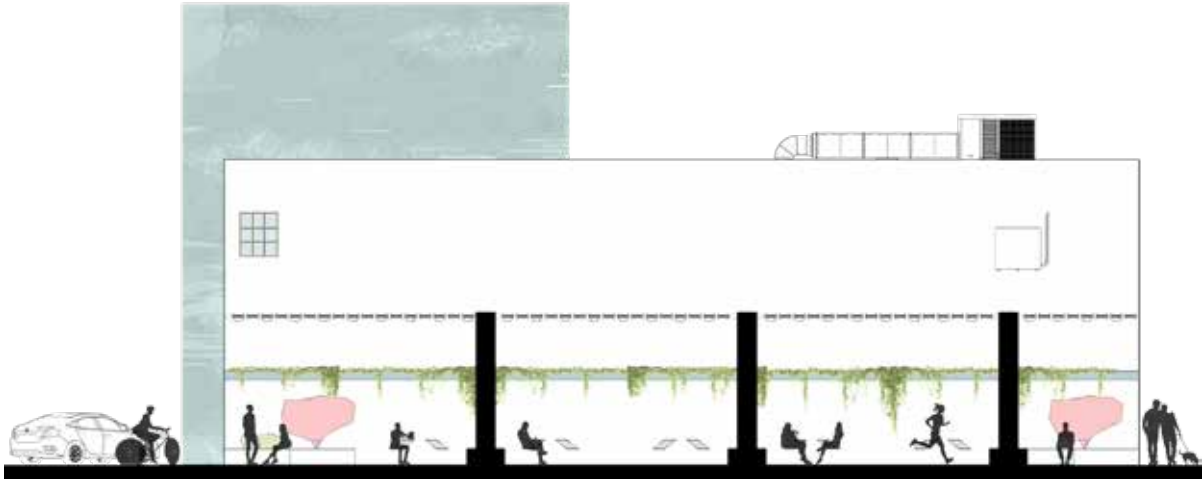
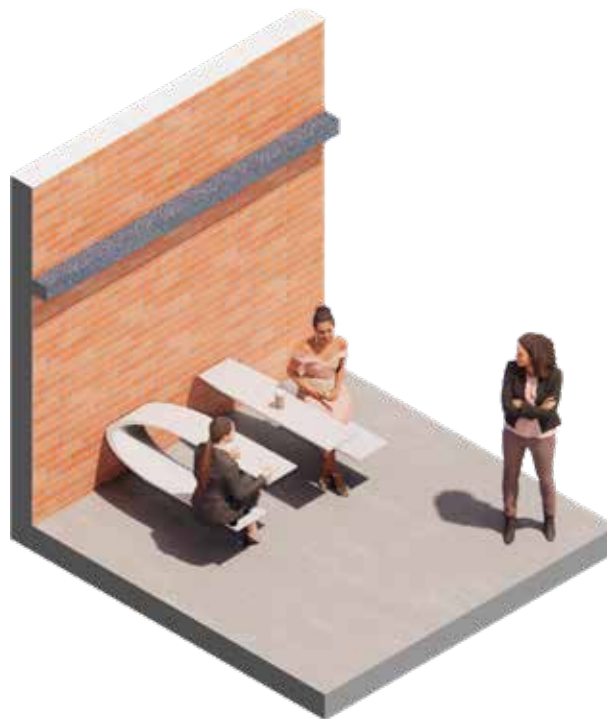


Image by Kayarash Karami
Axial section through proposed alleyway

Street Furniture Design

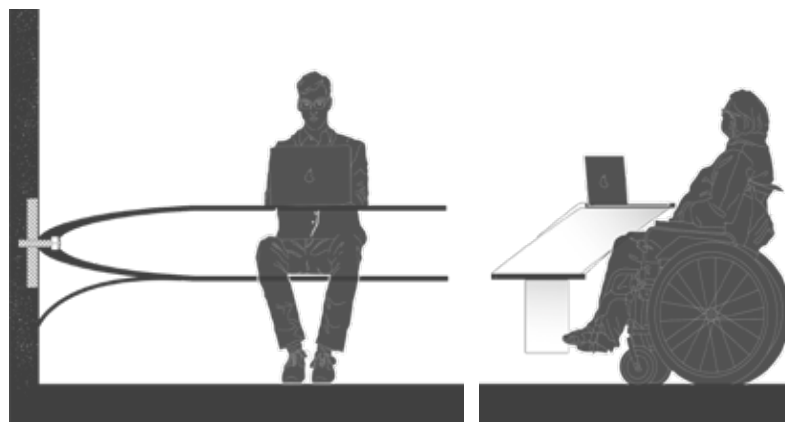
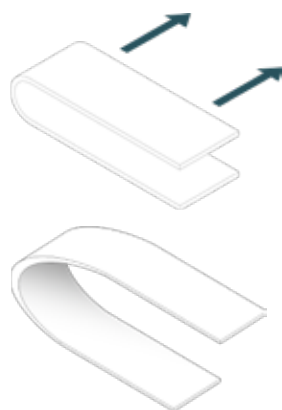
The furniture design has one main drive, and that is inclusiveness: simple, functional, able to serve everyone, regardless of their abilities. The furniture must be subtle enough not to discourage dynamic pedestrians from walking through it. It must be identified similar to park furniture but serve a broader user pool.



Top Left - Image by Kayarash Karami
Isolated view of furniture in use

Bottom Left - Image by Kayarash Karami
Furniture geometry

Bottom Right - Image by Kayarash Karami
Profiles and mounting



Dynamic Shading System

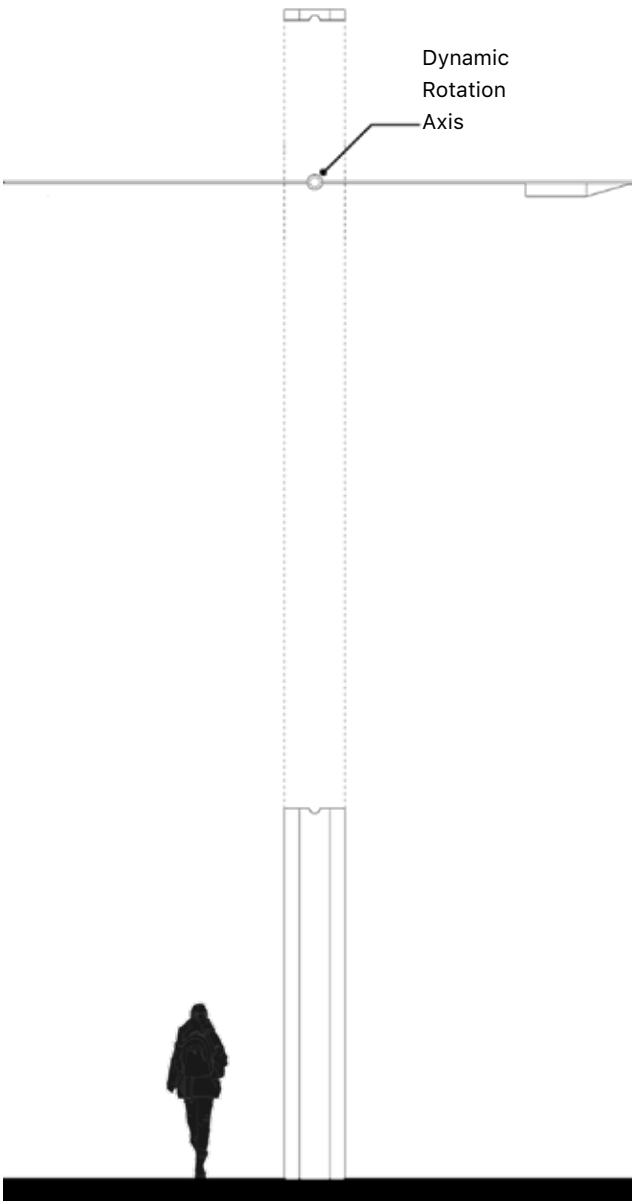
This dynamic shading system will help create some much-needed shade and, in combination with foliage, will help cool down the alley without energy use in the hot Oklahoma climate. The slats can be rotated manually to create season-appropriate shading angles. They are made from recycled laminated wood and aluminum to be lightweight and easily maintainable. The slats also have small scoops on one end which will fill with rainwater, causing them to rotate downwards toward the wall-mounted greenery, mostly climate-resilient vines, and disburse the water into the soil. The process will create a dynamic and organic movement during rain seasons to add to the character of the infill plaza.

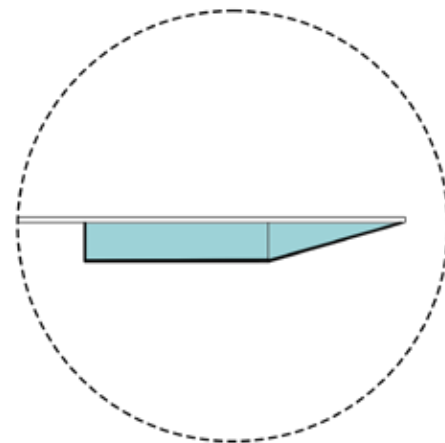
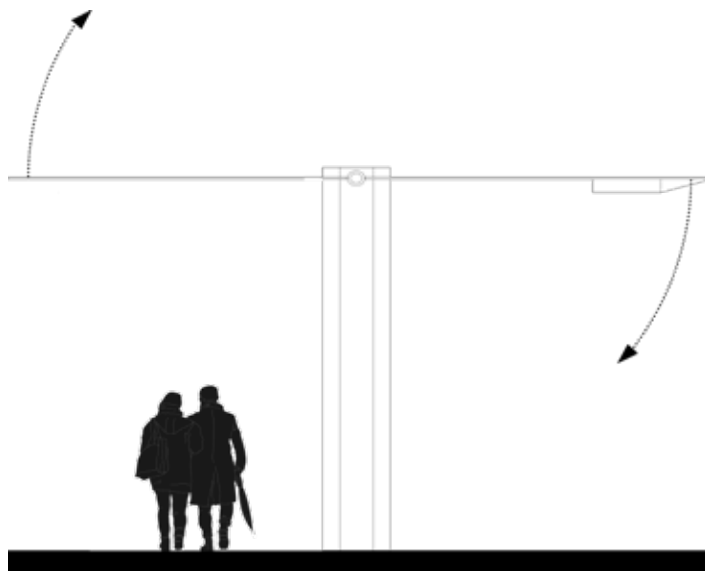
Conclusion

The goal of this design proposal is to activate new potentials on Campus Corner at the University of Oklahoma, driven by a new wave of pedestrian functions, comfort, safety, and aesthetics. Reimagining the underutilized grounds of Campus Corner can benefit students and other users greatly to improve the quality of life near the University of Oklahoma campus.

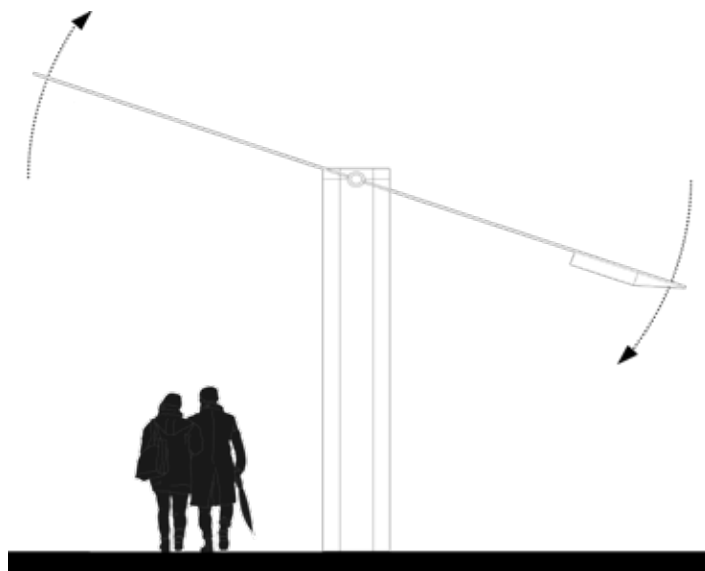
*Right - Image by Kayarash Karami
Exploded Elevation of shading post and rotator slat axis.*

*Opposite - Image by Kayarash Karami
Rendering of the lived-in infill plaza proposal on OU Campus Corner.*

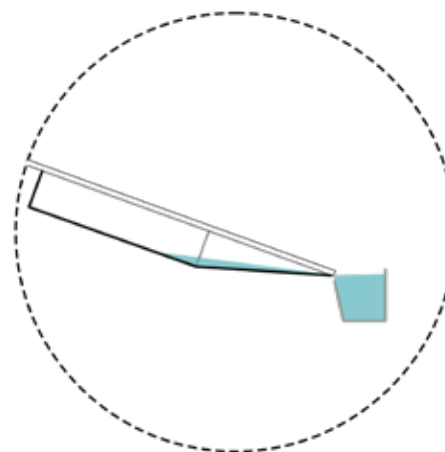




Above - Image by Kayarash Karami
Rain scoop acts as weight to rotate the slat down.



Below - Image by Kayarash Karami
Rain scoop discharges water and rotates back up to neutral position.







REUSING THE UNUSED.

Transforming Healthcare Infrastructure

In the past few decades, we have witnessed the emergence of new buildings and technology that have accelerated urbanization. Disused buildings and abandoned construction sites are becoming increasingly common. With green building codes and energy-efficient guidelines making their way into building designs, we are beginning to see the discomposing irony of building sustainable infrastructure. While architects and city planners are pursuing new ways to build green buildings and battle climate change, adaptive reuse of older, depleted, or otherwise vacant buildings is gaining momentum. Lately, the phenomenon of adaptively repurposing and reusing existing built structures has been a successful endeavor for several industrial and commercial projects.

With the onset of the pandemic, healthcare systems across the globe are grappling with decreasing reimbursements and increasing costs. Healthcare planners are exploring various strategies that can enable setting up and

expanding healthcare facilities rapidly and economically. The efficacy of adaptive reuse, especially in healthcare, though some were skeptical initially, is gradually gaining meaningful acceptance. Thanks to the pandemic-imposed urgency to swiftly ramp up, expand, and set up new health infrastructure, healthcare professionals, architects, and planners are investigating adaptive reuse as an alternative approach to rampantly building more infrastructure. The notion of adaptive reuse strategy's sizable reduction in cost and time observed in the other building types might not transpire as such in healthcare facilities by certain peculiarities that healthcare environments necessitate. However, with careful consideration and meticulous planning, this approach offers financial, environmental, and communal benefits.

AUTHOR**Ravideep Singh**

Associate Director
Creative Designer Architects



LA MIDAS
AESTHETICS

One of the principal factors of a healthcare building's feasibility is its location, visibility, and accessibility. Service areas on-site, medical zoning, and functional efficiency prospects are also essential factors in determining the adaptability of a building. Hospital buildings often require loftier floor-to-floor heights than other building typologies to accommodate the complex mechanical and service systems. Low structural floor heights in older buildings can pose a challenge to their repurposing and lead to increased costs. Accounting for the constantly evolving technology and medical equipment, architects must also consider the potential of MEP (mechanical, electrical and plumbing) induction in the existing structure. These factors require meticulous attention and planning.

The pandemic has undoubtedly altered the course of hospital design and planning, and healthcare professionals are reconsidering the efficiency of existing medical facilities. Furthermore, it is crucial to examine the prospects of growth, flexibility, and reconfiguration in a repurposed building to allow for a surge in bed counts and to accommodate additional care units to serve a larger population. Along with a detailed analysis of the site conditions, structural integrity, and other operational viability considerations, architects must ensure that a project complies with regional and national building codes. By investigating the various prospects of adapting an existing building to a hospital, generating a point-based decision matrix can help establish the project's overall feasibility. In addition to the pragmatic factors, healthcare planners must redesign the building to ensure a safe and healing environment for patients, caregivers and healthcare workers. Architects must also factor in the prospects of improving community health and well-being and revitalizing the structure for a holistic and sustainable approach toward the built environment.

Architects and planners must consider each of these factors at various stages of the design process, carefully evaluating the potential outcomes of each project. While every project has unique challenges and opportunities, the goal must be to create a sustainable and healing environment.

The La Midas Wellness Centre in Gurgaon, India, is a twenty-year-old dwelling refurbished into a high-end wellness center for women that stands tall like bold street furniture in a residential neighborhood. Diyos Men's Health Centre is another brownfield project that resurrected an old derelict residence. On a larger scale, another project resuscitated 180,000 square feet of retail space into a full-fledged hospital in Kaushambi, Uttar Pradesh. The expansive atriums of the Shopprix Mall now serve as the entrance lobby of Yashoda Super Speciality Hospital. The Santosh Children's Hospital is an ongoing project in Indirapuram, designed to transmute a dilapidated clinic into an engaging, responsive, and altruistic built form.

More recently, Fortis Hospital in Greater Noida involved transforming an existing hotel building into a 230-bed hospital to meet the increasing demand of healthcare infrastructure in the area.

Such projects are a testimony to our commitment to transform spaces that foster health and wellness. As healthcare architects and designers, we strive to deliver innovative, adaptive, and sustainable solutions, with a goal to revolutionize healthcare infrastructure—sustainably and altruistically. With meaningful interventions and a thoughtful design, adaptive reuse in the healthcare design realm is an opportunity to breathe new life into buildings, their inhabitants, and the community.



Opposite - Photo courtesy of Studio Noughts and Crosses
"After" image of La Midas Wellness Centre, Gurgaon, India

Above - Photo courtesy of CDA Studio
"After" image of Fortis Hospital, Greater Noida, India

TURNING THE MUSEUM INSIDE-OUT.

As a designer, you have to embrace uncertainty, it has to propel you forward. You can't progress and evolve without moving in directions that scare you a little. Those obstructions in your path will take you somewhere more interesting, ultimately.

The new Burke Museum on the University of Washington campus breaks down traditional museum barriers between public and back-of-house spaces, integrating collections and research labs with traditional galleries and circulation pathways. Large areas of glazing help to frame and exhibit objects for both internal and external viewers, creating a welcoming street presence and inviting the community to engage with scientific discovery. In addition to redefining the museum visitor experience, the design likewise asks internal researchers and scientists to adapt their own practices, as their workspaces and processes are now on display alongside totem poles, gemstones, and fossils.

AUTHOR**Tom Kundig, FAIA, RIBA**

Principal, Owner + Founder
Olson Kundig

BURKE

CELEBRATE
THIS LIFE
BEFORE YOU





Opposite - Photo courtesy of Aaron Leitz

The Burke Museum, exterior Kebony siding references forests across the Pacific Northwest, while large areas of glazing link the interior experience to the campus, landscape and city.

Above - Photo courtesy of Aaron Leitz

The design of the new Burke Museum breaks down traditional museum barriers between public and "back-of-house" spaces, integrating collections and research labs with traditional galleries.



Photo courtesy of Aaron Leitz
The building's rational scheme holds the complexity of the Burke's activities and collections, framing an intuitive user pathway



Photo courtesy of Dennis Wise / University of Washington
The Burke's design allows visitors to engage with the process of scientific discovery—and scientists themselves—in a true working museum

SEARCHING FOR BALANCE.

Series 1

Telesis Vol. V 2023

A PLACE BEHIND THE SUN.

Series 2

Editor's Note:

Artist John Wolfe was born in Vernon, Texas, in 1947. In 1970, he obtained a degree in Art Education from Southwestern Oklahoma State University, followed by the completion of an M.Ed. at the University of Central Oklahoma in 1976. John taught art in the Midwest City-Del City school system. Additionally, he shared his expertise as an adjunct faculty member at both Rose State College in Midwest City, Oklahoma and Adams State University in Alamosa, Colorado. Such experiences undoubtedly enriched his own artistic endeavors. Widely recognized for the creative prowess, Wolfe's works have been showcased extensively throughout Oklahoma and the surrounding region. Displaying remarkable versatility, he demonstrates mastery across various artistic mediums, including painting, assemblages, and sculptural forms. Notably, his artistic repertoire often incorporates found objects, further elevating the depth and significance of his creations.

The Telesis team had the privilege of attending Wolfe's art exhibit at the Depot Gallery in Norman, and the experience left an indelible impression. Wolfe's work not only produces harmony but shows an understanding for the environment by his noble manner of repurposing discarded materials sourced from fellow artists. Through careful sketches and progressive mock-up models, Wolfe gradually unveils the essence of his vision, culminating in a final piece of art that resonates with profound meaning. In this manner, art transcends its conventional boundaries for Wolfe; it becomes a form of meditation, an immersive realm where the artist merges with the artwork itself. His dedication and profound connection to his craft are evident in every stroke, every intricate detail, rendering his creations not mere objects, but gateways to a heightened state of awareness and contemplation.

AUTHOR

John Wolfe
Artist



The first series, "Searching for Balance," is constructed from steel, ceramic, wood, and found objects. The works are predominantly horizontal with a steel framework. Thoughts about this series dealt with borders and boundaries and how one might react to that situation: being in or out, or perhaps moving freely around or through, and the relationships between the parts and the space in which they dwell.

The second series, "A Place behind the Sun," is also constructed of steel, wood, and ceramic. These pieces are all vertical, and color has been introduced. The common link between the pieces is the wooden shapes that were throw-aways from a wood turner. There was a conscious effort to minimize components—saying more with less. The reduction of the elements will hopefully reveal the true essence of the form.

The title "A Place behind the Sun" comes from the song "Over the Rainbow." This is the place I go when working, the sheer joy of doing.

Below - Photo courtesy of John Wolfe
Sculpture 2, Series 1, "Searching for Balance"

Opposite - Photo courtesy of John Wolfe
Painting 9, Series 1, "Searching for Balance"







Left - Photo courtesy of John Wolfe
Sculpture 3, Series 1,
"Searching for Balance"

Opposite - Photo courtesy of John Wolfe
Sculpture 13, Series 2,
"A Place behind the Sun"



Below - Photo courtesy of John Wolfe
Sculpture 7, Series 2, "A Place behind the Sun"

Opposite - Photo courtesy of John Wolfe
Sculpture 6, Series 1, "Searching for Balance"





ADVANCING HEALTH + THE BUILT ENVIRONMENT THROUGH COMMUNITY ENGAGEMENT.

A Transdisciplinary Approach

Adaptive practice through community engagement means shifting research power from an academic silo to communities to drive lasting change. For this change to take place, land-use practitioners must engage and communicate with health professionals and educational institutions to envision safe and healthy communities for the next generation.

The built environment can be a double-edged sword when it comes to health impacts—it can create health problems as well as solve them. Over the past decade,

public health professionals and land-use practitioners have sought ways to integrate their knowledge to improve industry standards through academic research and curriculum. While there has been much advancement by academic institutions offering interdisciplinary curricula, land-use practitioners often continue to operate in silos. Many land-use practitioners who are involved in the early stages of development and change when decisions are made, often do not consider health impacts as a vital and necessary part of their process.

AUTHORS

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Wel-Nest

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In recent years, many land-use organizations have provided statements of support regarding the built environment and its impacts on public health outcomes. These statements are valuable forms of progress. But in order to actually change how we construct the built environment, we need a truly integrative approach, involving strategic education and conversations that are accessible and inclusive of all stakeholders—including health professionals as consultants and advisors.

In addition, many organizations have provided in-depth information and resources on health and the built environment, including the CDC's Built Environment and Health Initiative (which is unfortunately no longer funded or updated), the Robert Wood Johnson Foundation, and the Urban Land Institute's Building Healthy Places Initiative.⁴⁹

Despite the abundance of statements of support, data, and studies on these topics, the information is often difficult to apply in practice and may only be relevant to certain areas of practice, such as public health and planning. Key players like architects are often left wondering how data and best practices regarding public health outcomes and the built environment applies to them and how this information should influence and fit into their workflow.

Approaches to Health and the Built Environment

Adapting to an integrative process can start with having a foundational understanding of the Social Determinants of Health and their impact on the built environment. In a recent poll of land-use practitioners, over one third of those surveyed responded that they had no understanding of the subject. Responses indicating a lack of understanding revealed a heavy emphasis on architects and real estate professionals.⁵⁰

For land-use professionals to advocate for and understand the determinants of healthy environments, a different approach is required—namely, one that encourages integration, communication, and learning. This approach can be seen in fig. 1, which compares standard and proposed communication and learning models regarding health and the built environment.

The standard multidisciplinary communication model conceives public health and educational institutions outside the circle of communication, thereby constraining learning between key players. The proposed PETAL framework (Public Health and Education within a Transdisciplinary Framework to Advance Learning) brings public health and education inside the circle, thereby creating the conditions for applied integration, communication, and learning. Using PETAL as the foundation for a new approach, knowledge from public health and education contexts can be applied to the built environment, enabling deployment in practice through community engagement.

We can look to Daniel Stokols and colleagues' definition of transdisciplinary research for ways to apply this framework to create adaptive land-use practices.⁵¹ Through an integrative process that includes health and education inside the circle of conversation, practitioners from academic and nonacademic disciplines can work jointly to develop and use novel approaches drawn from multiple perspectives to yield innovative, healthier land-use solutions.

Models and Frameworks

In considering ways to develop this approach, the following frameworks have been helpful in applying health contexts in community engagement.⁵²

- The social-ecological model of health is used to broadly inform health and identify contributing factors at different levels and is focused on changing environments rather than modifying health behaviors.
- The Active Community Engagement Continuum is focused on community engagement and the role community plays in behavior change.
- Diffusion of Innovation is a platform for understanding and communicating a new approach or idea through community-engaged efforts.
- Community-based participatory research is a collaborative approach through partnerships and community involvement in the research process, which aims to achieve social change, improve health outcomes, and eliminate disparities.

- Translational research is widely used in clinical practice with a focus on translation. Turning research into practice, community engagement is seen as a necessary tool for effecting change in practice, improving population health, and reducing disparities.

The value of community engagement in public health has been well documented. Unfortunately, community engagement has not been widely integrated into land-use processes as a method to positively impact health outcomes. How can we build on these models through the

lens of land use to develop the transdisciplinary PETAL framework (fig. 1) to make it accessible and deployable in communities?

Community Engagement as a Tool for Success

For many projects utilizing community engagement, the foundational process of community research typically involves contracting outside organizations to conduct studies and recommend solutions, meaning those researchers are rarely local. "As a result, their

BUILT ENVIRONMENT AND LAND USE COMMUNICATION & LEARNING MODELS

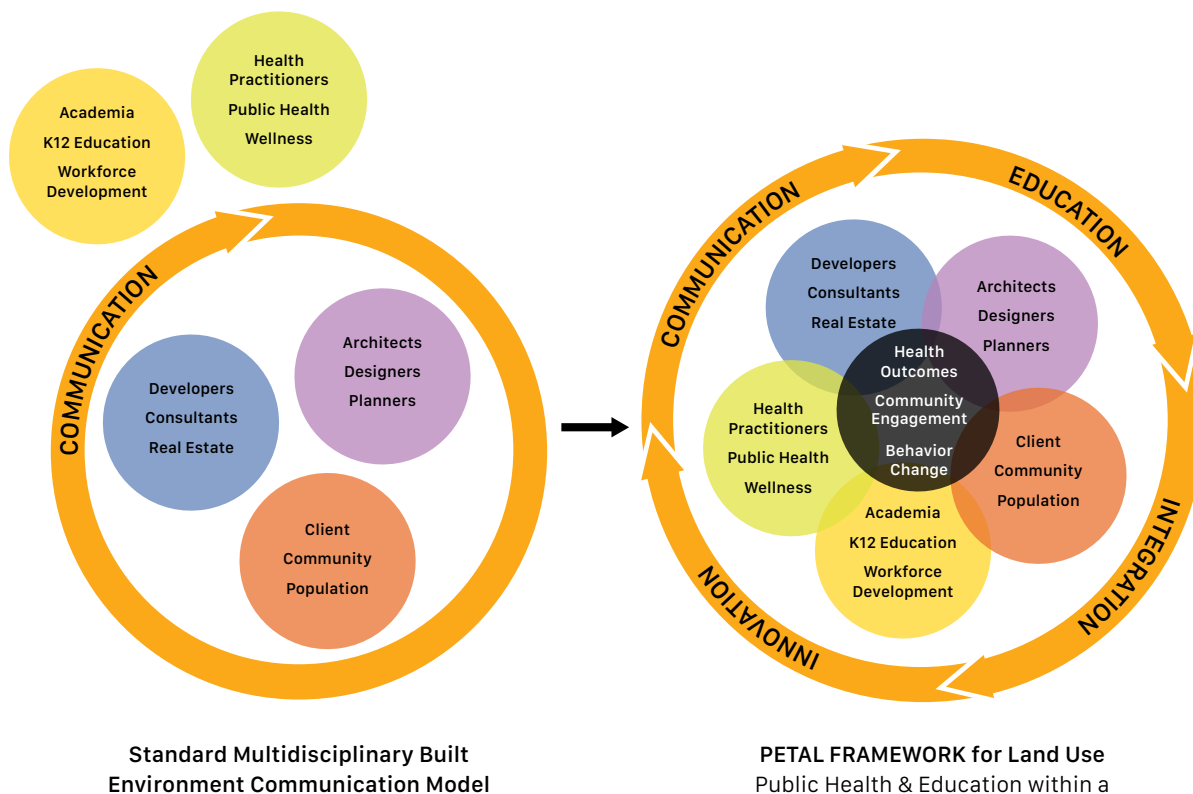


Fig. 1 by Natasha Brand
Built Environment and Land Use
Communication + Learning Models



Fig. 2 courtesy of Verdant Studio, 2022
Tactical Urbanism Plan, Thaden School,
Bentonville, Arkansas

recommendations often don't factor or value the experiences of residents most affected by the challenges facing their neighborhoods—making the results of that research less effective.”⁵³

Community engagement is defined as “the process of working collaboratively with and through groups of people affiliated by geographic proximity, special interest, or similar situations to address issues affecting the well-being of those people.”⁵⁴ Over the last two decades, research and practice in public health have increasingly employed community engagement. Jane Jacobs encapsulates this definition and the importance of local knowledge and industry experience in her book *The Death and Life of Great American Cities*: “Cities have the capability of providing something for everybody, only because, and only when, they are created by everybody.”⁵⁵

Deploying a road map based on community engagement models and frameworks that are widely accessible to community organizations, education, and land-use professionals would mean enhanced communication and integration, improved health outcomes, reduced health disparities, social and behavior change, and an inclusive learning environment. The process of building a road map can begin with elected officials and municipal employees at the city level engaging with public health or population health professionals. The Urban Land Institute Health Leaders Network is a great resource, listing health leaders by region and country. Alternatively, a health professional in the community could contact the city or local organizations to start conversations.

Community Engagement in Practice

A successful example of incorporating these community engagement principles into the proposed PETAL framework is a recent tactical urbanism project developed by students from the Thaden School in Bentonville, Arkansas, in 2022 and 2023.

The project advanced health and the built environment through learning, communication, and collaboration to propose viable solutions for the project location, addressing safety issues, improving health, promoting behavior change, and sparking policy conversation. Using

tactical urbanism strategies, the students proposed a crossing and mural for a dangerous intersection, sidewalk delineation measures between the road and local businesses, and a gathering place between those businesses to encourage safe, social interaction (fig. 2).

The project drew from all areas of the PETAL framework, incorporating:

- K-12 education: Thaden School urban studies class and the school community at large
- Health professional: Urban Land Institute health leader
- Researcher: population health strategist
- Land-use organization: Urban Land Institute, Northwest Arkansas
- Land-use business partnership: Verdant Studio
- Community surveys: Local business and community groups serving the project location
- City government: Mayor, emergency services, and planners
- Local active transportation advocacy group: NWA Trailblazers
- Public input session: Urban Land Institute's Place Summit

Conclusion

To successfully advance public health within land-use discourses and practices, built environment practitioners must shift from traditional communication models to the PETAL framework, which seeks to involve public health and education professionals in land-use processes. In addition to fostering the partnerships necessary to deploy the PETAL framework successfully into built environment projects, understanding, transparency, trust, and equity are essential to creating sustainable partnerships. Most important is understanding the community's history, its residents, and the challenges being faced.⁵⁶ As a researcher working within communities to develop this road map, it is imperative that one must put aside any preconceptions about the community and listen to the lived experiences of its residents. Only then can true community engagement happen—and change begin.

ADAPTIVE ARCHITECTURE + DIVERSITY, EQUITY, INCLUSION & BELONGING

*Until we become the architects of a society that
is truly free and ecological, it will always seem
that when the human brain is not adaptive, it is
more often destructive than creative.*

—Murray Bookchin

AUTHOR**Christopher Le, Assoc. AIA/NCARB**

Aviation Architectural Designer

Terminal Planner

Mead & Hunt

Adaptive Architecture Framework

All buildings, all architecture, are technically adaptable, as the built environment can always be modified with human intervention, design, and redesign. Adaptive architecture refers to buildings that are specifically intended to respond to stimuli such as the surrounding environment, its inhabitants, or to objects the building interacts with. At times, adaptive architecture refers to design processes that are adaptive to data drawn from those stimuli and are utilized to create generative strategies and solutions. These data-driven design methods don't necessarily lead to adaptive structures, but they are fascinating approaches toward design. But data that is driven for or collected by human components may overlook disinvested communities. What is not discussed enough when talking about motivators for adaptive architecture is the role diversity plays in the human component of the built environment. This article is intended to spark the conversation on how diversity should be incorporated in the design process and not just for individuals as "diversity hires." It's an issue that requires everyone to be cognizant of their work, impacts, and the communities.

Architect Holger Schnädelbach writes extensively about the structure of adaptive architecture and describes the cutting-edge research around spatial constructs, their motivators, and their results. His study presents a conceptual foundation for adaptive architecture and an overview of motivations and drivers. He concludes in his paper "Adaptive Architecture: A Conceptual Framework" with a discussion of the various strategies available to architects.⁵⁷ However, the paper does not address how diversity, equity, inclusion, and belonging (DEIB) fits into designing for adaptive architecture.

In this writing, I want to introduce the question of how DEIB can influence adaptive architecture, with Schnädelbach identifying several main categories—inhabitants, the environment, and objects. While there are technical or technology-driven elements of adaptive architecture, a person's background—including culture, history, and circumstances—also affects the design methodology or approach.

The Missing Link

Schnädelbach writes, "An architect might focus their design efforts on individual inhabitants of an adaptive building."⁵⁸ Individuals have always been empowered to change architectural layouts manually. Several examples include adding one's personal style to a building to showcase the mission of the company, or including electronic louvers that automatically adjust as the sun moves across the sky and provide different levels of shade. It's crucial to understand that there are also specific cultural concerns that need additional understanding and development. For example, many African, Indian, and Asian communities cook in their garages after coming to the United States, as they need more robust ventilation for preparing traditional foods that require lots of heat, circulation, or fresh air. Another example is that intergenerational living—grandparents living with their kids and grandkids—is more prevalent in non-U.S. cultures so you'll find three-, four-, and sometimes even five-bedroom units or renovations are more desirable. Architecture that responds—without manual intervention—to groups of individuals requires knowledge of the group, including its history, context, and needs. This information needs to be captured during the design process to be useful and expressed in the final solution.

The technology that helps define adaptive architecture comes from a diverse, global pool of talented designers, and understanding that connection is a discussion that doesn't occur often enough. According to Schnädelbach, "The complexity lies in aggregating from multiple streams of personal data and finding a way to aggregate those streams in a way that is meaningful and useful."⁵⁹ In other words, how is a person's (or group of people's) background incorporated in design? Community-based participatory design that ensures specific communal needs are identified and addressed is a great strategy to infill the holes in the design process. Diversity in architecture is essential, but diversity in influencing adaptive architecture through problem-solving and technologies is equally essential, considering the range of talent that architects come from as well as the variety of communities that they serve.

Lack of Representation Matters

Before incorporating DEIB in adaptive architecture, it's pertinent to understand why it is crucial. Mike Ford, principal at BrandNu Design, blends the hip-hop ethos with architecture and community planning. While the designer dubbed the "hip-hop architect" makes architecture more relevant to a more diverse audience, he says not much has changed since he was in school: "The current state of diversity and inclusion in architecture is very dismal." A 2016 Equity by Design Survey backs this assessment, finding not only gender disparity in all categories but also a severe lack of racial diversity in architecture.⁶⁰

In an article entitled "*Why Diversity in Architecture Matters for Communities and the Bottom Line*," Arizona architect Taz Khatri introduces Gabrielle Bullock, director of global diversity at Perkins + Will. Bullock states that while the future of diversity in architecture is optimistic, there are still glaring and immediate issues to address. Bullock had this to say:

Architecture is about problem-solving, about being able to understand our clients as best as we can to propel them to their highest aspirations. If we narrow our view, our process, or our ability to see, hear, or discover the multiple layers inherent in every project, we risk our relevance. If we cannot connect, understand, and be a part of the community we are serving, how can we design for that community?⁶¹

Historically, Black communities and other underrepresented communities have routinely been uprooted and the victims of eminent domain and forced architectural development, and are constantly regarded as incapable of helping develop and design their communities. Even during good times, these communities are often left out of the development conversation. It's worth noting that the "community design" programs that target specific communities tend to garner minimal representation unless they also provides element such as childcare or compensation for participation. Because of historical inequities, representation is minimal because life obligations are a larger priority than the development conversation.

Consider the negative connotations of gentrification, defined here as the agent of change whereby the character of a poor area—oftentimes the neighborhoods of underrepresented communities—is changed by wealthy people moving in and improving housing, attracting businesses, and typically displacing the current inhabitants in the process. Often, those being displaced are of underrepresented communities, primarily Black or Latino.

In recent years, architectural atrocities against minority and underrepresented groups have come to light, bringing attention to architectural projects that were not responsive to (or even desired by) the communities of the area. News and information about these affected communities is virtually nonexistent. For example, not many people knew about the Tulsa Race Massacre in Tulsa, Oklahoma, in 1921 until the TV series *The Watchmen* depicted the event in its opening sequence. The Greenwood District, also known as "Black Wall Street," was burned to the ground over two days, resulting in 300 deaths and the destruction of more than 1,200 Black businesses, homes, and other buildings. Black Wall Street, which had rivaled the New York Stock Exchange, and bright, rising American citizens (including architects, businesspeople, and activists) and their future contributions were erased over those two days. It has taken one hundred years to bring awareness and to begin healing in this community.

The National Organization of Minority Architects (NOMA), through the 2022 NOMA Barbara G. Lauri Student Design Competition, focused on a project that serves to address the gentrification and the displacement of North Nashville community members as the result of the Interstate Highway System built by the Eisenhower administration in the 1960s, which bifurcated the once thriving Black community. However, this is not an isolated case. In any major American city can be found a historically Black neighborhood demolished, split, or cut off from the rest of the city by a highway. These serve as a patchwork quilt of legacy racism through federal transportation policies across the United States, which continues to define urban landscapes.

This isn't just remnants of our past. Even the October–November 2022 edition of *The Architect's Newspaper* speaks to this in the article "Paradise Paved Over," written

by Adam Paul Susaneck, a New York–based designer and founder of Segregation by Design. Susaneck talks about a portion of the highway proposed to connect I-395 and I-95 to Miami Beach, whose original highway had already closed hundreds of businesses, dozens of churches, several schools, and forced out nearly twelve thousand residents, nearly all Black. This highway project would seek to worsen that damage.⁶²

Making Opportunities Viable for Everyone (MOVE) is a community development corporation that hosts an international design competition for Africatown, Alabama. Africatown made news when the slave ship *Clotilda* was discovered in the Mobile River Delta. Thirty-two of the original 110 kidnapped West Africans were unable to return home after being freed, so in 1865 they set up a community that still exists today. The neighborhoods suffer from neglect, industrial encroachment, and constant reminders of the region’s slaveholding past. Remnants of the slave industry—including outdoor sleeping pits where the enslaved were chained and had to sleep out in the open environment—are maintained for historical preservation, but not in such a way that is sensitive to or pays respect to the Black communities of Mobile, Alabama. As Jack Travis, FAIA NOMAC and jury chair for this competition, said, the design competition is looking for “African forms for African communities.”⁶³

A more positive example of diversity in adaptive architecture comes from Marvel Studios’ fictional country of Wakanda. With advanced technologies, design, and architecture, the designers of Wakanda crafted a technologically advanced society with heavy roots in African archetypes, history, and culture. By and large, this is the first example in mainstream media that portrays technologically superior design with roots in Africa and African culture. In this movie, nothing goes untouched by the cultural significance of the Black experience. The Afrofuturistic sensibilities can be found everywhere, from their clothing, advanced equipment, and superior weapons, to their architecture. And yet, sadly, this is fictional.

Diverse World, Diverse Solutions

Drawing from various backgrounds around the world, designers and architects can see how others would address

a concern or a client’s issues. Given any problem to design around, ten architects sitting in a room will produce ten different designs. Understanding that individuals produce work based on their own education, experiences, and interests is key to establishing a design process that not only is inclusive but also produces better design.

Designing for other climates, for example, can be a challenge if you are not familiar with the issues your client faces. An architect from Texas may work on an airport in the Midwest, but their understanding of snow loads needs to be refreshed, or they need to partner with someone local who understands those issues.

The same can be said for ethnic differences and influences on technology and adaptive architecture. Designers are constantly looking at Middle Eastern and Islamic architecture on their efficient and beautifully styled window screens, but what’s being praised is an efficient use of building materials to address the sunshade issues of a desert climate. Other architects look into traditional African thatched roofing for its longevity, eco-friendliness, and climate-efficient properties to address passive cooling. Cultures help express the architectural solutions to the opportunities presented by climate, environment, and resources.

Speaking of this issue, Susaneck implores designers to abandon the failed urban highway planning efforts of the past; rather designers should look to innovative projects found in such places as New York City, Paris, France, and Seoul, South Korea, whose extensive elevated highway removal project (combined with an investment in Seoul Metro) in return for a city center with a park and stream created a significant financial boon.⁶⁴

DEIB and the Bottom Line

Bluntly, diversity is good for business. According to a McKinsey & Company report that examined 180 publicly traded companies between 2008 and 2010, companies have a 95 percent higher return on equity than those without DEIB policies. The report was measured on objective company data as it pertains to women and cultural diversity. Bullock explains that diversity and inclusion programs raise awareness of the issues involved. She goes on to

explain that “if people you work with don’t understand what unconscious bias is, for example, they’re liable to continue it.”⁶⁵ Once diversity and inclusion become a stated goal, a designer or design team can adapt their work and accountability can be measured. Only by stating DEIB as goals can the conversation of appropriate or thoughtful adaptiveness be had and its positive impact on design maximized.

Creating New Cultures

Without the perspectives that come from diversity, creative placemaking can and will miss unique cultural identifiers and hinder community economic revitalization. Having representation in discussions of architecture, revitalization, and correcting architectural crimes of the past is extremely important to the healing process. Ford says, “The profession has never been highly desirable to Black communities because it is associated with the environmental injustices we have faced for decades.”⁶⁶ Having a diverse design team can develop better perceptions and create better designs by including their voices and ideas through their understanding of the issues that face their communities and to be able to better adapt to their intended users.

As the world we live in is becoming increasingly more understanding of the need to adapt, reuse, and revitalize the built environment around us, the need to incorporate DEIB methodologies and practices into the profession is likewise increased. If adaptive buildings are explicitly designed to evolve and grow with their inhabitants, then understanding the connection between the built experience as a function of a human experiences is vitally crucial to inclusive, adaptive design. If adaptations in most adaptive architecture are related to their users over time, so is adapting the practice of understanding to those inhabitants and their shared lived experiences.

But quite frankly, this isn’t just a Black issue; this is an architectural issue. How does a non-Black architect design for a Black community? Using DEIB and applying it in the framework of AA design will expand the understanding of truly responsive architecture. While this goes hand-in-hand with having architectural representation, it’s a nuanced subtlety that bears mentioning.

There are plenty of scholarly articles about the need for increased representation in architecture. That’s not what’s being discussed here. This article is designed to spark the conversation on how diversity should be incorporated in the design process; it’s an issue that requires everyone to be cognizant of their design, their impacts, and the communities. Understanding one’s shortcomings as a designer and partnering with a person or a group of people who can speak to those truths and experiences is key to developing truly adaptive architecture that responds to and for the community in which it is placed. Involving the community and understanding the impact will go a long way to elevating the communities in an authentic, organic, peaceful, and verdant manner to begin the work of dismantling systemic and historical inequalities. This also includes looking into technologies, building methodologies, and materials from a more diverse understanding of the built environment.

Khatri explains this rather simply: “Firms can remain relevant, foster innovation, and come up with better solutions for the communities they serve, and improve their bottom line by taking concrete steps to create a culture that fosters diversity in architecture.”⁶⁷

While designs should incorporate the latest technologies, they should also acknowledge the people they serve, pay homage to historic and cultural identities, and spark community economic revitalization. Truly adaptive architecture will seek to help design better community amenities like new housing, updating schools, and ensuring access to services and green spaces by being able to respond and adjust to evolving societal stimuli and communal needs. Architecture needs more diversity in its ranks, but it also needs allies: allies ready to understand that they have a duty and a responsibility to deliver thoughtful architecture that responds to its community and pays respects to what has shaped their understandings and how it can continue to evolve and be a part of the living human experience.

COMMUNITY- LED DESIGN.

A Conversation with Open Design Collaborative

Telesis Vol. V 2023

The word adaptive invokes ideas of fluidity and change, an ever-present evolution of ideals and methodology. As designers, architects, engineers, and artists, we're thrust into a field that is constantly in a state of transformation. With the completion of one project comes another. Similarly, society is also in a state of transformation. As one global event comes to a close, another one is just beginning. We are tasked with responding to these conditions in ways that are insightful and understanding, while also being proactive in considering future generations. We must be open to an adaptive practice tailored to the current environment and adjusted to its mercurial conditions.

An adaptive practice calls upon methods of design that aid in the restructuring of current practices to address the ever-changing socioeconomic and political climates and to dive deep into the ideals of adaptive practice in the built environment and beyond. Researching into how one can bring about such a fluid environment requires us to think about the timetable of architectural works on a multifaceted scale. Our work affects those not only past and present, but also tens and even hundreds of years into the future. How can an architectural work morph and adapt to such unpredictable circumstances? How can everyday practices within a studio be retrofitted to the changing climate? Pondering such questions allows us to dream up big solutions to change our environment. However, asking practicing professionals and designers may be the key in achieving a deeper understanding of what a truly adaptive practice resembles.¹

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The interview has been lightly edited for clarity.

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Interviewer

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Interviewees

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Open Design Collaborative

Errin Mcknight

Architectural Designer +
Community Engager
Open Design Collective

Architecture primarily serves to create spaces for people of all backgrounds. It should not discriminate between its subjects, but it so often does. As the effects of climate change continue to worsen, many underrepresented communities face disproportionate exposure to harms associated with resource extraction, hazardous waste, and other land uses. Because of their inability to fight against societal norms, these communities are forced to endure harsh environmental conditions, despite not being the cause of them. An adaptive practice would seek justice for those disproportionately exposed to these unsafe conditions. Open Design Collective is a nonprofit organization that brings together underrepresented communities and the design and city planning resources necessary to promote social and spatial change. The collective listens carefully to community voices and centers them in its practice, learning alongside community members.

The collective creates culturally specific workshops to support community-led design with individuals who may not be trained in design, planning, urban design, or architecture. Making the community such a central contributor in the design process creates strong foundations for community-led designs. Thus, Open Design Collective is a vessel through which community members voice thoughts and ideas, which in turn are transformed into built works and plans. I spoke to two of the vital members of this organization about how they see their practice as adaptive in the face of an environmentally unstable social climate.

Abby Janka (A): Thank you both so much for meeting with us today and having these conversations about adaptive practice and what this subject means for the future of architecture. To start out, *can you introduce yourselves and talk a little bit about your background?*

Deborah Richards (D): Yes, so I am a licensed architect and urbanist. I went to the University of Michigan for my undergrad and Columbia University, GSAPP for my graduate degree. I am also an assistant professor at the College of Architecture at OU and have an architectural practice called Script Architecture. I became interested in this type of work in 2009 during my last semester project in grad school. During that project was really when I started to think about how to engage people. What does it mean to ask good ques-

tions? How can people participate in these conversations without having been trained in design? And then in 2018 I connected with Vanessa [Morrison], and we started this organization, Open Design.

Errin McKnight (E): Hi, I'm Errin, and I am an architectural designer and community engager with Open Design Collective. I'm from Oklahoma and graduated from the OU architecture program. Before that, I worked in special education for almost a decade and then transitioned to architecture. I have a strong desire toward how spaces move people emotionally and physically. It's important to me that people who are marginalized, who wouldn't normally have a say in the spaces that they occupy, are incorporated and included in the decisions that define the spaces that they use. I am hoping that our research into the topic of adaptive practice will focus on community engagement becoming more prominent in the architectural field.

A: Thank you. Alright, now we're going to have a few ice-breaker questions to get to know you both better. *To start off, are you an early bird or a night owl?*

E: What day of the week?

D: I'm usually a night owl, but now I have kids so I'm always awake.

A: *Coffee or no coffee?*

E: No coffee! It's stinky.

D: Coffee! Our other partner doesn't like coffee either. I've never met so many people that don't like coffee. Two people that don't like it—that's like more than I've ever met in my entire life.

A: It looks like we've got a wide range of opinions here! This is good. Let's move into a more focused discussion. *What experiences before or after graduation influenced how you run or engage your practice?*

D: My graduate schooling was really influential in allowing me to think about urban design. I got interested in big-picture ideas. My projects led me to look more into how I can create an opportunity for everyone to participate in making their environment, which became very difficult

*Opposite - Photo courtesy of Open Design Collective
The founders of Open Design Collective
Vanessa Morrison (left) and Deborah Richards (right)*

because how do you democratize that process? It's something we continue to work toward in our practice.

A: *When starting your firm, which legal structure did you choose?*

D: Open Design Collective is a 501(c)(3). It's really difficult to run a nonprofit. We've had so much support and we're slowly building our board with people who are knowledgeable about nonprofits. We consult lawyers and accountants, everybody in-between, in order to ensure

we are doing the work correctly and making sure that the organization is run fairly and appropriately. For funding, we apply for grants in order to do our work.

A: *Is there a particular project delivery method you prefer, or does this vary project to project?*

D: Yes, planning, urban design, storytelling, research, everything that's related to the built environment. We get pulled into different kinds of projects depending on identifying the need.



D: It's equity and access to quality water, environments such as parks and public spaces. In order to achieve this, a lot of effort must go into undoing past environmental harms and injustices that have disproportionately affected minority communities through racist governmental policies and social norms. For our South of Eighth project, we saw tons of industrial sites that are negatively affecting the community in many ways. So these are all issues, and it's not just about constructing new things moving forward, but

trying to think about how to correct some of the things that have been negatively affecting the community for years.

E: When people do community engagement, they often leave out the environmental component. So what we make a key component of our practice is addressing it directly in communities that have felt these injustices. Also, I believe there are professors doing this type of work; there's so many people out there doing this stuff. You can find them online, and even in many private practices as well.

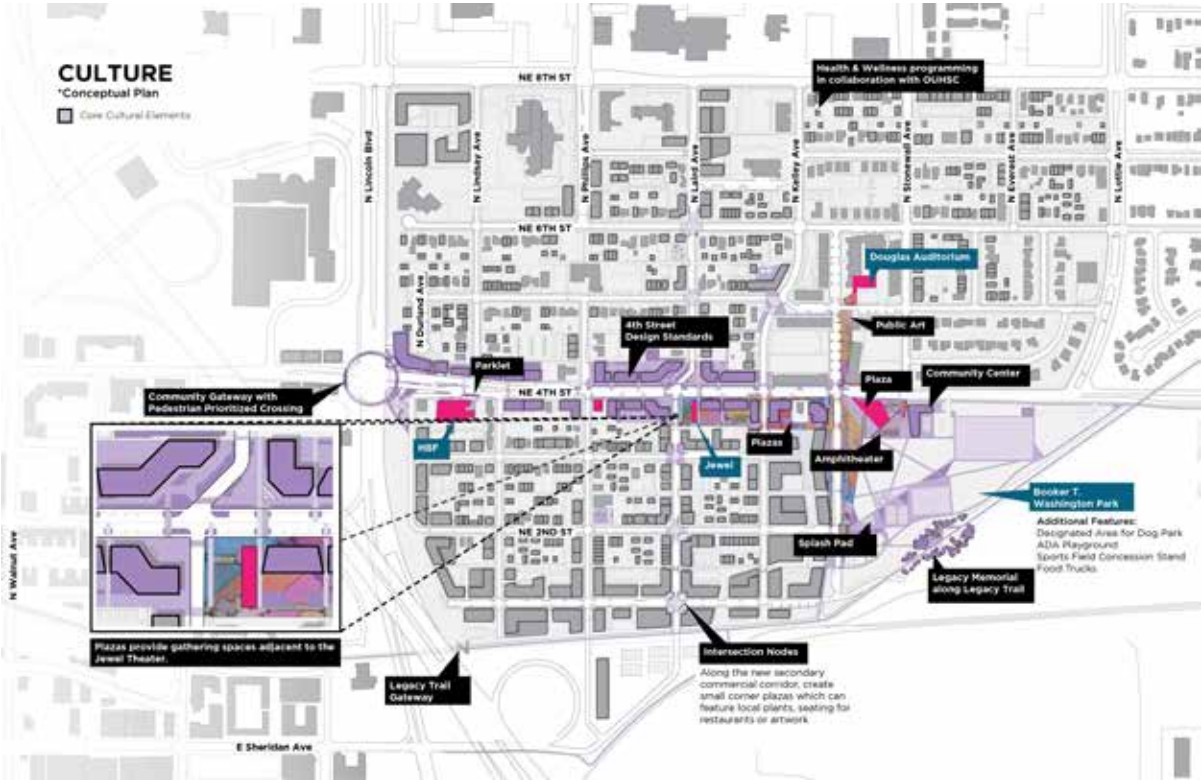


Image courtesy of Open Design
A culture map of South of 8th Street

A: *Is there a particular way you communicate information with community?*

D: When looking at our South of Eighth project, we had a committee of twenty-five people. We had over sixty one-on-one meetings with community members and regularly attended neighborhood association meetings, I mean hundreds of meetings.

E: We were also able to have recordings of these meetings that we could later reference or send to clients. Just

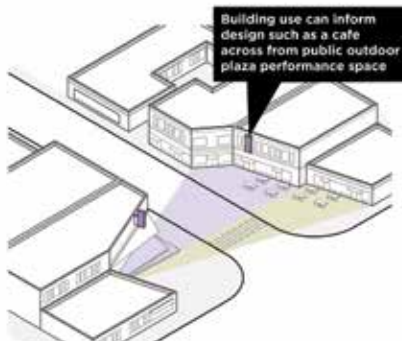
recording and documenting everything so that we can continue to send out this information to people as they have questions. I'm very glad we were able to do that.

A: Well, I think that just about wraps up our time together! Thank you both so much for sitting down to talk with me to better understand community engagement within design and how it is affecting the field today and how it will continue to shape the built environment in the future. Boomer!

D & E: Sooner!

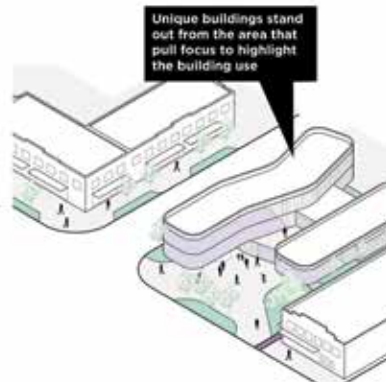
Call and Response

Spaces/elements that explore connections to other spaces/elements so that each component is situated in a manner that responds to the other



Solo Moments

Elements that deviate from the rhythm to create space for a new program, unique architectural style, or other urban design components that stand out from their surroundings



Improvisation

Design that allows urban elements to express individual characteristics while maintaining the established rhythm



Rhythm

The repetition of specific components that generate a harmonious pattern

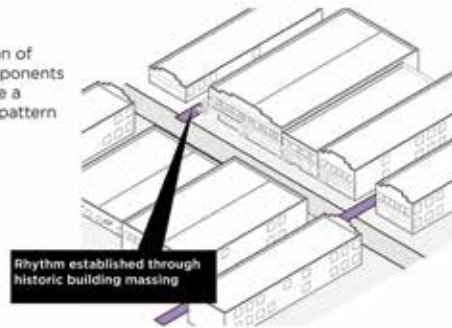


Image courtesy of Open Design

Cultural Design Elements: By utilizing jazz's rich melodious influences and distinguishing elements as an instrument for design, the urban fabric can begin to reflect and revive the history and essence of NE OKC's Black cultural history

END- NOTES.

1

Michael J. Dawes and Michael J. Ostwald, "The Mathematical Structure of Alexander's A Pattern Language: An Analysis of the Role of Invariant Patterns," *Environment and Planning B: Urban Analytics and City Science* 47, no. 1 (January 2020).

2

Christopher Alexander, *A Pattern Language* (New York: Oxford University Press, 1977).

3

Stan Allen, "Field Conditions," in *Points and Lines: Diagrams and Projects for the City* (New York: Princeton Architectural Press, 2012).

4

Benjamin Wilke, "Field Conditions Revisited," in *Stan Allen: Four Projects* (Columbus, OH: Applied Research and Design, 2017).

5

"Jean-Nicolas-Louis Durand, Systematization and Composition," *Senses Atlas*, March 25, 2021, <https://www.sensesatlas.com/territory/jean-nicolas-louis-durand/>.

6

Jean-Nicolas-Louis Durand and Antoine Picon, *Précis of the Lectures on Architecture: With Graphic Portion of the Lectures on Architecture* (Los Angeles: Getty Research Institute, 2000).

7

Leandro Madrazo, "Durand and the Science of Architecture," *Journal of Architectural Education* 48, no. 1 (September 1994), <https://www.jstor.org/stable/pdf/1425306.pdf>.

8

Ed Young, "We're the Only Animals With Chins, and No One Knows Why," *The Atlantic* (January 2016), <https://www.theatlantic.com/science/archive/2016/>.

9

Stephen Jay Gould and Richard C. Lewontin, "The Spandrels of San Marco and the Panglossian Paradigm: A Critique of the Adaptationist Programme," *Proceedings of the Royal Society of London* 25, no. 1161 (September 1979): 581–98, <https://www.jstor.org/stable/pdf/77447.pdf>.

10

Philip Steadman, "The Spandrels of San Marco (or Rather, the Pendentives)," *Philip Steadman* (blog), <https://www.philipsteadman.com/blog/the-spandrels-of-san-marco-or-rather-the-pendentives/>.

11

Georges Perec and John Sturrock, *Species of Spaces and Other Pieces* (New York: Penguin, 1999).

12

Thomas Pynchon, *Mason & Dixon* (New York: Henry Holt, 1997).

13

Irénée Scalbert, *A Right to Difference: The Architecture of Jean Renaudie* (London: Architectural Association, 2004).

14

Stewart Brand, *How Buildings Learn: What Happens after They're Built* (New York: Penguin, 2012).

15

Henri Lefebvre, "The Everyday and Everydayness," *Yale French Studies*, no. 73 (1987): 7–11, <https://www.jstor.org/stable/2930193>.

16

"Critical Theory," *Encyclopaedia Britannica*, accessed December 16, 2022, <https://www.britannica.com/topic/critical-theory>.

17

Frantz Fanon, *The Wretched of the Earth* (New York: Grove, 1965); Michel Foucault, *Discipline and Punish: The Birth of the Prison* (London: Penguin, 1975); Audre Lorde, *Sister Outsider: Essays and Speeches* (Trumansburg, NY: Crossing Press, 1984); Antonio Gramsci, *Prison Notebooks* (New York: Columbia University Press, 2010); Homi K. Bhabha, *The Location of Culture* (London: Routledge, 1994); Bernard Stiegler, *Technics and Time, 1: The Fault of Epimetheus* (Stanford, CA: Stanford University Press, 1998).

18

Jacques Derrida, *Of Grammatology* (Baltimore: Johns Hopkins University Press, 2013).

19

"Aufheben," *Encyclopedia of Marxism*, accessed December 16, 2022, <https://www.marxists.org/glossary/terms/a/u.htm>.

20

Leitch B Vincent et al., *The Norton Anthology of Theory and Criticism: Third Edition* (W.W. Norton & Company, 2018).

21

Bruce Goff and Philip B. Welch, *Goff on Goff: Conversations and Lectures*. Norman: University of Oklahoma Press, 1996.

22

Luca Guido, Stephanie Pilat, and Angela Person, eds., *Renegades: Bruce Goff and the American School of Architecture*. (Norman: University of Oklahoma Press, 2020).

23

Goff and Welch. *Goff on Goff: Conversations and Lectures*. (Norman: University of Oklahoma Press, 1996).

24

Bruce Goff and Philip B. Welch, *Goff on Goff*.

25

Guido et al., *Renegades*.

26

Guido et al., *Renegades*.

27

Guido et al., *Renegades*.

28

Goff and Welch, *Goff on Goff*.

29

Guido et al., *Renegades*; *Herb Greene: Mapping the Mental Continuum* (Norman: Norman Arts Council, 2021).

30

Guido et al., *Renegades*; *Herb Greene*.

31

Guido et al., *Renegades*; *Herb Greene*.

32

Guido et al., *Renegades*; *Herb Greene*.

33

Guido et al., *Renegades*; *Herb Greene*.

34

Guido et al., *Renegades*; *Herb Greene*.

35

Guido et al., *Renegades*; *Herb Greene*.

36

Dave Boeck, Interview with Merle London, Gibbs College of Architecture, October 2022.

37

Dave Boeck, Interview with Merle London

38

Dave Boeck, Interview with Merle London

39

Andrew Stone, Interview with Merle London, Gibbs College of Architecture, October 2022.

40

Andrew Stone, Interview with Merle London.

41

Guido et al., *Renegades*.

42

Farzhan Mahmoudzadeh and Blake Adams, Interview with Merle London, Populous Norman, November 2022.

43

Guido et al., *Renegades*.

44

Guido et al., *Renegades*.

45

Ashley Moser, "Resorts Gear Up to Welcome Skiers, Snowboarders in a Few Weeks," *KSLTV*, October 23, 2022, <https://ksltv.com/509367/resorts-gear-up-to-welcome-skiers-snowboarders-in-a-few-weeks/>.

46

Parker Malatesta, "Report: Park City Increasingly a Wealthy Enclave without Policy Intervention," *TownLift*, March 17, 2022, <https://townlift.com/2022/03/report-park-city-increasingly-a-wealthy-enclave-without-policy-intervention/>; Ian Wood, "Nearly 43% of Housing Units in Park City Are Short-Term Rentals," *Unofficial Networks*, July 6, 2022, <https://unofficialnetworks.com/2022/07/06/nearly-43-of-housing-units-in-park-city-are-short-term-rentals/>.

47

"Ski Instructor Salary in Park City, UT," Indeed, <https://www.indeed.com/career/ski-instructor/salaries/Park-City-UT>; Jennifer Alsever, "Where Should Park City

- Employees Live?," *Utah Business*, October 15, 2021, <https://www.utahbusiness.com/park-city-real-estate-prices-are-causing-problems/>; "Park City Parking & Transportation," Park City Mountain Resort, accessed December 14, 2022, <https://www.parkcitymountain.com/explore-the-resort/about-the-resort/getting-here.aspx>.
- 48 "Park City Ski Team Statistics and Demographics," Zippia, 2022, <https://www.zippia.com/park-city-ski-team-careers-1350994/demographics/>.
- 49 "Designing and Building Healthy Places," CDC, <https://www.cdc.gov/healthyplaces/default.htm>; "Built Environment and Health: How Place Affects Health," Robert Wood Johnson Foundation, <https://www.rwjf.org/en/our-focus-areas/topics/built-environment-and-health.html>; "Building Healthy Places Initiative," Urban Land Institute Americas, <https://americas.uli.org/research/centers-initiatives/building-healthy-places-initiative/>.
- 50 "Understanding Social Determinants of Health and their Relation to Land Use," Wel-Nest, <https://www.linkedin.com/feed/update/urn:li:activity:7000928526606487552/>.
- 51 Daniel Stokols, Kara L. Hall, and Amanda L. Vogel, "Transdisciplinary Public Health: Definitions, Core Characteristics, and Strategies for Success," in *Transdisciplinary Public Health: Research Education, and Practice*, ed. Debra Haire-Joshu and Timothy D. McBride (Hoboken: Wiley, 2013), 3–30.
- 52 Agency for Toxic Substances and Disease Registry, "Models and Frameworks," *Principles of Community Engagement*, 2nd ed. (2018), https://www.atsdr.cdc.gov/communityengagement/pce_models.html.
- 53 "When Research about a Community Is Led by the Community," Urban Institute, <https://www.urban.org/in-their-own-words/when-research-about-community-led-community>.
- 54 M. S. Goodman and V. L. Sanders Thompson, "The Science of Stakeholder Engagement in Research: Classification, Implementation, and Evaluation," *Translational Behavioral Medicine* 7, no. 3 (2017): 486–91, <https://doi.org/10.1007/s13142-017-0495-z>.
- 55 Jane Jacobs, *The Death and Life of Great American Cities* (New York: Random House, 1961).
- 56 "Fostering Partnerships for Community Engagement," Urban Institute, <https://www.urban.org/research/publication/fostering-partnerships-community-engagement>.
- 57 Holger Schnädelbach, "Adaptive Architecture: A Conceptual Framework," *Proceedings of Media City 197* (2010): 522–38, https://www.researchgate.net/publication/235218510_Adaptive_Architecture_-_A_Conceptual_Framework.
- 58 Schnädelbach, 533.
- 59 Schnädelbach, 533.
- 60 Thomas Barta, Markus Kleiner, and Tilo Neumann, "Is There a Payoff from Top-Team Diversity?" McKinsey & Company, April 1, 2012, <https://www.mckinsey.com/capabilities/people-and-organizational-performance/our-insights/is-there-a-payoff-from-top-team-diversity>.
- 61 Taz Khatri, "Why Diversity in Architecture Matters for Communities and the Bottom Line," Redshift by Autodesk, March 7, 2017, <https://redshift.autodesk.com/articles/diversity-in-architecture>.
- 62 Adam Paul Susaneck, "Paradise Paved Over," *Architect's Newspaper* 20, no. 10 (2022): 23.
- 63 MOVE and Studio Rotan, "The Africatown International Design Idea Competition," March 3, 2019, <https://africatowndesign.com/>.
- 64 Susaneck, "Paradise Paved Over," 23.
- 65 Khatri, "Why Diversity in Architecture Matters."
- 66 "The Hip-Hop Architect: Michael Ford Wants to Revolutionize His Field," *Isthmus*, August 4, 2016, <https://isthmus.com/arts/the-hip-hop-architect-michael-ford/>.
- 67 Khatri, "Why Diversity in Architecture Matters."



