

University of Michigan
Taubman College
Architecture
Fall term 2024
Meeting: Friday
Time: 13:00-16:00 EST
Room 2108
Credits: 3

MASA
ARCH 660
Thesis Seminar
Date: 20240805

Key Notes:
Course Synopsis

IMAGES: FSD t-shirt
by Felipe Orensanz.
Mexico City. Colibri =
Hummingbird. Mantis.



INSTRUCTOR

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Director, UMI nDS
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Faculty, Digital Studies
Institute [DSI]

Faculty, Center for Ethics,
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Faculty Associate,
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Center for Chinese
Studies

Diversity Scholar: Arts
& Humanities, National
Center for Institutional
Diversity [NCID]



*The willingness continually to revise one's
own location in order to place oneself in
the path of beauty is the basic impulse
underlying education.*

Elaine Scarry.
On Beauty and Being Just.
Princeton University Press, 1999.



ARCH 660 Thesis Seminar
MASA
Mexico Architecture Studio Alliance

0.0. INVITATION: DEAR THESIS CAMARADAS [COMRADES]:

A successful thesis plays a significant role in **advancing architectural thinking through speculative design** while leveraging opportunity space for your exit from Taubman College. I understand my role as your advisor to support your thesis as you navigate your intellectual project throughout this important life transition. Thesis is a moment for you to take stock in the dream beyond the reality; to be present to your work; and, to establish your practice and leadership within the discipline. The thesis seminar allocates time for you to explore your intellectual curiosities in architecture by connecting to courses of action that address complex global challenges facing 21st-century culture. **The geography of this thesis focuses on Mexico City.** The seminar will develop a week of intensive fieldwork in Mexico City in October 2024.

0.1. SITUATIONAL AWARENESS: FILTHY, SPRAWLING, DANGEROUS.

In his 1997 book, "Cities For A Small Planet", the late British architect Richard Rogers naively described Mexico City as **Filthy, Sprawling, and Dangerous**. This negative categorization perpetuates urban narratives of how architects often understand their position as superior in response to extreme forms of cultural or ideological difference. In contrast to disciplinary thinking that retreats from the complexities of the urban imaginary by reducing the conceptual scope of architecture, **MASA enthusiastically engages the diverse vitality of Mexico City** as a means to catalyze architecture and extreme urban euphoria that obliterates the parameters of Filthy, Sprawling, Dangerous.

0.2. MASA: MEXICO ARCHITECTURE STUDIO ALLIANCE.

In the culinary traditions of Meso-America, masa is ground corn flour that binds together a diversity of cultural practices. While there exist many unique geographies to locate the theoretical underpinnings of an architectural thesis, this thesis unit will focus on Mexico City to situate a wide range of possible design trajectories. **Mexico City: 25 million people. The 6th largest city in the world: 2,240 meters [7,350 feet] above sea-level, volcanic, seismic, DTW>MEX = 4.5 hours.** MASA - Mexico Architecture Studio Alliance - is a collective for urban and architectural research that co-locates design-based research within the intersectional diversity of this incredible mega-city. MASA provides an open platform that seeks to critically reposition the thesis within the rich cultural context of Mexico City. All thesis agendas, positions, and hunches are welcome within the MASA orbit. MASA emphasizes developing critical methods and core techniques for advanced architectural research by refining the communicative structure of architecture through speculative and applied work that is actionable.

0.3. ITINERARIES: MAKING, MISSIONS, SITES.

MASA prioritizes acts of making where the distinctions between virtual-digital and actual-physical worlds coincide. The thesis seminar will **define your thesis mission** through interdependent co-authoring strategies that deepen a commitment to design, and develop a direct correspondence with Mexico City. The thesis approach is less oppositional and more compositional where spatial stories and counter-narratives reposition the agency of architecture in ways that are both lyrical and grounded in the discipline of architecture. MASA invests in digital and physical prototyping through a material-cultural framework that informs a more intersectional architecture. If **architecture is the communicative and relational structuring of complexity**, then design is the organizational practice that navigates the interplay between intricate objects and world-making. MASA provides a platform for you to explore your specific thesis interests - vividly.

IMAGE: *The Feet of Angel Alberto Hildago Perez.*
Traditional dancer from Veracruz, MX performing La Vaqueria
on wooden box. Orly Anan Studio. Photo by RA. 2023.



Screen Space // Green Space

Course Information

<u>Instructors:</u>	Adam Fure (he/him)	afure@umich.edu
	Thom Moran (he/him)	tjmoran@umich.edu
<u>Location:</u>	CMYK, A&AB 3rd Floor	
<u>Meeting times:</u>	Fridays, 8:30am - 11:30am EST	
<u>Office hours:</u>	Contact your instructor for appointment	

Course Description

This thesis section asks students to use the tools of scenography, virtual production, and livestreaming to conceive of an architectural thesis. Rather than pit digital against physical, we will collectively reflect on the possibility of architecture to ground human experience in media rich environments.

The term “virtual production” refers to the workflows that hybridize digital and physical spaces in real time. These technologies are most often used in broadcast television productions like sports commentary and cable news. Live feeds of people and physical objects in front of a chroma key (green screen) are blended with digital objects and spaces to create a seamless image of people in space in real time. “Livestreaming” refers to the workflows most often used by well-known gamers to broadcast their gameplay and simultaneously interact with their live audience, usually via chat. Our thesis group will begin by experimenting with these workflows to explore their possibilities as representational tools and architectural propositions that hybridize physical and digital embodiment.

By incorporating the ever-expanding array of digital tools into architectural design, our hope is to infuse bodily experience with the same vivid visuals our screens use to hold our attention. Rather than theorize first, you will experience first-hand the mediation of your own bodies in screen-based platforms. Students will begin the Fall semester learning the workflows of virtual production and experimenting in Taubman facilities, such as the TV Lab. After an initial design exercise, we will form thesis groups based on shared interest and student input that will continue through the rest of the year. The second half of the Fall semester will focus on group research, reading, and discussion in order to build a discursive context for your work. The semester will end with a presentation of your thesis in schematic form to your classmates. Group work will continue throughout the Winter semester. It is our belief that working in groups will provide a robust culture of dialogue and collaboration, and allow for more resolution in the complex work-flows of virtual production.



'Tangerine Dreams'

Tangerine Dreams will operate like a think-tank, working always as designers. Constructing the seminar and studio culture is the most important thing. In the winter term, we will emphasize supporting, growing with, and learning from each other, working in the studio beyond the dedicated studio days, together. There is a structured framework, but no thematic, or technique overlay in the seminar and studio. Each of you will take ownership of the construction of your thesis, working on things that you're deeply curious about. The seminar and studio are taught by me, individual work (although two or more people can form a group), no travel, other voices outside the cohort always welcome. As designers, curiosity about the world is the single most important thing we can have. We will focus on setting up ways to 'practice'—a discipline for making work, and for framing a thesis in relation to a 'project'. They are not the same thing.

In the fall we will establish several core ingredients for a thesis construction including identifying various strains/ types of theses; initiating your interests; contextualizing and positioning those interests; framing and conceptualizing an approach and discipline for working; establishing the roles of key players in the thesis construction—'mechanics of engagement'; exposing highly diverse design methods (14 of them) and several representation techniques to work more effectively; establishing several possible means of delivery for a thesis; and extensions of the work beyond thesis. Importantly, we will develop the scope and stakes of the work, the tone, and the 'leave'—how to take the next shot. We will unpack default things like 'program' through programmatic structuring; 'site', through situational thinking; and questions surrounding authorship. We will take nothing for granted in our work together. I look forward to everyone producing unique, pithy, and amazing work—going to places you've never imagined possible. Cultural agents, all.

The work for the fall includes **'I Could Imagines'**; **'I Could Imagines, Again'**; **'Entourage'**; **'Mechanics of Engagement'**; **'Studio Brief'**; and the **'Thesis Operating Manual'**—the metaphorical and operational map for the winter road trip. All come with briefs and particular time frames. We will lean into the 'design' equation early. Perhaps even 'designing' the thesis in the early fall and unpacking it to find the 'real' thesis. Physical constructs may well be part of the work of the studio.

In **Tangerine Dreams**, there is plenty of room. You could pursue questions surrounding gender equity, philosophy and critical theory through the production of a ...; living aquatic technologies through material computation, machine learning and rapid prototyping; making three houses, situated in different time frames and geographies, in one; queer and monstrous ecologies, meet Greek mythological constructions, towards alternative social diagrams and programs; story-telling and the virtues of shared communication through a traveling motel; up-cycling, and circular economies crossed with speculative notational systems; rerouting Excel spreadsheets, BIM protocols and alternative construction techniques, as related to critically reframing labor practices, producing a new 'how to' manual for use; radically transforming architectural education; image density, social media and Midjourney as the 'new' linear perspective; or, all of the above simultaneously. You might hijack 11 other theses, through deep fakes and digital twinning.

The roles and definition of the architect are changing. We must be prepared to lead the charge by augmenting the terms of spatial realms and educational models. As social injustice, information transfer, globalized practices, technological shifts, and the environment morph, complicatedly, at unprecedented speeds, it is critical that architects know how they work, what they work on, and the ramifications of their work.

At a critical juncture, the education of architects is tricky business. Architectural education must open eyes and minds to that which is conceptually, philosophically, materially, and representationally possible. Inclusively. Accordingly, **Tangerine Dreams** will augment default assumptions, inspiring burning curiosities through a belief that imaginative thinking, spatial speculation, and critical reflection can be taught. Everyone will be a transformational and transformed cultural agent. We will pleasurably chase the **dreamiest tangerines**. Where will you be when the music starts?

Degrowth, Low-tech, and Alternative Hedonism

This thesis section will challenge participants to situate architecture within the fundamental impossibility of limitless economic growth in any sustainable planetary future. As scientists from across disciplines have claimed for decades, in order to reach a just and sustainable society, a phase of degrowth is unavoidable. Degrowth refers to a reduction in the production, circulation, and consumption of our energetic, material, and informational resources — all variant and interconnected forms of energy dissipation when conceived from a thermodynamics perspective. The correlations between energy dissipation, economic growth, climate change, and social violence are well substantiated. Attempts at decoupling environmental degradation from supposed “green growth” have proven to be not only scientifically impossible, but also a distraction from effective strategies for transitioning into sustainable practices. So too, technological innovation in renewable energy will not save the day. The shift to renewable energy is far from enough, and each new technology necessitates regimes of resource extraction that reiterate ecological degradation and social inequity. Only a fundamental and radical reduction of energy dissipation, and by extension, Gross Domestic Profit, will be effective.

As a discipline and as a profession, architecture is intricately entangled with economic growth. Especially in the context of neoliberalism, there are scant professional commissions with proforma not grounded in bases of economic expansion. Meanwhile, our disciplinary imagination assumes the development of the new as a given — this, the pervasive legacy of a modernist avant-garde pitted against the past. All the while, it is clear that any new construction is unsustainably energy intensive, as evidenced through recent calls for a “moratorium on new construction.” Equally clear is that a full moratorium today would threaten to ossify patterns of inequity, and asymmetrical societal well-being that characterize present forms of uneven “development.”

Arch 660 Thesis Development Seminar
Fridays, 1–4pm, ARR
Mireille Roddier (mroddier@umich.edu)
McLain Clutter (mclainc@umich.edu)

This section is interested in a multiplicity of responses across scales that situate architecture’s future at the complex intersection of the social, economic, and ecological contexts of degrowth. While the specter of degrowth often elicits associations of austerity or decline, we are most interested in submissions that instead forward alternative notions of abundance and prosperity, celebrating societal values beyond economic activity. How might the built environment participate in the (re) emergence of energetically frugal but fundamentally joyous ways of dwelling, lifestyles, and rituals? Can an ethic of care, maintenance, and repair enable the recovery of lost know-how and mindful behaviors that would help restore a healthier socioeconomic metabolism? What can we learn from non-western, indigenous, or vernacular practices and epistemologies about the stewardship of our social and physical environment? Can we put our capacities at the service of exnovation processes that, far from being restrictive, offer an opulence of pleasures and creative engagements with life itself? Can we imagine ebullient aesthetic regimes of degrowth?



ARCH 660 / THESIS SEMINAR

TECTONIC ARGUMENTS

This thesis section aims to interrogate the means of developing an architectural argument through the tectonics of the building. In recent years, many thesis projects have aimed to construct a narrative thesis that signals a series of important intentions and an agenda for architecture. While this work has been profound and necessary, it has often left behind the means by which architecture is able to operate in the world and manifest itself as such; the building fabric. The term 'Tectonic' identifies a material assembly and an organizational structure. This thesis section believes that it is possible to develop an architectural thesis that is augmented by the tectonics of the building, carefully considering its materiality, composition, embodied carbon, relationality to other systems within the building, and perhaps most importantly, its relation to cultural codes; current and historic.

The proposed methodology for this section will pay careful consideration to the study of precedents; by studying and analyzing existing buildings, students will create their 'personal canons'. The idea of a 'canon' has fallen out of fashion in efforts to decolonize the discipline and expand upon the voices that have contributed to architectural history. Still, this studio will utilize the contestation of a canon as a methodology of historical analysis, which will allow each student to branch out and identify the influences that will be embedded in the thesis project. The studio will embrace what Jonathan Lethem has called 'The Ectasys of Influence' rebuking 'The Anxiety of Influence' framed by Harold Bloom, a central figure who has defended the Western canon in literature. By discussing and

"Tectonic Arguments," images developed using Midjourney - Text to Image AI.

FALL 2024 - 8:30am-11:30am Thursdays

INSTRUCTOR: JOSE SANCHEZ - JOMASAN@UMICH.EDU

developing a shared architectural canon as a studio, each student will be invited to manifest points of departure due to personal interest or due to cultural perspectives. In this fashion, the studio will be constantly evaluating the relationship between collective knowledge and personal contribution.

In this thesis section, we will explore the methodology of 'close reading buildings,' an approach that draws inspiration from the literary technique of close reading, where texts are meticulously examined to uncover deeper meanings, nuances, and layers of interpretation. Just as a literary scholar dissects a text to understand its structure, themes, and rhetorical strategies, we will carefully 3D model and analyze buildings as precedents to unravel the intricate relationships between form, function, and context. By engaging in this rigorous examination, students will gain a deeper appreciation of architectural design, uncovering the subtle interplay of materiality, spatial organization, and cultural significance that defines the built environment. This method encourages a heightened sensitivity to the architectural details that contribute to the overall narrative of a building, fostering a critical understanding that will inform and enrich your own design practices.

KEYWORDS:

Tectonic, Assembly, Detail, Close Reading, Precedent, Fabrication, Materiality, Embodied Carbon, Labor, Provenance, Rhetoric, DIY, Means of Production, Composition, Representation, Poetics.

CONSTRUCTED ACTORS

ARCH 660 / F24

THIS MOMENT

As we navigate an era defined by environmental degradation, the opaque acceleration of technological advancements, and unchecked resource extraction under the guise of globalization, the role of architecture has become increasingly tenuous. The lingering question of architecture's agency—its capacity to mediate, influence, and transform—invites a reassessment. This involves not only rethinking communication strategies and audience engagement, but also critically examining the analytical tools we use to interrogate the socio-spatial dynamics that shape our world. In this process, we as designers must confront our own positionality—acknowledging the specificity of our perspectives, the contexts we choose to care for, and the political undercurrents that invariably influence our work.

ANALOGY AS FRAMEWORK

To cultivate a more nuanced understanding of architecture, urban design, and development, the *Constructed Actors* thesis group will spark new lines of inquiry by examining storytelling traditions, particularly through the culturally comparative study of puppetry, and its allies practices performance and scenography. Historians suggest that puppetry, among the oldest of art forms, has endured not merely due to its accessibility and adaptability but because of its deep entanglement with cultural memory. Across different epochs and societies, puppets have consistently transcended their inanimate forms, serving as vehicles for education, entertainment, and the articulation of societal values. What makes puppetry persist is its capacity to convey ideas too complex, too fraught, or too dangerous for human actors to embody, allowing the creative medium to engage with subjects that are otherwise unspeakable.

As an analogical framework, puppet theater, with its control mechanisms, staged constructs, situational motifs, soundscapes, and visual juxtapositions, embody both agency and manipulation, mirroring the forces at work in architectural production. Embedded within a nexus of social, political, and economic influences, students working *independently or in groups* will examine the power structures that shape our built environment in order to understand how spaces are animated, imbued with meaning, identity, and purpose. Just as a puppet is brought to life by external forces, architecture, too, will be understood as a dynamic entity, gaining significance through its interaction with society.

INDEPENDENT RESEARCH

Puppetry, as a thematic and conceptual anchor for collective dialogue and critical evaluation, will guide students in framing self-initiated projects within a structured research and design framework. *As the research evolves, much of the initial conceptual scaffolding will be deliberately dismantled, allowing for more organic and student-driven exploration.* Conversations, prompts, and workshops will serve as both catalysts and checkpoints, fostering an environment of incremental, exploratory work. In this context, peers are treated as collaborators, contributing to a collective where direct interaction with the built environment and its influences is essential. Although the outcomes may diverge from conventional disciplinary expectations, often favoring experimental and nontraditional forms of communication and emerging mediums, the cultivation of specialized expertise remains a central objective. *Important to note: puppets will not be made in this section.*

ALLIED THEMES & TOPICS

Narrative Urbanism, Performance, Performativity, Scenography, Constructed Reality, Symbolic Order, Empathy, Cultural Resonance, Animation, Detachment and Symbolism, Staging

TRAVEL

France: Paris, Charleville-Mézières (Temps d'M/Festival Mondiale des Théâtres de la Marionnette), Marseille.

Dates: September 18-27, 2024

Taubman College Guarantees Stipend: \$1,500

Out of Pocket Costs: ~\$200

PARTNERS

Marseille-based Théâtre Anima will collaborate as an artistic partner, offering both workshop materials and on-site engagement during the travel portion of the course.

TIME / SPACE

This Thesis Prep course meets Fridays, 1-4PM.

In Winter 2025, *Constructed Actors* will be participating the Studio Reassembled prototype.

ANYA SIROTA - sirota@akoaki.com

ARID LOGICS



climate coexistence in desert america

Arch 660 Thesis Seminar Fall 2024 | Fridays 1-4pm | Prof. Kathy Velikov kvelikov@umich.edu

ARID LOGICS: climate coexistence in desert america thesis unit will explore architectural and infrastructural development as a territorial and environmental agent. Work will be situated in region of the Las Vegas Valley; a formerly lush spring-fed meadowland between adjacent mountain ranges opening to the Black Canyon of the Colorado River, now facing threats of water scarcity, global heating, and increasing urbanization. The thesis unit will work across territorial, infrastructural, and material design scales to develop design strategies that are embedded within ecological paradigms and speculative scenarios to envision future climate-positive and place-based design practices for coexistence within the context of the dynamically changing climate and communities in the region.

The fall Seminar will introduce students to the area's contexts, conditions, and histories, and will include three *arid logics* modules: the territorial, the material, and the technical. Each module will serve as a lens into the socio-environmental conditions of the region while introducing practices of seeing, drawing, and making. Each module will bring a guest instructor to the unit who will share insights and lead a hands-on practice seminar session. This will build the unit's discursive framework and methodological repertoire.

Territorial Logics: Exploration of water, geology, and wind as active agents in shaping the region, with a focus on water, water cycles and circulations, and water scarcity in shaping the territory and in supporting human and nonhuman lifeways. The practice seminar with guest faculty Dana Cupkova will focus on fluid dynamic methods of drawing water flows as an active yet transient material shaping design propositions.

Material Logics: Exploration of material practices of building and making that combine computational technologies with learning from indigenous practices and from plants and creatures that have adaptive capacities in this climate. The practice seminar taught by guest faculty Jane Scott will focus specifically on hands-on experiments in working with lightweight materials, fibers, textiles, and the environmental behavior of material systems.

Technical Logics: Exploration of technical regimes that have transformed the valley including surveying and zoning, urban development, water and power infrastructures, military operations and testing zones, and practices of displacement. The practice seminar with guest faculty Jeffrey Nesbit will focus on seeing and describing the often invisible technical logics that produce spatial and environmental conditions in the region and on countermapping practices that can shape alternative futures.

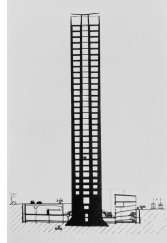
Working Modality: Fall seminar work will be done in pairs. The winter thesis project can be undertaken individually or with a partner. Students will develop a proposition and speculative scenario for their thesis project during the course of the fall seminar.

Travel: The thesis unit will travel for one week to the region in late January 2025 to visit thesis sites, explore the region, and meet with local constituencies. The itinerary will be co-created with the class based on interests and thesis project foci emerging during the fall.

Costs: J. Windom Kimsey (B.S.Arch '83, M.Arch '85) is sponsoring this thesis seminar and studio with a gift to Taubman College. His gift supports the emphasis on climate, water, and sustainable urbanization in the region and covers travel, guest instructor, and material costs.



Ponti, Superleggera



Ponti, Pirelli Tower



Molino, Table for Lattes Editor



Molino, Casa Altopiano Di Agra

From Paul Bunyan to Gio Ponti: the economies, efficiencies and ecologies of laminated form.

This thesis course is based on four premises:

1. Timber is precious

From the early deforestation of Michigan to the invention and rail distribution of platform (Western) framing, timber established itself a quintessential part of American culture and history. Yet in a nation where more houses are made of wood than anywhere else, why is it taking so long to adopt mass timber? Perhaps it is an attitude towards the material, a belief that in our nation lumber is abundant and that it is not precious. This position differs amongst Europeans, who deforested their continent centuries ago, over wars, using the last remnants of their forest to build ships sent out to plunder the resources of new worlds. Europeans learned to value timber as a resource, where even today, upon traveling to the US, they still marvel at how verdant our forests are. It is this understanding of preciousness, I speculate, that drives innovation in timber design more quickly abroad than here, and the first position this course plans to adopt.

2. Furniture is a model of architecture

In the mid to late 1800's, scarcity of large old growth logs led to the discontinuation of heavy timber industrial and agrarian architecture in favor of higher carbon footprint, fireproof structural materials like masonry clad steel or concrete. Post old growth deforestation in America, the primary focus of timber construction has been stick framing. This in turn led design innovation to supplant joinery with industrially manufactured fasteners. The occurrence not only happened in architecture, but in furniture design as well. Think of the difference between the Thonet No. 14 chair and the Breuer Cesca chair. The case of furniture is brought up because most innovative architects of yesteryear not only designed buildings, but furniture as well. Why was that? Here I would surmise that: furniture gave architects a profound understanding of the material. The design and making of furniture offered them the opportunity to test form, structure and construction methods at a reduced scale and cost. At essence, furniture is a model for building, the second position this course offering will adopt.

3. Material scarcity leads to innovation in form

Wartime and post-war construction brought material scarcity as well as technological and formal advancements back into the picture. Perhaps one of the more iconic wartime innovations in wood design can be seen in Charles and Ray Eames' splint: lamination and the development of advanced adhesives. From Denmark to Italy the design and production of formed wood modern furniture became a global phenomenon, where plywood was a more efficient and economical use of timber and the most precious grades were used for veneering, while solid wood was reduced to tapered shapes. Following this imperative, design became structurally minimal and formally innovative. Perhaps there is no better example of this than in Italian architect Gio Ponti's Superleggera chair. However during the postwar when transitioning from the scale of furniture to architecture the scarcity of timber led Italians to translate their design innovation from wood to efficiently tapered, shaped and thin shell concrete structures. This is clearly evident not only in Gio Ponti, but other Milanese architects' as well. Material efficiency leads to innovation in form is the third premise this course offering will adopt.

4. From joint to mono-block

Today when we look at the more common uses of mass timber like CLT, clearly evident is a gridded frame and panel construction system similar to precast concrete. Like it, the fire resistance weak point of CLT is in its steel fasteners and connectors. If we look at formed concrete, the joint between a column, a beam and a slab is seamless and considerably more fire resistant. The same method is not possible with a material like wood, which typically cannot be cast. However one structural innovation postwar furniture designers (like Hans Wegner or Carlo Molino) developed was to move the joint away from where two pieces of wood come together and envision the joint as a mono-block piece that can be connected by simple linear or planar elements. Perhaps architects can rethink laminated wood systems at the building scale in a similar manner. This is the fourth premise of the course.

In the winter term students will travel to Milan for one week.