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/   Arhitektura, raziskave

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Editor's Foreword
Toward a Planetary Practice

Igor Marjanović

1   Epigraph: Karl Marx, *Theses on Feuerbach* (1845), ed. Friedrich Engels, Marx/Engels Internet Archive, https://www.marxists.org/archive/marx/works/1845/theses/theses.htm, accessed December 10, 2023.

> All social life is essentially practical. All mysteries which lead theory
> to mysticism find their rational solution in human practice and in the
> comprehension of this practice. [1]
>
>   **Karl Marx, *Theses on Feuerbach*, 1845**

Contemporary discussions regarding the education of the architect often
morph into debates about the role of practice within academia and the
form that practice assumes in relation to the indeterminant technical, cul-
tural, and sociopolitical demands continuously challenging antecedent
pedagogical conventions. If Karl Marx's claim that "all social life is essen-
tially practical" is extended to academia, then those involved in architec-
tural education will recall the critical banter and ideological rifts between
practice and pedagogy that have been the focus of countless journal
issues, conferences, and institutional debates.

   Even though the concepts and mechanics of practice—or architectur-
al education, for that matter—should constitute obvious topics of architec-
tural historiography, their entry into the discourse was relatively slow.
Among the books that gradually elevated the study of practice into a legit-
imate form of scholarly inquiry are, in the English-language world, Spiro
Kostof's *The Architect: Chapters in the History of the Profession* (1997) and
Dana Cuff's *Architecture: The Story of Practice* (1991). During the theoreti-
cal wave of the 1990s, stable notions of academia, practice, and their inter-
relationship were questioned—or even deconstructed—by building on the
critique of professionalization as a rather limited understanding of prac-
tice. Magali Sarfatti Larson, in particular, contributed to the critical
reassessment of practice from the perspective of social and cultural stud-
ies, mostly through her books *The Rise of Professionalism: A Sociological
Analysis* (1977) and *Behind the Postmodern Facade: Architectural Change
in Late Twentieth-Century America* (1993). In 1996, William Saunders edited
a volume titled *Reflection on Architectural Practices in the Nineties*, which
tried to destabilize the notion of practice even further, including through
an essay by Rem Koolhaas, who makes the case that the internationaliza-
tion of practice is indeed one of the most precious tenets of the profession
today—though, for him, the excitement is purely opportunistic, an effect of
the period's unprecedented expansion of global capitalism and
neoliberalism.

   By the end of the decade, authors like Francesca Hughes had turned
to feminist theory and identity formation as a foundation for the expanded
field of practice, including in her edited book *The Architect: Reconstructing
Her Practice* (1998). By the beginning of the 2000s, authors such as
Jonathan Hill were drawing on the theories of critics such as Peter Bürger,

who argued that the institution of art is much wider than its constituent parts. Likewise, architecture is much bigger and more encompassing than its narrowly defined professional institutions. In Hill's case, that meant a direct critique of the Royal Institute of British Architects (RIBA) in projects such as *The Illegal Architect* (2000), which questions the narrow definition of the profession as a byproduct of national markets, accreditation, and licensure.

While this abbreviated arc is limited—it relies purely on Western, English-speaking scholarship—it starts to paint a picture of the evolving relationship between academia and practice and how historiography might see practice as its object of study. In particular, it suggests that the internationalization of the discipline has only been accelerated by the global crises and challenges of the last few years. Our own moment is further complicated by the evolving context of "social life," which has been continually expanded through new forms of social, environmental, and cultural change. Meeting this moment will require an even closer examination of the relationship between academia and practice.

Notwithstanding the importance of building design for the education of architects, this issue of *AR* seeks to expand the notion of practice of architecture as a whole beyond the static coursework, the legislative and curricular diagrams, by embracing the diversity and creative potential of our world—in particular, that of our students as they seek to define their vision and place within the multifarious *practice(s)* of architecture. In the context of escalating wars, the anthropogenic climate crisis, and social inequalities worldwide, we cannot but wonder: *What does it mean for academia to be practical today?* What does it mean to enact—using languages, values, and visions that are not immediately our own—new forms of design research and practice that originate along the edges of dominant pedagogical discourses?

AR 5 presents a suite of papers and projects that broadly address this debate, aiming to engage the questions that are both existential and speculative, literal and metaphorical, local and global. Namely, what is the role of practice—and what form does it take—within schools of architecture? How are manifold forms of knowledge situated within contemporary curricula, and what are those forms? How does history speak to the curricular changes necessary for an architect—and architecture—to find relevance in a seemingly entropic, anarchic milieu?

Straddling all these questions is a series of essays that provide openings into new discourses from various geographies and angles, suggesting that the most cogent dialectic between academia and practice today is

2   Slavoj Žižek, "The Unsustainable: A Planetary
     Conversation with Giovanbattista Tusa," *Plan-
     etary Conversations*, https://www.planetaryco
     nversations.com/slavoj-zizek-with-giovanbatti
     sta-tusa-the-unsustainable, accessed Decem-
     ber 10, 2023.

perhaps that of planetary thinking and the ensuing global solidarities it creates.

The work of the Polish-born artist Miron Tee frames these conversations through layered annotations and media interventions—a type of art that seeks to legitimate itself not through a particular aesthetic but as a form of real-life poetry that encompasses notes, photographs, and descriptive geometry. This form of self-reflection is somewhat familiar— Eastern European in its directness—while still seeming different and refreshing to the Western reader.

I am deeply grateful to be a part of the *AR* community through this issue of the journal. The relevance of this edition's subject is beyond question, and, as I spent my childhood in Belgrade when both Serbia and Slovenia were part of the former Yugoslavia, serving as guest editor for this edition has been a sort of homecoming — a platform for reflection and reconnection. Thanks to the collaborative efforts of *AR*'s team of editors, designers, and managers, we have made this issue a beautiful reality.

Since I began with Marx, it is probably only appropriate to end with Slavoj Žižek. In a recent "Planetary Conversation" with Giovanbattista Tusa, Žižek reflected on the idea of "unsustainability," or the paradoxicality of our own world and the demise of its future. In particular, he distinguished between two models of the future: one that envisions it as a progressivist extension of the present—the same things happening over and over again—the other positing that new things are yet to come (*avenir* in French). "All great plans for different futures necessarily turn into their opposites," Žižek said, suggesting instead a more open and innovative version of a global, planetary futurism that questions the very norms and standards of the present. [2] Here, too, in this issue of *AR*, we seek to explore an open-ended dialectic that is tethered midway between academia and practice, using the fragmentary pedagogy of the present to suggest how we might practice in the evolving world of tomorrow.

Uvodnik
K planetarni praksi

Igor Marjanović

1   Epigraf: Karl Marx, *Teze o Feuerbachu* (1845),
     ur. Friedrich Engels, Marx/Engels Internet
     Archive, https://www.marxists.org/slovenian/
     marx-engels/1845/03/teze-o-feuerbachu.htm,
     dostop:15. december 2023.

Vse družbeno življenje je po bistvu praktično. Vsi misteriji, ki
napeljujejo teorijo k misticizmu, dobe racionalno rešitev v človeški
praksi in v zapopadenju te prakse. [1]

Karl Marx, *Teze o Feuerbachu*, 1845

Sodobne razprave o izobraževanju arhitektov pogosto preidejo v debate o
vlogi prakse znotraj akademskega dela, in o obliki, ki jo praksa prevzame v
razmerju do nedoločljivih tehnoloških, kulturnih in družbenopolitičnih
zahtev, ki nenehno spodbijajo veljavne pedagoške konvencije. Če Marxovo
ugotovitev, da je »vse družbeno življenje po bistvu praktično« razširimo na
akademsko sfero, se bodo deležniki v arhitekturnem izobraževanju
spomnili zbadanja in kritik ter ideoloških razhajanj med prakso in
pedagogiko, na katera se osredotočajo številne strokovne revije,
konference in institucionalne razprave.

Čeprav bi morali biti koncepti in mehanizmi prakse, vključno z
arhitekturnim izobraževanjem, pomembne teme arhitekturnega
zgodovinopisja, so se v diskurz vključili relativno pozno. Med knjigami, ki
so v angleško-govorečem delu sveta raziskovanje prakse postopoma
povzdignile na raven legitimnega znanstvenega raziskovanja, velja omeniti
delo Spira Kostofa *The Arhitekt: Chapters in the History of the Profession*
(Arhitekt: poglavja iz zgodovine stroke, 1997) in knjigo Dane Cuff
Architecture: The Story of Practice (Arhitektura: zgodba o praksi, 1991).
Kritika profesionalizacije kot precej omejenega razumevanja prakse, ki jo
je sprožil val teoretičnih študij v devetdesetih, je vodila v preizpraševanje –
in celo dekonstrukcijo – ustaljenih predstav o akademskem delu na eni in
praksi na drugi strani ter njunem medsebojnem odnosu. Tu izstopa Magali
Sarfatti Larson, ki je pomembno prispevala h kritični obravnavi prakse z
vidika družbenih in kulturnih študij, predvsem s knjigama *The Rise of
Professionalism: A Sociological Analysis* (Vzpon profesionalizma:
sociološka analiza, 1977) in *Behind the Postmodern Facade: Architectural
Change in Late Twentieth-Century America* (Za postmoderno fasado:
spremembe v arhitekturi v Ameriki konec dvajsetega stoletja, 1993). Leta
1996 je William Saunders uredil zbirko esejev z naslovom *Reflections on
Architectural Practices in the Nineties* (Razmišljanja o arhitekturnih
praksah v devetdesetih), ki je v razumevanje prakse vnesla še več nemira;
esej je prispeval tudi Rem Koolhaas, ki je prav v internacionalizaciji prakse
prepoznal eno najdragocenejših načel stroke v tistem času – čeprav je šlo
po njegovem mnenju pri tem za zgolj oportunistično vznesenost, učinek
širitve globalnega kapitalizma in neoliberalizma, kakršne dotlej še ni bilo.

Ob koncu desetletja so nekatere avtorice temelje za širitev polja prakse iskale v feministični teoriji in oblikovanju identitete; tu bi omenil Francesco Hughes in njen uredniški projekt *The Arhitekt*: *Reconstructing Her Practice* (Arhitektka: rekonstrukcija njene prakse, 1998). Na začetku novega tisočletja so se avtorji, med njimi Jonathan Hill, navdihovali pri kritikih, kot je Peter Bürger, ki je trdil, da je umetnost kot institucija veliko več kot vsota njenih sestavnih delov. Enako velja tudi za arhitekturo, ki je veliko večja in bolj vključujoča kot njene ozko opredeljene strokovne ustanove. Za Hilla je to pomenilo neposredno kritiko Kraljevega inštituta britanskih arhitektov (RIBA), ki jo je izražal s projekti, kot je bil *Illegal Arhitekt* (Nezakoniti arhitekt, 2000), v katerem je podvomil v ozko definicijo stroke kot stranskega proizvoda nacionalnih trgov, akreditacij in licenciranja.

Čeprav je omejen na zahodne, angleške znanstvene raziskave, ta kratek oris vseeno zariše obrise razvijajočega se odnosa med akademsko sfero na eni in prakso na drugi strani ter nakaže, kako bi lahko zgodovinopisje kot predmet svojih raziskav obravnavalo tudi prakso. Med drugim ugotavlja, da so globalne krize in izzivi, s katerimi se soočamo v zadnjih letih, še dodatno pospešili internacionalizacijo discipline. Naš čas je še bolj zahteven, ker se z novimi oblikami družbenih, okoljskih in kulturnih sprememb nenehno širi tudi razvijajoči se kontekst »družbenega življenja«. Za soočenje s tem časom bo potrebna še podrobnejša analiza razmerja med akademskim delom in prakso.

Čeprav je načrtovanje stavb pomemben vidik izobraževanja arhitektov, želimo s pričujočo številko razumevanje pojma prakse arhitekture kot celote razširiti onkraj statičnih študijskih nalog ter zakonodajnih in kurikularnih diagramov, s tem da sprejemamo raznolikost in ustvarjalni potencial našega sveta – še posebej sveta naših študentov, ko poskušajo določiti svojo vizijo in najti svoj prostor znotraj raznolike arhitekturne *prakse* in mnogovrstnih arhitekturnih *praks*. V kontekstu zaostrovanja vojn, antropogene podnebne krize in družbene neenakosti po vsem svetu se preprosto moramo vprašati, *kaj danes v akademski skupnosti pomeni biti praktičen.* Kaj pomeni – z uporabo jezikov, vrednot in vizij, ki nam niso neposredno lastne – udejanjati tiste nove oblike raziskovanja in prakse na področju oblikovanja, ki se porajajo na obrobju prevladujočih pedagoških diskurzov?

AR 2023 predstavlja nabor prispevkov in projektov, ki širše posegajo v to razpravo ter ob tem odpirajo vprašanja, ki so obenem eksistencialna in spekulativna, dobesedna in metaforična, lokalna in globalna. Kakšna je vloga prakse in kakšne oblike zavzema v arhitekturnih šolah? Kako so raznotere oblike znanja umeščene v sodobne kurikulume in katere so te oblike? Kaj nam zgodovina pove o spremembah kurikulumov, ki so

2   Slavoj Žižek, »The Unsustainable: A Planetary
     Conversation with Giovanbattista Tusa«, *Plan-*
     etary Conversations, https://www.planetaryco
     nversations.com/slavoj-zizek-with-giovanbatti
     sta-tusa-the-unsustainable, dostop: 10.
     december 2023.

potrebne, da lahko arhitekt – in arhitektura – najdeta relevantno vlogo v okolju, ki ga zaznamuje občutje anarhičnega propadanja?

Odgovore na ta vprašanja iščejo eseji, ki iz različnih geografij in zornih kotov odpirajo poti v nove diskurze, ter ob tem ugotavljajo, da je danes najbolj prepričljiva dialektika med akademskim delom in prakso morda prav planetarno razmišljanje in globalna solidarnost, ki ga spremlja.
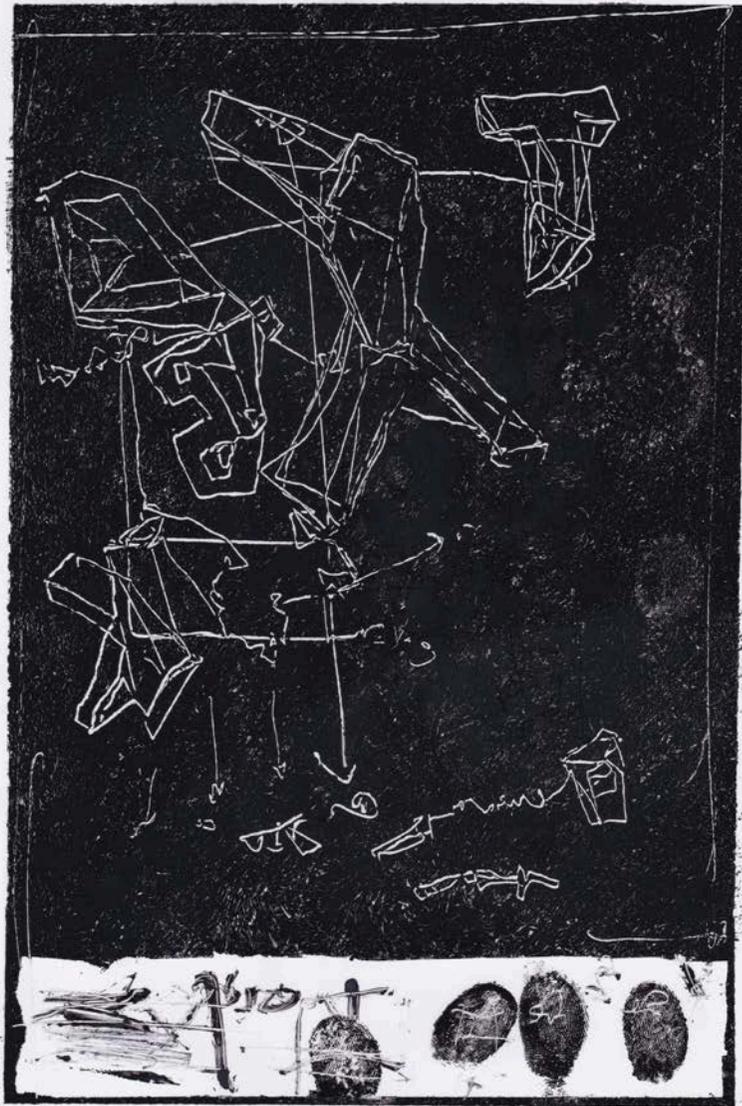
Izmenjave skozi naplastene komentarje in medijske intervencije uokvirja delo poljskega umetnika Mirona Teeja – njegova umetnost je tiste vrste, ki svoje legitimnosti ne išče v določeni estetiki, temveč v tisti obliki poezije, ki jo piše resnično življenje, in združuje zapise, fotografije in deskriptivno geometrijo. Zahodnemu bralcu se zdi ta oblika samorefleksije nekako domača (in vzhodnoevropsko neposredna), a vseeno drugačna in sveža.

Neizmerno me veseli, da sem kot član skupnosti *AR* lahko sodeloval pri ustvarjanju pričujoče številke. Svoje otroštvo sem preživel v Beogradu v času, ko sta bili Srbija in Slovenija del skupne države Jugoslavije, zato sem svoje uredniško sodelovanje pri tej številki, ki je nedvomno pomembna, doživel kot nekakšno ponovno srečanje s prijatelji; kot član uredniškega odbora revije pa sem z *AR* dobil platformo za razmislek in krepitev vezi med nami. S skupnimi prizadevanji uredniškega odbora, oblikovalcev in upravljalcev smo ustvarili nekaj čudovitega.
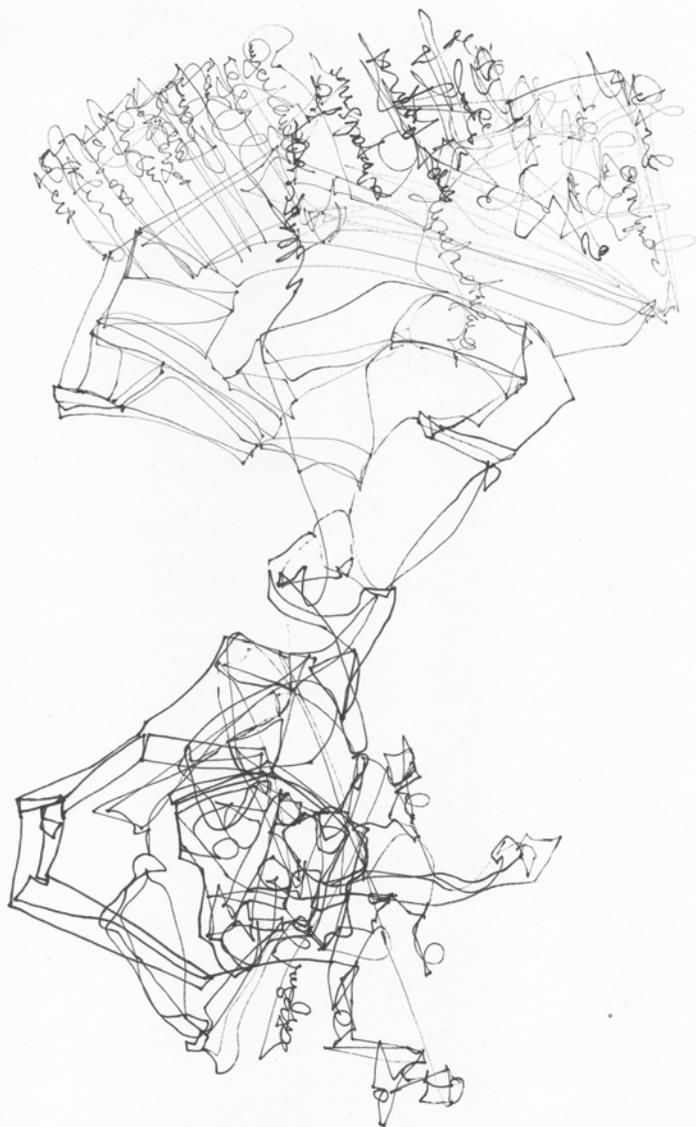
Glede na to, da sem začel z Marxom, se zdi primerno, da zaključim s Slavojem Žižkom. V nedavnem »Pogovoru o planetu« z Giovanbattistom Tuso je Žižek razmišljal o ideji »netrajnostnosti« oziroma paradoksalnosti našega sveta in koncu njegove prihodnosti. Omenil je dva modela prihodnosti: prvi si zamišlja prihodnost kot progresiven podaljšek sedanjosti, v katerem se vedno znova ponavlja eno in isto, drugi predpostavlja, da bodo nove stvari šele nastale (ali kot bi rekli Francozi, *avenir*). »Vsi velikopotezni načrti za različne prihodnosti se neizogibno sprevržejo v svoje nasprotje,« je ugotavljal Žižek in namesto tega predlagal bolj odprto in inovativno različico globalnega, planetarnega futurizma, ki preizprašuje norme in standarde sedanjosti. [2] Tudi v pričujoči številki *AR* želimo raziskati odprto dialektiko, vpeto na pol poti med akademsko sfero in prakso, ter s pomočjo fragmentarne pedagogike sedanjosti ponuditi odgovor na vprašanje, kako lahko delujemo v porajajočem se jutrišnjem svetu.

(0)asemic

Miron Tee

Educating the Pluriversal Practitioner

Mia Roth-Čerina

1   Marcus Vitruvius Pollio, *The Ten Books on Architecture* (New York: Dover Publications, 1960), 5.

2   "Directive 2005/36/EC of the European Parliament on the recognition of professional qualifications", Official Journal of the European Union, 30.9.2005. https://eur-lex.europa.eu/eli/dir/2005/36/oj

3   "Architecture's Afterlife: The Multi-Sector Impact of an Architectural Qualification" was a KA2 strategic partnership of six European schools (Royal College of Art, University of Antwerp, KU Leuven, Politecnico di Torino, Polytechnic University of Valencia, University of Zagreb), funded by the European Commission's Erasmus+ programme, that took place between 2019–2022. The consortium's research team were Michela Barosio, Dag Boutsen, Andrea Čeko, Haydee De Loof, Johan De Walsche, Santiago Gomes, Harriet Harriss, Roberta Marcaccio, Mia Roth-Čerina, Carla Sentieri, Federica Vannucchi, and Hanne Van Reusel. The study sought to understand the skills gaps and mismatches between what is taught in architecture schools and what is needed by today's architecture practices, as well as by other professions, industries and sectors with the goal to identify opportunities for a multi-disciplinary and transdisciplinary curriculum that could more effectively serve student, labour market and societal needs. An EU-wide survey conducted as part of this study revealed that over one-third of architecture graduates chose not to work as building architects. It also revealed that the most transversal skills are not hard skills taught through defined curricula.

Defining a Transversal Discipline

The persistent need to redefine the objectives of architecture as an academic discipline has become increasingly evident. This imperative has been driven by shifts in society, the looming climate crises, the broadening of the field's scope, and the emergence of alternative modes of practice. The questions this posed on education delved into the roots of the perceived slowness for an industry to fundamentally shift and called for a rethinking of established western-dominated canons, questioned the mythologized figures transmitting the knowledge, explored ways of decolonizing curricula. Yet the impetus of newness, the revenue of the construction industry, the invisible hierarchies hardly gained and viciously protected, make these efforts cosmetic more often than fundamental. On the other hand, the transversal nature of an architect's profession and upbringing finds new applications in an expanded field of practice which is increasingly beyond building. Being knowledgeable of various fields as prerequisite of designing and building is historically linked to the profession; Vitruvius described an architect being one well-versed in geometry, history, philosophy, music, medicine, jurisprudence, astronomy, and the theory of the heavens.[1] Current European professional qualifications directives state the necessity for an architectural practitioner to know fine arts, technology, human sciences, environmental issues, building regulations, as well as mediating between people and buildings, and between buildings and their environment.[2] This multitude of areas known are, however, primarily those related to the western anthropocentric realm and in the function of contributing to the built environment through construction. Moreover, the epistemological broadness of the discipline, while widely recognized, still refers to a broad field of concrete knowledge. This translates into well-established curricula and outcomes defined by the hard skills they produce. However, as the Architecture's Afterlife research[3] has demonstrated, it is the soft and emotional skills, or behaviors, that architecture graduates utilize most regardless of whether they are still practicing architecture in the narrow sense of making buildings or engaging in other modes of practice or related fields. These competencies include endurance, critical thinking, determination, empathy, collaboration skills, management, and others, gained in varying degrees during education, though not being explicitly taught. While skills are typically associated with specific disciplines, behaviors are inherently more universal, transferable, and versatile. As a result, they possess the capability to withstand the constant fluctuations in socio-economic conditions and technological advancements. "While certain unique skills are needed to qualify within a discipline – such as medicine, architecture and law for example – the enduring professional protectionism of these

4   "White Paper," Architectures' Afterlife – The
     Multisector Impact of an Architectural Qualifi-
     cation (in pub.).

5   "OECD Future of Education and Skills 2030
     Concept Note", OECD 2019.

6   Arturo Escobar, *Designs for the Pluriverse:
     Radical Interdependence, Autonomy, and the
     Making of Worlds* (Durham and London: Duke
     University Press, 2018), 15.

7   More on that topic in the chapter "Laboratory
     of the Future" on the Venice Biennale curated
     by Lesley Lokko in 2023. The concepts of
     coexistence and codependence as set out in
     process philosophy as well as biological theo-
     ries of mutualism have been the framework
     for the discursive program of the Croatian
     Pavilion at the 18th Architecture Exhibition at
     the Venice Biennale (curators Mia Roth and
     Tonči Čerina), exploring what architectural
     education is aiming for through a series of
     workshops and talks (discursive program
     curator Ivica Mitrović).

8   James Lovelock, *Gaia – A new look at life on
     earth* (Oxford: Oxford University Press, 2000).

9   Bruno Latour, *Facing Gaia: Eight Lectures on
     the New Climatic Regime* (Cambridge: Polity
     Press, 2017)

10   "Earth/Gaia is maker and destroyer, not
     resource to be exploited or ward to be pro-
     tected or nursing mother promising nourish-
     ment. Gaia is not a person but complex sys-
     temic phenomena that compose a living plan-
     et. Gaia's intrusion into our affairs is a radical-
     ly materialist event that collects up multi-
     tudes. (...) Gaia is not reducible to the sum of
     its parts, but achieves finite systemic coher-
     ence in the face of perturbations within para-
     meters that are themselves responsive to
     dynamic systemic processes." (Haraway, Don-
     na J., *Staying with the Trouble. Making Kin in
     the Chthulucene* (Durham and London: Duke
     University Press, 2016), 43–44.

11   Escobar, Arturo, *Designs for the Pluriverse:
     Radical Interdependence, Autonomy, and the
     Making of Worlds* (Durham and London: Duke
     University Press, 2017).

12   "Principles and Practices of Architectural
     Education: a position paper of the EAAE Edu-
     cation Academy", European Association for
     Architectural Education, 2018.

professions could misapprehend the true source of their value."[4] The OECD Future of Education and Skills 2030 report states that the core value of "disciplinary knowledge" lies in its ability to provide, "an essential foundation … and a structure through which students can develop other types of knowledge."[5] Going back to historical definitions of architecture, the transversal nature includes soft and hard skills equally by implication: the fundamental systematization of human knowledge of the enlightenment's Encyclopaedia or Systematic Dictionary of Sciences Arts and Crafts mentions architecture in all three main branches of knowledge: memory, reason and imagination. Acknowledging the value of soft skills and behaviours gained in architectural education today implies the question of their applicability in a redefined field of architectural practice, addressing the urgent needs of contemporary society and ecosystems we are part of. The transversality based on knowledge, expanded to include behaviours fundamental to meaningful practice, can be defined as pluriversality: following the question Arturo Escobar asks in *Designs for the Pluriverse*: "could design become part of the toolkit for transitions toward the pluriverse"?[6] A profession acknowledging relationality, as well as the necessity of operating upon a connected set of rational and emotional skills, can be one catering to all segments of the codependent planetary systems.

Raising Agency

Various considerations on the concept of Gaia have impacted architectural theory and value systems,[7] relating process philosophy to the contemporary condition in drawing on thoughts of James Lovelock,[8] Bruno Latour[9] or Donna Haraway.[10] Arturo Escobar elaborated the necessity to shift the ultimate product- and market-oriented goal of design towards a collaborative, experience-based, interspecies goal.[11] Acknowledging our belonging to the planet's dynamic flux as prerequisite to survival, our relatedness to various non-human and post-human entities, our contribution to systems in constant change for better or worse, this paper asks the question of what skills and values are in need of addressing during architectural education.

Between 2016 and 2018, the Education Academy of the European Association for Architectural Education conducted a series of workshops in which it sought to define the aims, practices and principles of contemporary architectural education, not by mapping what was existing, but rather formulating its own position paper on topics it deemed relevant within today's society.[12] The position paper aligned goals to socio-economic conditions characterizing different regions and focused on ongoing transformations within architectural education and the architectural profession. It also recognized diverse

13   Beatriz Colomina, Ignacio G. Galán, Evangelos
Kotsioris, Anna-Maria Meister, *Radical Peda-
gogies* (Cambridge: MIT Press, 2022).

forms and interpretations of practice, all of which are addressed in various contexts: the practice of design, the practice of teaching through design, professional practice, and the practice of architectural research, including research by design. In its first of five parts, the position paper asks what architectural education can do, and for whom (a notion which has been replaced by 'with whom' in the follow-up workshops re-examining the document in relation to sustainable development goals). The first point it makes relates to shaping agency of future architects and their ability to respond to emergent needs. To do this, the key objectives of architectural education should be empowering graduates to detect, formulate, and articulate spatial problems, making them advocates for community-led initiatives and capable of generating spatial solutions independently, taught to embrace complexity and uncertainty, posing questions rather than just providing answers. It also recognizes the goals of architectural education extending beyond technical skills and knowledge, placing importance on developing tools for critical examination of local, regional, and global spatial production values, balancing local identities, regional tendencies, and global systems. The document even opens with the following statement: "The architecture graduate is a new citizen, able to detect, formulate and articulate spatial problems and know when an intervention could be beneficial to society." Stressing the importance of training an agile mind ready to embrace the uncertainty of future practice, it encourages students to observe nascent trends and learn to deal with ambiguity, while asking schools to rethink the dominant western traditions and decolonised their knowledge bases. Yet, object-oriented curricula and content are still the dominant output of educational environments across the globe, lone auteurs glorified in subject histories, and power dynamics of entering a chosen profession prevalent in the tacit layers of the educational experience.

   Experiments in education challenging the traditional methods of learning happen in cycles, related to dramatic societal shifts, to subsequently either be abandoned or assimilated into the ubiquitous ways of teaching. We can trace these reformist movements in all levels and areas of education – for example, the dramatic shifts of child-centred, active-learning pedagogies in elementary schooling which challenged the traditional school at the beginning of the 20th century either became the norm in post-war educational systems, or were abandoned, only a few retaining their particular methodology. Analogies can be drawn to the radical movements in architectural education which happened between the 1950s and 1970s, and many motives and lessons still bear relevance today. The movements examined in the Radical Pedagogies research network[13] bear a common denominator of demanding a reevaluation of curricula to address contemporary social and political

14   Mia Roth Čerina, Roberto Cavallo, eds. *The Hidden School Papers. EAAE Annual Conference Zagreb 2019 – Proceedings* (Brussels: EAAE Publishings. European Association for Architectural Education, 2020)

15   "Final Report," Architectures' Afterlife – The Multisector Impact of an Architectural Qualification, http://architectures-afterlife.com/en/outputs?q=63

issues, but also share a fate which led to abandonment of most. So, what is it that left architectural education stagnant and lacking innovation? While societal and climactic challenges are indeed acknowledged, the hidden infrastructures of the profession, reflected and groomed during education, make the true change difficult to tackle.

What all the position papers, initiatives or movements mentioned have in common is the belief that practice can only be changed if educating for it changes as well. But in fact, as the "Hidden School" conference held in Zagreb in 2019 explored,[14] transformations in content, place or process are only part of what constitutes change, as some of the tacit aspects of architectural education, embodied in power-relations and rites, transfer a profession's ambition which is hard to break. On another note, architecture graduates demonstrate a high percentage of those leaving the discipline they educated for, compared to other regulated professions. When asked which of the skills attained during education they use most in their current profession, endurance and resilience were highlighted.[15] Yet the origin of these skills, found in the transfer of power dynamics embedded in master-apprentice, or student-jury relationships, may also be the key to answering the question of the difficulty of permanent and substantial change.

Resilient to What?

In many cases, skills are commonly associated with domain-specific and professional expertise, encompassing abilities essential for tasks like architectural design. Conversely, behavior pertains to the capacity to put these skills into action, encompassing activities like collaboration, management, organization, etc. And indeed, resilience was one of the most prominent and useful skills attained in architectural education, regardless of the subsequent professional trajectory, according the Architectures' Afterlife enquiry. In the questionnaire answered by over 2500 respondents, "endurance" was highest ranking, with over 80% of respondents choosing it as the competency gained most during their studies; the others being (in order of score from highest to lowest: work ethic, determination, handling criticism, constant self-improvement, flexibility, and dealing with complexity being the lowest on the list).

In the further stages of the grounded theory segment of research, the Afterlife project delved deeper into reasons for the transferability of skills, through events, roundtables and – most importantly – in-depth interviews. The project's interview roster featured professionals hailing from diverse backgrounds and occupying various roles in different sectors. The topics explored were wide-ranging, looking into the very essence of what it means to be an architect, the significance of the professional title, the skills

16   Mia Roth-Čerina, "Ecology of the Crit," in
      *Rethinking the Crit — New Pedagogies in
      Design Education*, eds. Patrick Flynn, Maureen
      O'Connor, Mark Price, Miriam Dunn (London:
      Routledge, 2022), 103–120.

17   Leif M. Hokstad, Gro Rødne, Bjørn Otto Braat-
      en, Steffen Wellinger, Fredrik Shetelig, "Trans-
      formative Learning in Architectural Educa-
      tion," in *Threshold Concepts in Practice*, eds.
      Ray Land, Jan H.F. Meyer, Michael T. Flanagan
      (Rotterdam: SensePublishers, 2016), 321–333.

acquired during architectural education and their practical value, interdisci-
plinarity, the future prospects of the architectural field, work-life balance,
mobility within the profession, and – most significantly – resilience in the
face of crises. The means of attaining this resilience requires focus. At first it
may seem as an asset gained among the "behaviors" albeit gained implicitly
through the process of education more than the content, learning outcomes
or curricula. Resilience is an important trait for an architect to have in face
of crisis, yet its origin may not serve the purpose which one may hope for
while designing for a resilient world. The endurance mentioned in the sur-
vey, translated to resilience in professional trajectories, is not one gained
explicitly, i.e. purposefully. It is in the tacit transfer of hierarchical tiers, the
constant need of presenting oneself through projects, the staging of critiques,
that a resilience is acquired. An asymmetry of power is tacitly expressed
here, throughs customs, language, appearance, and rituals, all of which are
nurtured and transmitted from those already rooted in the field to those
aspiring to join it. [16] From Henri Lefebvre's explication of backgrounds in
space (re)production, to Michel Foucault's sense of positioning oneself with-
in these power relationships, they take shape from the very beginning. This
acculturation process unfolds throughout architectural education, character-
ized by a series of rites serving to instill hidden values, while also cultivat-
ing a distinct sensibility and resilience essential to the role of an architect.

   In fact, in addition to imparting transversal skills and fostering a partic-
ular mode of thinking, architectural education functions as a means of indoc-
trination into an obscured power dynamic, one that is upheld and nurtured
through a variety of procedures designed to maintain the existing balance of
power. While these power dynamics may exhibit various expressions, they
share a common thread linked to the archetype of the architect. This arche-
type is cultivated in the process of shaping individuals into architects,
encompassing not only a professional identity but also a particular mindset.
Architectural education, beyond the conventional delivery of learning out-
comes and technical skills, can also be regarded as an environment where
students are initiated into a disciplinary culture, instrumentalizing the limi-
nal states accompanying these transitional stages embedded into studio, crits
etc. This liminal space where one learns about the discipline also serves as
a platform for introducing issues relevant to contemporary practice, such as
new value systems, the necessity for interdisciplinary work, and "defining
new and emerging ontologies and epistemologies." [17] The transformation that
occurs during this liminal phase of entering the profession represents an
opportunity to shape and instill a meaningful ethical foundation, define the
purpose of the discipline, and influence the trajectory of learning in subse-
quent stages.

18   This notion of a heroic figure hovering above the rest is sublimated in Ayn Rand's literary protagonist Howard Roark in the Fountainhead, a book once revered and now often used to exemplify the hierarchies gone wrong in society-architecture relationships.

19   Hayden, Dolores. *The Grand Domestic Revolution* (Cambridge, Massachusetts and London: MIT Press, 1981)

20   Beatriz Colomina, Ignacio G. Galán, Evangelos Kotsioris, Anna-Maria Meister, *Radical Pedagogies* (Cambridge: MIT Press, 2022)

21   Giancarlo De Carlo, *An Architecture of Participation.* London: Royal Australian Institute of Architects, 1972

22   John Turner, *Housing by People: Towards Autonomy in Building Environments*. New York: Pantheon Books, 1977

23   Federica Vannucchi, Mia Roth-Čerina, "Multidisciplinarity in Action: Defining Collaborative Design" in *Towards a New European Bauhaus — Book of Abstracts. EAAE Annual Conference Madrid 2022* (Brussels: EAAE Publishings, European Association for Architectural Education, 2022), 23.

Collaborative Practice

The creation of physical space and therefore the process of architectural education both inherently embody power relationships, reflecting social ambitions and value systems. In the early 20th century, architectural education and practice predominantly adhered to the avant-garde model, characterized by the dominance of a select intellectual elite, what can be described as a Fountainhead complex.[18] This paradigm placed great emphasis on the individual architect as a visionary leader, shaping the direction of architectural endeavors. Consequently, architects valued personal competencies and individual responsibilities as central to their professional practice. However, today, recent architecture graduates are increasingly exploring alternative approaches to practice that diverge from the traditional model. These new modes of practice prioritize collaboration, inclusivity, and interdisciplinary exchanges. The process of creating architectural spaces is gradually evolving into a shared endeavor that actively engages a diverse range of actors, each contributing their specific expertise required for the construction process. Importantly, this evolving approach recognizes that making architecture demands the active participation and collaboration of the community for which these spaces are intended.

The modernist deviation of singular practice has been in conjunction with the conventional notion of an architect as the sole creator, though – historically as well as today – architecture witnessed other paradigms. These alternative models challenged the traditional narrative of architectural practice, as found for example in Dolores Hayden's influential work "The Grand Domestic Revolution."[19] The 1960s marked a significant turning point in redefining architectural roles, particularly in the context of participation, looking both into historical examples as well as possible modes of engagement at the time. This shift was greatly initiated, staged and performed by educational settings. The actions aimed to promote self-organization and establish more inclusive educational institutions while exploring experiments within educational practice directed to challenging the means and goals of architecture.[20] Notable figures such as Giancarlo De Carlo,[21] with his projects in Italy, and John Turner,[22] known for his work on "The Barriada Movement", contributed to the theorization of a new collaborative relationship between architectural creators and end-users during the design and construction processes. These practices offered a testament to the evolving dynamics within the discipline.[23]

This growing emphasis on inclusivity, community collaboration and learning from indigenous spatial practices has brought to the forefront critical questions about historical patterns of exclusion and inclusion within the

24   Menna Agha, "The Nubian House: Displace-
      ment, Dispossession, and Resilience," in *Mak-*
      ing Home(s) in Displacement: Critical Reflec-
      tions on a Spatial Practice, eds. Luce Beeck-
      mans, Alessandra Gola, Ashika Singh and
      Hilde Heynen (Leuven: Leuven University
      Press, 2022), 327–346.

25   Lesley Lokko, "Introduction to the 18th Inter-
      national Architecture Exhibition," La Biennale
      di Venezia, May 2023 https://www.labiennale.
      org/en/architecture/2023/introduction-lesley-
      lokko

realm of architectural space-making. At the same time, they imply the question of whether non-collaborative practice is in fact a deviation from the ubiquitous perception of processes in architectural conception and production. It prompts a reconsideration of who has historically been excluded from the process and who has been included. For instance, Menna Agha's research on the Nubian House underscores the collaborative nature of construction practices, where women play a central role in the process, while men within the household are responsible for executing the construction.[24] Collective work in architecture was treated as isolated experiment, confined to their own narratives or contexts. However, the notion of collectivity has evolved and is currently reshaping both the field of architectural knowledge and the practice of architecture itself. This transformation reflects a broader shift towards more inclusive and community-oriented architectural approaches.

According to the Architecture's Afterlife research, collaborative practice and engagement with others was a topic frequently coming up in both the in-depth interviews conducted, as well as the survey. And, alongside endurance, was among those most needed in one's current profession, regardless of how it relates to the core topic of education. Architecture's Afterlife aimed to establish the percentage of graduates which have left practice to pursue other more or less related jobs. The survey led to a division into four groups of architectural graduates: those working solely in practice (62%), those combining architectural practice with another field, those working in a related sector and those working in unrelated sectors. Regardless of current professional placement, graduates primarily emphasize competencies like "work ethic," "continuous learning and self-improvement," "flexibility," "determination," "dealing with uncertainty," "collaboration skills," "handling complexity," and "endurance." Their common denominators are remarkably consistent: when "collaboration skills" are further elaborated in interviews, competencies such as "working with clients," "business management," and "mediation skills," as competencies acquired during their architectural education and frequently applied in their respective roles emerge as crucial irrespective of their specific sector.

"Laboratory of the Future"

In the framing of the topic of the 18th Architecture Biennale in Venice, Lesley Lokko asked the question of what it means to be an "agent of change."[25] The core theme of "The Laboratory of the Future" revolves around "change", and the multitude of practices conveyed a message of immediacy in changing canons upon which we practice and teach. Highlighting practices and peripheral knowledge, the exhibitions became a driver of change,

26   Ibid.

27   "White Paper," Architectures' Afterlife.

a wayfinder for future directions of a profession made increasingly obsolete by its own rigidity. The "gorgeous kaleidoscope of ideas, contexts, aspirations, and meanings that is *every* voice responding to the issues of its time"[26] established a pluriversal reality, a necessity of knowing and accepting a diverse range of narratives, knowledges, needs and histories. It underscored the importance of diversity and inclusivity within the architectural profession. Including voices from underrepresented regions, backgrounds, and perspectives was a significant step towards fostering a more inclusive and equitable architectural community. The analysis of the practice done by Decolonizing Architecture Art Residency (DAAR), recipients of the Golden Lion, directs toward a framing of relevant practice as being one of agency, as they demonstrated how architecture becomes a tool for social and political critique, engaging with marginalized communities and universal concerns related to borders, migration, and power dynamics in contested territories.

The 2023 exhibition re-framed participants as "practitioners" rather than architects or designers, acknowledging the need for a broader understanding of architecture in a diverse and hybridizing world. Biennale prompted discussions about the future of architectural education. It encouraged reflection on how architectural schools should prepare students for the evolving challenges and opportunities in the profession, including interdisciplinary work and sustainability. In fact, education emerged as a central contribution to the event as framed by Lokko.

Another statistic related to contemporary practice, known from the Architects' Council of Europe Sector studies, explored through the Afterlife project, and incidentally unveiled at the Venice Architecture Biennale, was the domination of small practices, reflecting a significant shift in both architectural production and educating for future practice. The fragmentation of architectural practices is one of the more significant outcomes of the Afterlife project: the majority of the respondents to the survey fall into the definition of "portfolio worker," meaning that they work with several different clients, practitioners, companies or organizations – or in this case across more than one sector at the same time.[27] Across Europe and beyond, growth in the number of portfolio workers is exponentially tied to the rise in the "gig economy" – a labor market characterized by the prevalence of zero-hours or short-term contracts or freelance work rather than permanent jobs. Following the early findings of the research, those combining practice with another field were of particular focus, as their multiple occupations usually means that they are not working full time or are contract based. The agility of this aspect of architectural practice makes raising agency in education a particularly important one, as the responsibility of action is up to the understanding and accountability of a free-lance practitioner taking on jobs

28   Harriet Harriss, "The 'Future of Architecture'
     is for Other Species," in *Designing in Coexis-
     tence – Reflections on Systemic Change*, eds.
     Ivica Mitrović, Mia Roth, Tonči Čerina,
     (Zagreb: Croatian Architects' Association,
     2023), 123–142.

29   Pete Buchanan, "The Big Rethink: Rethinking
     Architectural Education," *Architectural Review*
     232 (2012): 91–101.c

of various sources and potential impacts, but also acting on their own initiative.

The question of how to educate for this conscience has been central to the strong discursive aspect of the 18th architecture exhibition in Venice, and lead to some reckoning with ourselves as practitioners and as educators. "I recognise that any design-thinking led efforts at reduction, resistance, resilience, restoration, or even re-rewilding will not be able to fully recover what has already been lost. It is only by making these admissions that it becomes possible to see how architects' exceptional, three-dimensional problem-solving skills, could play a positive role in developing effective responses – but only if the outcome is not always and automatically a building."[28]

Reformulating Architectural Education for Redefined Practice (concluding remarks)

As Pete Buchanan pointed out in the Big Rethink series,[29] our inability to make significant progress towards sustainability can be attributed to a deficiency in psycho-cultural development happening within schools where structures of power and institutional inertia hinder the graduates' capacity to comprehend, empathize with and address the increasingly global challenges, their diverse cultural dimensions and the need for collaboration across cultures. The previous chapters point to the necessity of questioning the pillars of architectural education, in its canons and processes through which it conveys future goals for practice, through developing agency, cultivating a productive resilience, educating for collaboration. Before that, the meaning of transversality requires expansion beyond the hard skills usually associated with the multitude of knowledge branches related to the discipline-contingent ones.

The Architecture's Afterlife questionnaire underscored that the competencies most cultivated and utilized by architecture graduates extend beyond the realm of cognitive "knowledge" and "understanding." Notably, only a portion of the skills developed by architects during their academic years is directly related to the architectural discipline, with the most critical competencies being social and emotional in nature. Yet the canon, upon which architecture is taught, is a sporadically challenged topic – albeit fundamental in framing the contemporary directions of architectural education and subsequent future practice. Of these competencies, two are particularly highlighted: resilience and collaboration.

Resilience, a quality prominent in an architectural graduate, is not one which had been expressed in outcomes or curricula. The mode of gaining this resilience could also be the key to raising practitioners at better service

to society and planetary well-being. The components that distinctly shape the essence of architectural education can range from overt to more concealed elements, discernible to those who have experienced it. The nature of studio culture, intensity of making, presentation, exposing creative acts publicly, communicating, situated learning, result in liminal states in which students position themselves and gain personal discipline-contingent value systems. Instrumentalizing these with contents and processes toward more meaningful goals could indeed produce resiliences of a different kind.

Modernism has delineated conflicting roles for architects: on one side, architects are positioned as exclusive creators, while on the other, they are envisioned as facilitators of collaborative processes. Collaborative practice is rooted in vernacular practices as well as in contemporary modalities. In the multiple forms of practice mapped out in the Architecture's Afterlife research, architecture serves as a medium for communication and interaction, particularly in the way it shapes how diverse individuals engage with space. It goes beyond merely catering to society; it actively contributes to the formation and evolution of society itself. Notably, a growing number of impactful practices today involve collectives, challenging the conventional notion of a singular authoritative figure.

This prompts us to consider how architecture should be taught to foster meaningful spatial agency. It also raises questions about how architectural education and practice can advance the creation of spaces for and with collectives. The concept of collaboration and collectivity lies at the heart of sustainable development as defined in global common goals. Consequently, an important question for future education centers on the pedagogical approach employed by architecture schools in Europe to address and instruct these contrasting roles, but also foster an understanding of the interconnectedness of systems in constant flux.

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Schools of Thought:
From "Alles ist Architektur" (Everything is Architecture) to Environmentalism, Passing by Parametricism.

Nasrin Seraji

1   Rem Koolhaas, "Is the Whole World a Thing of the Past?" in *Countryside, a Report* (Köln: Taschen, 2020), 337.

2   Stephen Parnell, "Manplan: Manifesto for the Planet," *The Architectural Review*, no. 1500 (2023).

> *In most books the I, or first person, is omitted; in this it will be retained; that in respect to egoism, is the main difference.*
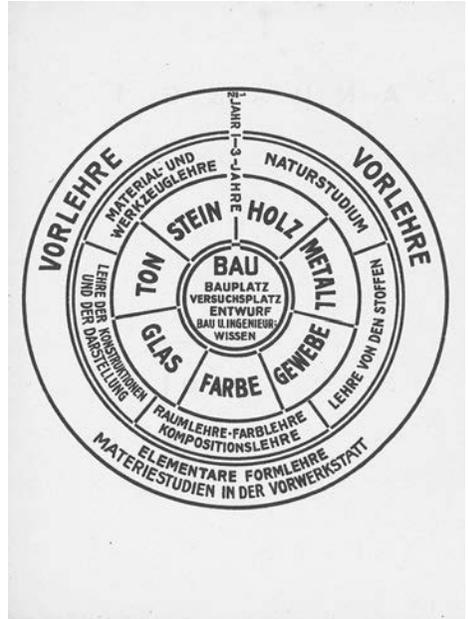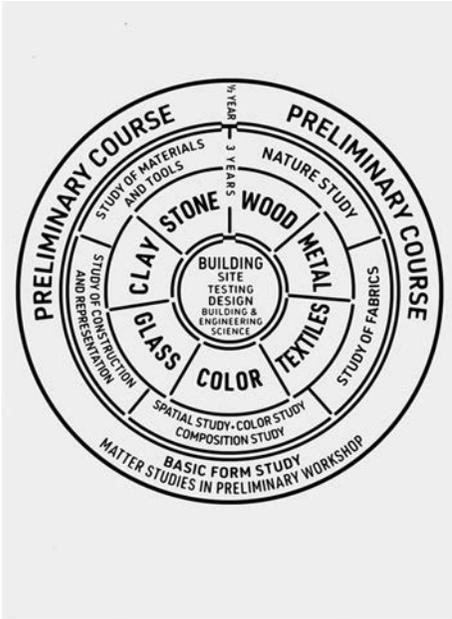> *We commonly do not remember that it is always the first person that is speaking. I should not talk so much about myself if there were anybody else whom I knew as well.*
> **Thoreau, Walden, or Life in the Woods, page 7, 1845**

From Earth. Merely a child in the swinging 60's, my 12th birthday was only six months after the Eagle landed on the moon. It was July 1969, we had arrived in Esfahan from the USA and my grandfather had bought a television to greet us and let us watch the landing on the moon broadcasted live. We were back from the land of soap operas and TV watchers and Iran was still a country connected to the outside world. That summer is still vividly in my mind, and from then on mankind had the possibility to observe the Earth from afar, the perfect meaning of critical distance. But did we? Not really, as we continued to use and abuse its resources and this in spite of the architecture discipline's many critical views on Earth. Stewart Brand's Whole Earth Catalogue had published the first image of Earth in space[1]. Many years later, in 2005, Steve Jobs would refer to the catalogue and compare it to the Google search engine in his commencement speech at Stanford. Science more than ever became a commodity and critical thinking and good design started to serve the technology industry, to the point of addiction.

As architects we were and are guilty and as human beings we were and still are too gullible. Governments and governance has pushed the one and only planet earth to a point of no return. However, the world still believes that all will be OK after 2050 and that technology, AI, AR etc… will save us. The profession and the discipline of architecture are still imagining how one should build in 2050 and beyond. We need the likes of Reyner Banham and Manplan[2] to review the conditions of architectural engagement in our societies. Perhaps we need to stop building and attend to all that we have built in the 20th century. This is why we urgently need to look critically and analytically redesign how we practice and how we teach architecture now that we are more and more faced with material and resource scarcity.

Return to the future. Before the moon landing, Paris and France were on fire. May 1968, "sous les pavés, la plage" or "under the paving stones, the beach": the slogan was the promise of another, bright future. The slogan never made it to the list of many beautiful posters that the Beaux-Arts students had made to demonstrate their solidarity toward what were to become the archetype of protests in the world. The '68 movement contributed to a revolution in the education of architecture in many ways. In France, it separated the Arts from architecture definitively: architecture became

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3   <u>Hans Hollein</u>, "Alles Ist Architektur," *Bau: Alles Ist Architektur*, no. 1/2 (1968)<u>. Hans Hollein</u> announced in the Bau journal, against images of a lipstick, a pill, a spark plug and binary code. This was not simply a reference to his work but a manifesto for a whole new generation of architects, designers and thinkers of the 1960s and the 1970s who were keen to expand the definition of contemporary architecture to its limits. The magazine became a means of exploring experimental ideas which questioned the pre-war doctrine of function that defined modern architecture. Instead it drew on a wide-range of issues such as popular culture, ecology and technology including the "Space race". see Institute of Contemporary Arts, 'Everything Is Architecture: Bau Magazine from the 60s and 70s', *Institute of Contemporary Arts*, 2015.

1   The original diagram of the pedagogical structure of the Bauhaus curriculum

autonomous and was no longer part of the Beaux arts. André Malraux, the minister of Culture, created by decree five new schools –Unités Péda-gogiques, or pedagogical units– in Paris and thirteen others in the provinces.

In Germany the revolution had happened following WW1. Gropius had invented the Bauhaus integrating all the Arts, the Bauhaus, and its novel cur-riculum enabled architecture (*Bau und Entwurf*) to join the fine arts and were integrated fully as a new constellation.

Most of the radical architects and artists of the Bauhaus had fled Nazi Germany before WWII and settled in the United States of America. They were contributing to new educational institutions such as Black Mountain College and Illinois Institute of Technology. Gropius had settled in at Har-vard. Mies van der Rohe directed the IIT for twenty years 1938–1958 and branded Chicago with his architectural and pedagogical legacy.

The 68' events reinforced what had already been initiated earlier in the mid 60's as a series of speculative and alternative practices where the bour-geois life style was under criticism and scrutiny, politically activating archi-tecture as a catalyst for change and empowering the public as its main insti-gators. Collaborative practices such as Super Studio and Archizoom (1966-in Italy), Haus-Rucker-Co (1967-in Austria), and others generated a conscien-tious relationship between architecture and society. Though the ghost of these movements could be traced to groups such as the Situationnist Interna-tional, their refreshing political activism opened a new chapter in architec-tural education.

Hans Hollein, an Austrian architect, thinker, educator and even accord-ing to Wikipedia "a key figure of postmodern architecture", was one of the most influential Viennese architects; in the 60's and thereafter. His famous "*Alles ist Architektur*" enabled architecture to be freed of its commonly understood meaning as "the art of building". Hollein wrote that "*Everything is architecture*" in the *Bau* magazine in 1968, for which he was the editor from 1964 to 1970. Through his liminal text, he asserted that the limited and traditional definitions of architecture had lost their validity. He articulated that "architecture is a medium of communication, architecture is cultic, that it is a symbol, a sign and an expression", and that "architecture is determina-tion, establishment of space, environment and architecture is control of bodi-ly heat–protective shelter …".[3] It was to be quite some time before his revo-lution could be implemented in his native city. Hollein became the head of the department of Architecture at the University of Applied Arts in Vienna (*Angewandte*) between 1995–1999. That same year I was appointed the Pro-fessor and Head of one of the *Meisterschule* at another, rival, architecture school in Vienna, the Academy of Fine arts, where Hollein had studied archi-tecture before going to the Illinois Institute of Technology in 1959 and

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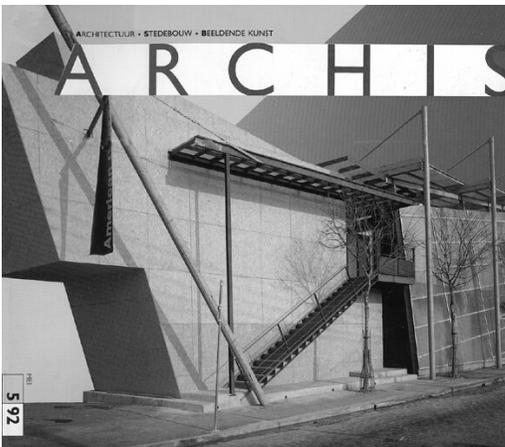
4   Maarten Liefooghe, "The 1996 Architecture
      Biennale: The Unfulfilled Promise of Hans
      Hollein's Exhibition Concept," *OASE, Exhibi-*
      tions: showing and producing architecture, no.
      88 (2012): 54.

5   H. Muchamps became the architecture Critic
      of the New York Times in 1992–2004 taking
      over from Paul Goldberger. He taught at the
      Parsons school of Design and directed its
      graduate program in architecture and
      design criticism.

6   G. Piechl studied like Hollein at the Academy
      of Fine arts and was a professor and Head of
      the Master School of Architecture between
      1973 and 1996.

2   Bremen Competition Daniel Libeskind (1ˢᵗ Prize)
      https://images.app.goo.gl/PspaP8uPaK3APzT

3   American Centre -Front Cover Archis
   Nasrine Seraji Archive

finally in 1960 to Berkeley, where architecture, landscape, and planning were integrated under the umbrella of the freshly established College of Environmental Design.

The Seismograph. In early 1996 I received a fax – not much Internet then – from the director of the 1996 Venice Biennale: Mr. Hans Hollein was inviting me and my office to take part in what was to be his theme for this session, "Sensing the future: The Architect as Seismograph" [4]. A crisis meeting was organized in the office, what were we to do? The office was small (though we were moving up the ladder), comprising myself and three young architects. We had lost a few competitions, and specifically a great one: The Bremen Philharmonic (1995). We couldn't have won against Daniel Libeskind (1st Prize) [2] neither Günter Behnisch (second prize ex-æquo with us), nor Fumihiko Maki who were amongst the ten architects invited to compete. Libeskind was not going to build his winning entry any way as he had left Germany and his Holocaust museum project and gone back to the USA due to disagreements with his museum clients. So Hollein was spot on to have said, that "Architecture is a medium of communication", some thirty years before.

How could we afford to go to Venice? We were supposed to put up an exhibition and pay for everything, as it was clearly stated in the invitation letter that there was no financial aid, nor fees from the Biennale organisation. Most importantly, what were we to show as a response to the theme? We had neither the notoriety of the big-name architects, nor did we have the infrastructure to support our participation.

Before responding, and as we were in an euphoric state of total disbelief, we started to do some research to understand why Hollein had invited my office. I didn't know him personally and the only project that I had to my name was the Temporary American Centre in Paris built in 1990, deconstructed in 1992 and it had been published in 105 journals. It was perhaps the shortest-lived building of its time [3]. Herbert Muschamp [5] thought that Zaha Hadid had designed it, and he had labelled it as the best "deconstructivist" work of its time. Most importantly the Temporary American Centre Competition was the project that made me into an architect and a teacher.

Or was it because the Academy of Fine Arts had chosen me over Zaha Hadid to be its next Professor of architectural design, and the head of one of the two *Meisterschule* for Architecture previously held by the famous Gustav Peichl? [6] I would also be the first woman professor in the history of the two art academies in Vienna (Fine arts and Applied arts). Soon we realized that there were no sound answers and no point in speculating, and we decided to go ahead and present the Bremen Philharmonic project that was very much about sensing the future of listening to music [4]. Music was being privat-
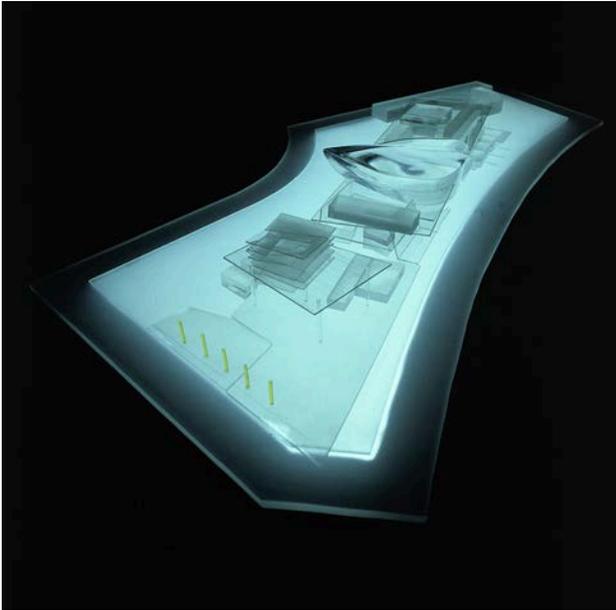
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7   Adolf Loos, *Ornament and Crime: Selected Essays* (Riverside, CA: Ariadne Press, 1998); essay originally published in 1908.

8   Robert Hughes, "Doing Their Own Thing," *TIME*, no. 2, January 8, 1979.

9   Kopp, Anatole. *Quand le moderne n'était pas un style mais une cause*. Paris: Ecole nationale supérieure des Beaux-Arts, 1988.

4   Bremen Competition 2nd prize
     Nasrin Seraji Archive
   Photographer-Jacqueline Trichard

5   Cover of Time Magazine

ized and we were still interested in the collective idea of listening. Spotify was not invented yet, and personal smartphones were years away, however, the first versions of MP3 and I-pods were changing the modes of listening to music. A philharmonic hall of the 21st century had to be able to allow individual listening in a collective setting.

PoMo 80's. In 1983 I had graduated from the Architectural Association and celebrated by going to the biggest concert by David Bowie in Milton Keynes, one of the first New Towns on the periphery of London. A precursor experience of the act of collective listening to that of our imagined one when designing the Bremen Philharmonic competition twelve years later in 1995.

Charles Jencks had largely occupied the scene of architectural history and theory in England since long and was pushing the discipline to look at history as a way of going beyond Modernism. He had become the authority on post-modern theories in architecture with his book *The language of post-Modern architecture* (1977) which gave every student and architect the main clues of what is to be considered postmodern or not. Incidentally Le Corbusier had already highlighted the value of understanding history and classical architecture through his famous dictum of "listen to me, I who have seen Athens". So Philip Johnson's famous phrase "you cannot not know history" was perhaps already a post-modern way of citing the grandfather of Modernism. Both in architectural practice and education Le Corbusier and the modern movement were under attack as the proponents of impossible ideals and soulless architecture, as well as being the main reason for the standardization, boredom, sameness and the whiteness of our living environments. Jencks was responsible for a dark period of formal understanding of history in the most literal sense. Architects in America went on a crusade to re-discover Rome, Athens and the architectural orders. Buildings were ornamented with signs and symbols, as if "Ornament and Crime" [7] had never been written. So many new buildings were adorned by columns and pediments as if we could rebuild history through veneer and collage. in January 1979, The AT&T building by Philipp Johnson had even made it to the cover of *Time Magazine*. Architecture seemed more important than the dismantling of a civilization: Philip Johnson and the AT&T [8] were larger than life and more important than the violence that was ravaging Iran at the time. [5]

If Modernism was not a style but a cause, as Anatole Kopp [9] had suggested, then Post-modernism was diametrically the opposite: from inception it became a distinctive style. All architects of a certain generation and all around the world had their PoMo period, just like the blue period of Picasso and the white period of Modernism. Michael Graves, Charles Moore, James Stirling, Arata Isozaki, Aldo Rossi (the intellect of the City), Adolfo Natalini (Superstudio veteran) and of course several main figures of American archit-
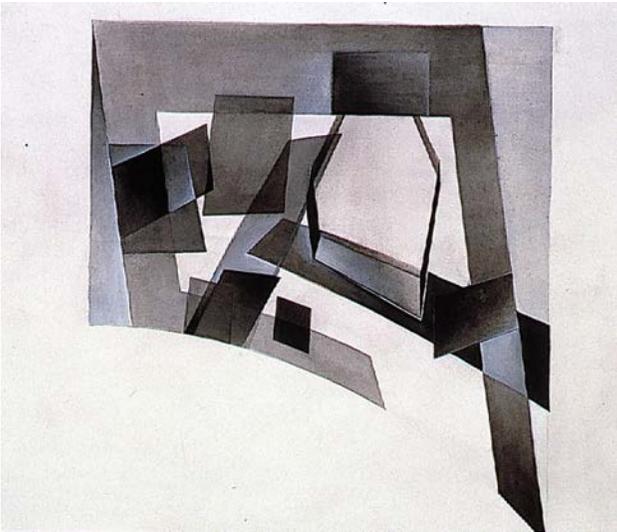
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6   6a
     Guangzhou Opera house – ZHA
     https://the8percent.com/master-work-guangzhou
     -opera-house/
     6b
     Cardiff Bay opera house – Zaha Hadid painting
     https://www.zaha-hadid.com/architecture/cardiff-
     bay-opera-house/

ecture who were also involved in education such as Robert A.M Stern, Robert Venturi, Denise Scott Brown and Peter Eisenman.

Some of these architects continued to design with total conviction as intellectuals and academics first and as commercial practitioners later. Architecture had entered a period of familiarity. The clients liked Doric columns and broken pediments: they had seen them (somewhere) before, they were comforting. Architecture was not an abstract idea anymore. The clients knew what they were in for and what they were paying for. The fake had value, marble and stone didn't need to be solid blocks: they could be veneers.

Orders, elements, fragments and tik-tiks. All this heavy, serious and weighty architecture needed to be counterbalanced by the thesis of a younger generation that would resist history and was a defender of what we now know as the deconstructivist period of architecture. Where structure was no longer synonymous with stability, and order was no longer visible in architecture.

Zaha Hadid had won the Hong Kong Peak competition in 1983, the year I received my diploma from the Architectural Association, and the Cardiff Opera house in 1994 when I was in my second year of teaching at the AA. Eleven years had passed between the most significant of Zaha's projects in relationship to teaching and her practice, none of them built. The drawings of both projects were a new graphic position in movement and dynamic spaces; shedding clear light on Zaha's passion for Malevich and Suprematist paintings. Zaha was a great painter and she was also an obsessive imaginative person. She used few words but many lines, points and surfaces. Her famous tik-tiks were an invention of another way of saying elements/ fragments without the derogatory meaning of fragmentation in architecture. The Cardiff Opera House project has often been praised by being compared to a much later, built project with a similar program, the Guangzhou Opera House, China. Yet the projects have nothing to do with one another. One (Cardiff) is a subliminal *chef d'oeuvre* based on Hadid's understanding of the Russian constructivist ideas of space and the deformation of the idea of Le Corbusier's '*promenade architecturale*' into a '*promenade programmatique*' as the dynamic force of the project. The other (Guangzhou) is a parametric formal game of seemingly complex geometries put together with very poor construction techniques [6].

The Cardiff Opera house would have celebrated its 30th birthday this year and the Peak in Hong Kong would have turned 41. Their architect passed away too early but she left a legacy of "function follows form" that was mis-interpreted as form follows form, which is still strongly desired by Chinese and Russian oligarchs and commissioned to what seems to be the ghost of Zaha's ambitions, the ZHA directed by Patrik Schumacher. ZHA

10 Mario Gandelsonas, Peter Eisenman, Michael
        Graves, Georges Teyssot, Ben van Berkel,
        Jesse Reiser, FOA, Liz Diller, Alessandra
        Ponte, Beatriz Colomina and Mark Wigley etc
        were teaching at Princeton. The cast was wor-
        thy of Ben-Hur or even Anthony
        and Cleopatra.

must be the most masterfully constructed parody of Dame Zaha Hadid's ideals once taught with fervor and insistence at the AA's diploma Unit 9 after the departure of Rem Koolhaas to New York (*Delirious New York* had to be researched and written!) and Elia Zenghelis to Athens. With Zoe Zenghelis and Madelon Vriesendorp, both men had constituted OMA and were Zaha's teachers.

The late 70's, the 80's and the early 90's had been for those who had chosen to go to the AA to study or to teach the most challenging and culturally rich years. Its chairman Alvin Boyarsky had instilled a culture of drawing and debate unique to the AA for almost 20 years (1971–1990). As he had said in an interview for the Architectural Review in 1983: "We create a very rich compost for students to develop and grow from and we fight the battle with the drawings on the wall. We're in pursuit of architecture, we discuss it boldly, we draw it as well as we can and we exhibit it. We are one of the few institutions in the world that keeps its spirit alive." Drawing was at the center of the debate, everyone was attempting to invent a new language of architecture. This language was not spoken anywhere else except at the AA, everyone was coming to the AA to learn it and to disseminate it around the world. That's perhaps why Zaha was talking to the world with her drawings and never with words.

The digital 90's. In 1992 Jeff Kipnis and Bahram Shirdel moved from California to start the Graduate Design Programme at the AA, which led to the establishment of DRL (design Research Lab) founded by Patrik Schumacher and presently directed by Dr. Theodore Spyropoulos. The Information Age was settling in and the first issue of *Architectural Design* after many years of Andreas Papadakis' editorship (1977–1992) who had introduced tendencies and 'isms' of architecture to the readers and served as the longest chief editor of an architecture Journal, AD with its new director Maggie Toy was turning the page of postmodernism and deconstructivism, and sliding smoothly into the blobosphere.

In the late 1990's at Princeton, I was teaching a graduate seminar, thesis and a master studio, after Peter Eisenman and Michael Graves' penultimate master studio: an exercise "in the manner of", similar to what Venturi and Scott Brown had done many years earlier with their learning from Las Vegas studio at U Penn.

Ralph Lerner was the Dean at Princeton at the time and was very interested in a melange of genres [10]. The place was a hotbed of ideas and debates, a deliberate potpourri of ideologies and convictions.

Very much akin to what Alvin Boyarsky had instilled at the AA in the late 70's: make opposing ideologies debate in order to create what he called the compost necessary for architecture.

11   Mario Carpo, "Twenty Years of Digital Design,"
      in *The Digital Turn in Architecture 1992–2012*,
      AD Reader, ed. Mario Carpo (Chichester:
      Wiley, 2013).

12   Ibid, 9.

13   John Frazer, "The Architectural Relevance of
      Cyberspace (1995)," in *The Digital Turn in
      Architecture 1992–2012, AD Reader,* ed. Mario
      Carpo, (Chichester: Wiley, 2013), 48–52.

Alvin had created a typology for architectural education and its pedagogy, which was being propagated everywhere: we, as its ambassadors were teaching around the globe. I for one was trying to bring a new way of critical analysis through drawing and designing. We were looking at a series of modern houses (from Richard Neutra to Glenn Murcutt) and were testing their relevance in our time through speculative drawings and diagrams of their central ideas. In my seminar, we were scrutinizing the differences and similarities of Le Corbusier and Rem Koolhaas's theories of modernism and the city. We were reading *SMLXL* (RK). and the *Œuvre Complete* (LC) and drawing their ideas. And all this amongst my colleagues who were re-inventing the wheel, its digital version of course.

The information age, toward an architecture of Parametricism. In the introduction to his edited book *The Digital Turn in Architecture-1990–2012*[11] Mario Carpo explains that there is a pervasive follow up of Deconstructivism and Postmodernism in digital architecture. He also claims that "Deleuzian, post-modern variability was the cultural framework within which digital technologies were first put to task to design and produce variations (variations in form and variations in series, or mass customization), and in this more general sense the digital turn in architecture can also be seen as a belated vindication of some of the principles of Post-Modern architecture itself: against Modernist standardization, the PoMos had argued for differentiation, variation and choice; almost one generation later, digital technologies provided the most suitable technical means to that end. A philosopher and historian could even argue that, in a typical cultural-technical feedback loop, post-modern culture was the 'favorable environment' where digital technologies took root and to which they adapted to finally evolve in the way they did."[12]

In the same volume, John Frazer's text: "The Architectural Relevance of Cyberspace (1995)" (then teaching at the AA with Julia Frazer in Diploma Unit 11) announces the emergence of a brave new world : "A new consciousness – a new mode of thinking – is emerging with profound implications for architecture." Another chapter is dedicated to FOA describing their Yokohama Port terminal at great length as a new newness: "The surface of the ground folds onto itself, forming creases that provide structural strength, like an origami construction. The classical segmentation between building-envelope and load-bearing structure disappears. The use of segmented elements such as columns, walls or floors has been avoided in favor of a move towards a materiality where the differentiation of structural stresses is not determined by coded elements but by singularities within a material continuum, more efficient against earthquake stresses."[13]

14 Interestingly enough no one was looking at painting or the other arts, Literature and Philosophy were the refuge for architects desperately searching for a new formal language.

15 Tom Conley — Abbot Lawrence Lowell Professor of Romance Language and Literature and of Visual and Environmental studies, translator of Gilles Deleuze's *The Fold: Leibnitz and the Baroque*

16 Gilles Deleuze, *The Fold: Leibniz and the Baroque*, trans. Tom Conley (Minneapolis: University of Minnesota Press, 1993).

17 Fun palace manifesto – We believe in the genius in everyone, in everyone an artist and everyone a scientist, and that creativity in community can change the world for the better. We believe we can do this together, locally, with radical fun – and that anyone, anywhere, can make a Fun Palace. In 1963 Cedric and Joan asked Gordon Pask, a cybernetician (also a teacher at the AA) to join them to deal with the cybernetics.

Most of the architects gathered in this volume were concentrated in a few schools around the world and were teaching at a variety of levels: John Fraser, FOA (intermediate school-2+3rd year) at the AA, Eisenmann often lecturing at the AA and teaching at Princeton and Yale (later) at the master level, Greg Lynn teaching at UCLA, Jeff Kipnis and Bahram Shirdel at the Graduate school AA.

Since Deleuze's famous book *The Fold* had been translated into English (1992), its argument had become the perfect alibi for a new mode of generating form in architecture literally inspired by folds of space[14], movement and time. Tom Conley, professor of French at Harvard University and translator of Deleuze[15], argues that Leibniz's writings constitute the grounding elements of a Baroque philosophy and of theories for analysing contemporary arts and science[16]. A model for expression in contemporary aesthetics, the concept of the monad is viewed in terms of folds of space, movement, and time. Similarly, the world is interpreted as a body of infinite folds and surfaces that twist and weave through compressed time and space. According to Deleuze, Leibniz also anticipates contemporary views of event and history as multifaceted combinations of signs in motion and of the "modern" subject as nomadic, always in the process of becoming.

Non-standard. In 2004 The centre Pompidou had organized an exhibition entitled *"Non-Standard Architecture'*. Its curator, Frederic Migayrou would be appointed Chair professor of the Bartlett school of Architecture seven years later. The work and research developed by 12 international architectural teams who were mainly working with digital and computational tools and techniques in their architectural design and practices was showcased in a building that its ancestral idea was the Fun Palace (1961) by Joan Littlewood and Cedric Price[17], the competition for the building had been won in 1971 by Richard Rogers and Renzo Piano. The exhibition attempted to evaluate the social, economic and political mutations induced through an increasingly generalized use of non-standard logics in architectural production, design and urban policies. The invited firms were, Asymptote- dECOI Architects- DR_D- Greg Lynn FORM- Kol/Mac Studio- Kovac Architecture- NOX- Objectile- Kas Oosterhuis.nl- R&Sie- Servo and UN studio.

The Chapel of Petits-Augustins. From April 2006 onward, I was directing the École Nationale Supérieure d'Architecture Paris-Malaquais, a new school of architecture that had been founded in 2001 on the former site of the Beaux-Arts as a collage of two other schools that subsequently disappeared as such. In January of the same year, I had been appointed for the second time the Professor and Head of the Academy of Fine arts in Vienna where I instituted a new curriculum based on Five Research Platforms in

18   Analogue Digital production, Ecology Sustain-
        ability Conservation, Construction Material
        Technology, History Theory Criticism.

19   Christian Girard, *Architecture et concepts
        nomades traité d'indiscipline* (Bruxelles:
        Mardaga, 1986).

7

7   2006: in the Chapel, part of the Ecole des Beaux-
        Arts now partly used by the ENSA Paris-
        Malaquais, digital experiments replaced the
        sculpture casts that used to serve as drawing
        models for art and architecture students in the
        19th century.

20   Not far from the recent Heatherwick claim of
        "Blandism" being the fault of Le Corbusier.
        See The Guardian Thomas Heatherwick's war
        on boring buildings: "Ive never gone against
        the Industry before" by Amelia Gentleman
        25th October 2023.

2007.[18] : the perfect dual vantage points to observe and compare the evolutions of architectural education.

At Malaquais, the only area that the entire school was against developing was the domain of digital architecture, and this due to the meagre budget conditions of French public schools. However, I thought that it was important to introduce this branch of research in our school. Christian Girard [19], and Philippe Morel co-founded the Department of Digital Knowledge, the only one of its kind amongst the 20 ENSA in France. After all the philosophical question had started with Derrida and Eisenman many years before and so the digital condition and its knowledge were born with the French theory that was so influential in American architecture schools. In Vienna, at the Academy of Fine Arts the production of architecture was to be looked at in the context of the digital and analogue tools as a dialogue in its dedicated platform directed by Wolfgang Tschapeller, whereas at the *Angewandte* (The Academy of Applied Arts) architects such as Zaha Hadid, Greg Lynn and Hani Rashid of Asymptote had one after the other replaced Hollein and Coop-Himmelb(l)au of another generation. The digital era was in full swing in schools of architecture but was being used in its very basic capacity (sophisticated renderings) in practices all around the globe. Perspective renderings were being sold as a commodity for seducing clients. The price of a rendered perspective was equal to a month's salary of a mid-level architect. Drawings were no longer a tool for investigating ideas or articulating a position, they were a commodity with which architects sought to win competitions.

Neo liberal genius or glossy undertaker of Zaha's legacy. But "He is the defender of Zaha's legacy"! Who said that? Shortly, after Zaha Hadid's passing in 2016 Patrick Schumacher brought the whole world against himself by turning all the spotlights on his persona: a young, tall, running shoes wearing, philosopher architect. At the Berlin World Architecture Festival he managed to divide the world of architecture into villains and heroes, with himself a hero in disguise. He damned social housing and argued for privatization of everything from streets to parks etc., in effect he was telling the world of developers and investors that architecture is at their service and that he completely subscribes to the neo liberal world of economical supremacy.

Schumacher's argument is exemplified in "Parametric Order-21st Century architectural Order", a long and repetitive talk he delivered at the GSD Harvard some 11 years ago. According to him, the main reason for parametric architecture and his new order was to rid humanity of repetition, boredom and sameness [20] that Modernism allegedly had installed in our societies. The lecture is based on a very outdated view of architectural history, mansplained as an exclusively white western viewpoint. Listening to the lecture, there is

21   Thomas Piketty, *Capital in the Twenty-First Century* (Cambridge Massachusetts: The Belknap Press of Harvard University Press, 2014).

a deep problem of incoherency between Schumacher's desire to be a contemporary Marxist –understanding the problems of housing in the inner city for "his people" working in 'his' office– and suggesting to eradicate social housing and leaving the market to regulate a kind of survival of the fittest scenario. Allowing the creative generation of the up-and-coming neo-liberals to be housed near their workplace to enjoy 'his' seemingly differentiated exciting spaces and not be bored when they are watching Netflix in their smooth curvy sofas designed by ZHA.

But society is constantly evolving. As French economist Thomas Piketty has demonstrated in his *Capital in the Twenty First Century*[21], there is good evidence to believe that functional differentiation does not portray the whole spectrum of today's society and will not do so in the near future either. And so, the belief in autopoiesis might not be that revolutionary after all, because it argues along with functional differentiation, rather than helping practice to deal with our present age urgencies and challenges. On the contrary we could say that the approach is quite conservative, despite the hype and glorifications of ZHA's buildings. As Preston Scott Cohen in the Q+A part of the lecture pointed out, the differences simply reside in the shapes of the plans, never in the spaces nor in the relationship of the body to the spaces, nor in the relationship of the users and the inhabitants of the environment created.

How Soon is Now? Now is 2050. Environmentalism is not another branch of post-modernism, nor was deconstructivism. It has been there since a long time, with its many activists in many forms and shapes in histories and theories of the arts, and architecture, and the sciences. Ruskin, William Morris, Henri David Thoreau, John Muir, Vandana Shiva are traversing time from then to now.

In the USA, Departments of architecture (except Berkeley) were for many years reticent to be part of the Schools of Environmental design or Schools of Engineering. In France the debate has been less about the integration of architecture into the other disciplines as schools of architecture have mostly remained autonomous from the Universities, since their creation after May 68.

The now 20 schools known as National Superior Schools of Architecture (ENSA) under the supervision of different Ministries at different times, to begin with —culture, then public works and infrastructure— and now Culture again. There have been many discussions in recent years for the twenty architecture schools to be attached to and supervised by the ministry of Environment instead, now the Ministry for ecological transition, or even – considering the stakes of the environmental crisis is relationship to architecture – to the office of Prime minister.

22 The Academy of Fine arts in Vienna has had university status since 1998, but retained its original name. It is currently the only Austrian university without the word "university" in its name.

23 Tim Ingold, *Making: Anthropology, Archaeology, Art and Architecture* (Milton Park, Abingdon, Oxon: Routledge, 2013).

In Europe most of the schools of architecture were integrated into universities and continue to be attached to either Engineering schools – as is the case with University College Dublin where I am currently teaching – or to the Arts, like the Academy of Fine Arts where I was teaching between 1996–2001 and 2006–2012. There, the different schools (painting, sculpture, architecture, scenography etc..) joined hands and received university status in1998 [22]. The German architecture schools as well as Italian schools have mostly been part of Universities and continue to be a small drop in an ocean of other departments, all be it with an average of minimum 1500 students in the discipline of architecture and urbanism.

If we accept that architecture has lost its assertiveness as a consistent, political, social and collective discipline that encourages equality and prosperity, then it is time to move toward a responsive, responsible and culturally local architecture. The answer is perhaps in the understanding and drawing of the specific environments allowing for new healthy conditions to emerge through extensively damaged environments. But is this even possible in the era of climate change after the global economic ruins of capitalism? We are rapidly entering in the eye of the tornado of climate change and all that which it implicates. We need to urgently question the concept of modernity that led us to this catastrophe. And yes it is possible, if a profound restoration of our educational institutions and universities takes place, if making creates knowledge, builds environments and transforms lives [23], if it becomes meaningful and a 'process' of evolution as Ingold postulates, and if research becomes the driving force of our architecture schools. Architectural projects then have to be true research that explores new speculative territories. Projects can no longer be a mere staging of the lures of technology (parametric, now AI and what not), nor a mimicry of what once was the heroic past of our discipline. The teaching of architecture needs to once and for all rid itself of the use of "precedents", that formal reduction of history to signs. It needs to concentrate on the 'why' of things as opposed to the 'how' of things, the research that takes risks and is provocative and prospective, research that is, original, innovative, uncomfortable and daring.

I would like to propose that the new ecological paradigm in architectural education and practice is a new form of Environmentalism. This ideology needs to recognise that Architecture is slow, it is about the long term, just like geography, landscape and archaeology, it needs time on its side. Perhaps the only way to make architecture relevant again is through its slowness, the only way to resist the neoliberal pressure of economic urgency is to perhaps rediscover the 'time' of our discipline.

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Humour, Wit and Resolution:
Give Me the Details!

Carolina Dayer

1   Pablo Sztulwark, *Componerse con el mundo.*
     Modos del pensamiento proyectual (Buenos
     Aires: Diseño, 2015), 113.

2   Claudio Zuchovicki with Mario Pergolini in an
     interview at Vorterix, March 20, 2023.

"Life constructs the city."[1]
>   **Pablo Sztulwark**

In the main street of a town, there was a large pothole that made significant impediments to passing cars. This generated long queues and a wait of at least 20 minutes. Rather quickly, the neighbours realized that they could creatively appropriate the inconvenient situation. Suddenly, shops around the pothole started to appear: fruits, drinks, cell phone accessories, products that drivers could buy while waiting. One day, the town elected a new mayor who decided to fix the pothole. To his surprise, the neighbours strongly opposed its repair as it would mean the end of their business. Without alternative, the mayor accepted that the pothole should remain.[2] The story told by Argentinean professor, columnist and business administrator Claudio Zuchovicki, summarizes what happens when precarity ignites practices of social production. It exemplifies a common phenomenon in the Global South, where things happen spontaneously around moments of disruption. The quick reaction to figure things out produces unexpected networks of exchange, unique spatial configurations and, when it comes to buildings, distinct typologies of details. These details work with what is within reach, not accepting materials for what they are supposed to be, but for what they could be. They salvage and develop shrewd and cunning use of what they can from the residue of mass materials. In contrast to a regime of industrialized supply chains, these othered details see materials as part of an at-hand ecology. These diverse forms of making architecture show an alternative way of relating to the environment and benefiting social connections of a place. In Argentina, a particular expression is used to refer to such situations—sticky and with no logical or apparent solution: *atado con alambre*: 'fixed with wire.' This common saying indicative of cultural everyday-life practices is employed also by architects and non-architects to refer to decisions made at construction sites and design development phases. To solve a predicament with 'wire' is to keep it working for another day, and when that day comes, a better solution will present itself. Sometimes, that day never comes, or as in the case of the story, when a solution appears another may have already become a better opportunity. Each act of resolution under such paradigm, is characterized by a personal touch of creativity and a surplus sense of pride and effectiveness. Often, these fabrications and resolutions are culturally recognized as witty and humorous due to their graceful execution and unconventional pragmatism. Such practices, highly present in self-built domestic constructions and repairs, are not unique to Argentina. All across the globe, as scarcity and precarity grows, more and more details of this form of ingenuity populate urban and suburban built environments, offering not just

3   Lina Bo Bardi, Marcelo Carvalho Ferraz (ed.),
     Lina Bo Bardi. 4th ed. (São Paulo: Instituto
     Bardi Casa de Vidro: Romano Guerra Editora,
     2018), 220.

4   Marco Frascari, "The Tell-The-Tale Detail," *VIA*
     7 (1981): 23–37.

5   Frascari, "The Tell," 24.

6   Bernard Rudofsky, *Architecture Without Archi-
     tects: A Short Introduction to Non-Pedigreed
     Architecture* (Albuquerque: University of New
     Mexico Press, 1964), 3.

solutions, but character and unmapped cases of practical wisdom. Similarly, formalized architecture design practices are often faced with economical and logistics constraints that contribute to an attitude towards thinking astutely in order to get the most out of the least. "Poor architecture" as Lina Bo Bardi explained in 1984, is not about poverty, but about the capacity to express the maximum through minor means. [3]

Forty years have passed since architect and educator, Marco Frascari published the influential essay, "The Tell-The-Tale Detail", in which he argued that details are generators of architectural knowledge through the mirrored activities of construing and constructing. [4] Frascari reflected on the role of details as producers of architectural theories and practices, able to demonstrate meaning and narratives of cultural significance. Furthermore, he theorized that the detail is a practice of significant social action: "In the details are the possibilities of innovation and invention, and it is through these that architects can give harmony to the most uncommon and difficult or disorderly environment generated by a culture." [5] Building details then, contain valuable data to assess social, cultural and material matters concerning built environments. Thus, studying and becoming exposed to the sensibilities attained in the construction of details with those who build, can be extremely fertile for architecture pedagogies. The difficulty perhaps becomes, what details to study and what do these details teach us. When Bernard Rudofsky published his well-known work in 1964, *Architecture Without Architects* he problematized the education of the architect by saying: "Architectural history, as written and taught in the Western world, has never been concerned with more than a few select cultures." [6]

In last decades and generally speaking, architectural discourse in the Global North around details has been pulled in several and not surprising directions both in practice and in academia. In practice, exceptional architecture studios with small scale projects continue to grapple with the luxury of time, money and use of the best crafts and materials. With exceptions, larger studios, in close collaboration with industries, struggle to fit within a project's budget and time the attention needed to be inventive with details. BIM, codes and regulations complicate matters even more and built solutions become highly repetitive and standardized from project to project. In academia, thoughts and expertise on sustainability tend to frame the study of details and materials through design for disassembly and circular economies strategies, life cycle assessment, reuse, recycle and in some cases, the potential use of biogenic materials. For better or for worse, a great disconnect continues to exist between what is taught at schools and what is built by practices. Furthermore, there is an even greater disconnect between academia/professional practices and the built production that is administered

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7   Rudofsky, *Architecture Without,* 5.

8   Billie Faircloth, "Build. No Exceptions," *Journal of Architectural Education*, 75, 1 (2021): 6–8.

9   Ibid., 7.

10   Ibid.

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1   Added exhaust duct for a barbecue shop in La Plata, Argentina. Photo by author.

2   Membrane over roofs in São Paulo, Brazil to simplify repair work of localized leaks. Photo by author.

11   Caroline Walker Bynum, "Wonder," *The American Historical Review*, 102, 1 (1997): 1–26, 21.

and executed by non-architects, what Rudofsky called, the production of the "communal vernacular".[7] The production of the communal vernacular today is not as pretty, organized and slow-made as Rudofsky's examples. It is also not very present in affluent countries. Where it happens, it is messy, precarious, sometimes humorous and witty [1][2]. Mostly found in the Global South, where economic issues and less invasive industrial systems exist, examples of the communal vernacular and its influence to architects has much to teach us.

In her opinion piece, "Build. No Exceptions" Billie Faircloth poised: "If we are going to wrestle with the role of the built in architecture and architectural pedagogy, then I propose we begin where Howard Davis did: begin with all that is built."[8] All that is built does not just belong to architects authorship, it is also what your neighbour did when something in her house broke and what the neighbour of that neighbour built when he needed to add an extra room in his house. Faircloth insists that we look at the built to avoid, for example, forms of architectural exceptionalism that exists when faculty in universities are designated as either designers or technicians.[9] Furthermore, to look at the built, is to look at cultural practices that own their everyday life in the best way possible, with the means available, which are very often scarce, a techno-social realm that is often disregarded in academia. However, as Faircloth states: "The built is an essential source for the transformation of pedagogy and practice."[10] Under such perspective, this paper presents the work, through built details, of three architecture studios that practice, teach and look closely at spatial practices of everyday life. By understanding socio-economical situations they make the most out of the least. Without raising loud political, environmental or discursive flags, emerging practices in South America offer alternative ways of working—and teaching—in times of global crises. Moreover, as an architect, teacher and researcher myself, I believe that I can make space through my privileged access to academic publications to make visible the work of architects and teachers that are less known in the Global North.

Vagueness

"Wonder is induced by the beautiful, the horrible, and the skillfully made, by the bizarre and rare, by that which challenges or suddenly illuminates our expectations, by the range of difference, even the order and regularity, found in the world."[11]

Caroline Walker Bynum

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12   Unpublished results by author of interview
      with Anna Juni, Enk te Winkel and Gustavo
      Delonero, at their architecture studio in São
      Paulo, Brazil on November 25, 2022.

13   The Latin term 'divagare' from the term vague
      comes from means: slowing down, to move
      away from the main road to go somewhere
      else. Dizionario Etimologico Online, Novem-
      ber 26, 2023.

14   Bynum, "Wonder," 24.

15   Unpublished results of interview with Anna
      Juni, Enk te Winkel and Gustavo Delonero,
      November 2022.

3   Space underneath large span of the MASP (Museo
      de Arte de São Paulo) designed by Lina Bo Bardi.
      Photo by author.

4   *Subsolanus* installation project by vão in Mexico
      City. Photo courtesy of vão.

At the reception of the Debut Award of the Lisbon Architecture Triennale of 2022, Anna Juni from vão, an architecture practice from São Paulo, Brazil starts their lecture by explaining the name of their office, which in Portuguese language means both: a span and something vague. Exemplifying what vão is with images of Lina Bo Bardi's MASP (Museo de Arte de São Paulo), Anna recalls that their office embodies both, the engineering and structural efforts of what it takes to make a span, and also the possibilities of free occupation generated by the space Bo Bardi allowed to exist below the generous concrete spanning structure siding Avenida Paulista [3] [12] To be vague, they argue, is to allow architecture to be experienced in a multiplicity of forms. Vão's vagueness is also present in how they work and organize their studio: they teach, they collaborate with artists, they look at each project as an individual entity, they collaborate with builders and acknowledge their skills, they research… While vagueness is often associated with lack of precision, it can also be associated with acts of wondering, moving slowly, being attentive. [13] I'd like to connect this form of wonder to what historian Caroline Walker Bynum, in her studies on medieval notions of wonder explained: "wonder was a response to something novel and bizarre that seemed both to exceed explanation and to indicate that there might be reason (significance-not necessarily cause) behind it." [14] In conversation with Anna Juni, Enk te Winkel and Gustavo Delonero, the architects explain: "When we talk about our work, we like to talk about processes. We don't like to show the work as a great idea that emerged from nowhere. Ideas emerge from possibilities and impossibilities. Ideas emerge to justify and to enable that something is done, they don't emerge from an aesthetic dream detached from a reality." [15]

In their early winning project *Subsolanus* (under the sun) from 2016, co-authored with Marina Canhadas and realized at the architecture gallery LIGA, Espacio para Arquitectura in Mexico City, the architects proposed to bring natural air from the rooftop of a building, where the association held conferences and meetings, to its ground floor where a small exhibition space existed. The built installation on the existing building designed by Augusto Álvarez, stretched 30 meters high [4]. The competition call was entitled *Geometrías Invisibles* and asked for an installation piece at the very small gallery. Within the constraint of smallness, the architects imagined instead a large, yet minor intervention full of air that would acknowledge the area winds and the invisibility of such movements into the little room while connecting to the rooftop activities. Such idea, they explained, came from a set of accidental and known references that connected with São Paulo's everyday urban life and their studies from architecture school. Inspired by situations they normally would encounter in the city, the project emerged from

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16   Rudofsky, *Architecture Without,* 92–93.

17   Unpublished results by author of on-line inter-
      view with Anna Juni, November 11, 2023.

5   Arrangement with discarded materials found in
     the streets of São Paulo by vão. Photo courtesy of
     vão.

6   Housless people drying clothes in metro
     ventilation grills. Photo courtesy of vão.

7   *Subsolanus* installation project detail by vão in
     Mexico City. Photo courtesy of vão.

18   Ibid.

8   *Subsolanus* installation project detail by vão in
     Mexico City. Photo courtesy of vão.

two situations: a humours arrangement of discarded materials randomly found on the street **[5]** and the common practice of drying clothes at metro ventilation openings by houseless people **[6]**. These encounters made them recall Rudofsky's published photographs of the wind structures from West Pakistan [16] and they related these references to the air and winds conditions of Mexico City. Because the gallery was so small, the only possible intervention to them seemed to fill it up with air. The project was realized with very little money, 2,000 USD, and a lot of courage as they remember. Silver tapes, plastic membranes and minimum steel structure brought not just air to the small gallery but public attention and visibility due to its unimagined scale **[7][8]**. The effort was possible due to a lot of mentoring, consultations and interactions with engineer, Rui Furtado, the constructor Bonifácio López, and a former professor, Marta Bogéa.

Vão's light, humorous way of working can be found in many of their built projects where a sense of wit and joy surrounds their decisions. This form of knowledge appears to rely on both, their formal education and the diverse conditions they encounter in their everyday life which confronts them with socio-political and economical struggles and a constant vibrancy in the cultural practices of making ends meet. When asked about how this form of sensibility can be transmitted to architecture students, Anna, who teaches 1st year students at Escola da Cidade in São Paulo reflects: "We have to be attentive to propitiate exchanges among students. Diverse thoughts among the same issues triggers better projects." [17] She explains how important it is to gather multiple ideas in one room to create dialogue and to create crossings in the imaginaries of what architecture could actually become. Likewise, placing at the same level the production of everyday life details found in the city as well as the production of high details found in architecture magazines expands on the possibilities and sensibilities of a project prospective. Accidental discoveries, new relationships and diversification of points of view are at the core of her pedagogical approach to teaching architecture. One on hand she is interested in how students can appropriate the ideas that they research, but also how can they incorporate ideas that emerge in collective dialogue, discussion and difference with other peers in the classroom. "Ideas do not belong to anyone", she says, and makes a comparison with theatre rehearsals: "when one or two actors or actresses rehearse a situation, there is a construction in the collective acting, we call it 'stair effect', acting together makes a plot evolve and 'climb up' to an unexpected development. I think the same occurs in debates and exchanges, things grow. This is also how we work in our office." [18]

In the project of critiquing modernism, the 1980's philosopher Gianni Vattimo proposed that 'weak thought' is a foundational principle for learni-

19 Gianni Vattimo, *Weak Thought* (Albany: State University of New York Press, 2012).

20 Unpublished results of on-line interview with Anna Juni, November 11, 2023.

21 Quote cited by Lucy A. Schumann in her book: *Plans and Situated Actions: The Problem of Human-Machine Communication* (1985), Sherry Turkle, *The Second Self: Computers and the Human Spirit* (Cambridge, MA: The MIT Press, 1984), 34.

22 Guaraní term shared with me by Juan Pablo Berbery from a conversation he had with his friend and architect Quique. November 24, 2023.

ng, designing and thinking. The philosophical proposition suggests a focus shift from cannons and ideologies (as much as possible) with an intention to encounter a viable way for thinking where interpretation – hermeneutics – is at stake in the presence of the thing itself, in other words, the 'itinerary of thought' emerges from that which the minds think with as it experiences it.[19] Weak thought also considers practices and events that are seemingly insignificant and thus it becomes a powerful tool to address a range of topics that are outside the field of the 'important' within the architectural discourse, providing in exchange, the alternative emergence of new ideas. Anna reflects that students sometimes go through a sense of anguish because they want answers. To ease this, she finds that a constant re-circulation and wondering of vague ideas is fruitful. However, she remarks, "we need to also trust emptiness, we need to trust lack. This may help diminish the anguish about having to fill up everything."[20]

Differential Thickness

> "Marginal objects, objects with no clear place, play important roles. On the lines between categories, they draw attention to how we have drawn the lines. Sometimes in doing so they incite us to reaffirm the lines, sometimes to call them into question, stimulating different distinctions."[21]
> **Sherry Turkle**

The Argentinean grillers—parrilleros—that occupy city sidewalks to sell sausages and meats have a particular technique to attract customers. They place in the fire a small lump of fat to increase the reach of the smoke with the hope to catch more clients within a larger radius of impact. Something local becomes expansive by increasing the possibility of how far it can stretch. Spatial practices as such, are important to Juan Pablo Berbery, architect and teacher working in Buenos Aires. Juan Pablo's studio is called OTRO (other) and he is a member of the collective, *Dispositivos Nómades*, that studies and documents urban nomadic devices such as those that grillers and other businesses build and move around cities. His interest in urban and suburban socio-cultural artifacts and built conditions manifests also in the way he teaches and practices the discipline.

The project *Casa Yaraví* in Moreno, exemplifies his approach to practicing and teaching. Moreno is a city bordering the capital of Buenos Aires that Juan Pablo associates with the guaraní term: 'yeré.'[22] Yeré, he explains, is something that surrounds and protects something else. A 'yeré' can be a good friend or a gallery around a house to protect it from winds and heat.

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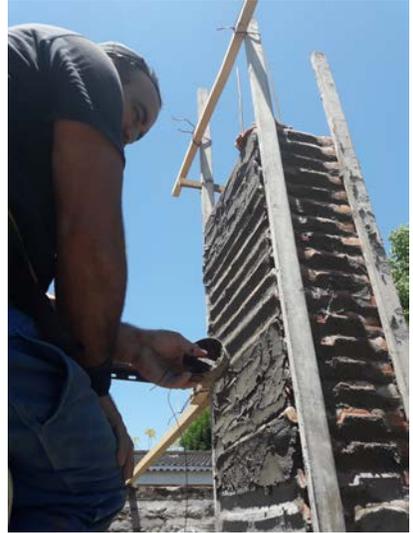
9   Column project at Casa Yaraví by OTRO. Buenos
     Aires, Argentina. Photo by Federico Cairoli.
     Courtesy of Juan Pablo Berbery.

10   Construction of column project at Casa Yaraví by
     OTRO. Builder using a tuna can to smooth the
     cement mortar joints. Buenos Aires, Argentina.
     Photo courtesy of Juan Pablo Berbery.

12   Column project at Casa Yaraví by OTRO. Buenos
   Aires, Argentina. Photo courtesy of Federico
     Cairoli.

13   Column project at Casa Yaraví by OTRO. Buenos
     Aires, Argentina. Photo courtesy of Federico
     Cairoli.

He considers Moreno to be this bordering structure of the Capital, wanting to have a bit of the center but always remaining in the periphery. The project is located in a modest middle-class neighborhood and he was commissioned to essentially make a 'yeré', an open garage for one car on one side of the house and a gallery for drinking mate or similar outdoor activities on the other one. The project minimal budget entailed that most materials had to be found and labor was conducted by the architect himself together with his cousin.

Leftovers from another construction site determined the materials to begin the work. More than 200 hundred French roof tiles were transformed into two columns, one in the front, one in the back. The architect proposition was to interfere as little as possible the ground floor to maximize the use of space, and if needed, to push the boundaries of the garage that tightly could fit two cars if needed for a visiting guest. Garages in Argentina are extremely versatile spaces, a birthday party, a Sunday barbecue lunch, a gym class organized among neighbors… anything can happen in such space. The garage embodies a space quality that Juan Pablo likes to call 'differential thickness.' The columns to allow room for such spaces were then made by stacking the French tiles with cement mortar, trying to erase as much as possible their identity [9]. Two holes were made on each tile to tide them structurally with reinforcing bars, a literal example of 'atado con alambre' [10]. The two columns sit on small, non-visible, concrete bases. On the top, they receive a steel beam that connects with a flexible joint to allow for discrete movements due to wind and other factors. The beam is helped by a steel cable that connects with the column foundation on one end and with the existing house roof on the other. From this beam, two smaller ones are hanged perpendicularly on one side and on the other side they rest on the party wall of the lot [11] [12] [13]. The new garage and gallery coverings are made by a simple steel frame with a corrugate metal sheet. The witty, seemingly fragile structure lightens up the entrance and back side of the house, allowing maximum space and response to the clients' needs with minimal use of materials.

In his engagements with teaching, both at the University of Buenos Aires (UBA) and at the National University of San Martin (UNSAM), Juan Pablo also teaches in the 2nd year of architecture school. Pedagogically, the architect believes in the need to build an analytical and critical theoretical body of the non-hegemonic production of cities. Especially in Latin America, it seems fundamental to him to be able to investigate and build solid arguments about behaviors and dynamics of their ways of living. He explains: "our cities, compared to European ones, are practically young and need a theorization of alternative practices to what is currently known in
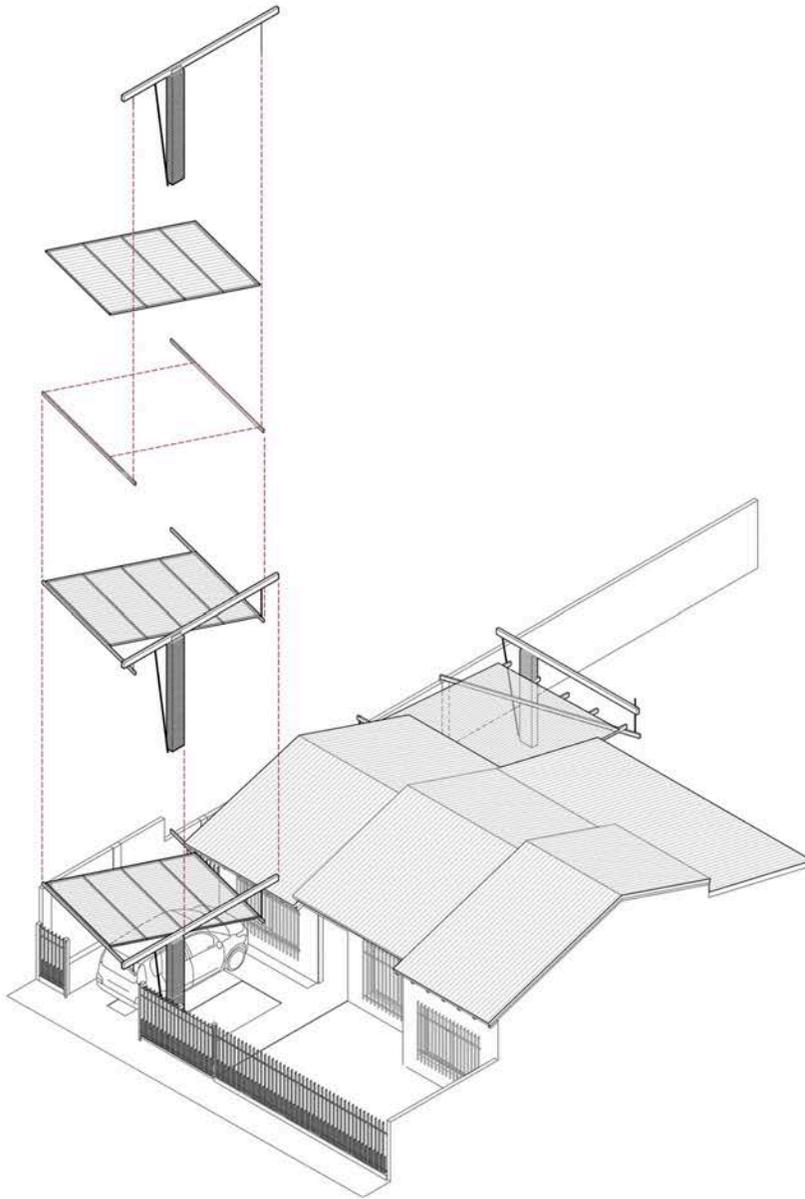
11   Drawings of Casa Yaraví project by OTRO showing the two new additions in the front
      and back of house. Drawing courtesy of Juan Pablo Berbery.
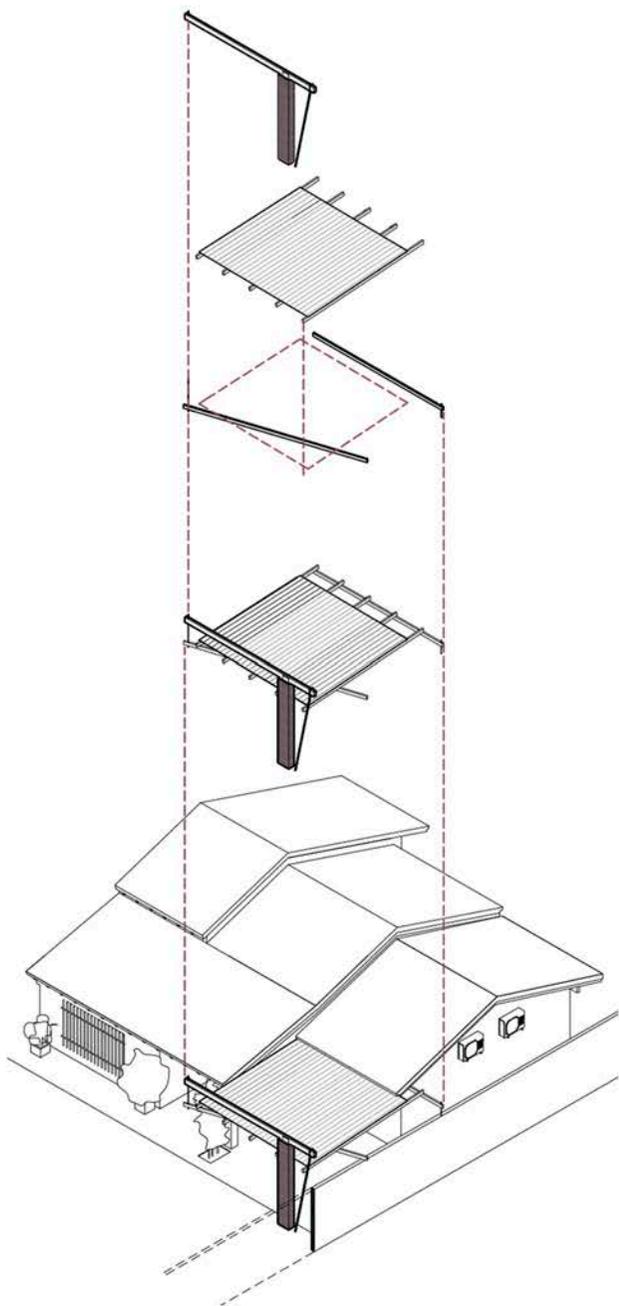
23   Unpublished results by author of on-line inter-
      view with Juan Pablo Berbery, November
      17, 2023.

24   Lucy A. Suchman, *Plans and Situated Actions:
      The Problem of Human-Machine Communica-
      tion* (Palo Alto, CA: Xerox Association, 1985).

25   Ibid., 35.

26   Solano Benítez & Gloria Cabral, *Archives,
      Journal of Architecture* 6 (2020): 51.

academia."[23] Juan Pablo thus expands the cultural heritage of habitability by attending to forgotten, unrecognized and invisible practices that tend to be lost or are in danger of not being known because they are minorities and perform outside academic circles. To address this, he exposes students to forms of unspoken building details such as the ones made by people making urban nomadic devices or those found in working class neighborhoods made by non-architects. When it comes to designing buildings, Juan Pablo's approach encourages the accumulation of partial fragments. Students begin projects by understanding different spatial situations that involve people, physical components and their performance to make 'life' happen. He insists on expressing to them that things have weight, they break, they can be associated and can be lived. Within this vibrant intellectual position, fragments, pieces, devices can respond to different problems and in their material and structural accumulation can create new spatial possibilities. Differential thickness is a concept that he employs to expand on what perhaps Lucy A. Suchman called "situated action."[24] Suchman elaborates on this notion to explain that "the course of action depends in essential ways upon the action's circumstances. Rather than attempting to abstract action from its circumstances and reconstruct it as a rational plan, the approach is to study how people use their circumstances to achieve intelligent action."[25] The anthropologist gives agency to particular actions to indicate that, just like Frascari positioned details, fragments and smaller units of execution are determinant of larger plans (or designs) and not just subordinates. Differential thickness is then the space of architecture to embody many places, reach out far and near, transform thin materials into thick ones and the capacity of exercise intellectual permutations that shuffle and recombine known things into unexpected and surprising ones. Such strategy to address issues of material and social sustainability seem fundamental to architectural education, yet, it can only be implemented by kindling a new set of sensibilities and engagements with built practices.

Opportunism

> "Sometimes we have to talk to explain what is it that we are no yet sufficiently clear about, but in the conversation it appears with great force and that's good. We are made by others."[26]
> **Solano Benitez**

While opportunism can be associated to morally selfish acts, in architecture can also be a form knowledge that finds chances among defined systems or seemingly useless materials or conditions. When I interviewed

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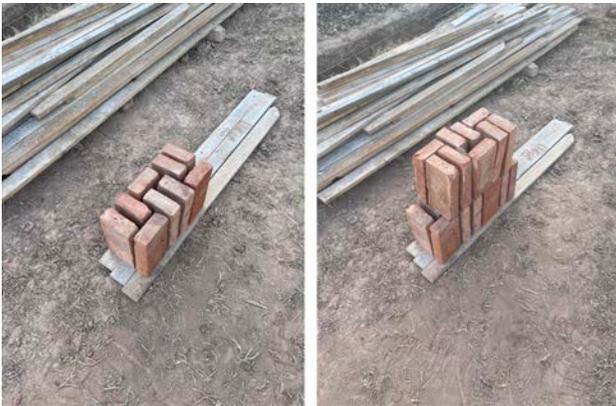
14   Augustín Berzero's house in Córdoba, Argentina
      showing cut thermal blocks to make thin screen.
      Photo courtesy of Federico Cairoli.

15   Brick bonding of *Tres Casas* in Córdoba, Argentina
      by Agustín Berzero. Photo courtesy of Agustín
      Berzero.

16   Brick walls showing vertical bonding and concrete
      columns of *Tres Casas* in Córdoba, Argentina by
      Agustín Berzero. Photo courtesy of Agustín
      Berzero.

Agustín Berzero at his house in Córdoba, the capital of the homonymous province in Argentina, I encountered, through his built work, forms of positive opportunism at many scales. When I asked for example, about the kitchen table in which we were seating at, which is a concrete slab, he responded that he had made it with a previous table which he did not like and to give it a purpose, he used it as a formwork to cast the one that he now uses. The house he built for himself is mostly made out of exposed thermal bricks, a common and inexpensive material produced in Córdoba that defines mostly low-income constructions done by non-architects [14]. He used this material in a multiplicity of ways. As load bearing walls but also as a thin screen in the front facade that provides security and privacy to the house. The way in which he created the screen was by cutting, at the construction site, the thermal blocks into three parts each. By thinning the bricks, he lightened up the weight of the screen and maximized the use of the material. The house, which is full of details made with re-used parts and a witty used of materials is a modern monument to opportunism. Agustín believes that each project is indeed, an opportunity to do something graceful, joyful. Instead of repeating solutions from project to project, each exercise is a chance to investigate materials differently. In two recent projects, he has been exploring how to articulate brick bondings so all the infrastructural systems of plumbing and electricity can be built up concurrently within the wall section. To make this happen, in the *Tres Casas* project, he developed a bonding typology that works vertically, leaving linear ducts to embed the various tubes and pipes needed to supply the house [15]. Working closely with construction workers, they tested the bonding detail on site which proved to work well. The brick walls work simultaneously with concrete columns and slabs that give altogether provide stability to the entire spatial system [16]. Agustín self-challenge to find a way to make a wall section that considers simultaneously aspects of structural and infrastructural resolution is driven by several factors. One of them is the desire to honour the craftsmanship of brick layers by avoiding any post-demolition to embed pipes on the walls. Another factor is the desire to reduce the use of material by avoiding any rendering or plastering of the wall, to attain this, the wall resolution must be done in the tidiest, most well-crafted way. And a third aspect, is the concurrent planning of workers' schedule, both bricklayers and plumbers and electricians, so they can all work in the most efficient way as the walls come up. The resourceful handling of workers time reduces cost for the client while providing the workers with a clear understanding of the project's logic, which they appreciate as they are not faced with surprises that happen when tasks are disconnected for each other's field of expertise.

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17   Construction of *Ceramic House* in Córdoba,
      Argentina by Agustín Berzero, showing internal
      cavities for services pipes and ducts. Photo
      courtesy of Agustín Berzero.

18   Construction of *Ceramic House* in Córdoba,
      Argentina by Agustín Berzero. Photo courtesy of
      Agustín Berzero.

27   Claudio Solari, *Rafael Iglesia: Lecturas en la
      construcción poética* (Buenos Aires: Diseño,
      2020), 57.

In the *Casa Cerámica,* another experiment with brick walls happens. In this case, the use of thermal ceramic blocks, which are thicker than regular bricks, opened up the opportunity for the architect to imagine with its hollowness [17] [18]. The vertical liberated cavities are obtained by making strategic cuts to some of the blocks where the needed ducts need to go through the wall. Again, the decision is made with the desire to avoid any post-demolition of the wall to fit in infrastructural elements. For Agustín the premise of working with scarcity in the most graceful way is manifest in all the works he embarks.

When it comes to teaching, he explains that he is part of a 2nd year studio as well, where curricular planning does not deal directly with building details but more with structural principles and overall understanding of spatial consequences. However, he expresses that some of the same logics that he employs when building details enter in the overall teaching approach he guides. To him, model making is at the core of architectural pedagogy, always understanding that all elements in the model have weight and structural principles. Students don't work with massing models but models made out of structural components and discussions about spans, weight, material qualities. Through this method, discussions about details and material components potentials immediately emerge in pinups and tutorials. For Agustín the most powerful tool of pedagogy is conversation about and around projects. To converse, literally means to him: 'to turn around with', to make turns around the same subject in order to elucidate and discover, as words, concepts and models are seen from different perspectives. The practice of turning around, just like the *atado con alambre* expression, has its own formalized significance in Spanish: *buscarle la vuelta*, which means, to look for the right 'turn' so something can work, so something can fit well. In the constant movement of searching for something through conversations around models, students realize and discover structural and spatial qualities of different architectural components. This practice resonates with the work of Argentinean architect Rafael Iglesia, who saw architecture in constant potency towards new arrangements and opportunities. Speaking about his work, Ana María Rigotti explains that Iglesia understood architecture components as "objects that assert themselves in their autonomy and matter and refer to playful, childish experiences, to the simple logic of support and balance of wooden blocks, puzzles, chopsticks, playing cards (…) always out of tune with the logic of codes and reconsidering the elements as interchangeable pieces to assemble." [27] The playful nature of Iglesia's approach of architecture is embodied in Agustín methodology towards teaching and practicing architecture.

28   John Morreall, *The Philosophy of Laughter and Humor* (Albany: State University of New York Press, 1987), 2–3.

29   Jonathan Watts, "Richest 1% account for more carbon emissions than poorest 66%, report says," The Guardian, November 20, 2023.

30   Smiljan Radic, *Habitaré mi nombre* (Barcelona: Puente editores, 2022), 20–21.

31   Henri Bergson, *Laughter: An Essay on the Meaning of the Comic* (Massachusetts: The Macmillan company, 1911), 2.

32   Ibid., 18.

Unconcludingly...

> "For both the philosopher and the humourist, nothing is to be taken for granted: everything can be looked at with a questioning, experimental, even irreverent eye."[28]
>
> **John Morreall**

Humour, in the most simplified definition means 'state of mind,' expression which also extends to one's emotional state. Culturally, we generally relate good humour with joy and laughter and bad humour with anger. In South America, humour, both good and bad, is very much part of everyday life. Unstable economies, socio-political turmoil and the recent increment of environmental disasters make life difficult.[29] Yet, good humour, despite all crises, acts as a coping mechanism to keep afloat, to find meaning in the most difficult situations, to figure things out. Moreover, humour becomes a thriving force for creative co-existing with everyday life's unexpected events. The knowledge production that this approach to life generates when it comes to making buildings demonstrates an aspect of architecture that is rarely discussed: under which circumstances and mood, do architects and non-architects design and make buildings? While global crises do not just affect the Global South, but as we see daily, they permeate in everyone's everyday life, it seems relevant to look closely at practices of coping that act and situate their actions in particular contexts and with a great degree of wit and joy. Smiljan Radic, architect practicing in Chile quotes Henri Bergson in his book *Habitaré mi nombre* who speaks of 'good sense' as being a non-passive attitude of the spirit. Good sense, Bergson explains, requires an awaken attitude, an adaptation that never ceases to renew itself in face of always changing situations.[30] Bergson's good sense definition could be related to his interest in the comic and laughter. In 1900, he published in French three essays under the title: *Laughter: An Essay on the Meaning of the Comic*. Bergson was interested in understanding the role of laughter for human imagination and said that a comic spirit "has a logic on its own, even in the wildest eccentricities."[31] For the philosopher, the comic spirit constituted a social activity in which adaptation and playfulness can bring about new thoughts and relationships. He expressed:

> "What life and society require of each of us is constantly alert attention that discerns the outlines of the present situation, together with a certain elasticity of mind and body to enable us to adapt ourselves in consequence. Tension and elasticity are two forces, mutually complementary, which life brings into play."[32]

If new building details, are emerging and being developed all around the world due to the many difficulties and constraints of our times, closer attention to their resolution and stories may help practices and academics to grasp, disciplinarily, coping mechanisms that care for the built environment gracefully and joyfully. In the very polarized world we inhabit, seeking other ways to discuss and learn architecture through practices more than ideologies seems urgent. I believe humour can offer an expanded alternative to such effort.

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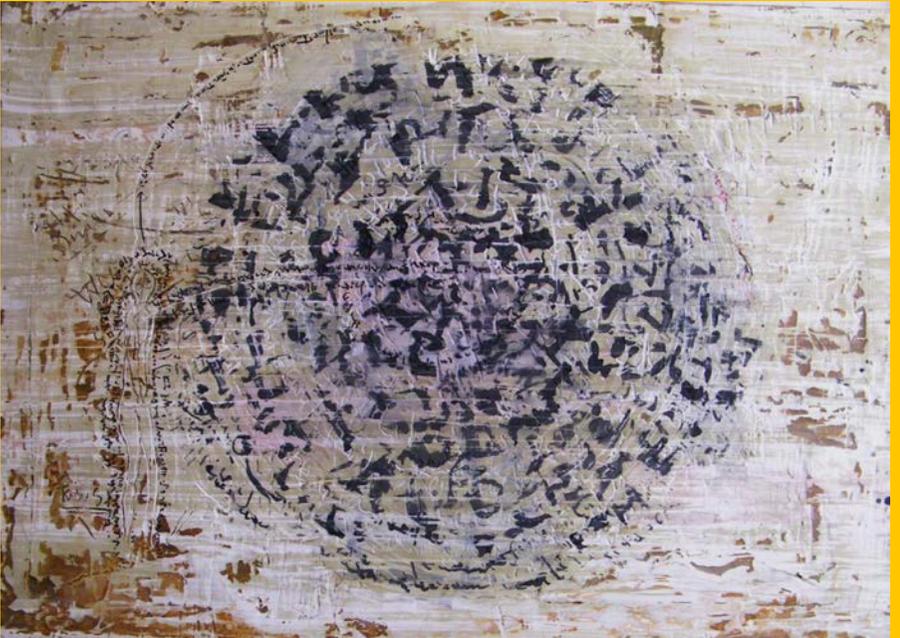Zuchovicki Claudio with Mario Pergolini. Vorterix. March 20, 2023. https://www.youtube.com/watch?v=vrfcx5-4UPo.

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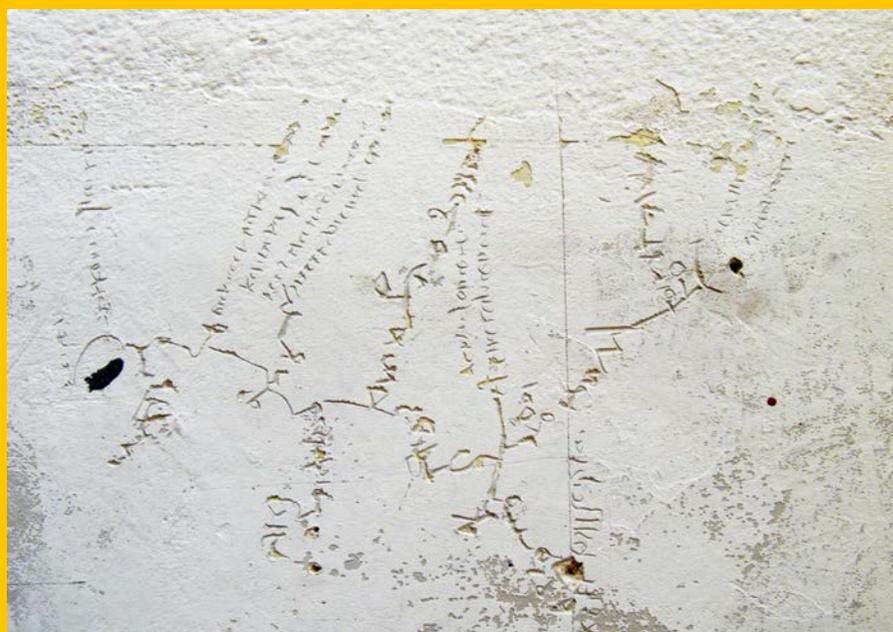
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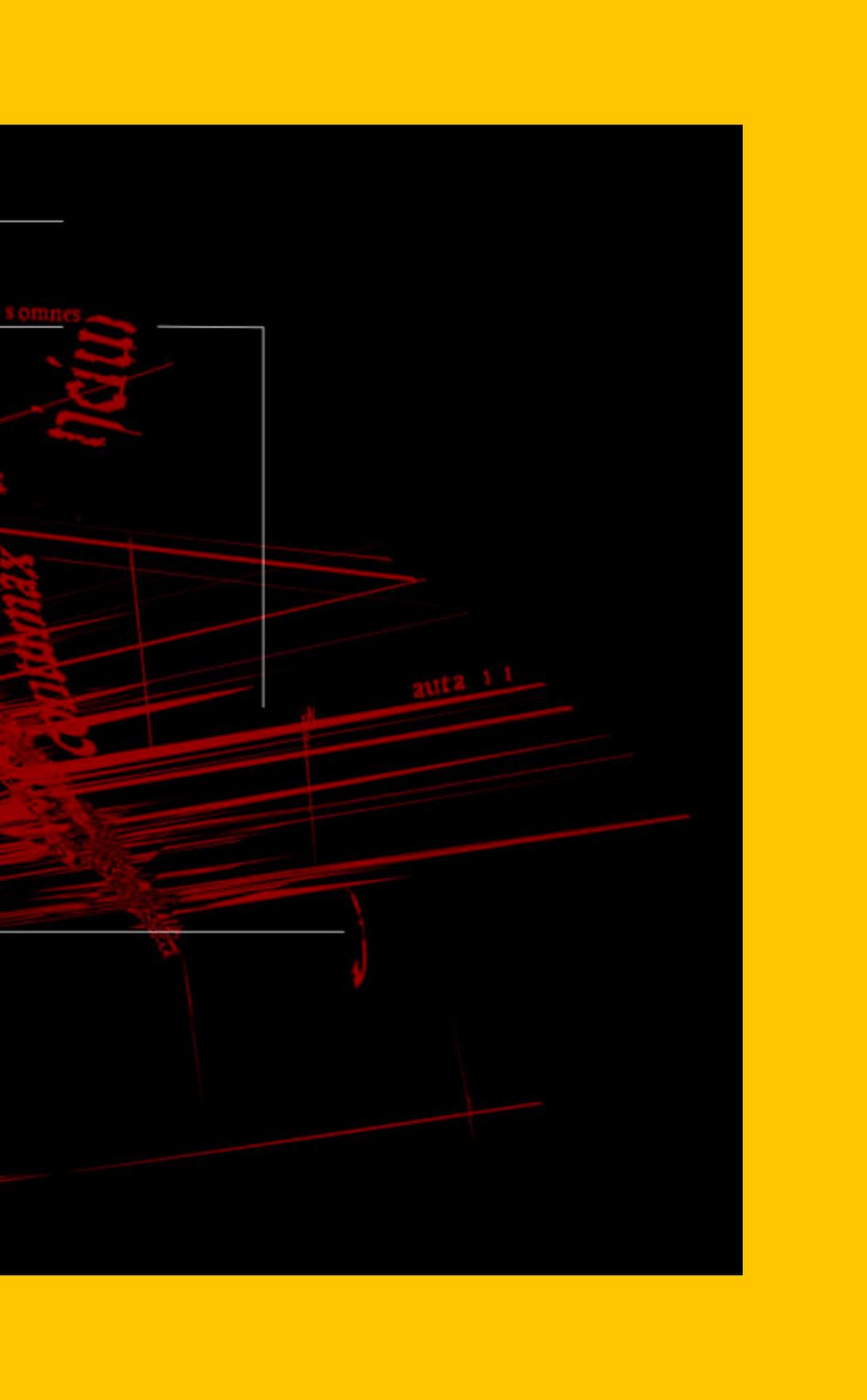rim , te

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Lantern Field and Contested Cultural Identity:
Museum Installation as a Platform for Education, Practice, and Criticism

Aki Ishida

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1   Richard W. Hayes, *The Yale Building Project: The First 40 Years* (New Haven: Yale School of Architecture, 2007).

2   Harriet Harriss and Lynnette Widder, *Architecture Live Projects: Pedagogy Into Practice* (Oxon: Routledge, 2014).

3   Edward W. Said, *Orientalism* (New York: Vintage Books, 1978).

4   "Young Architects Program (YAP)," Museum of Modern Art, accessed November 20, 2023.

1   Photography: Jeff Goldberg/ESTO

Introduction

What can the practices of architecture and museum curation bring to the education of an architect? Design-build projects, where students working alongside faculty and community-based clients, design and build a structure, pavilion, or an art installation, have become an integral part of architecture school curricula.[1] Also called 'live' projects, they often serve as a vehicle for both service and pedagogy.[2] Besides imparting syntactical knowledge in construction details, fabrication, managing of client expectations, and negotiating the complex budgetary and legal constraints of the professional world, how can design-build projects challenge pedagogical conventions or proffer questions concerning cultural milieus that emerge through community engagement?

Reflecting upon *Lantern Field* [1], an art installation by faculty and students of Virginia Tech for the Smithsonian Institution, affords critical examination of an impermanent design-built project as a form of pedagogy, practice, and criticism. Situated in a museum charged with a contested history of Asian identity in the West, a transdisciplinary team of students and faculty created an art installation that transmuted discoveries from architecture, music, and computer engineering. The project educated both students and public about Japanese culture by interpreting the traditions of lantern festivals and craft in Japan. It did so in a space of Western gaze, in a building designed to house collections of Asian arts amassed by an American industrialist James Lang Freer in the early 20th century. These contexts raise contemporaneous questions regarding Japanese American identity, as well as authenticity and Palestinian American literary critic Edward Said's theory of Orientalism, or a discourse of the image constructed about the East through a Western worldview, which presents the East as exotic, vulnerable, and feminine.[3] Using the conventions of a museum typology, the installation entwined architectural practice, public engagement, education, and curation to reexamine representation of cultures and counter stereotypes.

Installations by Architects as a Platform for Pedagogy and Practice

Over the past few decades, series of installation by architects—larger than sculptures but smaller than buildings and often temporary—have enabled architects to experiment with new materials or fabrication techniques. SHoP's *Dunescape* of 2000, commissioned by the Museum of Modern Art in New York as the inaugural project of their Young Architects Program,[4] is one notable example in a series of installations by then-emerging architects who have since become international figures. Architecture practices such as

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5   FUTUREFORMS, accessed November
    21, 2023.

6   Hannah, accessed November 21, 2023.

7   After Architecture (Studio), accessed November 21, 2023.

8   Sarah Bonnemaison and Ronit Eisenbach,
    *Installations by Architects: Experiments in
    Building and Design* (New York: Princeton
    Architectural Press, 2009).

9   Ila Berman and Douglas Burnham, *Expanded
    Field; Architectural Installation Beyond Art*
    (Novato: Applied Research and Design Publishing, 2016).

10 "Creative Placemaking," National Endowment
    for the Arts, accessed November 20, 2023.

11 Ann Markusen and Anne Gadwa, *Creative
    Placemaking: Executive Summary* (Washington, D.C: National Endowment for the
    Arts, 2010).

2   Yoko Ono's "Wish Trees for London" at the "Yoko
    Ono To The Light" exhibition at the Serpentine
    Gallery, London, June 2012. Photography:
    Michelebuzzi

12 Jacques Rancière and Gregory Elliott, *The
    Emancipated Spectator* (London: Verso, 2009).

FUTUREFORMS [5] in San Francisco have built interactive installations and temporary structures to experiment with fabrication tools, software, sensors, and actuators clients may not be ready to in a permanent. More recently formed firms such as Hannah [6] and After Architecture [7] have focused on bio-material assemblies, robotic-based fabrication, and 3D printed buildings. While this form of practice has also come under scrutiny for producing short-lived structures that sometimes exploit student labor and result in large amounts of material waste, installations by architects have facilitated experimentation and pedagogy, and diversified architects' practice. [8], [9] Furthermore, these projects often serve as a preliminary step for, and an ephemeral microcosm that embodies the same approaches and tenets of more permanent buildings by, an architecture office.

The proliferation of these installations converged with increased interest on a national level for community-based art project. Since 2011, the National Endowment for the Arts, the independent US federal agency funding art and art education, has funded Creative Placemaking projects that "integrates arts, culture, and design activities into efforts that strengthen communities" [10] by partnering with local organizations and institutions. These art project would spark economic growth, make streets and public spaces safer, and bring together a diverse population around a place. Such initiatives have brought awareness to the arts across the nation as an accessible means to make meaningful gathering spaces, a platform on which to question and construct community and cultural identities. [11] These projects underscore participatory co-creation, resulting in process that is more inclusive and engaging.

Lantern Field combines the hands-on pedagogy with an experimental practice (building upon the instructor's body of work in similar interactive installations using light and sound) and a form of participatory creative place-making. It also borrows from artists such as Allan Kaprow, who in the 1960s directed events he called Happenings, or spontaneous performance in which the audience became performers, as well as Yoko Ono, whose serial work *Wish Tree* [2] invites participants to write and tie wishes to a tree. Accordingly, by situating an installation within a national art museum, *Lantern Field* became a highly visible setting to question and reexamine multiple Japanese identities in the West. It turned a national museum into a platform for pedagogy, practice, and criticism by figuratively and physically by moving cultural learning out of classrooms and galleries and into a garden, a symbol of life and renewal. French philosopher Jacque Rancière writes in *Emancipated Spectator* that participatory performing art blurs the boundaries between actors and spectators. [12] Likewise, viewers of *Lantern*

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3   Photography: Jeff Goldberg/ESTO

4   Photography: Jeff Goldberg/ESTO

5   Photography: Jeff Goldberg/ESTO

6   Photography: Jeff Goldberg/ESTO

7   Photography: Jacob Ehnmark

13   The courtyard access for the public had been
     limited by the Smithsonian due to lack of an
     accessible ramp. Construction of the ramp
     was completed in April 2023, making the
     courtyard accessible to the public. "Featured
     Initiatives: Courtyard Accessibility," National
     Museum of Asian Art, accessed November
     22, 2023.

Field become makers, and when even a deeper engagement occurs, cultural critics.

Lantern Field during the National Cherry Blossom Festival

Lantern Field is an interactive installation designed by Japanese-born architect and educator Aki Ishida in collaboration with students and faculty from Architecture, Computer Science, and Computer Music at Virginia Tech. It was designed over the spring semester of 2013 and installed on April 6 and 7, 2013 during the National Cherry Blossom Festival in the courtyard of the Smithsonian's Freer Gallery in Washington, D.C., a part of the National Museum of Asian Art. *Lantern Field* involved public participation on two levels: the making of paper lanterns and in the activating of the light and sound once the lanterns were installed. During a day-long public workshop in the Freer courtyard [3], the museum visitors folded the mulberry paper lanterns under the guidance of the design team. The event opened the museum's central courtyard, which has only been accessible for viewing but not for other activities,[13] to the public for collective making and reflection on the installation. The field of lanterns grew over the course of the day as they amassed on a bamboo frame [4] suspended beneath the vaulted ceiling of the loggia facing the courtyard.

The surfaces of the folded papers and the plaster ceiling captured the mutable brightness and hues of natural light during the day and electric—artificial—light at night [5]. As people walked under the lanterns, sensors detected their presence and activated a gradated shift in light that oscillated between tones of white and deep magenta [6]. The visual experience was accompanied by the sound of bamboo chimes that intensified the longer people lingered. The multisensory installation coalesced expertise and ideas that could only manifest through transdisciplinary creativity and teamwork.

The ephemeralness and delicate luminescence of the artwork reflect the Japanese tradition of *hanami*, or flower viewing [7], a ritual started in the Heian Period (794-1185) and is mentioned in the *Tale of Genji*, a classic literary work from the 11th century. The custom began with members of the Imperial Court viewing cherry blossoms while drinking sake and feasting under the trees and writing poems reveling in the fleeting beauty of the blossoms. The ritual spread to the warrior class, then in modern times, to a wider sector of Japanese population.

The practice of flower viewing was brought from Japan to the United States along with a gift of trees. The National Chery Blossom Festival, held in Washington, D.C. every March to April, commemorates the gift of cherry trees from Japan to the United States while celebrating the friendship

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14 "Charles Lang Freer Research Portal," National Museum of Asian Art, accessed November 20, 2023.

16 "Freer Gallery of Art: Media fact sheet," Smithsonian, January 1, 2018.

15 John A. Pope, Introduction to *Freer Gallery of Art*, ed. John Alexander Pope, Harold P Stern, and Thomas Lawton (Tokyo: Kodansha, 1971), 13.

17 John Alexander Pope, Harold P Stern, and Thomas Lawton (eds.), *Freer Gallery of Art*, ed (Tokyo: Kodansha, 1971), 1–4.

18 Susan Hobbs, *Whistler Peacock Room* (Washington, D.C.: Freer Gallery of Art, Smithsonian Institution).

8 James McNeill Whistler / National Museum of Asian Art, Smithsonian Institution, Freer Collection, Gift of Charles Lang Freer, F1904.61

19 "Charles Lang Freer, Art Collector, Dies," *New York Times*, Sept. 26, 1919.

between the two countries. In 1912, Mayor Yukio Ozaki of Tokyo gifted 3,000 cherry trees to the city of Washington, D.C.. Helen Herron Taft, the US President's wife, and the wife of the Ambassador of Japan planted the first trees along the Potomac River's Tidal Basin, which, with views of the Thomas Jefferson Memorial and the Washington Monument, has become the focal point of the Festival. The National Cherry Blossom Festival, which was first held in 1934, grew out of this simple ceremony. The ritual of cherry blossom festivals in both countries share similarities. In March when the air is still chilly, the cherry blossoms signal the beginning of spring and is often the first occasion in which people dine and drink outdoors. Although the flowers peak for a period of only two-weeks each year, the resonance of their ephemeral beauty remains as an experiential artifact. For the Japanese, the blossoms symbolize the temporal beauty of all lives. Each year in Japan, the timing of cherry flowers in bloom is carefully forecasted by meteorologists and followed attentively by the public. This practice has been adopted in the US, where the bloom around the Tidal Basin is carefully tracked as if a seasonal betting game.

Charles Lang Freer and His Art Collection

The Freer Gallery, together with the Arthur M. Sackler Gallery, form the Smithsonian's National Museum of Asian Art. The gallery was founded in 1906 by Charles Lang Freer, a Detroit-based railroad car manufacturer and a self-taught art collector. After amassing his wealth, Freer retired at the age of 45 and dedicated himself to studying and collecting Asian art through his travels to Asia.[14] The museum has augmented the collection of 9,000 objects he donated with new purchases since 1921,[15] reaching 26,000 objects in 2018.[16] In addition, he created an endowment to support "the study of civilization of the Far East."[17] The collection includes items from Japan, Korea, China, India, Iran, and Egypt, among others. Additionally, it contains work by Western artists collected by James McNeill Whistler, most notably the *Peacock Room* (1877) [8], a dining room designed by Whistler and British architect Thomas Jeckyll to house Whistler's collection of Chinese blue-and-white porcelain collection. Freer purchased and trans-located the room in 1907 to his home in Detroit; it was moved to the Freer Gallery upon his death.[18] Such background makes the setting of *Lantern Field* poignant and appropriate, as it stresses the urgency for alternative representation of current and future Asia.

The collection also includes paintings by American artists of the Gilded Age, such as John Singer Sargent and Winslow Homer, and over 1,200 works of art by Whistler himself.[19] Notably, these artifacts are examples of

20   Ayako Ono, *Japonisme in Britain: Whistler, Menpes, Henry, Hornel and Nineteenth-Century Japan* (London: Taylor & Francis Group, 2003), 86.

21   Ono, *Japonisme in Britain*, 66.

22   Isabella Stewart Gardner Museum, *Inventing Asia: American Perspectives Around 1900*, ed. Noriko Murai and Alan Chong (Boston: Isabella Stewart Gardner Museum, 2014), 10.

23   Pope, Introduction to *Freer Gallery of Art*, 10.

24   Isabella Stewart Gardner Museum, *Inventing Asia*, 11.

Japonisme, a French term coined in the late nineteenth century to reference the wide popularity and influences of Japanese art on Western artists, representing Japan through the Western lens. While heavily influenced by Japanese paintings and ceramics, Whistler never visited Japan. Furthermore, his belief in 'art for art's sake' contradicted the role of art in Japanese culture, in which art is integral to everyday life. [20] He took inspirations from Japanese art, such as the seafoam green of the Peacock Room color or the kimono-like garment worn by the Greek model Christina Spartali in the painting *The Princess from the Land of Porcelain* in the *Peacock Room*, but his interest was in exoticism, not accurate representation, of Japan. [21]

Charles Lang Freer, along with Isabella Stewart Gardner of Boston, were two of most prominent American collectors of Asian Art in the early 20th century. Following the widespread Western enthusiasm for Japan in the late 19th century, Gardner and many of her friends were entranced by Asia. Their deep curiosity and extensive network of collectors and intellectuals of Asian arts—including Okakura Kakuzo, the Japanese scholar most known as the author of *The Book of Tea* (1906), and Ernest Fenollosa, a Harvard-educated historian of Japanese art who taught at the Imperial University at Tokyo, and their peers—contributed to the making of elite American culture around 1900. [22] Freer's purchases were advised by elite art dealers in Japan [23] as well as an extensive network of American intellectuals on Asia, including Fenollosa. According to Freer's terms of the Deed of Gift, only the objects in the permanent collection can be exhibited in the gallery, and loans from the collection are prohibited. For this reason, works by contemporary artists or works not in the Freer collection are exhibited in the adjacent Sackler Gallery. The temporary nature of the *Lantern Field* enabled it to be installed in the building's courtyard.

Multiple Representations of Japanese Culture

Art historian Noriko Murai and curator Alan Chong characterize the multivalence of Gardner's collection as "collectively reflective of the American cultural imagination of "Asia."" Though advised by experts on Asian arts, Gardner never became an expert herself and collected a constellation of artifacts that ranged from valuable artwork to quotidian objects. [24] The Japanese identity associated with Asian art collections from the early 1900s is of a specific kind that differs from that of most Japanese living in Japan in the past or present, or the Japanese Americans living in the United States today. The cosmopolitan intellectuals such as Okakura of Japan and Rabindranath Tagore of India who influenced the taste of American collectors of Asian art around this time, including Freer and Gardner, were charismatic cultural

25   Isabella Stewart Gardner Museum, *Inventing Asia*, 11.

26   "The Madama Butterfly Effect," *Yale Daily News*, October 19, 2012.

27   Isabella Stewart Gardner Museum, *Inventing Asia*, 12.

28   Kwame Anthony Appiah, *Cosmopolitanism: Ethics in a World of Strangers* (New York: W. W. Norton & Company, 2006): 113.

29   Kwame Anthony Appiah, "Identity Against Culture: Understandings of Multiculturalism," *UC Berkeley: Townsend Center for the Humanities*, September 14, 1994.

intermediaries who were privileged, highly educated, and multi-lingual. From their privileged, masculine perspective, they constructed a specific image of Japan that persists today in the West.[25]

Mirroring the representation of Japan cultivated over a hundred years ago in the United States, the National Cherry Blossom Festival collectively reflects a multitude of Western imaginations of Japan over time. The cherry trees represent an image of Japanese culture which, despite it becoming more known and accessible today than in 1900, carries a hint of foreignness for many Westerners; it is often constructed in their imagination based on stories and indirect knowledge. Most North American knowledge of Japan today is based on what they glean from popular culture, such as the fantastical worlds of Studio Ghibli's anime films, combined with the stereotypes firmly cemented in Western imagination in the early 1900s, including Puccini's opera *Madam Butterfly* (1904) and Whistler's paintings, which persists. The opera *Madam Butterfly,* a story of a geisha who commits suicide when her lover, an American soldier, returns home to marry a white woman, has spurred criticisms for reinforcing a stereotype of Japanese women as being erotic, submissive, hypersexualized, and exotic.[26] For architecture students outside of Japan, their images of Japan is a fragmented collage of characters drawn by Hayao Miyazaki; work of contemporary Japanese architecture by Japanese practitioners, including Pritzker Prize Laureates Toyo Ito, SANAA, and Tadao Ando; and artwork they encounter in museums, including early 1900s paintings depicting Western female figures wearing pan-Asian garments.

Perhaps then it is fitting that the *Lantern Field*, designed by a group of architecture students, nearly all of whom neither had first-hand knowledge of Japanese culture nor had visited there, was situated in this place of blurred, contested Asian identity. One could debate whether the Freer Gallery's collection represents Japan accurately or authentically, though that is not the fruitful argument here. There are many identities of Japanese culture, particularly outside of Japan. Murai and Chong also aptly state in their book on Isabella Stewart Gardener's collection, "The transnational careers of these figures [the cosmopolitans like Tagore and Okakura] challenge us to define culture not as a predetermined monolith but as an evolving process of interpreting differences and affinities."[27]

In response to those who say that globalization is making cultures homogeneous, British American Philosopher Kwame Anthony Appiah argues for the possibilities of pluralistic cultures that maintain many identities.[28] In the United State where the Anglo-Saxon culture dominates, we must resist assimilation of less dominant cultures, he writes, [29]as that African American or Asian American is an important social identity in the United States.

30 "Kwame Anthony Appiah Examines Our Multiple Identities," *Yeshiva University News*, Sep 12, 2019.

31 Amale Andraos, "The Arab Cities in Representation," in *The Arab City: Architecture and Representation*, ed. Amale Andraos, Nora Akawi, and Caitlin Blanchfield (New York, NY: Columbia Books on Architecture and the City, 2016), 6–20.

Appiah asserts that elements of identity, which includes gender, creed, country, color, class and culture, do not remain static and with passing of time, one may become more dominant than others: "All these dimensions of identity are contestable," he notes, "always up for dispute."[30] This mutable, non-monolithic identity pertains to an individual as well as for a nation.

In the realm of architecture, Amale Andraos in the book *The Arab World: Architecture and Representation* critiques the myth of authenticity and essentialist reduction of the multiplicity of Arab cultures in the contemporary architectural production in the Middle East.[31] Arab cities are being designed, often by European and American architects, with a "montage of signs and symbols…essentializing an entire society," without a deep understanding of the complex make-up of the people in that group. She argues, "The concepts we enlist, the contexts we shape, and the content we produce matter…To engage in its complexity is to acknowledge the renewed urgency of historical knowledge while also embracing the responsibility to project much needed alternate futures." In other words, she calls for those with intimate knowledge of Arab culture to step up and construct alternate futures, and for all who are designing in the Middle East to become educated on the complex contexts in which they design.

Similarly, without the participation of those who understand the nuances and complexities of Japanese culture, an event like the National Cherry Blossom Festival is at risk of essentializing Japanese people and their culture. Partnering with their long-term sponsors such as the Japan Foundation and the Japan America Society of Washington, D.C. is one way to help ensure representation of multiple identities of Japan, including performing artists (from contemporary to traditional) Japanese American families who have been here for generations, and Japanese expats. Partnering with a Japanese-born American architect to install an artwork with participatory public workshop is another to shape a less reductive, more pluralistic representation of a culture. *Lantern Field* at the Smithsonian presented an opportunity and responsibility for those who have insights into complexities of Japanese culture to represent nuanced identities different from those postulated by Freer and his cohorts.

Freer Gallery's Architecture by Charles A. Platt

The prominence of the Freer Gallery gave *Lantern Field* a highly visible platform in which to engage the public. The Freer Gallery is situated on the southside of the National Mall, a 146-acre lawn in Washington, D.C. where iconic monuments, including the Lincoln Memorial and the Washington Monument, are situated along with ten other Smithsonian's national museu-

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32   *Freer Gallery of Art*, 3.

33   Keith N. Morgan, *Charles a. Platt, the Artist As Architect* (New York: Architectural History Foundation, 1985): 167–168.

9   Photography: Jeff Goldberg/ESTO

10   Photography: Jeff Goldberg/ESTO

ms. Freer selected Charles A. Platt, a New York-based architect who was also a landscape architect and a painter, to design the museum that would house his collection. Construction began in 1916, and the building was completed in 1921, 18 months after Freer's death. The museum opened to the public in 1923. Designed in Italian Florentine Renaissance palace style, there are 18 sky-lit galleries on the ground floor, with a central garden courtyard on axis with the entrance. The lower-level houses offices, library, study rooms, storage, and an auditorium. [32]

The rusticated granite facades facing the Mall to the north and Independence Avenue to the south serve as the formal and public faces—disciplined, geometric, and relatively closed off to the outside, with only small, punched windows at basement level. In contrast, the loggias fronting the courtyard presents its private face—informal, lush with trees, enlivened by a fountain, and ever-changing with seasons. Until the 1970s, live peacocks (paralleling the Peacock Rooms in the museum) roamed the courtyard, adding to the other-worldliness of this secluded garden. Two loggias with arches flank the east and west ends of the courtyard, which served to circulate air through the galleries before air conditioning and provide a space of contemplation while moving from a gallery with Japanese art to another with Korean, or from Indian to Chinese. This introspective, sensual qualities of the courtyard provided a suitable setting in which to create a delicate, ephemeral lantern installation.

Platt, with his background as a painter, obsessed over the illumination of the galleries, which were daylit from the ceiling as much as possible, supplemented by electric lights within the skylights. [33] The *Lantern Field*'s illumination design likewise combined daylight and artificial light, bringing out the ever-changing qualities of the folded paper lanterns as the light in the loggia and courtyard shifted. Unlike Platt's skylit galleries, the lanterns were illuminated gently by daylight reflected upon the loggia walls and vaults [9]. As the sun set, the artificial light placed along the loggia floor projected the light upward towards the vaulted ceiling, then reflecting downward onto the suspended paper lanterns [10]. Light reflecting off the white Tennessee marble walls and floor and the plastered ceiling created a softly illuminated space within which the light-sources were rendered ambiguous.

Asian American Experience

Lantern Field, envisioned and directed by a Japanese born American architect working with American students and collaborators could be understood as a Japanese American work, distinct from what a Japanese designer working in Japan might create. This Asian American identity of the work shares

34   For DuBois, double consciousness was an identity struggle encountered by Blacks in a predominantly White society. W. E. B. Du Bois and David Levering Lewis. *The Souls of Black Folk* (New York: Modern Library, 2003).

35   Viet Thanh Nguyen, "Brief but spectacular take on writing and memory," PBS News Hour, 2022.

similarities with an increasing number of Asian American authors whose works have been widely read and popularized. These authors include, among a host of others, Viet Thanh Nguyen, a Vietnamese American novelist; Hanya Yanagihara, an American novelist and editor of Japanese descent; Jhumpa Lahiri, an Indian American novelist; Michelle Zauner, a Korean American musician and writer; and Ocean Vuong, a Vietnamese American poet. They each present their Asian culture from a combination of first-hand experience and second-hand stories they hear and read. As a result, they experience what W.E.B. Du Bois called double consciousness,[34] in which one simultaneously sees through the eyes a predominantly white society and of an Asian. This distinguishes their voices from those who are native, such as Haruki Murakami or Banana Yoshimoto of Japan. Their experiences as hyphenated Americans are characterized by conflicted feelings of both alienation and intense connection to their culture through their family's customs, gestures, language, and rituals, particularly through their parents and extended families. Unlike European counterparts who immigrate to the US, because of their Asian ethnicity, they continue to retain their *otherness* in the eyes of Westerners even generations later, which intensifies their Asian American identity.

Seeing one's culture misrepresented in popular culture such as a Hollywood film or a festival drives these authors to tell a different story from their perspective. Viet Thanh Nguyen speaks of being propelled to write his novels, including the Pulitzer Prize winning *The Sympathizer*, since seeing Vietnam often depicted with deep sexism and racism in books and films.[35] Similarly, seeing one's culture misrepresented in visual art or architecture motivates Asian Americans to embrace the responsibility to construct their own cultural identities instead of accepting the interpretations by others. Vietnamese American poet Ocean Vuong says that his book sales surged following the Atlanta spa shooting of 2021, in which eight women of Asian descent were killed. While he is clearly uneasy with the idea of profiting from a shooting, at the same time, his books help people understand the victims' experiences from an Asian American perspective. Similarly, a work of art can catalyze critical discussions and enable the students and the public to glean how Asian identifies have been constructed through art in this country.

Observations from the 2012 National Cherry Blossom Festival made evident the missed opportunities to engage families and children in craft workshops offered at such places as the National Building Museum. Japanese culture, with its traditions of handicrafts that can be made precisely but using inexpensive, readily available materials such as papers and wood sticks, is ripe with potentials for public engagement. Introducing American

36 Besides the Freer Gallery, there are other Japan-related non-profit organizations in the Northeast. The Japan Society in New York, established in 1907 by prominent business-men with ties to Japan, connects "Japanese arts, culture, business, and society with audi-ences in New York and around the world." It hosts events, exhibits, and classes year-round. Washington, *D.C.* also has a local chap-ter of the Japan America Society, one of over 35 chapters across the country that builds a local community of Japan-related business-es and organizations to foster relations between the two countries.

37 The festival is attended by 1.5 million people annually, which includes residents, residents, visitors, dignitaries, young, old, friends, and families. "About the Festival," National Cherry Blossom Festival, accessed November 20, 2023.

38 Number provided by Amanda Williams, Public Affairs and Events Specialist, Feer|Sackler Galleries, April 2013.

families to Japanese art and culture and be more imaginative and dynamic than a conventional origami workshop. The idea of a lantern making work-shop for the *Lantern Field* emerged out of such criticism. Additionally, by having a designer with knowledge of Japanese art and design, creative and novel interpretations of Japanese aesthetics in an American context would be possible. While authenticity was not the goal, a project leader who was raised in Japan can serve as a cultural interpreter for the team to whom the rituals and artifacts were less familiar, and prevent gross misrepresentation of a culture, or an unintentional mashup of pan-Asian cultures. While *Lantern Field* is rooted in traditional Japanese craft and rituals, the traditions are liberally interpreted for a present-day context outside of Japan.

Museum as a Platform for Critical Pedagogy

Lantern Field was a decidedly educational experience created in collabora-tion with a museum,[36] facilitated by an interactive, ephemeral artwork made with public participation. It interrogates the role of curatorial practice to engage a group of faculty and students for a collective learning experience. By applying practice to education, architect-educators create platforms in which to ask indeterminate technical, cultural, and socio-political questions around an array of issues. The Freer Gallery's partnership with the Festival, which is attended by 1.5 million people each year, exponentially increases the audience and expands the demographics of the museum visitors.[37] Over the weekend that *Lantern Field* was installed, over 22,000 people visited the museum,[38] which amplified the responsibility and impact of the team to project alternative cultural identities.

Architecture schools have partnered with non-profit organizations for decades. For example, the First-Year Building Project at the Yale School of Architecture began in the 1967. The students have built community centers in the Appalachia in the 1960s, to recreational structures in the 1980s, to more recent affordable housing in New Haven, Connecticut, where Yale is located. By designing and building an art installation that existed for a only one day, how did this experience impact the education of architecture stu-dents? Some impacts are similar to what they might learn in designing and constructing a building. The students produced multiple design schemes and reviewed them with the client/partner, then iterated based on the feedback. The project required structural integrity and coordination of multiple infra-structural systems, including lighting, sound, and ultrasonic sensors. Because the museum prohibited use of hardware that left permanent marks on the building, the bamboo structure had to be suspended from aluminum poles that were held by tension against two walls. Since the public workshop

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39 Hayes, *Yale Building Project*, 7.

40 Paulo Freire, Donaldo P Macedo, and Ira Shor, *Pedagogy of the Oppressed*, trans. Myra Bergman Ramos (New York: Bloomsbury Academic, 2018).

41 bell hooks, *Teaching Critical Thinking: Practical Wisdom* (New York: Routledge, 2010).

11   Photography: Jeff Goldberg/ESTO

was limited to six hours, the bamboo frames were brought to the museum partially prefabricated and assembled at dawn in the courtyard.

Every design-build project demands that students understand the context in which they build—the physical, social, and cultural context of the town, the block, or, in this case, the museum and the Festival. In designing the *Lantern Field*, students were introduced to the Japanese craft of paper lantern making, the rituals of flower viewing, examples of festivals that involve collective making, and light and darkness in Japanese spaces, including reading the classic architecture text *In Praise of Shadows* by Junichiro Tanizaki. They also studied Platt's plans and sections of the museum, imagining how people would move into and around the loggia to step underneath the lanterns. However, the problems of cultural representation in art and architecture, as well as Orientalism and *Japonisme* exemplified in Freer's collection and the artwork by Whistler and his peers, were not critically discussed with students at the time, and should be if the project were to happen in the future.

During the workshop [11], the students took turns teaching the museum visitors of all ages how to fold the paper lanterns according to the design and hung them from the bamboo frame. By demonstrating the paper folding steps and explaining the traditions of lantern festivals, they reflected on what they themselves were learning. Therefore, on a small scale, the students gained experience in working with a team that required precise coordination and collaboration. Robert A.M. Stern, former Dean of the Yale School of Architecture, describes the significance of design-build projects by students, which also applies to this art installation: "While group dynamic and the sense of social responsibility embedded in the Building Project are crucial to its success, it is an act of seeing a design through to construction that has the most profound effect on the training of fledging architects…In learning by doing, the study of architecture moves from abstraction to reality in ways that anticipates professional practice." [39]

Perhaps more importantly in the context of this article, a project like *Lantern Field* can be what Brazilian educator and philosopher Paulo Freier and American theorist and social critic bell books call a practice of freedom; art creates a dialogical space where teacher, students, and the museum visitors collectively confront difficult questions around cultural identity. Paolo Freier advocates for "problem posing" as opposed to "banking" mode of education in which the teacher "fills" an empty vessel with knowledge. [40, 41] Emphasizing "praxis"—action and reflection upon the world in order to change it. Freier argues for students and teachers to become the co-creators of knowledge. A project like *Lantern Field* poses a problem and a platform, and the museum visitors—the public—join the students and teachers as the

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co-creators and learners. Museums can not only be a place to reflect but also to act, to intervene through an art installation, and impact how we construct our own cultural identity. Museums of national stature, such as the Smithsonian, are authoritative shapers and disseminators of cultures they represent. It is critical, therefore, that those with first-hand cultural knowledge participate in representing cultures that museums project out into the world.

Conclusion

Reflecting ten years later, these issues of cultural appropriation and misrepresentation of Asian cultures in the United States would now be foregrounded if this project were to happen today. The rise of anti-Asian hate crimes during the pandemic revealed an uncomfortable truth, that Asian Americans are perpetual outsiders in the United States. Black Lives Matter, an anti-racism movement that started in 2013 following several highly publicized police brutality and racially motivated violence against Black people in the United States, also amplified discussions around identities around race and ethnicity. While many remain uncomfortable and defensive in speaking of race and identities, these recent events have brought out the conversations around race out in the open, including classrooms. Looking back, it would be prudent to introduce the students to the issues of cultural identity and representation of Asian cultures in the West. To have a discourse would be a critical step forward in preparing future architects for the global contexts in which they will design. For example, could the design of lanterns confront the work in Freer's collection more critically, to spur discussions of appropriation and representation? Are there ways to bring more awareness to Orientalism in the collection and could a participatory installation help to counter Orientalism? The answer would be yes, and the need for an educated, thoughtful response is exigent.

A design-build project can raise pedagogical questions that challenge conventions and cultural assumptions and prepare architects who not only are equipped with technical and practical skills gained from a live project, but also to think critically about the socio-political contexts in which architects design today and in the future. Representation of cultures outside of their homes, including in art and architecture, remain complex and contested. As the daylight and electric light in *Lantern Field* became blurred and rendered the sources of illumination ambiguous, cultural identity is mutable and context dependent. Representation of such subtle complexity is possible and urgently needed in a world that tends to view things black and white. As minority groups grapple with their identities, museum installations cons-

tructed with public participation present opportunity and responsibility to collectively challenge and reexamine ever-changing cultural identities.

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O Architecture, Where Art Thou?
A New Episode of the Never-Ending (and Fertile) Love Story Between Architecture and Context

Franco Pisani

1   NERIS Analytics Ltd. "16 Personalities." Octo-
     ber 10, 2023.
     https://www.16personalities.com/personality-
     types/.

2   Geometra (abbreviated geom.) is the profes-
     sional who measures, evaluates, and designs
     public or private works of a modest size.

3   Aa.Vv, »Fundamentals, 14ª Mostra inter-
     nazionale di architettura,« in *Catalogo della
     mostra, Biennale di Venezia*. Venezia: Mar-
     silio, 2014.

4   Brady Ross, "How many architects are in the
     world," Architizer Inc. Oct 10, 2023.

A few weeks ago, during a conversation about the popular Myers-Briggs Type Indicator test [1] with a former student of mine, recently graduated, an interesting argument came up.

The test, through an introspective self-report questionnaire, establishes what your Psychological Personality Type is, among a range of 16 typologies depending on how you perceive the world and make decisions. She asked me to take the test, which I had actually never heard of, to understand which category it would have assigned me to. During the discussion she told me that she did not want to repeat the test for fear of not confirming the result, of which she was particularly proud, obtained in the first attempt: *INTJ or the ARCHITECT*. Smiling, positively surprised by the profound value she assigned to the title, and by the pride that such a result had triggered in her, I had to confess that, even today, being able to put this title in my business card arouses great pride in me. Being an Architect means a lot to me too. But I also had to confess that the meaning of the word Architect, and consequently that of Architecture, varies greatly depending on the contexts in which the word is used, especially if inside or outside the discipline. I rarely wear black, and often, in certain contexts, I have felt uncomfortable being called an architect, in an almost, for me, derogatory sense.

If you do a survey today, asking a number of common Italians what architecture is, or—more precisely—what do they need an architect for, most reactions will be weird faces and out of focus answers. In some cases the need for an architect, at least in Italy, boils down to the signature and the stamp needed to obtain building permissions. As such, the architect is only a bureaucratic figure who can validate a construction process, no regard for either the quality, the meaning or the goal of that same process. This is the only "specificity" that most people are willing to grant architects. Nevertheless, in Italy, the percentage of projects validated by the stamp and signature of a professional architect is still very low. The reason being, other professionals (mainly engineers and "*geometri*") [2] can also affect the built environment. Unlike other professions, practicing architecture cannot rely on a strong scientific basis. It does not have (at least today) a solid ground or a set of commonly accepted criteria to guide actions and make decisions. It is incredible how unpopular this professional figure has become in Italy, the country with the highest "density" of architects in the world. According to data shared at the 2014 *Biennale dell'Architettura* in Venice, [3] there is one architect for every 414 inhabitants in the Italian peninsula. [4] When I tell my students about this, they often ask me why we have so many architects. Although I honestly do not know the answer, I can say that studying architecture in Italian universities paves the way for different "interpretations" of this profession. For instance, we have architects working in such contexts as

5   Almalaurea srl. "Condizione occupazionale dei laureati," Oct 10, 2023.

6   Report by CRESME Centro Ricerche Economiche Sociali di Mercato per l'Edilizia e il territorio, Oct 27, 2017

7   Ibid., More than 1,000 vacant spots. 6,802 spots; 6,897 applications; 5,730 accepted students. Unfortunately we are witnessing a slight increase in the number of applicants, since 2020, and therefore since Covid pandemic, mainly due to the state support to increase the energy efficiency of buildings (called 110 percent) and therefore to an increased request from the job market not so much of capable designers, but of bureaucrats and construction managers, able to compile forms and technical specimens.

theaters, movies, fashion, photography, landscape, education, product design, and many others, but only a few of them are actually involved in shaping the built environment.

In the past, in Italy, architects enjoyed a high social status. To some extent, it still sounds good and fancy to practice this profession, although the average earning is very low. According to a 2023 report by Almalaurea,[5] Italian architects (of which only 45 percent come from building design)[6] make less money compared to their colleagues in other countries. On average, it takes six years to become a licensed architect in Italy and another five years for a licensed architect to earn a monthly salary of about 1,600 euros. A widespread lack of awareness about this discipline is, in my opinion, the main reason for such critical conditions (more so than the incredibly intense competition, as some suggest).

What people think an architect can do for them is far different from what an architect could (and should) do for them. Somehow, people lost track of Architecture. As a consequence, Architecture is slowly slipping into obsolescence. Architectural design is not an appealing job anymore. Proof of this is the continuously negative trend of enrollment in architecture schools. Once again, following a trend started in 2010, in 2019 there were fewer applicants to Italian architecture schools than available spots.[7] The only significant outcome of the recent changes affecting the organization of Italian academic curricula has been the pulverization of architecture as a discipline into myriad apparently appealing technical sub-disciplines like interior design, urban planning, product design, landscape design and so on. Centuries of tradition stressing the holistic nature of architectural design have been wiped out by cutting off all the interdisciplinary ties that made architectural design the crossroads bringing together many fields of human expression. By disintegrating into a plethora of specialist (mainly technical) disciplines, Architecture lost its natural vocation of interpreting of the different forces active in the transformation of the physical environment.

Consequently, the meaning and the essence of architecture started to be misunderstood. One result of these convoluted conditions is that Architects have lost contact with everyday life. They are often associated with glamour and extravagance. Architecture is seen as an exclusive luxury, a decorative and unnecessary contribution to the built environment. It is expected to live in high-definition pictures in magazines and webzines but is hardly capable of influencing collective imagination. In fact, it does not affect life anymore. Architecture has become inaccessible and exclusive not only physically but also, economically (architects increase cost and decrease lifespan of buildings) and culturally (architects' buildings are cryptic and meaningless). Architecture doesn't live in the present, even if it is of pressing actuality. In

8   Giorgio Grassi, "*Architettura lingua morta*," in
     Scritti Scelti 1965–1999, ed. Giorgio Grassi
     (Milan: Franco Angeli, 2000), 162.

9   Vitruvius, *De architectura,* Latin text with fac-
     ing Italian translation by A. Corso and E.
     Romano (Torino: Einaudi, 1997), 6.

10   The Exploited, *Punk's not dead*, London, 1981.

11   Rem Koolhaas,"Bigness," in *S,M,L,XL*, eds.
     Rem Koolhaas, Bruce Mau (New York: Mona-
     celli Press,1995).

12   Ibid., p. 495.

a famous lecture he gave in Berlin in 1984,[8] Giorgio Grassi compared architecture to a dead language, like Latin or ancient Greek, a language outdated and obsolete in its use, but able to give an incredible contribution to understanding todays' phenomena. An interesting position, indeed. Yet, the risk here is a pessimistic drift infused with nostalgia, suggesting some sort of re-alphabetization of an obsolete language as the only life jacket. In fact, to be an architect and an architectural educator one must have a vision for the future; optimism, therefore, must be a part of this mind frame. Sometimes architecture is associated with a technical problem-solving discipline that managers, experts, and lawyers can master better than architects can. This has led architecture to lose part of the specific know-how that was learned in and from construction sites.

In the same meanwhile, architecture as a whole discipline and design as a mindset, are not easily marketable by communication strategists. Media need information for immediate consumption, and data must be easy to consume and digest even without any knowledge. As we all know, architecture is hard to define. Like with electrons in physics, it is only possible to define an orbit, a field of tension where architecture can be met. For a long time, architecture inhabited a space somewhere between imagination and reality. It cannot be precise, as it deals with both theory and practice: *Ea nascitur ex fabrica et ratiocinatione*,[9] Practice and theory, manual and intellectual labor are its parents, as Vitruvius said 2.000 years ago. More importantly, architecture must have a mutual relationship with life. Scientists have proposed hundreds of ways to define life, but none of them have been widely accepted. The only sure thing about life is that it must deal with evolution and change, and it has a limited time span. This is why the definition of architecture, too, evolves constantly, thus requiring continuous updates, commitment, and faith.

Architecture's not dead! This is the violent, intentionally "non-academic" scream that is about to rise at this point of my contribution. In doing so, I am quoting Wattie Buchan, lead singer of the Scottish punk band The Exploited (certainly very far from being a nostalgic Latin scholar).[10]

What if instead of being dead and buried architecture has simply hid itself somewhere waiting for better times? In 2002, Rem Koolhaas stressed the notion of "Bigness" in his seminal book *S,M,L,XL* [11]: as he put it, building was trying to replace architecture and "all these breaks with scale, with architectural composition, with tradition, with transparency, with ethics— imply the final, most radical break: Bigness is no longer part of any urban tissue. It exists; at most, it coexists. Its subtext is fuck context."[12]

On the contrary, maybe poor Architecture (scared by Bigness) ran away and was given asylum by its longtime friend and ally Context, turning on

incognito mode. This would have made it possible for Architecture, as in a "moral fable," to become invisible while hosted by Context, with whom it had always entertained a mutual and fertile relationship with intricate plots, where cultural, political, economic, and technical demands inseparably merge.

So is Architecture alive? Yes, Architecture is alive and it exists in Context. To rediscover the beating heart of Architecture it is imperative to understand the contextual milieu within which it exists.

Context is an unfinished choral book from which Architecture takes meaning and energy. In turn, Architecture, too, contributes its own "episodes" to it. Context is like a cloud, whose precise form develops from a previous form at a given moment and is doomed to fade in the immediate future, thus leading to a continuous evolution. Architecture operates in this evolution. Therefore, it is more important to take into account the structural values of the Context rather than chasing the exaggerated individuality and self-referentiality of the building and its technology. Understanding the dialectical relationship between the structure of the Context and the formal structure of Architecture is a pressing, necessary question to revive Architecture and make it fertile again.

Architecture, its transdisciplinary role saved by the shelter of Context, in turn graciously sets Context as the focus of its own interests. Architectural design uses the built environment as a quarry of data to inform future projects, both from a conceptual and a physical point of view.

Understandably, the most physical component of Context is the environment, both built and natural. Today more than ever the built environment needs design and the multifaceted character of Architecture. It requires architects not only as mere designers of good buildings but mainly as professionals able to **read, interpret, and fix**. Due to ecological emergencies, sustainability issues, and lack of sensitivity, there is not a single acre of virgin land that is worth "anthropizing" by encrusting it with new buildings.

Architects are needed for their learned capacity to envision, thus pairing—entwining—theory and practice. They are required to help and support decision making; to research building materials and technologies; to rediscover the laws of nature hidden behind codes; to consider and advise the so-called "informal sector"; to fix urban mistakes; to restore and repurpose historic buildings; and to speak of style and aesthetics. In other words, they are needed to promote concepts and ideas that can help the built environment evolve toward an accessible and enjoyable place where life can happen.

The built environment is and will be the target of Architecture, whether we speak of the natural expression of the rural environment brutalized by

intensive exploitation or the urban environment traumatized by a century of economic speculation.

Architects can continuously reshape their ability to read the built environment as an opportunity to contribute a verse to its narrative plot. Under these conditions, reading, understanding, and interpreting the built environment become critical design tools. Verbs like evaluate, re-use, fix, re-cycle, get rid, clean-up, complete, re-purpose, wipe out, make room, occupy, extend, implement, reorder, sew up, and so on must become main actions for architectural design.

There are multifarious tools used to read the built environment, and to understand the opportunities it provides for architecture. They range from the analogical and traditional to the most advanced and digitally precise. They include such "areas" as survey, measurement, sketching, technical drawing as plans and sections, photography, videos, and laser scanning. All of these instruments are necessary for a correct understanding of the project. Yet, they are not enough. These highly sophisticated tools are very precise but their results happen to be too analytical and specific vis-à-vis the direct and physical experience of the architectural space. The fundamental tool for reading the built environment is physical—haptic—experience; in other words, a person accessing that space, moving in and reacting to it or envisioning doing so.

Teaching one to read the contextual narrative means promoting the importance of the contextual experience, to become a user of architecture and to be able to impart a language of Architecture. As such, fiction is perhaps the most acute means to infiltrate mass media culture and the dominance of the ephemeral image. Architectural design is, in and of itself, a form of fiction. Teaching students to appreciate the built environment and to speak of Architecture through its lexicon of words and drawings is a first important step toward a new awareness. Educating students to develop a contextual sensitivity, means making them able to speak warmly of Architecture in a precise language that conveys with exactitude.

Learning to read, recognize, and evaluate contextual issues will result in re-educating people about architecture and what architects can do for them.

Context existed before, during, and after architectural design; it is affected by design and it should inspire design. Within this framework, design is a continuous modification of the Context and architects, as surgeons, will operate in Context to accommodate the new needs introduced by the evolution of life, values, and ideas. In surgery, a profound knowledge of the body and of its health state is essential for a successful surgical operation and, more importantly, to avoid rejection phenomena.

13   Guy Debord, »Théorie de la derive,« in *Inter-
nationale Situationniste 1958–69*, ed. Mario
Lippolis (Nautilus: Torino, 1994).

Context is a combination of material and immaterial substances, some easier to survey and report on a drawing, some ephemeral and quite impossible to reduce to a Mongean projective reality. Sophisticated and apparently arbitrary and bizarre tools need to be developed to re-educate spatial sensitivity and sensibility in the age of Global Positioning Systems, live tracking and, free access to data.

Training the capacity of seeing, watching and learning from Context by extracting countable and objective data from uncountable and subjective perceptions will result in a less scattered and confusing built environment, where respect and meaning will lead decisions instead of obsession for extravagant novelty and maximization of profits.

The following 10 exercises are attempts to train this capacity and also to trigger curiosity and instill passion for Context in inhabitants of the built environment, but also routines to develop skills and methods to search Context for the fertile ideas without which design is just a mere and arbitrary formal speculation.

Drifting in Context

Since we have become addicted on Google Maps as a tool to walk places, relearning the art of getting lost becomes a more and more urgent architectural expression.

From Baudelaire's flânerie to Guy Debord's drift[13]*, walking places without any other purpose than being an acute observer of urban life is an important learning tool for architects, a fundamental method to have an idea of the context in which we will design.*

By walking a design site aimlessly you will understand how mutant context is and how continuously varied and affected it is by its inhabitants as well as by time, weather and light.

The street view image provided by the smart phone is only a frozen impression of its physical appearance, useful to get to places but not to understand them.

_The Drift

Take a photocopy of a map of the site and a stopwatch.

Go for a walk on the site in different times of the day and different days of the week.

Start from the same place being it home, studio or another relevant urban position.

Start the stopwatch and record your itinerary decisions and all the slowdowns imposed by your curiosity (shop windows, colors, people), and by the impositions of the site (traffic lights, sidewalks, fences) in short, all those things not easily representable in a scale plan.

Represent your drift in the map together with any discovered points of interest, using a set of graphical conventions of your own invention.

Repeat the experiment in different moments of the day, and different days of the week, and under different conditions.

Compare the results, trajectories and ending points of the different drifts and try to identify variables and invariables of the path.

_Urban Gambling

Make a site plan that covers an area at least four times bigger in dimensions than the actual site of intervention for the project ex. (if the site is 50×100 mt, chose an area of at least 100 x200mt).

Start walking from a location on the edge of the map of your choice directing your steps toward the site.

Each time you find yourself in front of an intersection, roll the dice and let it determine the direction to go, and register it on the map.

Make your own rules and write them carefully, as 1–6 left, 2–5 straight, 3–4 right, or something similar, but once you start, follow strictly the suggestions of the dice. If you meet a condition not previewed in the rules, stop and add a written rule to the list for that peculiar condition.

Each time the route addresses you to the edge of the map, bounce on the edge, go back on the opposite side of the street, and restart the route.

Map carefully your itinerary, and see what the resulting diagram can suggest in terms of area coverage, means of access to the site and frequency of repetitions and overlapping.

Capturing the Context

In any urban site, there is a dialogue between history, buildings, and events that takes place over time. This dialogue creates a rich palimpsest of material traces— marks on walls, patinas on door handles, demolitions, re-buildings, re-paintings, painting overs, overlays, insertions, extensions, modifications, — that reveal multiple usage and overlapping narratives.

In his essay "The Tell-the-Tale Detail", Marco Frascari describes that while a plan drawing shows the "plot" of a building, the design of the

details crystallizes the "tale".

    Details articulate the story of the architecture. Frascari says that certain important details are impregnated with significance; these "tell-the-tale" details can give us an understanding of the whole.

    This series of exercises aim to capture small portions of the site using Frascari's attitude of viewing a detail as an indicator of a larger condition.

    With the attitude of an urban crime-scene investigator, and using the skills and the tools typical of such an attitude, you will organize portraits and identikits of the site, starting by collecting evidence in a scientific way. The exercises will serve as the basis for a forensic and taxonomic series of site studies, able to ignite tales about our sites.

_Using a Camera as a Fishing Net

Take an old camera (analog or digital) and cover the monitor or viewfinder with paper tape. As an alternative, hold a smart phone backwards and take frontal pictures (so you can't see the screen).

    Give yourself a set of rules as in "I will take a picture every ten steps," or "every walking minute," and start capturing pictures of the ground from the same distance— maybe help yourself with a custom-made spacer.

    Map the location of each shot on a site plan, trying to cover at least a sample of all the different soils of the site.

    Once at your desk, download all the pictures and discover carefully what ended up in them, by zooming in and out and trying to name episodes and recognize colors and materials.

    Re-organize the pictures in an appealing mosaic-style plan representation.

    You can repeat the exercise with vertical surfaces at eye level, creating an atlas of building materiality and finishes.

_The Curio Cabinet

Find a box of Ziploc plastic bags of different sizes and some tweezers.

    Print a map of the site in a handy format, and bring some sheets of paper to take notes.

    Go for an exploration of the site paying particular attention to things that can be found on the ground.

    Collect the objects or the material samples that you find of particular interest.

    Put each item in the Ziploc bag using the tweezers.

Label the object, with a code and locate it on the map. Maybe take a picture and write some notes about the object in its context.

Once at your desk, design and build a curio cabinet, some type of display case or shelf to organize—hanging on the wall or laying on a table—all the items collected next to each other to form a display.

This display of apparently valueless random objects will invoke curiosity, and will become a precious informal representation of the site.

_ **Tell-the-Tale Tile**

During a site visit, identify a detail that indicates a moment of change in the evolution of the built environment of the project site and locate it on a map.

Please note that, for a detail to be a possible subject of your study, it should:

_show the intersection of at least two different materials; and

_show "the passage of time", through weathering, the juxtaposition of old and new materials, patina, or literal traces and markings left on surfaces.

Make a mask made of heavy cardboard capturing a portion of surface equivalent to that of a common ceramic tile, approximately 30×30 cm.

Put the mask on the detail chosen, helping yourself if needed with paper tape.

Take a picture keeping your camera straight to the subject, in plan or in elevation minimizing vanishing points.

Think and take notes about why this detail reveals to you an important narrative.

On a 30x30cm white sheet of Bristol board or watercolor paper, at your desk with the help of the picture taken or live straight on site, redraw the framed chosen detail at 1:1 scale.

You may use whatever medium is most appropriate for your subject matter and intent (pastel, pencil, colored pencil, ink wash, a combination of media, etc.) as long as it is hand drawn.

The image should be composed full-bleed on the sheet and it must be as carefully and faithfully rendered as possible in a hyper-realistic way.

In other words the drawing should at first glance appear to be a photograph.

As a set, these drawings will form an impressive reading of the project site, allowing you to see your surroundings in a new way.

Composed together as the tiles of a floor or of a wall, the drawings will have a spatial and visual impact in their own right.

_*The Windows Atlas*

During a survey, collect pictures and/or sketches of doors and windows that can be found on site.

Pictures and sketches, will be made as straight as possible to the subject in order to remove all the vanishing points, or they will be used to abstract information such as dimensions, proportions, colors and materials. They will have the goal of revealing the character and the identity of the built environment.

Windows and doors are thresholds between interior and exterior; through them spaces are made accessible and are lit. They are frames for both the views on the surrounding landscape as well as for the spatiality of the building.

How are they made? How big are they? Do they have shutters or curtains? How do they work in framing light and views? How are the fixtures protected from the elements? Are there recurring themes and figures?

Once in studio, print the pictures or open them in photo editing software in the same scale and proportion and organize a big fictional elevation of the site as if it were a whole building.

_*Castings*

Take some toilet paper or paper towels.

Dip the paper into water mixed with a small amount of PVA glue for a while and then let it drip all the excess humidity.

With this procedure paper will become softer, pliable and easier to adapt and copy "physically" other surfaces.

Lay the wet paper down and push it against a surface that you find particularly interesting for texture, plasticity, or aging. Use a towel or other cloth to gently press on top of the paper to soak up all the excess water. The paper will follow the form of the object.

Let the paper dry completely before removing it from the surface you want to reproduce.

The surface will leave marks on the paper that will solidify once the paper is completely dry and stiff. This procedure creates a cavity that contains the exact imprint of the object. Paper has a remarkable memory and dries to create very detailed imprints.

Try using pastel, crayons or charcoal to pick up the texture of the embossed paper surfaces.

The casts produced, reminiscent of fossilized remains, will capture the memory and the texture of the surface.

Assembling them in a sort of three dimensional catalog will result in an abstract sculptural representation made of on-site textures.

_Rubbings

Take some sheets of white paper or similar material.

Place a sheet over the subject of your investigation.

Rub a material of your choice that is able to deposit marks against the paper.

You can use charcoal or graphite pencil but also various forms of blotted and rolled ink, chalk, wax, or other experimental matters.

The marks left on the paper will make visible textures and surface discontinuities measuring only a few thousandths of a millimeter and resulting in a very precise and accurate reproduction of the subject.

The drawings produced using these two techniques will be composed in a series of abstract drawings and can be easily transformed in pattern and textures reusable in the design activity.

_Puddlecolors

Get good-quality and weight watercolor paper and a set of brushes.

Choose a view or part of the site that you find particularly interesting or worthy of further study.

You can use latex gloves throughout the assignment.

Begin a drawing of your subject; pencils are permitted uniquely for small construction drawings or for reference.

Make a watercolor representation of it using only materials or substances found on site, dipping the brush into puddles or other sources of liquid, or spilling bottled liquid on dust or other materials near you, naturally present on the site.

At the end of the drawing, as for the caption of a painting exhibited in a museum, add a description of the materials used to paint, with reference to how that material arrived at the site.

The painting produced will turn out to be a super contextual representation of the site.

Registering the Context

No matter what preservationists and nostalgists can think about it, the environment, as everything infused with or affected by life, is characterized by change over time. This series of exercises are targeting the effect of time and

*life on a specific site and the way such changes might be recorded
and mapped.*

*A register is a device able to extract data capable of representing and
study how a space changes, especially when there are a number of different
types of register, as those found in a weather station.*

*Registration logs a situation or phenomenon and makes it visible,
sometimes through the patterns that emerge from a mass of data, or by com-
paring found material with an agreed scale (such as a ruler or
thermometer).*

*Registering urban phenomena can help us to understand a building or
space as an active organism through monitoring changes to materials, light,
air movement, sound levels, structural movement and dimensions. The data
extracted by the register and organized in an intelligible form can show how
a site is used, by recording types and frequency of use of different spaces,
movement patterns, occupation levels and feedback by the building's users.*

_The Register

*You will be designing and making a device to register one or more elements
of the site that you are fascinated by and think could be worthy of further
investigation, and how they change over time or across other change agen-
cies. The register can record the viewer's analysis of a building too, record-
ing individual subjective assessments of its spaces.*

*The length of time during which this device will register change is up to
you, but it must be defined. The time scale of the register can be slowed,
revealing the historical changes the site goes through.*

*The device must be made to exhibition quality, using innovative pur-
pose-made or reusing 'found' materials or repurposing mechanisms.*

*The register may operate involuntarily, or may need an operator. It will
need to fit snugly into place within the site or be able to move along a desig-
nated route through the space.*

*It must produce a durable result that can be retrieved and edited where
necessary to communicate information to others, (eg., as film, photogram,
photography, sound recording, physical inscription, trace, automatic draw-
ing, numbers,diagrams, texts.)*

Telling the Context

*Remember, there is not one correct story, only correct ways of seeing what
the stories can be.*

This category of contextual investigations is focused on the capacity typical of narrative tools to talk about places and spaces starting from the lived or imagined experience of them. Written language and storytelling can express the inexpressible, turning the immaterial component of spatial contents hardly representable in drawings, tangible and transferable.

These exercises will demonstrate the important role of architect as a storyteller, which has been manifested in architecture since its beginnings.

These written assignments will show how fictional stories can play an important role in designing architecture, not just as a separate and supplementary exercise, but as an integral element of the design process.

These narratives will become tools for a deeper understanding of the context.

_A Narrative

You are asked to write a two pages fictional narrative situated in or related to the site of your project.

It can be a description, a story board, a scene for a movie plot, a cartoon, a fairy tale, a romance, a drama.

By writing, you are asked to 'draw with words' the site of their projects where the assigned program will be organized similarly to the appropriate dwelling of their characters; in short to 'write this very place.'

Issues of materiality, atmosphere and character are paramount, and must be expressed through 'word-designs' and life episodes.

The narrative writings must express the experiences and the imagined space, describing it from the user's perspective rather than from the designer's perspective. In doing so you will combine fictional and non-fictional aspects of space appropriation and you will envision the potential changes of the site induced by design and time agencies.

_Writing the Place

Spend a delimited gap of time on site (one hour, one morning, one day, …) experiencing the spatial quality of it, observing it and using it as the scenario for some informal activity, (e.g. reading a book, eating a sandwich, taking a nap, making a phone call).

Do not take notes or sketches during the experience, just take what you get from it as a peripheral or background presence.

Once you leave the site, using the memorized perceptions try to describe in written form, with a proper language, as precise as possible, the site as experienced during the visit.

14   NERIS Analytics Ltd. "16 Personalities." October 10, 2023.
     https://www.16personalities.com/free-personality-test/.

Make sure, in your written description to cover the following areas:

Physical presences such as constructed elements (monuments, buildings,), natural elements (green areas, trees, animals,), traffic and transportation mode (cars, bicycles, buses,) and people (presence of tourists, residents).

Perceptive presence of smell, sound, taste, touch, temperature and other visual sensations, and of the global feelings induced by the site.

In the written description, you are allowed to use only your memory of the site, no pictures, notes or other tools. This exercise is using memory as a filter to select the most relevant aspect of the site. You can use sketches or other forms of visual support for the description, only if they are made after the experience in a remote location, using memory and not copying sketches or pictures made on site.

_On-Site Plots

This exercise is the second part of the so-called Curio Cabinet assignment developed in the Capturing the Context category. It will add a fictional component to the forensic approach developed there.

Take the curio cabinet developed before and start to join narratively all the specimens collected in a fictional plot.

The specimens collected will be reused in the fictional plot without a particular order but with the goal of rooting them even more in the context.

The result will be a story with fictional characters acting and moving in a real context, using real objects found on-site for an imagined situation.

The exercise will force the writer to imagine everyday life tales triggered and hosted by the spatial qualities offered by the site. The actors of your script will be less fictional than the scale figures in a cross section, and they are potential fruiters of the design activity.

Architecture, to me, has a lot to do with meaning; with the reasons why things are done the way they are done. To be an Architect is to be able to hide thoughts and meaning inside forms.

I finally took the Myers-Briggs test[14] and came out as an ENFP Turbulent Campaigner personality type: "Enthusiastic, creative, spontaneous, optimistic, supportive, playful. Value inspiration, enjoy starting new projects, see potential in others."

Not an Architect? **Fair, I take it.**

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The Transforming Body as a Spatial Instrument

Ephraim Joris

1   Jacques Derrida, *Of Grammatology* (Johns
     Hopkins University Press, 2016) — This open-
     ing statement rests on multiple foundations of
     which most remain hidden yet the writing of
     Jacques Derrida on deconstruction in which
     he emphasizes the inherent ambiguity and
     instability of language and its meaning culti-
     vated this interest in my own education as an
     architect and my subsequent teaching. Derri-
     da argues that language constructs reality but
     is always open to multiple interpretations. In
     teaching, this perspective presents the poten-
     tial to encourage students to question and
     deconstruct established knowledge, in the
     pursue of new knowledge, indeed revealing
     inherent complexities and multiplicities.

2   Bruno Latour, *Reassembling the Social: An
     Introduction to Actor-Network-Theory* (Oxford
     University Press, 2005) — The notion of the
     open ended and interactive nature of the stu-
     dio stands in reference to Bruno Latour's
     Actor Network Theory. Latour in part illus-
     trates the interconnectedness and fluidity of
     knowledge by unpacking the idea that knowl-
     edge is constructed through an interactive
     network of human and non-human actors.

3   Paulo Freire*, Pedagogy of the Oppressed*
     (Continuum, 2005), 71- 86.

4   Henry A. Giroux, *Education and the crisis of
     public values: Challenging the assault on
     teachers, students, and public education,* 2nd
     edition (Peter Lang Inc, International Academ-
     ic Publishers, 2015) Critical pedagogy as
     developed by Henry Giroux emphasizes the
     need to engage with contemporary social
     issues in education. In accordance, recogniz-
     ing the multiplicity of perspectives and the
     instability of knowledge, observed as central
     to developing critical consciousness and
     active citizenship in students.

5   Donna J. Haraway, *Simians, Cyborgs and
     Women: The Reinvention of Nature*, (Rout-
     ledge, 1991), 149–181. Haraway actively chal-
     lenges the notion of fixed boundaries between
     humans, technology, and nature, arguing for
     hybridity and multiplicity. In teaching, this
     perspective allows students to explore the
     complex interplay between disciplines, tech-
     nologies and identities incorporating various
     viewpoints to contribute to the development
     of each project.

Introduction

In a world in which we critically challenge previous linearities, inherent to dominant hierarchical power structures only to reveal a world which is fundamentally unstable, the multiplicity and ambiguity of knowledge construction ought to be acknowledged.[1] It is Jacques Derrida's concept of deconstruction in which we can obtain this inherent ambiguity and instability of language and its meaning, allowing us to observe this world as endless multiplicities. This paper comments on a studio environment cultivating an open-ended approach to learning and thinking to allow students in architecture and spatial design to engage in collaborative processes of co-creating knowledge.[2] Such studio culture actively challenges the notion of a singular, authoritative source of information and presents the potential to students to question and deconstruct established knowledge, in the pursue of new knowledge by indeed revealing inherent complexities and multiplicities. While some hierarchical aspects remain in the evaluation of this studio, its teaching invests in the dismantling of such hierarchies to set up an educational environment where collective participation propels the exploration of new ideas. This approach closely aligns with Paulo Freire's concept of authentic thinking, where ideas are shaped by the complexity and dynamism of reality through experience and dialogue.[3] In this didactic framework, scholastic success is not measured by students' adherence to predetermined tasks but by their ability to transcend previous limitations. As an embodiment of freedom and co-creation, this approach engages with students as active participants. This is important, particularly for a form of pedagogy that encourages critical examination, known as problem-posing education. Problem-posing education, a concept also developed by Paulo Freire, is characterized by a dialogic approach where teachers and students engage in critical conversations on topics that are meaningful and relevant to their own lives and communities. (ibid) This stands in contrast to many other educational paradigms that revolve around the illusion of problem-solving strategies, often rooted in a post-consumerist mind-set.

The pedagogic practice commented on in this paper places strong emphasis on the following 3 aspects. Firstly, a deep engagement with contemporary social issues, allowing students to recognise the multitude of perspectives that collectively contribute to the intrinsic instability of the understanding of such issues.[4] Next is an emphasis on transmedial knowledge construction, recognizing that learning occurs through diverse modes of representation and various media. As such, students can intersect various disciplines such as film, theatre, dance, sculpture and architecture, recognizing that nothing exists in isolation.[5] A third and central idea in this paper is the

6   Alice Y. Kolb, David A. Kolb, "Learning Styles and Learning Spaces: Enhancing Experiential Learning in Higher Education," *Academy of Management Learning & Education* 4, 2 (2005), 193–212, https://www.jstor.org/stable/40214287.

8   Maurice Merleau-Ponty, *Phenomenology of Perception*, (Routledge, 2011) — This seminal work by Merleau-Ponty originally published in 1945 provides a leading commentary on his theory of embodiment, exploring how the body is not just an object in the world but a fundamental aspect of our perceptual experience. Further developed by subsequent publications such as: Maurice Merleau-Ponty, *The Primacy of Perception, And Other Essays on Phenomenological Psychology, the Philosophy of Art, History and Politics* (Northwestern University Press, 1964).

7   John Dewey, *Experience and Education* (Kappa Delta Pi, 1938). Dewey's classic work emphasising the importance of experiential learning. Dewey's central argument revolves around the idea that education should be rooted in and shaped by experiences. He contends that learning is most effective when it is tied to genuine experiences that are meaningful and relevant to the learner. This perspective aligns well with architectural design education, where students are effectively tasked with designing spaces and structures that have a tangible impact on the environment and people's lives.

9   Karen Barad, *Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning* (Duke University Press, 2007).

10   Bell Hooks, *Teaching Critical Thinking: Practical Wisdom* (Routledge, 2010)

11   Donald A. Schön, *The Reflective Practitioner: How Professionals Think In Action* (Basic Books, 1983).

concept of the transforming body as a spatial instrument in the design of spaces. The term 'body' in the first instance refers to the physical presence of each individual student. However, the 'body' also acknowledges other bodies, both human and non-human as part of an ongoing process of evolution and adaptation. Parallel to a commentary on a selection of design projects produced as part of this pedagogic practice, the following chapters develop the idea of the 'transforming body' as a learning experience, connecting a fourfold theoretical framework. Alice Y. Kolb and David A. Kolb's work on learning styles and learning places, as a basis for enhancing experiential learning in the context of a spatial design studio. [6] John Dewey's work emphasising the importance of experiential learning in ways that bodies and spaces are combined in dynamic and reciprocal relationships of mutual and continuous change. [7] Maurice Merleau-Ponty's theory of embodiment stating that the perception of the world is fundamentally shaped by our body. [8] Karen Barad's ideas on agential realism, arguing for an understanding of the world as an entanglement of phenomena highlighting the interconnectedness of entities in the world. [9]

The pedagogic practice explored in this paper is grounded in the transformative potential of the body, and draws critical inspiration from the above mentioned theoretical framework to explore the connection between bodily experiences and spatial design. Within this approach, bodily experiences are seen not as isolated occurrences but as integral parts of a dynamic web of interactions. This integration of ideas provides a lens through which to view the body as an instrument in spatial design, facilitating a more nuanced exploration of the intricate relationships and interdependencies that shape the design of spaces. As a result, students are immersed in learning experiences that go beyond the conventional understanding of spaces as static entities, encouraging them to perceive space as a dynamic and interconnected system. The transforming body becomes a key instrument for students to actively engage with and comprehend the complex entanglements inherent in such spatial systems.

Ideas unpacked in this paper have been developed through thought and study at various institutions and organisations. Concepts discussed are rooted in principles of critical pedagogy, and existential teaching, emphasizing an approach that continuously re-examines the process of education and research. [10] A core principle in this kind of teaching is to acknowledge the spatial design studio as a laboratory in which students can develop a reflective practice integrating spatial design with various acts of self-examination. [11] Such a place operates within the complex world of opposites, where various perspectives and approaches coexist and interact. Student work discussed in this paper has been produced between 2005 and 20022 at various

12 Paulo Freire, *Pedagogy of the Oppressed* (Continuum, 1970). Freire a pioneer in critical pedagogy, emphasizes the importance of dialogue and problem-posing education. He believes that education should not be a one-way transmission of knowledge but a collaborative process where teachers and students co-construct knowledge. By acknowledging the diversity of experiences and perspectives, students can better understand the complexity of the world.

institutions. All work originates from studio's written and taught by the author in his capacity as course leader, studio master or thesis supervisor as part of a larger team.

Freedom and Uncertainty; Problem-Posing Education

The fundamental aim of the pedagogic practice commented on here is to nurture students' transformative potential and cultivate personal growth. In pursuit of these objectives, teaching wants to be structured by values such as freedom, choice, and individuality.[12] As various examples of student work will illustrate, the exploration of such values provides a framework for student-learning beyond mere acquisition of knowledge. Project work supports the development of authentic, self-aware individuals, capable of making meaningful choices in critical relation to others. Creating such a learning environment requires students to recognise their inherent freedom and take ownership of their learning, which is not intuitively evident for most. Students explore design questions in the context of their own lives, their own physical being in this world, and thus engage with introspective reflection to come to understand personal experiences, thoughts, and emotions. The projects produced out this studio culture resist a perhaps ever-growing desire for producing aesthetic impressions of stability and certainty which often answer to the demands set by contemporary commercial practice. In design this often leads towards the conformity to stylistic and cultured reiterations without questioning or challenging the status quo. Drawing upon the insights of Paolo Freire in his influential work "Pedagogy of the Oppressed," two key principles, "absence of doubt" and "fear of freedom," come to the forefront to indeed challenge the status quo. These terms encapsulate the challenges and opportunities inherent to teaching. "Absence of doubt" suggests a rigid and unquestioning adherence to established norms, which would hinder critical thinking and personal growth. "Fear of freedom" reflects the hesitancy and apprehension that students may experience when confronted with the responsibility of making choices and taking ownership of their learning. The studio culture commented on in this article seeks to break free from these limitations by setting up an environment where doubt is embraced as a catalyst for critical thinking and where freedom is not feared but looked for as a pathway to personal transformation and authentic learning.

As such, design projects produced don't start with a set definition of things, no clear axioms, no dogmatic truths, no set architectural program or delineated end-user in sight. Projects don't even confine to a single disciplinary framework. What guides each design is an invitation to critically examine a specific socio-cultural context, emphasizing the pivotal role of the
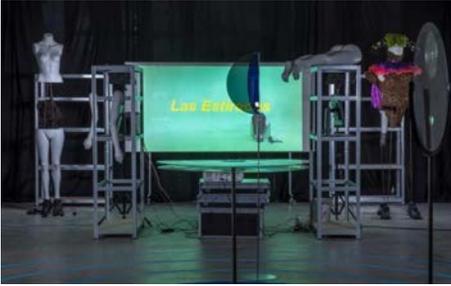
1

13   Michel Foucault, *Power/knowledge: Selected interviews and other writings, 1972–1977* (New York: Pantheon Books, 1980) — The idea to critically engage with implicit power dynamics take place on multiple levels. Indeed, as part of the studio's discourse but also in terms of its overall didactic alignment. This stands in reference to what Michel Foucault writes on power, discourse, and knowledge when he unpacks the role of power in the way it shapes that what is considered true or false. It is this kind of understanding that can encourage students to examine the power dynamics inherent to knowledge production and dissemination. With the aim to nurture critical thinking and the ever so gently deconstruction of dominant narratives in education.

14   Leon van Schaik, *Spatial intelligence: New Futures for Architecture* (Wiley, 2008) – The work and teaching of Leon van Schaik stands at the basis of considering reflective practice in architectural design. The concept of spatial intelligence is often associated with Howard Gardner's theory of multiple intelligences, which includes various types of intelligence beyond the traditional notion of IQ. Spatial intelligence, in this context, refers to an individual's ability to perceive, understand, and work with the spatial relationships and configurations. The second chapter of Leon van Schaiks book specifically comments on how the acknowledgment of spatial intelligence in architectural education and the profession should facilitate a process of demystifying the practice of design with the clear intention to create a more democratic connection between society and the practice itself.

1   'Las Estiradas' (the streched woman) by Denisse Vega de Santiago, 2021, MA thesis at MIARD, installed at the exhibition 'The In-Between' at Hofbogen Rotterdam, with Curator and project manager Sharmyn Cruz Rivera and Zoraïma Hupkes, graduation committee Golnar Abbasi, Ephraim Joris, Natasha Marie Llorens, Federico Martelli and Alex Augusto Suárez. Photo's by the author.

student-researcher in this process. In such situations, students have the freedom to initiate a design process using their own preferred medium, liberating themselves from the constraints and hierarchies inherent in a particular discipline. To reveal a world characterized by instability, the construction of knowledge indeed needs to occur beyond the boundaries of an agreed-upon vocabulary. Consequently, the disciplinary nature of the work is contingent upon the projects at hand and does not originate from the contemplation of a specific creative practice. Rather, they adapt as necessary to assume a form of practice most relevant for each project. Design is structured along a trajectory of discovery. Projects navigate the unknown, and in doing so, students have the opportunity to develop courage and resilience. This ultimately involves a wider critique, towards reconsidering the rigid structures and hierarchies that often characterize traditional educational settings.[13] Projects presented in this paper embrace a learner-centred approach, with an emphasis on critical thinking and creativity to address a world characterized by rapid change, complexity, and uncertainty. They engage in a critical examination of mechanized societies which are often built upon the notion of 'division of labour'. Such structures assign individuals to specialized roles within distinct subject-specific domains. These hierarchical fables frequently come at the cost of reflective practices which can only thrive in the continuous flow of intellectual and conceptual interconnection and debate. In pursue of critical dialogue, the design studio does shift its attention towards the interconnectedness of such domains to develop what can be referred to as 'soft knowledge'. Examples of this are, spatial intelligence, social intelligence, emotional intelligence, and adaptability.[14] In doing so, each project is allowed to explore questions related to identity, meaning, and purpose. They venture beyond categorised knowledge to engage with self-discovery and bring forth a deeper understanding of oneself in relation to the world.

The following design project serves as an example in which a student explores personal spatial encounters as an immigrant worker during the 2020 lock-down in the Netherlands. [1] Through her design work, she documents personal experiences and reflections that arise, as she embarks on her daily journey through an eerily empty world. At a time most people remain at home, she navigates empty trains, quiet roads, traversing various socio-economic enclaves to reach a food distribution centre responsible for maintaining urban food supplies. The culmination of this project, titled 'Las Estiradas,' takes the form of a documentary film, set within a warehouse installation. This film provides an intimate narrative about the racialization of migrant laborers across boundaries of personal safety during the Covid pandemic. Various bodily transformations narrate levels of strain and struggle as she traces a trajectory of multiplicity and collapsing identity during her daily
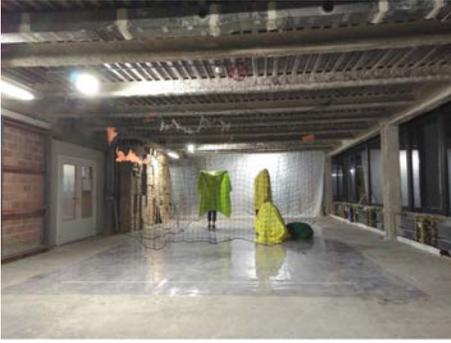
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15 Marjorie o'Loughlin, *Embodiment and Educa-
    tion: Exploring Creatural Existence* (Springer,
    2006) — This book discusses the relevance of
    Merleau-Ponty's work on embodiment to edu-
    cation, making connections between philoso-
    phy and educational practices. Critiquing tra-
    ditional Cartesian dualism which separates
    mind from body as introduced by René
    Descartes. In architectural education, the
    transforming body becomes a place where
    mental and physical realms interact and over-
    lap; in which the body is becomes an integral
    part of the mind as is the mind is integral to
    the body.

2   Lost in Space performative workshop in
    collaboration with Wouter Krokaert; 2017 BA 1 IA
    at KU Leuven. Students (unknown) explore bodily
    compositions in space. Space is explored as
    relationship between transforming bodies. The
    'stage' marks territories and introduces an
    interpretation of Alberti's idea of equipping the
    picture frame with a grid, (1435). This in support of
    the task of observing and annotating these
    movements through space using various media.
    Photo's by the author.

morning commute. As an essential worker, she grapples with heightened exposure, surveillance, and a growing sense of isolation. Her experiences reflect on the ways in which she, as an individual, becomes more and more 'stretched', thus measured by an institution of power.

The Transforming Body

Maurice Merleau-Ponty's 'Theory of Embodiment' unravels the notion for our perception of the world to be fundamentally shaped by our body. As such, rejecting the idea that the mind and body can exist as separate entities, asserting that they are intricately linked. Our body, according to this theory, is not just a physical vessel but a dynamic and active agent, actively engaged with the world. In architectural education, this allows students to reposition themselves from being passive receivers of knowledge towards becoming active participants in spatial learning.[15] Merleau-Ponty's theory implies for the body to never be static; and transforms and adapts as it interacts with the world. The following example of student work illustrates didactic moments in which students recognise their bodies as dynamic entities actively engaged in the composition of space. Such compositional processes want to nurture elevated levels of self-awareness of a personal presence in architectural space. This heightened sense of awareness significantly impacts the way students engage with the act of space making. Eventually, and as projects illustrate, the body is allowed to become an integral part of the mind as it contemplates the design and composition of space. Integrating Merleau-Ponty's theory stands in service of a critical pedagogical approach in which embodied experiences guide a process of intertwining perception and action. The resulting student work questions encyclopaedic design methods and considers a designing away from pre-set design vocabularies. Projects often reflect on how a personal design-intend might impact a larger socio-spatial context. Such an understanding of space, through the notion of networked experiences extends beyond form and functionality. It embraces the complexity of aesthetics as 'making sense of the world' and in doing so contemplate human and non-human experiences and well-being. The concept of the "transforming body" is the cornerstone in this process, and invites those who are willing, to enter the profound implications it holds, particularly within the context of an architectural design studio.

While introducing an entity so integral to our experience of the world might appear evident, the underlying nuance calls for a shift in perspective. Instead of perceiving the body as a singular and static entity, the body relates to the overarching idea of interconnectedness. Each body, in this context, forms a vital node within a vast network of other bodies, which in turn cont-
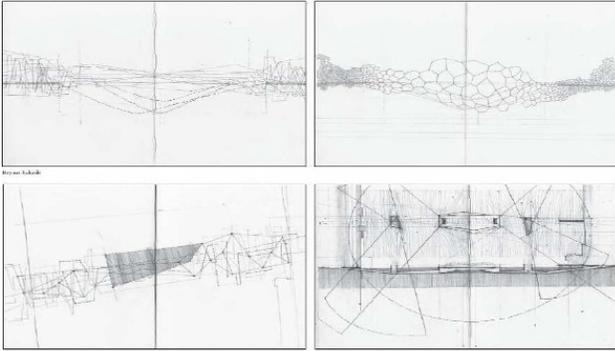
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3   Wire frame drawings form 'Lost in Space 2005'
       BA1 at Canterbury School of Architecture in
       collaboration with Sandra Mifsud and subsequent
       studios at Canterbury and Syracuse University
       London. These wireframes depict movements
       through space and consequently negotiate the
       idea of space making as a process of dynamic
       interaction between bodies, both human and non-
       human. Photo's by the author.

16   Karen Barad, "Posthumanist performativity:
      Toward an understanding of how matter
      comes to matter," *Signs: Journal of women in
      culture and society* 28, 3 (2003): 801–831. This
      seminal paper discusses the implications of
      new materialist philosophy for understanding
      the agency of matter and the entanglement of
      the human and non-human in the performa-
      tive constitution of reality by challenging tra-
      ditional notions of agency, causality, and
      ontology. Barad's ideas are deeply influential
      in the fields of feminist theory, science stud-
      ies, and posthumanism. Barad introduces the
      concept of "agential realism," which chal-
      lenges traditional dualisms and proposes an
      ontological framework that sees the world as
      an entanglement of intra-acting agencies.
      This framework has profound implications for
      our understanding of reality and challenges
      the separation between humans and non-
      humans. It aligns with posthumanist thought,
      emphasizing that matter and meaning are
      inseparable.

17   More elaborate commentaries on the work
      have been previously published in the follow-
      ing publications;
          - Ephraim Joris, Between Research and
      Practice, eds Konrad Buhagiar, (AP+; Malta,
      2012) pp. 71 – 80
          - Ephraim Joris, Collaborative modes of
      Practice; incomplete trajectories of thinking
      guiding a practice, commenting on research
      practice, The Practice of Practice 2 —
      Research in the Medium of Design, eds Leon
      Van Schaik, Michael Spooner, (one-
      pointsixone; Melbourne, 2010) pp. 65 – 80

ribute to the creation of rituals, cultures, societies and their spaces. Design teaching, in this instance, acknowledges what Karen Barad and Bruno Latour emphasize as the interconnectedness of entities in the world. They don't observe the body as an isolated and static entity, yet instead see it as part of a larger network of bodies and accompanying material forces. The following examples of student work challenge the traditional perception of the body in space by recognizing each body to be an active agent in the composition of space, through dynamic interactions with other bodies. Setting forth the understanding that all bodies are entangled in a complex web of ongoing relationships.[16] In these situations, spatial phenomena are not simply observed but are actively produced to extend the design of space to the materialization of meaning, in which the entanglement of matter and meaning occurs through performative acts. Such a paradigm shift brings forth a significant revelation: the body transcends its traditional role and transforms into an ever-evolving and interconnected instrument. Essentially, the "transforming body" injects vitality into an architectural design discourse, where it performs an ongoing reciprocal dialogue between the composition of space and its consequential architectures.

Following work falls under the title 'Lost in Space' and was taught at various cohorts between 2005 and 2017. "Lost in Space" was taught at Canterbury School of Architecture in 2005 and later at KU Leuven in 2017 at BA 1 level and Syracuse University at master level.[17] This project sets up a teaching environment merging two seemingly distinct creative realms, providing students with a platform to explore the intricacies of spatial composition. Over a transformative two-week period, students embark on a journey of self-discovery through contemporary dance tuition, which is integrated into an architecture design studio overseen by a choreographer, offering students a performative arena for exploration. [2] Students undertake an existential quest to experience relationships between body and space. Such journey, in which experiential knowledge is developed, is complemented with more analytical work as students produce drawings in which they capture and analyze various bodily compositions in space. [3] The concept of the "transforming body" stands central in this exercise. As the opus to their spatial design education each student is introduced to the idea that their individual body forms a vital node within a vast network of other bodies, contributing to various spatial compositions which at a later stage in their curriculum is enlarged towards the design of more complex architectural design projects.

Following work is part of the Master at MIARD in Rotterdam and is titled '30.90582'. [4] The project installs a dust-chamber in a public art gallery. People enter the dust-chamber wearing protective gear, while

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18   Henry Jenkins, *Convergence Culture: Where Old and New Media Collide* (NYU Press, 2006). — Jenkins discusses the importance of a participatory culture in which different media platforms and modes of expression intersect in the construction of knowledge. While the book primarily explores media and pop culture, 'Convergence Culture' provides a valuable framework for the implementation of critical pedagogy in architectural design. By incorporating media literacy, students can become active producers and contributors to media content equipped with the skills and perspectives needed to navigate an increasingly mediated world.

4   '30.90582' by Angelo Ciccaglione, 2021, MA thesis at MIARD, installed at the exhibition 'The In-Between' at Hofbogen Rotterdam, with Curator and project manager Sharmyn Cruz Rivera and Zoraïma Hupkes, graduation committee Golnar Abbasi, Ephraim Joris, Natasha Marie Llorens, Federico Martelli and Alex Augusto Suárez. Photo's by the author.

19   Elizabeth Grosz, *Architecture from the Outside: Essays on Virtual and Real Space* (MIT Press, 2001). Elizabeth Grosz provocatively challenges the conventional understanding of architectural boundaries, noting that they are to be perceived as permeable and porous rather than fixed entities. With her writing, she puts forward a reconsideration of spatial limitations, arguing for an architecture that allows for a blurring of the lines between inside and outside.

a matrix of cameras and projectors capture various intensities of occupancy and threat as the chamber grows consciousness. Resulting recordings are projected inside and outside the chamber to mediate perception and exemplify spatial and human fragility. This project installs a reversal; for the human as subject, in control of its environment, becomes an object controlled by an institution of power (in this case dust). Such space, activated by pollution and control becomes a mechanism of surveillance and punishment. Foucault calls these mechanisms "technologies of domination" in which human conduct becomes disciplined.

Transmedial Knowledge Construction: Navigating Complexity

The concept of transmedial knowledge construction, is an important vehicle for students to navigate the complexities of their position.[18] As projects illustrate, this approach moves away from 'discipline specific' modes of representation in order to engage with qualities of instability and ambiguity in the way students observe and notate space. Ultimately to foster interdisciplinary learning and encourage the use of multiple modes of representation and media to allow for a broader spectrum of experiences extending well beyond the confines of traditional architectural representation. The idea of transmedial knowledge construction supports an important pedagogical approach in that it underscores the importance of interrogating traditional categories of representation and media. Inviting students to question established notions concerning architectural aesthetics as form and function. In doing so, it seeks to introduce students to a spatial research practice by emphasizing the observation of spatial complexity, multiplicity, and diversity. This emphasis complements traditional principles of abstraction and notation, which have been a focal point in architectural education. While recognizing the importance of these representational skills, student work discussed here shifts its focus towards the observation and design of dynamic and temporal aspects of space. Traditionally, architectural education is centered around static representations, emphasizing the clarity of concepts, forms, and structures. The work as part of this studio culture, reflects on the qualities of change and emergence, aligning with Merleau-Ponty's notion of embodiment which has been further developed by Elizabeth Grosz.[19] She argues that our bodies should not be viewed as passive entities but as active participants in creating meaning within architectural environments and in doing so challenging the conventional view of architecture as static and object-oriented. In her book, 'Architecture from the Outside,' Grosz contends that architectural boundaries are to be seen as permeable and porous, constantly negotiated by the bodies that move through and interact with them. As such, clear spatial categories,
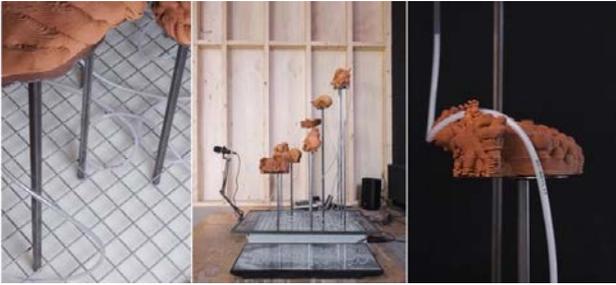
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20 Henri Lefebvre, *The Production of Space*
    (Blackwell Publishing 1974). Lefebvre's work
    argues that space is not just a physical entity
    but a social product shaped by socio-political
    forces. Lefebvre's theories have been influen-
    tial in a wide range of critical spatial studies.

21 Doreen Massey, "A Global Sense of Place,"
    From Space, Place and Gender (Minneapolis:
    University of Minnesota Press, 1994).
    Massey's theory of the power geometry of
    time-space argues for a dynamic understand-
    ing of space as always in the process of
    becoming. In doing so, asking the question
    "Can't we rethink out sense of place?" Explor-
    ing the possibility for such sense of place to
    be progressive and characterized by intercon-
    nectedness instead of attending to the desire
    for community coherence in time and space.

5   'Reproductive Wilderness' by Shonali Shetty, 2022,
    MA thesis at MIARD, ceramic mutations of a
    scanned bodily interior are being washed with
    milk; one of the most ancient ceramic glazing
    techniques. The installation is activated by
    measuring contextual parameters in the exhibition
    'Underfoot and reaching into the light' at
    Huidenclub Rotterdam, with project manager Eva
    Garibaldi, graduation committee Golnar Abbasi,
    Kris Dittel, Ephraim Joris, Federico Martelli and
    Alex Augusto Suárez. Photo's by Chiara Catalini.

such as inside and outside, seem to erode to a point that conventional ideas on containment and enclosure in architecture can be challenged. In alignment with critical theories of space, this drives architectural environments to be observed as imbued with social performance and meaning.[20] The following two projects interrogate such ideas as they seek to define the production of space as something intrinsically embodied and dynamic.[21] Projects move away from static representations of space in order to explore the concept of architectural/spatial boundaries as nuanced examinations of political and societal narratives. Projects tap into a discourse extending beyond the physicality of architecture, to reflect on the complex interplay between built environments and the narratives they house and shape. Projects like this exemplify how transmediality offers the opportunity to explore the interconnectedness of such ideas to navigate the intricate terrain of shifting societal landscapes.

The following project is titled 'Reproductive Wilderness' [5] and presents an interactive installation where one encounters a profound transformation; a collection of ceramic organs undergoes a ritualistic bathing; a convergence where rigidity meets fluidity, where the corporeal becomes mechanical, and the mechanical is imbued with vitality once again. The project negotiates spatial generative principles traversing realms of political and societal narrative as it explores the implications of human and non-human modes of reproduction. The work sets up an intricate interplay of permeability and porousness, where the body's interior relates to the world beyond its surface. The work produced by Shonali Shetty during and after pregnancy presents an ecosystem of contemplation, where previous distinctions fade in ever-shifting relationships between organic and artificial. The work wants to acknowledge the interconnectedness between mechanic and organic spatial reproduction, in all its fluid, ever-evolving, and disharmonious complexity.

This final example deeply engages with experiential and societal forces is 'The return of the Wolf' [6], a transformative journey, where Noëlle Ingeveldt becomes wolf (but to do so she also ought to become sheep) in order to interrogate a cultivated and disconnected landscape of the Netherlands. The story is told as a contemporary fairy tale through film. Various costumes and props allow this transformative journey to take place. For the body to become other. As explored by scholars like Donna Haraway and Karen Barad, the project questions the centrality of the human subject and acknowledges the agency and importance of non-human entities and the role they play in shaping societies, cultures, and their architectures. With this work, Noëlle Ingeveldt re-evaluates spatial design methodologies, emphasizing a collaboration with the natural material world. She puts forward a more

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22 Gloria Ladson-Billings, *The Dreamkeepers: Successful Teachers of African American Children* (Jossey-Bass, 1994). Ladson-Billings focuses on culturally relevant pedagogy. She argues that recognizing and valuing diverse perspectives and experiences in the classroom can lead to more effective and equitable education. Acknowledging the instability of knowledge allows for a richer understanding of different cultural contexts.

23 Paolo Freire, *Pedagogy of the oppressed* (Continuum, 2005), 71–87. This resistance towards the idea of centralized knowledge in the teaching of a design studio stands in reference to Paulo Freire's writing on teaching in which the supersedence of the teacher student contradiction is explored as a mutual process of transformation in which both can be observed as uncompleted beings, conscious of their incompletion, and their attempt to be more fully human.

6   'The return to the Wolf' by Noëlle Ingeveldt, 2021, MA thesis at MIARD, installed at the exhibition 'The In-Between' at Hofbogen Rotterdam, with Curator and project manager Sharmyn Cruz Rivera and Zoraïma Hupkes, graduation committee Golnar Abbasi, Ephraim Joris, Natasha Marie Llorens, Federico Martelli and Alex Augusto Suárez. Photo's by the author and stills taken from intermediate video work discussed during tutorials.

holistic and ecological approach by going far in exploring the entanglement of matter and meaning and indeed engage with the ethical responsibilities that arise from this entanglement.

Co-Creation: Breaking Hierarchies

The work and teaching discussed in this article negotiates dynamic and reciprocal relationships among students, often from diverse disciplinary backgrounds. This collaborative approach is fundamental, as it promotes a rich diversity of ideas and methodologies drawn from various areas of expertise.[22] In turn this allows for the creation of a heterogeneous creative environment in which students nurture a sense of cultural sensitivity and awareness as they come in contact with diverse sets of ideas and perspectives. The projects presented in this paper have grown from a studio culture that actively challenges the notion of a singular, authoritative source of knowledge. While some hierarchical aspects remain in the evaluation of studio output, continuous efforts have been made to deconstruct these hierarchies within the teaching process, thereby establishing an educational ecosystem where collective collaboration propels the exploration of new ideas. This resistance towards the idea of centralized knowledge in the teaching of a design studio stands in reference to Paulo Freire's writing on teaching in which the supersedence of the teacher-student contradiction is explored as a mutual process of transformation in which both can be observed as uncompleted beings, conscious of their incompletion, and their attempt to be more fully human. [23] Within such a framework, the traditional subordination of students to teachers becomes obsolete, facilitating a paradigm shift, as previously mentioned, in which strict design tasks are strategically avoided. By allowing students to engage with design challenges through the lens of their own physical experiences, this teaching method transfers the emphasis from a focus to rigid task completion to dynamic, reflective processes. Project briefs serve as zones where didactic dogma is suppressed and where traditional teacher-student hierarchies can be questioned in order to create space for ongoing reflection and personal growth. This approach assesses scholastic success not through adherence to predetermined tasks but by measuring students' ability to surpass previous limitations. This is deemed important in order to cultivate an educational environment of ongoing critique and discovery. The embodied nature of this educational model promotes freedom and co-creation, positioning students as active thinkers. In doing so, projects consistently transcend the confines of the design studio, actively engaging with a variety of socio-cultural issues. This deliberate expansion serves a dual purpose: cultivating empathy and raising a heightened sense of conc-

ern. Ultimately, this teaching practice aligns with this principal objective; establishing an educational environment where design projects evolve into the production of nuanced, embodied spatial instruments. The deployment of such instruments are not confined to the boundaries of the studio but are purposefully crafted for a broader critique and ongoing discovery.

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Mind the Gap

Robert M. MacLeod
Nancy M. Sanders

1   "ARE 5.0 Pass Rates by School," NCARB, September 10, 2023.
        The national pass rates of the of the six testing divisions in 2022: Practice Management, 50%; Project Management, 63%; Programming & Analysis, 55%; Project Planning & Design, 47%; Project Development & Documentation, 53% and Construction & Evaluation, 65%. The national average to complete AXP (internship) is 4.8 years, and another 2.9 years to completion of the exams.

2   The Florida AIA 2023 Convention was held in Orlando in July of 2023. The continuing education session featured chairs and directors of Florida's architecture programs responding to questions raised by attendees.

The debated "gap" between the academy and the practice of architecture is usually situated as a rift between the conceptual work of a studio-based design education and the mundane, work-a-day tasks of an office. These discussions lean on anecdotal evidence that suggest a lack of preparedness where new recruits enter internships with little knowledge of building codes, budgetary concerns, and construction methods. Poor pass rates on licensing exams are also stated indications of a problem, although these are taken after an average of about five years of professional experience, clearly placing that burden more on the internship process.[1]

The 2023 Florida American Institute of Architects (AIA) state conference featured a discussion session entitled "Bridging the Gap."[2] In a questionnaire produced by attendees for the academic community, excerpted below, the professionals' concerns, for the most part, parroted familiar tropes.

- "How are schools ensuring that academia aligns with the needs of the architecture field? How do they ensure that students have realistic expectations of practice?"
- "Most students are disappointed about architecture post-graduation. What are we doing to mitigate this?"
- "Why is design such an emphasis, when in practice, it is only a small part of a much more complex career?"
- "How can students learn more about how to actually work for an architectural company in regards to Construction Documents?"
- "How can practicing professionals influence the curriculum of architecture education? Your schools of architecture are training our entry level collaborators. Shouldn't our needs for certain skill sets be taken into consideration when developing curriculum?"
- "There seems to be an ever widening gap between what is being taught at the college level and the day to day practice of Architecture. All too often it appears we are setting false expectations of our profession."
- "Many students who seek internship with us have no realistic understanding of architectural practice and offer few practical skill sets other than wanting to be environmental / cultural warriors."
- "There seems to be a need to understand that our client base is not singularly focused on the demise of the natural environment and climate. Yet this is what students express to us as being a preeminent focus to the detriment of many other important aspects of the profession. This is very one-dimensional and doesn't serve the next generation of architect's, our clients or the larger community of citizens well."

3   "Number of Architects with Reciprocal
     Licenses Increased in 2022." *NCARB*, 5 June
     2023. It is worth noting Florida has the fifth
     largest cohort of in-state licensed architects
     (5382) and reciprocal licenses (5550) in the
     US for a total of 10,932 licensed professionals.
     California (22,210) and New York (21,043) lead
     the US in total licensure.

4   "ARE 5.0 Pass Rates by School," NCARB, July
     14, 2022.

- "How can we better balance theory and practical application in architectural education?"
- "Is a design-forward curriculum still important? Is a more business-forward curriculum more relevant?"
- "Should schools of architecture be focusing on innovation and technology?"
- "Can colleges be a catalyst for creating a more profitable profession?"
- "We need a better understanding of theory vs. practice. It seems a lot of education is leaning and pushing towards theory to understand the concept of space yet everyday practice seems to have lost that all together."
- "The transition after education is difficult when in practice the relationships and understandings of theory and space are not the same. In theory, theory and practice are the same. In practice, they are not."

It should be noted that these questions are posed by attendees of a single conference and not all assumptions are supported by evidence.[3] For example, take the queries, "Is a design-forward curriculum still important? Is a more business-forward curriculum more relevant" and "why is design such an emphasis, when in practice, it is only a small part of a much more complex career?" These suggest that graduates are over-prepared in design but under-prepared in the technical and business aspects. However, data from registration exams in Florida doesn't support this read, and, in fact, the design portion of the exam proves the most difficult to pass.[4] Or, the query that begins "most students are disappointed about architecture post-graduation," is too broad a generalization to build any argument upon. At their most banal, these assumptions suggest that firms require nothing less and nothing more than the skills needed to serve their business model. They also fail to acknowledge the immense challenge of preparing students for leadership in a rapidly evolving technological, ecological, and political landscape. The questions do at least, however, take the temperature of a segment of the profession in a particular place and time, and there is an important assertion here that the perceived disequilibrium is a disservice not only to a firm's economic bottom line, but to graduates' sense of self-worth; that their transition to the workplace would be less fraught if they could emerge from their education and move seamlessly, and profitably, into a pre-ordained notion of "the real world" that fits most, if not all, firms, if such a generalization were even possible.

The concerns of both entities, academic and professional, ultimately reside in the generational evolution of the world around us. Ever-changing disciplinary boundaries continuously re-frame architecture as a cultural construct impacted by socio-political forces. Recent years have seen an emergence of what we might call *crisis curriculum*, responding in real time to the highly charged socio-political issues facing the world: climate change, social justice, and the push to "de-colonialize" the curriculum. Graduates come of age and are inevitably confronted with new and unforeseen global threats coupled with a reshuffling of social orders. And while professional practice seeks expedient solutions, it is the role of the academy to ask difficult questions. The thesis we wish to advance here is that the perceived "gap" between practice and the academy within the myth of the "real world" may in fact serve an essential and existential purpose in the making of an architect. We also posit that a bridging of the gap resides less in "teaching them how to make working drawings" than in the reality of an evolving professional census and the boundless possibilities offered by a plastic, malleable curricular logic that expands the discipline into more fluid conditions of education and practice.

Consider for a moment the practitioner returning to the studios to serve on critiques after a long stretch away from the academic world embroiled in the day-to-day challenges of working in an office. S/he feels a sense of nostalgia, being re-connected to a place of creative energy and intellectual debate. The practitioner, recounting that now elusive window of time where they once had the opportunity to engage unencumbered with conceptual experimentation in the design studio, inevitably expresses a palpable gratitude for the gift of their education. They return to the office inspired to re-invest their work with the meaning and purpose that brought them to study architecture in the first place. Certainly, rifts need to be healed and institutional bridges between the two worlds must be fostered. But efforts to collapse the gap only unidirectionally, from the academy towards the goals of the profession, ignore the precious gift afforded by the educational experience. Thus we would suggest the profession embrace their own role as educators, a two-way street. If there is a rift to be healed, might it involve not just the academy shaping itself to the needs of the profession, but the profession also bearing a certain practiced gratitude toward the gifts brought forth by the academy?

The Fear of Theory

Architecture has long been a discipline seeking rules and guidelines in search of a definitive answer to the question of its very definition. As Joan

5   Rebecca Williamson, and Joan Ockman, "The Turn of Education," in *Architecture School: Three Centuries of Educating Architects in North America* (Cambridge, MA: MIT Press, 2012), 10

6   Joan Ockman, Rebecca Williamson, and Mary McLeod, "The End of Innocence: From Political Activism to Postmodernism," in *Architecture School: Three Centuries of Educating Architects in North America* (Cambridge, MA: MIT Press, 2012), 162–166

7   Vitruvius and M. H. Morgan, *Vitruvius: The ten books of architecture* (New York: Dover Publications, 1960).

Ockman states, "Indeed, it is fair to ask whether architecture has ever really constituted a unified domain of knowledge. Its unsettled boundaries have contributed to a tense relationship between the worlds of practice and academia." [5] Let us address what practitioners often state is the culprit of the perceived *gap*: that architecture schools delve too heavily in theory-based coursework in lieu of practical knowledge. Recall the young design student looking for the correct answer to a design exercise only to be confronted with numerous solutions and perhaps, ultimately, more questions than answers. The theoretical curricular realm, both reactionary and pro-active, has long been politicized, and the critiqued gap as we know it traces its origins at least to the Vietnam era, when anti-war protests intersected with civil rights movements and the rise of feminism. The reigning hegemony of top-down instruction gave way to collaborative engagement with studio courses addressing the socio-political issues of the day. Curricular changes placed conventional professional preparatory classes such as structures, technology, and practice management in the background to varying degrees while schools reconsidered curricula. [6] We also see today a form of practice driven by the academy with the emergence of community-based design centers directly engaged with cities and neighborhoods through an activist, boots-on-the-ground sensibility.

This period of open-ended inquiry in the education of an architect, although firmly in place since the beginning of the twentieth century, is recent relative to the longer arc of history. Principles of architecture were more or less scripted into training and practice from antiquity to the 19th century. History reveals how formal and spatial sensibilities, evolving over time, were ingrained into the language of buildings according to the technical skills, available materials, and traditional sensibilities of the day. The all-encompassing treatises of Vitruvius, Leon Battista Alberti, and Andrea Palladio defined the scope and the rules of the practice of architecture. Beginning in the first century AD, Vitruvius' *De Architectura* provided the first pedagogical handbook for architects, describing in its ten volumes the subjects of *city planning, materiality, proportions, temple construction, infrastructure, private houses, color and interior ornament, public buildings, astronomy and mathematics*, and *military engineering*. Architecture and all of its creative contributors, from the simple artisan to the supreme artist, were united in a single collective task. [7]

Representing craftsmen and merchants, and interwoven with the political and economic fabric of their towns, Medieval guilds kept competition in check and upheld standards of professionalism. From these emerged the tiered system of expertise from apprentice, to craftsman, to journeyman, to master. Notably, the guilds simultaneously contributed to the emergence of

8   "Guild," Encyclopædia Britannica, October
        21, 2023.

9   "START THE AXP," NCARB, March 9, 2022.

10   Leon Battista Alberti, "Synopsis: On the Art of
        Building in Ten Books," Powell's Books, Sep-
        tember 2023.

11   Andrea Palladio and Adolf K Placzek, "Intro-
        duction," in *The Four Books of Architecture:
        With a New Introduction by Adolf K. Placzek*N
        (New York: Dover, 1965).

academia. The University of Bologna, the world's longest continuously operating university, and the first to award degrees, was founded in 1088 by a student guild, the *studiorum*. Common throughout Europe by the 12th century, institutions of learning, called *Studium Generale,* offered pupils training in a singularly focused subject.[8] The collapse of the guilds intersected with the rise of capitalistic tendencies and early western industrialization, yet echoes of the system, wherein one must complete an apprenticeship or internship prior to licensure, can be seen in the contemporary professional organizational models of architecture, engineering, and medicine.[9]

For over a millennium the authority of Vitruvius went unchallenged. In the fifteenth century, seeking to update Vitruvius with a more elegant and precise text, Leon Battista Alberti introduced *De re aedificatoria*. Inscribed in Latin, it is a more theoretical treatise, lifting architecture from a guilds-based craft to a profession buttressed by intellectual underpinnings. A de facto sequel largely echoing the structure of Vitruvius's ten books, *De re aedificatoria* sought to improve and build upon but not entirely displace them: "In a Latin which was both more elegant and more precise than that of his ancient predecessor, he succeeded in framing a coherent account of the fragmented knowledge of antique architecture as it had survived through the dark and middle ages. His was the single book which established architecture as an intellectual and professional discipline rather than a craft and gave it a proper theoretical context…"[10]

Influenced by both Vitruvius and Alberti, Andrea Palladio, in 1570, published *I Quattro Libri dell' Architettura*. Palladianism offered the "correct" answer to the question of design throughout Western Europe and later, the United States. Adolf K. Placzek, suggesting Palladio was the most widely imitated and impactful architect in the western world, called him, "the spokesman for the belief in valid rules, in innumerable canons, for the belief that there is a correct, a right way to design."[11] Focused on materials and construction techniques, urban elements, and building types, Palladio's treatise, through widespread translation and adoption, evolved as a blueprint for both technique and style: the Palladian idiom. Palladianism (and later neo-Palladianism) were popularized in England and the various territories under British influence, primarily North America and India. Indeed, Thomas Jefferson viewed Palladianism as a style appropriate for the United States and modeled his own home, Monticello, after it.

Contrasting with the encyclopedic, how-to volumes of Vitruvius, Alberti, and Palladio, the theoretical works of the first half of the 20th century were characterized instead by shorter and more concise manifestos. From single page declarations to a few book length works, high-minded rhetorical theory became the norm in the likes of Adolf Loos' "Ornament and Crime"

12   Walter Gropius, "Manifesto of the Staatliches
     Bauhaus," Manifesto of the Staatliches
     Bauhaus, October 2023.

13   Walter Gropius, "The Theory and Organization
     of the Bauhaus' (1923)," mariabuszek.com,
     October 2023.

14   Joan Ockman, Rebecca Williamson, and Allen
     Stan, "The Future That Is Now," in *Architecture
     School: Three Centuries of Educating Archi-
     tects in North America* (MIT Press, 2012), 171–
     173

(1913), Sant'Elia's "The Manifesto of Futurist Architecture" (1914), and Le Corbusier's *Towards a New Architecture* (1931). In the aftermath of the first World War, and within the newly formed German Weimar Republic, Walter Gropius' "Bauhaus Manifesto and Program" (1919) offered a declaration binding art, architecture, and craft: "Architects, sculptors and painters, we all must return to the crafts!"[12] Recalling the ancient guilds, Gropius' curriculum included training in a chosen craft such as sculpture, blacksmithing, cabinetmaking, or weaving, as well as studies in drawing, painting, science, anatomy, color theory, bookkeeping, and contracts. Gropius wrote in *"The Theory and Organization of the Bauhaus"* (1923), the goal of the Bauhaus curriculum is for students to, "regain a feeling for the interwoven strands of practical and formal work. The joy of building, in the broadest meaning of that word, must replace the paper work of design."[13] The disruptions of the Second World War and the Korean War, coupled with the rise of the military industrial complex, saw the discipline distanced from the rhetoric of the 1920s and 1930s. Bauhaus educators dispersed globally, including to the United States with Gropius and Marcel Breuer proceeding to Harvard and Joseph and Annie Albers to Black Mountain College and eventually Yale.

By the second half of the twentieth century, the increased production and dissemination of architectural literature gave voice to ideological camps pursuing differing formal and figurative languages. Stirring new theoretical discourse while engaging academics and practitioners were the landmark publications of Robert Venturi's *Complexity and Contradiction in Architecture* (1966) and *Five Architects* (1972), featuring the work of the New York Five: Peter Eisenman, Michael Graves, Charles Gwathmey, John Hejduk and Richard Meier. The *grey and white* architectural camps ensued with, among others, Venturi and Robert A. M. Stern leading the grey camp and Peter Eisenman, et al, championing the whites. The greys mediated between low brow vernacular, pastiche, and historicist tendencies while the whites advocated modalities drawn from modernity, acknowledging and effectively paying homage to Le Corbusier.[14]

In the Introduction to *Five Architects*, Colin Rowe situates the "white" camp with a call for what would later be commonly termed as the unfinished modern project: "But, for all of this, there is a point of view shared which is quite simply this: that, rather than constantly to endorse the revolutionary myth, it might be more reasonable and more modest to recognize that, in the opening years of this century, great revolutions in thought occurred and that then profound visual discoveries resulted, that these are still unexplained, and that rather than assume intrinsic change to be the prerogative of every generation, it might be more useful to recognize that certain changes are so enormous as to impose a directive which cannot be resolved in any individu-

15   Peter Eisenman, Michael Graves, Charles
        Gwathmey, and Colin Rowe, "Introduction," in
        Five Architects (New York: Oxford University
        Press, 1975).

16   Robert A. M. Stern, "Gray Architecture as
        Post-Modernism, or, Up and Down from
        Orthodoxy," *L'Architecture d'Aujourd'hui* no.186
        (1976).

17   Richard Buday, "How to Write an Architectural
        Manifesto," Common Edge, July 17, 2019.

al lifespan."[15] For the grey camp, however, modernism was now dead on arrival, per Robert A.M. Stern in 1978: "…it is safe to say that the orthodox Modernist Movement is a closed issue, an historical fact of no greater contemporaneity than that of nineteenth-century academicism; and though messages can be received from both of these historical periods, as from the past in general, nostalgia for either cannot be substituted for a fresh, realistic assessment of the issues as they are now."[16] The leading figures of the white/grey rivalry are defined by their highly influential practices as well as by their notable long-term academic careers: Stern at Yale, Hejduk at Cooper Union, Graves at Princeton for nearly four decades, and Eisenman in numerous chaired professorships.

By the latter years of the 20th century, theory had evolved into the discussion of architecture as a syntactic language influenced by structuralism, deconstruction and literary criticism. Strikingly, while theoretical manifestos penned by leading practitioners proliferated through the 1990's, the 21st century has seen an inability of theoretical thought to coalesce into discernable movements impacting academia. As Richard Buday notes in his 2019 article, "How to Write an Architectural Manifesto," "The century of robust mini-debates on form and function, meaning and intent, petered out ten years ago. Evidence that contemporary theory and practice are threads of new architectural thought is scarce. Arcade magazine published a survey of architectonic declarations and mapped thirty modern movements from 1900 to 1960, and eighty more between 1960 and 2010. At 2015, they found only two."[17]

Prolific in both written and built works, it is difficult to overestimate the impact of the journalist, architect, theorist, and educator Rem Koolhaas and his skillful navigation of the intertwined worlds of practice, theory, and education. Indeed, Koolhaas (and his Office for Metropolitan Architecture, OMA) may well be credited with most effectively recognizing and leveraging both the academy and practice to create a unique synergy and productivity. The 1978 publication of *Delirious New York: A Retroactive Manifesto for Manhattan* launched an extraordinary period of productivity for Koolhaas culminating in the publication of *S,M,L,XL* in 1996. A monograph of OMA's written and built work, developed in collaboration with Bruce Mau, the 1,244-page tome altered the manner in which the academy, publishing, graphic design and, perhaps, the discipline, imagined itself. The trio of *Harvard Project on the City* books followed in 2001: *Mutations*, *Project on the City I: Great Leap Forward*, and *Project on the City II: The Harvard Guide to Shopping*. Projecting three views of urbanism, *Mutations* viewed the exponential growth of global cities at the turn of the 21st century, *The Great Leap Forward* studied the massive growth of South China's Pearl River

18   "OMA Publications." OMA. October 2023.

19   Joan Ockman, Rebecca Williamson, and Allen
     Stan, "The Future That Is Now," in *Architecture
     School: Three Centuries of Educating Archi-
     tects in North America* (MIT Press, 2012), 194–
     196

Delta, and *The Harvard Guide to Shopping* considered the inexorable link between consumerism and the city. These works placed the academy in the forefront of urban theory and foreshadowed the ambitious projects of massive urban expansion in Asia for the next decade. It also empowered the academy as a place of research impactful to practice.[18]

The late 20th century's rise of what we might call "high theory" aligns with the shifting status of architecture as a discipline within universities. The emergence of master's degree programs throughout the 1960s and 1970s (largely usurping the five-year bachelor's degree) repositioned architecture as a discipline offering a more prestigious terminal degree. The Master of Architecture also positioned the graduate architect as a more mature professional, having been exposed to the liberal arts as an undergraduate student. Simultaneously, the emergence of PhD programs across the US provided a new and more academically rigorous path resulting in a class of architecture faculty arguably more distant from traditional conventions of practice. The rise of theory as subject matter taught by PhD faculty trained in either architectural curricula or non-architectural disciplines offered ways to situate the logic of academic work that was sometimes critiqued as being distinctly "non-architectural."[19]

Today, the necessity of generating original research often outpaces a professor's instructional time. Building an independent practice in this environment is also challenging, given the time frame of obtaining, designing, building, and publishing a project. Such increased expectations for scholarship and publishing have led to the rise of theory as the intellectual informant for the pedagogical approach of the design studio. Offering more speculative projects rather than the execution of a building with the conventional package of plans, sections, elevations, and details, the work of the studio is more readily disseminated and published. It should be noted, however, that one approach is not necessarily exclusive of the other, and, in fact, design studios have been successfully navigating a synthesis of the abstract (the world of theory and speculation) and the concrete (manifesting achievable solutions for the real world) for decades. The academy is populated by those who are adept at, and in fact, specialize in building bridges between worlds. This work of illuminating the middle ground between theoretical scholarship and the expression of buildings and spaces through a rigorous architectural language is at least a partial definition for the role of the academy.

Although the anticipated rise of a PhD class that would usurp professors with Masters Degrees and stints of prestigious professional experience under their belt never materialized (*PhD Portal* lists only twenty-seven PhD programs in architecture throughout the US), universities have nonetheless

20 NAAB, National Architectural Accrediting
    Board, *2014 Conditions for Accreditation*
    (Washington: NAAB, 2014).

21 NAAB, National Architectural Accrediting
    Board, *2020 Conditions for Accreditation*
    (Washington: NAAB, 2020).

become more demanding of faculty research. And the pursuit of permanent, tenured positions, *professional educators*, if you will, has become more fraught and increasingly rare. Yet, coupled with the rise of less expensive, non-tenured adjunct and instructor positions within the past ten years, an unintended mosaic of approaches has emerged with extraordinary opportunities for cross-pollination between practitioners and professors. Of course, by their very nature of being part time instructors, adjuncts are less engaged in the shaping of curriculum. However, one sees their mark on the work of a school. More often than not, they are themselves graduates of the school, practicing in the community it serves. They are professionals of all ages who want to be connected to both worlds more permanently than simply attending final juries. Inevitably bringing to the classroom a combination of methods they learned on both sides of the spectrum, they are the gap's most direct conduit, an emerging voice extending curriculum into practice and practice into curriculum.

Curriculum (The Gift)

Contrary to common perceptions, such as this conveyed by one of the afore-mentioned conference attendees, "Shouldn't our needs for certain skill sets be taken into consideration when developing curriculum," schools of architecture do not develop the parameters of a curriculum in a bubble. Regularly, the curriculum is quite literally turned on its head with the arrival of the National Architectural Accreditation Board's (NAAB) revised conditions, which are developed in close consultation with the profession. The 2014 NAAB Conditions for Accreditation defined four areas of required student performance: *Critical Thinking and Representation, Building Practices, Technical Skills and Knowledge, Integrated Architectural Solutions,* and *Professional Practice*.[20] The latest revision in the 2020 Conditions brought a new set of learning objectives and outcomes: *Health, Safety, and Welfare in the Built Environment, Professional Practice, Regulatory Context, Technical Knowledge, Design Synthesis,* and *Building Integration*.[21] The complexity of NAAB's parameters don't stop here. They extend beyond subject matter competencies to address every aspect of the institution including research and innovation, leadership and collaboration, learning and teaching culture, social equity, and campus resources.

Within such specificities, it is essential for a school to not just tick off boxes in a course catalogue, but to map out a coherent framework of curricular methodology, tethering the NAAB objectives to rituals of learning that unfold in real time within the studio. Constructing curriculum is a creative act wherein the faculty must collectively distill the essence of a complex

22   Victor Turner, "Liminal to Liminoid in Play, Flow, and Ritual: An Essay in Comparative Symbology," Rice Institute Pamphlet — Rice University Studies 60, 3 (1974).

discipline into a series of discernible courses and exercises, delivering the material in a way that motivates and inspires students. Going beyond specific knowledge, we attempt to outline below the spatio-curricular framework that underpins this larger agenda of the academy, attending rather to the most universal skills of an architect. It is logistically impossible to teach every vocational skill that a future architect might encounter in their work. For example, there is little in common shared by the typologies of housing for the homeless and resort hotels, by kindergartens and big box stores, or by churches and train stations. Yet, we argue, architecture graduates arrive to the profession with the essential and timeless skills to tackle any of them.

Spatial Thinking, *Aura*, and Perception

Architecture as a college major is unique in that students arrive having had no prior coursework in the subject other than the now rare high school drafting class. Instead, they bring only disparate experiences of the built world around them and core classes in science, math, humanities, and technology. Only a handful of students arrive with more than one or two high school art classes, and there are no courses in their K-12 education that address the spatial skills that an architect requires. Most haven't had training in drawing, either digitally or by hand. Essentially, they arrive to the academy spatially illiterate. But within an architecture curriculum, contrary to an impediment, the naivete of a student is a powerful tool. All architectural schools, in one form or another, construct their beginning design studio curriculum as a *rite of passage*, leveraging this naivete toward the suspension of disbelief as a pedagogical strategy situated in a threshold, a construed break in continuity.

Let us think of this threshold as a liminal moment. Not the ubiquitous and fashionable definition of liminality that can be quickly categorized via Instagram posts depicting liminal spaces, liminal horror, liminal nostalgia, liminal club, liminal furniture, liminal moods, and so on, where the curatorial efforts seem to focus on the aesthetics of abandonment, creepiness, or the somehow vague and foggy. Instead, consider the definition of liminality within the field of cultural anthropology, where it is understood as a liberating, albeit disorienting, period of time wherein participants in a rite of passage are released into a temporary space of formative ambiguity, where senses are heightened by the rupture of preconceptions, and a period of creative awareness and lucidity ensues.[22]

Like the initiate in a rite of passage, the first-year student of architecture stands at the threshold between a known past and a pending future of new rituals and routines. Their preconceptions are challenged. Their identity

23 *John Hejduk, "John Hejduk Builder of Worlds: A conversation with David Shapiro,"* Michael Blackwood Productions, August 4, 2023.

24 Ignasi de Solà-Morales, "Weak Architecture," in *Differences Topographies of Contemporary Architecture* (MIT, 1999).

25 "Gain AXP Experience," NCARB, August 4, 2023.

26 "Integrated Path to Architectural Licensure (IPAL)," NCARB, July 22, 2022.

and sense of community is redefined. It is in this threshold where the academy situates some of its most fundamental curriculum related to the practice of architecture: those that attend to notions of spatial thinking and perception. Educator John Hejduk describes the perceptual qualities of architecture as *aura*. "I believe that the only difference that the architect can offer our society is the creation of a spirit, I mean some kind of aura: something eternal in a sense that, strangely, is lost. Architecture also has to do with sound. Not with pragmatic sound, but with a supernatural sound, a sound of the soul. When you enter a building, it gives you the wavelength of your sound. It is something that characterizes the best architecture of all time…I once heard a lecture from a surgeon who said that when he cuts a body he is able to tell where he is spatially by the sound of the cut."[23]

This notion of spatial and perceptual experience suggests a rare alignment of forces rendering a depth of insight and possibility, creating a strange, if fleeting, optimism — a buoyancy in the boundlessness of our discipline and a sense of the ephemeral. Aura is a liminal moment, and foundational curriculum, at its most brilliant, allows students to grasp it through the choreographed interplay of experienced and imagined space. It is the knife-edge moment that lingers in a monumental manner as described by Ignasia Sola-Morales in the essay "Weak Architecture," "…as the tremulous clangor of the bell that reverberates after it has ceased to ring… the lingering resonance of poetry after is has been heard, with the recollection of architecture after it has been seen."[24] While the circumstances are an intersection of the confluent forces of a carefully construed architectural experience and the randomness of a moment in time: an echo, a shadow, the sound of a busy city, the architect thus trained knows how to harness it through the control of light, proportion, and materiality within a shaped space. Great architecture possesses this delight, and the tightly scripted projects in the early studios must set the stage for students to recognize and encounter aura in their work and in the built world around them. Although s/he arrives spatially illiterate to architecture school, no architect, once taught this, has ever forgotten how to sense aura in the space of architecture.

Craft, Meticulousness, and the Inhabited Curriculum

We could speak about the structural overlap of practice and education through the lens of existing and emerging programs such as NCARB's AXP[25] or iPal[26], preparing for licensure exams or gaining internship experience while still in school. Community design centers embedded in schools of architecture also offer students an engaged experience with decision makers and end-users be they civic leaders or residents of townships. We applaud

27   Michel de Certeau, and Steven F. Rendall, "VII. Walking in the City," in *The Practice of Everyday Life* (University of California Press, 1984).

28   Ben Highmore, *Everyday life and cultural theory: an introduction* (London: Routledge, 2002).

these and do not discount their value. However, there is an enormous distinction between *learning* to be an architect and *being* an architect. That said, both actions require establishing a rigor of practice and the application of something meticulously and habitually repeated. Although it is also not a skill that any student arrives with, a practiced meticulousness is fundamental to the discipline of architecture. We would be wrong to see students as simply a passive cohort engaging their curriculum in a purely scripted manner, enrolling in whatever sequential coursework their catalogue requires. Architecture students, in particular, are much more engaged than that scenario implies, and we may think of them instead as *inhabitants of the curriculum*.

Michel de Certeau's *The Practice of Everyday Life* speaks to ritualized occupation of space and associated social behaviors as a means for individuals and groups to establish a sense of self within the complex forces of modern life. Certeau's urban "walker" is immersed in the city as part of her/his spatial routine, an experience mapped by planners, by cartographers, and by happenstance. Certeau calls space "a practiced place," as the habitual practice of the walker transforms the patterns of the city s/he walks through. He asks us to consider the keen difference between two cities, one frozen in time and one ever-changing: "Unlike Rome, New York has never learned the art of growing old by playing on all its pasts. Its present reinvents itself, from hour to hour, in the act of throwing away its previous accomplishments and challenging its future."[27] Imagine a curricular structure like the urbanism of New York that flaunts its agility through constant reinvention. Or, in contrast, one that grows old and rigid.

Inhabiting Certeau's walker, the student operates at the intersection of curricular practice and observation. S/he is both the occupant and the re-inventor of curriculum. The occupation of curricula is a testing ground for both student and faculty; the structured practice of each evolving as the interplay with the work matures through engaged repetition. This skill grows over a handful of years as lessons are built upon and expanded.

The academy thus serves as the place where a critical and meticulous practice is instilled. Within the performative space of the studio, Certeauean "walkers" establish a means of inhabiting and manipulating the curriculum toward a culture of disruptive inventiveness as noted by author Ben Highmore: "What characterizes the everyday for Certeau is a creativity that responds to the situation. By 'making do' with a ready-made culture, but also, and crucially, by 'making with' this culture, everyday life evidences an inventiveness."[28] Indeed, we note the common sentiment among teachers that they learn as much from their students as their students learn from them. More than just an endearing sentiment, it is a strategy toward inventiveness,

29   Michel Foucault, "Of Other Spaces, Hetero-
     topias," translated from *Architecture, Mouve-
     ment, Continuité* 5 (1984) 46–49.

30   Benjamin J. Smith, "SCI-Arc Builds on Peda-
     gogy," squarespace.com, August 4, 2023.

31   Reyner Banham, "Big Shed Syndrome," *New
     Society* (1972).

32   Ibid.

33   Ibid.

and the most agile studio instructors employ it, constantly adapting their assignments to apply what their students teach them through their engagement with the boundaries of a project. As students push the boundaries, the boundaries change.

However, while the ready-made and re-made culture within a school of architecture is the inhabited curriculum, it must shape itself within less-than-ideal conditions. Indeed, it is in the heterotopic nature of the architecture studio where we find its potential; neither a utopia nor a dystopia, but a place where students experience many things at once, collapsing, expanding, and intertwined. The concept of heterotopia is defined by philosopher Michel Foucault as somewhat different, charged, stimulating, and complex spaces or experiences. These are "other" spaces within the common cultural milieu but less experienced, less understood: cemeteries, prisons, and theme parks function as worlds embedded within worlds. Foucault used the example of a mirror in a lecture to a group of architects in 1967: "The mirror is, after all, a utopia, since it is a placeless place. In the mirror, I see myself there where I am not, in an unreal, virtual space that opens up behind the surface… But it is also a heterotopia in so far as the mirror does exist in reality, where it exerts a sort of counteraction on the position that I occupy. From the standpoint of the mirror I discover my absence from the place where I am since I see myself over there."[29]

The heterotopia of an architecture school is the setting for the practiced place. Yet, rarely, with a few exceptions, is the architecture building the most interesting example of architecture on the campus. Sometimes, either by design or by neglect, it is the least. In the 1972 essay, "Big Shed Syndrome", Reyner Banham speaks of Sci-Arc's (then called the New School) first home, a warehouse at 1800 Berkeley Street[30] in the industrial landscape of Santa Monica, "a forgotten pocket of the industrial grottage halfway between the Santa Monica beaches and the University of California campus."[31] Banham extolls the virtue of the ubiquitous, characterless space enabling students to labor within its haunts, free of another architect's vision. "What makes the idea of an architecture-free building so infectiously attractive is, of course, its freedom from architecture. It means that you won't find yourself competing with somebody else's aesthetic ego trip."[32] The big shed, a pedagogical tool, presumably allows for fluid, changing models of instruction and curricular invention. It is worth noting, however, Banham's disappointment with the use of space upon his visit: "Instead of spontaneous seminars and autonomous work groups camping out all over the Shed… there appeared to be that most drawing boards had been squashed into the old offices on the street front and seminars tended to happen in a small gallery hard up under the roof."[33]

Thus, the virtue of the big shed, for all its grandeur and ubiquity, is less its open, democratic spatiality than its existence as a curricular muse, providing a kind of transparent box for the heterotopic notion of the inhabited curriculum: nimble and endlessly adaptable. One is reminded of the well-worked nine-square grid exercise developed by John Hejduk and fellow "Texas Rangers" at The University of Texas at Austin in the 1950s and adopted by untold numbers of schools in the years since. The project employs the simple bounds of the nine-square grid to permit endless solutions and inventiveness. Simultaneously big and small, complex and simple, lucid and ambiguous, it initiates the practiced place and integrates the discipline in an atmosphere of student invention. Whether hosted in a vernacular shed or an articulated warehouse, the studio is inherently a pedagogical instrument for an inhabited curriculum. The urban analogy finds its way in viewing the design studio as a public space with all the issues of publicness, privacy, and decorum. The big shed sponsors the ritualized practice of walking in the city and the walker creates the heterotopic micro-community within a larger collective.

Communitas

Architects are trained intensively in the areas of critical thinking and communication. Every studio project is an exercise in critical thinking as much as it is a building design, wherein students develop a line of inquiry, form speculative questions, and offer responses to the project at hand through the language of buildings and space. An architecture student will prepare no less than twenty-four formal presentations of her/his studio work across six years of study. An agile curriculum that simultaneously prepares students for the complex work of comprehensive design across scales and building types while leaving room for the application of an increasingly critical level of logic and skepticism, is the hallmark of an architectural education. Demanding an increasingly adept level of research and execution, the architectural studio sequence culminates in the master's thesis, a student-driven proposal to develop a body of concentrated and tested knowledge. While a studio project may ask for the design of a well-researched, elegant, and adept building, the thesis asks for more.

Thesis differs from a "terminal project," the traditional conclusion of a five-year professional Bachelor of Architecture degree, in that it is not necessarily a demonstration of formal architectural competence (students have already demonstrated proficiency prior to embarking upon thesis). Also at the point of commencing thesis, students already have a broad body of professional awareness, many having worked quite extensively for local firms during their studies. This experience often informs the thesis, as does

34 Roberto Esposito, *Communitas: The origin and destiny of community* (Stanford University Press, 2010).

a student's personal history. While projects offer probing insight and yield a level of self-analysis through writing and through the operations of architecture, they also come from a sense of duty to society and humanity. Whether critiquing coming of age in a featureless suburb, offering a reading of the consumer and social media culture they were raised on, or questioning the boundaries of contested political landscapes, students are not merely occupying the curriculum at this juncture. They are fully owning it. Furthermore, due to the highly public nature of thesis presentations, often with invited guests from outside the institution, thesis projects carry a special weight, creating a history frequently referenced by younger students years later as they begin their thesis. For the institution, thesis is the performed and recorded history of the inhabited curriculum, an archived body of knowledge and representation that forms community and moves a school forward. For the student, thesis is both a culmination and a springboard toward a trajectory that later informs their way into and through practice.

In advocating for the academy as a nexus that unites students, educators and professionals, let us understand what we mean by community. The collective academic and professional community may, on one hand, be explained in terms of a certain exclusivity, attachment, or solidarity within the scope of our discipline. We might also entertain that we are bound to community by some combination of knowledge, interests, and common experience; the intimate and close knit community of the academy grafted onto the profession through our unique connection to the learned aura of architecture, perhaps. However, let us suggest community as it is defined by Roberto Esposito. The Italian philosopher draws a distinction between what he considers a common misconception of community as a homogeneous group of people defending shared territory and history, and the unstructured, and more amorphous *communitas*, which he describes as "the totality of persons united not by a property but precisely by an obligation or a debt; not by an addition but by a subtraction; by a lack, a limit that is configured as an onus."[34] The void, for Esposito, is configured much as the thesis is within the academy…as a call to duty, an obligation, or a "donation of a grace." The education of an architect, culminating in the work of the thesis is a gift to the discipline that does not require remuneration, but suggests a gratitude of a different kind.

Two related points from the aforementioned Florida AIA convention attendees are worth mentioning: "Can colleges be a catalyst for creating a more profitable profession" and "…many students want to be environmental / cultural warriors." Graduates arrive to offices with skills and ambitions reflecting their complex reality and the current zeitgeist, which may well be out of tune with older, experienced practitioners. Perhaps the profession can

35   "AIA's Blueprint for Better Campaign," Blueprint For Better, October 24, 2023.

36   "Architecture's Carbon Problem," Blueprint for Better, October 24, 2023

37   Updated in recent years, it is also termed "The Physician's Pledge"

38   Tyson, Peter. "The Hippocratic Oath Today." PBS, March 27, 2001. https://www.pbs.org/wgbh/nova/article/hippocratic-oath-today/.

39   Robin Pogrebin, "David Chipperfield Wins Pritzker Prize," *New York Times*, March 7, 2023.

receive young graduates, those who will inherit the discipline, on their own terms, if not halfway. Profitability and environmentalism are not disconnected. The AIA is the world's largest design organization, and the "AIA Blueprint for Better" campaign is, in its own words, a call to action with the intention to *increase equity in the built environment*.[35] The website offers a dire warning: "buildings account for about 40% of annual fossil fuel carbon-dioxide emissions (CO2), leading to increases in flooding, fires, hurricanes, and billions of dollars in annual damage. It's a global emergency of our own making. And if we don't take action now, we'll help to accelerate global warming—irreversibly changing life as we know it."[36] It seems the profession needs a community of environmental warriors.

Architect and educator Jan Wampler often speaks of "the space in-between." By this he means the space between buildings, the public realm, all that makes places, cities, and towns habitable. The space in-between is the space of community, the space where life is pursued and lived. In the spring of 2019 Wampler composed the "Oath for Architects" in consultation with colleagues across the country. His impetus came through conversations with physicians, who discussed the gravity of the Hippocratic Oath[37] to the medical profession. Administered upon graduation, and considered the oldest and most widely understood thesis on professional ethics, it was originally written by Greek physician Hippocrates, c. 460–370 BC. The revised modern version focuses on the physician and patient (at the expense of Apollo, Aesculapius and other Gods) and includes the promise, "I will prevent disease whenever I can, for prevention is preferable to cure. I will remember that I remain a member of society, with special obligations to all my fellow human beings, those sound of mind and body as well as the infirm."[38]

Hippocrates' call that physicians, "prevent disease… for prevention is preferable to cure" rings prescient when we consider the environmental threats we presently face. The 2023 Pritzker Prize recipient, David Chipperfield, in a New York Times interview upon receiving the award said this on the subject: "…architecture is more important than architects… we're facing two existential crises: social inequality and climate collapse… It's not about solar panels and insulating windows, but about making fundamental changes… All of our actions have to be measured, not in terms of economics, but in terms of their social and environmental impact."[39]

Wampler's "Oath for Architects" offers a pledge to the profession, humanity, and the environment. It offers a commitment and a gift to the discipline and to future employers: "On my honor, I hereby take this oath of commitment to the following principles: To maintain the highest ethical and moral standards in my life and my architectural practice; To commit my practice for the good of our planet and humanity; To practice architecture

40   Jan Wampler, "Oath for Architects," speech presented at the USF School of Architecture & Community Design Graduation, May 2019–2023.

41   Benjamin Walter, Hannah Arendt, and Harry Zohn, "Theses on the Philosophy of History," in *Illuminations* (Mariner Books, 2019).

according to its basic aim to provide human shelter and enriched quality of life for all humanity; To treat clients, allied professionals inside and outside of my industry, and the general public with respect, honesty, and integrity; To respect diverse socioeconomic identities, gender issues and rights, and to not discriminate by race, color, religion, sex, age, national origin, sexual orientation, gender identity, disability, and any other basis prohibited by law; To strive to be an enlightened, passionate steward of both the built and the natural environments, address climate change, and conservation of Earth's natural resources; To pass on to the next generation our responsibility to do good for the world through universal, sustainable design that meets the needs of all humankind and protects the Earth; By taking this oath, I have accepted my duty toward the betterment of civilization, its buildings, communities, and ecosystems." [40]

The relatively short time spent in school compared to multiple decades of professional practice make the diverse and intertwined lessons of education particularly precious. Curriculum cannot replicate professional practice, nor should it. Existing opportunities to engage the professional world should be encouraged and expanded, but the vocational-technical education, while ultimately necessary to the success of building, is not the first agenda of the academy. The institution is charged with, among many things, introducing to students the possibility of aura; to the beautiful intersection of ideas and representation, and to wedding the poetic with the pragmatic.

The oft-cited Paul Klee watercolor, *Angelus Novus*, described by Walter Benjamin as looking back upon the wreckage of history while being carried forward by the storm of progress captures the uncertainty of some architecture students upon graduation: "His eyes are opened wide, his mouth stands open and his wings are outstretched. The Angel of History must look just so. His face is turned towards the past. Where *we* see the appearance of a chain of events, *he* sees one single catastrophe, which unceasingly piles rubble on top of rubble and hurls it before his feet. He would like to pause for a moment so fair, to awaken the dead and to piece together what has been smashed. But a storm is blowing from Paradise, it has caught itself up in his wings and is so strong that the Angel can no longer close them. The storm drives him irresistibly into the future, to which his back is turned, while the rubble-heap before him grows sky-high. That which we call progress, is *this* storm." [41] We instead prefer the image of the student stepping through the liminal threshold as suggested by Janus, the Roman god of beginnings, thresholds, doorways, and gates, for s/he simultaneously looks forward and backward, making linkages, building bridges, and connecting across the gap.

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A Case Study on Hidden Curriculums in the Architectural Studio

César A. Lopez

1   Jean Anyon, "Social Class and the Hidden
    Curriculum of Work," *The Journal of Education*
    162, no. 1 (1980): 67–92.

While in recent years architectural education programs worldwide have recognized aggressive patterns and unproductive optics in the design studio environment, there remains a question about "what sort of architect" should emerge from these manifold programs. Every accredited academic institution has an obligation to help students become competitive in the professional field. However, by borrowing the descriptions of a series of educational models observed by education researcher Jean Anyon that use economic constraints and subjectivity to determine curriculum, this article argues that the education of the architect too often relies on 'producing' industry-ready graduates and not enough energy on providing them with the skill-sets to interrogate our discipline's entanglements with political and economic structures in and outside the architectural studio. This is explored through a terminal graduate-level architectural design studio taught at the University of New Mexico, School of Architecture + Planning, a program in the American Southwest / Mexico-United States Border Region that practiced ways of resisting an architectural education that shapes students based on their economic status.

In 1980, Jean Anyon, a researcher in education and policy, presented a theory central to this paper called "Social Class and the Hidden Curriculum of Work," which states that "public schools in complex industrial societies like our own make available different types of educational experience and curriculum knowledge to students in different social classes," which has a direct impact on the type and structure of "work" that students experience in class. Documented in Anyon's study were public K-12 schools and students in medium-sized cities and suburbs, which played a significant role in helping identify the pedagogical objectives and protocols prevailing in each school. The curriculums Anyon identified were categorized as *working class*, *middle class*, *affluent professional class*, and *affluent professional school* and *executive elite*.[1]

A *working-class* curriculum, which this paper will later use to compare to architectural education, is intrinsically tied to "practical" education models and prioritizes "docility and obedience." Like the others, the category borrows from how job sectors are categorized, where working-class curriculums parallel the "routine and mechanical" components of a trade or field that the individual worker is unfamiliar with. This gives the working-class curriculum its signature characteristic: the regiment of the workday. Another significant component is the context given to assignments, as teachers emphasize the procedural importance of assignments without providing their meaning or learning objectives.[3] The impact and value of education are not instilled in a curricular model where the primary outcome of these curriculums is routine over critical thinking. The middle-class curriculum is not

much better in this regard, primarily concerned with following a strict set of instructions that lead to a single correct answer. In this curricular format, students are not encouraged to deviate from the structure set by the teacher. While this builds routine and the importance of protocol, creativity, however, is limited. When asked to express themselves, it is typically secondary to the assignment and used only to motivate students by making school-work more exciting.

The hidden curriculum models that proceed with working and middle curriculums increasingly develop more assertive student behaviors. In an *affluent-professional* curriculum, many of the students' parents worked in highly educated and well-paid professions. This curriculum centers on creative activity in which students independently develop the ideas and concepts in their work. Assignments result in more writing, illustrations, and crafts, as much of the work depends heavily on gathering resources needed to complete assignments. This emphasizes free movement within the school, where students can go to the library for a book freely. The student's intellectual potential is realized in the executive elite curriculums, where problems posed to students must be critically reasoned. The structure of completing an assignment is entirely dependent on the student to conceptualize rules and apply them to find solutions. The final model, *executive elite school* curriculums, expands on these objectives by encouraging students to exercise analytical skills and reasoning to work through complex problems. The role of students as peers also evolves as they are encouraged to disagree, challenge, and debate subject material in the classroom, thus cultivating a more rigorous academic body.

The timing of Anyon's study is significant because it came nearly three decades after public schools were desegregated by the United States Supreme Court ruling on *Brown v. Board of Education* and 23 years after the United States Congress passed *the Immigration and Nationality Act*, which ended numerical restrictions by country of origin on immigrants allowed to enter the United States. In addition to surveying how curricula vary based on economic class, this study reflected how public school education is formatted with an increasingly ethnically diverse and mixed-status population. This study pointed to obvious inequities in education that mirror the economic struggles of minority groups. This article posits that such approaches of aligning educational models to the economic status of the surrounding communities keep students from breaking away from generational poverty and precarity.

One of the primary differences between the working-class, middle-class, affluent, and elite hidden curriculums that Anyon discusses when seen from an architectural educator's perspective is the dynamic between teacher

2   Naomi Stead, Maryam Gusheh, Julia Rodwell, "Well-Being in Architectural Education: Theory-building, Reflexive Methodology, and the Hidden Curriculum," *Journal of Architectural Education* 76, no.1 (2022): 85–97.

and student. In the working-class curriculum, the teacher primarily manages the execution of protocols and presides over the class as a supervisor. Wherein middle, affluent, and elite professional curriculums, teachers increasingly perform the role of moderator, advisor, and critic. It's important to emphasize that affluent and elite curriculum models form community and collegiality among students, while the working and middle-class curriculums disperse students with individually driven assignments. If the objective of higher education is the pursuit and production of knowledge, then a professional architectural curriculum that seeks to build new methodologies in the design studio setting might have more success in advancing practice in the architectural profession.

Shaping Bodies & Identity in Architectural Education

Since the late 1980s, the "hidden curriculum" has been a lens to evaluate architectural education. In a recent issue of the *Journal of Architectural Education* on "Health," architectural educators and researchers Naomi Stead, Maryam Gusheh, and Julia Rodwell summarized over 35 years of similar studies that unpack the hidden curriculums in architectural education. Their article, "Well-Being in Architectural Education: Theory-building, Reflexive Methodology, and the Hidden Curriculum," states that a power dynamic between students and instructor, or as they put it, "master and apprentice," had historically led to "narrow or skewed understanding of design 'qualities,' reinforces societal power structures, discriminates against women and minorities and the 'uncultivated,' and "fosters inaccurate expectations of the profession in terms of scope for design and creativity."[2] Stead, Gusheh, and Rodwell revive studies on hidden curriculums in architectural education of the past to call for teaching practices that prioritized "both excellent architectural practice and the well-being of its people." This article addresses the same points in calling for an architectural education that doesn't shape students based on economic class or treat them as workers who may never have greater influence over the discipline.

The parallels are quite clear in architectural education when compared to Anyon's description of a working-class hidden curriculum, specifically in architectural design studios taught in United States schools, which are essentially taught in a laboratory format. In the studio, students develop building proposals through a set of assignments ranging from precedent analysis and studies on form and spatial arrangements. The instructional contact time for these courses, where faculty are physically present in class to advise and provide critical feedback, can range from 8–12 hours per week over two to three sessions. In an undergraduate studio, that contact time can range up to

3   Garry Stevens, "Struggle in the Studio:
      A Bourdivin Look at Architectural Pedagogy,"
      Journal of Architectural Education 49, no. 2
      (1995): 105–22.

4   Carol S. Dweck, *Mindset: The New Psychology
      of Success* (New York City: Random
      House, 2006).

12–15 hours per week for a graduate studio. In 1995, Garry Stevens' article, "Struggle in the Studio: A Bourdivin Look at Architectural Pedagogy," made a similar point when examining the architectural studio as "vocational training that is also intended as a form of socialization aimed at producing a very specific type of person." Stevens points to the common practice of "longevity" in the architectural studio, "ensuring that only students with the right sort of social upbringing pass through the system to graduate."[3] However, I argue that when architectural education in a working-class community subscribes to these same practices, students aren't just being "filtered," as Stevens puts it; they are also being conditioned into the regiment and posture needed for an 8-hour workday that will often exceed due to the amount of work to be done. In the studio, students often need to prove that they "have what it takes" with stamina and complete work, which aligns entirely with a working-class education.

The architectural design studio is at the center of architectural school curriculums in the United States. In terms of time, it is where students spend most of their time receiving instruction, whereas other courses, such as history, theory, and technical courses, are formatted as seminar and lecture-based sessions. In the studio, students are expected to individually develop their projects while waiting to be visited by an instructor for feedback; they are also encouraged to seek advice from their peers despite a lingering objective to please the instructor, who is seen as the central critic in the studio and will have an outsized role in determining final grades and advancement into upper-level studios. The instructor sets project prompts, and parameters are often predetermined and highly calculated, rarely allowing for student perspectives to emerge in their work. These dynamics in the studio setting further parallel the professional architectural office setting and frame the instructor as the employer as students try to align their work with the instructor's bias in aesthetics, form, and methodology.

The approaches to teaching architectural design described above, suggest to students that becoming a successful architect requires certain natural abilities rather than ones they will develop by learning. Psychologist Carol S. Dweck describes in her book *Mindset: The New Psychology of Success* the difference in learning approaches, claiming that "people with a fixed mindset—those who believe that abilities are fixed—are less likely to flourish than those with a growth mindset—those who believe that abilities can be developed."[4] This is where our focus on architectural education as "vocational training" with the goal of "industry preparedness" needs to also convey a "growth mindset" for students who may not come from the walk of life that naturally leads to higher education, such as working class and first-generation students.

5   University of New Mexico. "Cost of Atten-
     dance." Office of Admissions. February
     11, 2022.

6   American Immigration Council, "Immigrants in
     New Mexico," American Immigration Council.
     August 7, 2020.

7   Rachel Moskowitz, "Poverty in New Mexico,"
     New Mexico Department of Workforce Solu-
     tions. July 31, 2022.

8   U.S. Bureau of Labor Statistics, "Unemploy-
     ment Rates for States," U.S. Bureau of Labor
     Statistics. July 28, 2023.

9   University of New Mexico, "First 2 Finish: Col-
     lege Enrichment Program," College Enrich-
     ment Program. July 30, 2023.

The School's Context Informs Studio Approach

The primary reason for re-evaluating hidden curriculums stems from geography and economic class's roles in determining educational models for students of varying experiences in Anyon's studies. For instance, the working-class curriculum that Anyon identified was shaped by the fact that parents of the children attending the surveyed schools were primarily unskilled workers with blue-collar jobs. The communities they come from struggle with poverty and unemployment rates that are higher than the national average in the United States. Anyon's study provided a clear case study that linked the educational models offered in schools to the demographics and economic class of the enrolled students. While these identified categories were found in K-12 schools, they remain relevant to architectural education, where the pressure to prepare students for professional practice erupts into a debate between technical and skill-based or conceptual and research-driven curricular models. This pressure increases when an architecture school is in a region impacted by economic challenges.

In what follows are the methods and outcomes of an architectural design studio taught in the Spring of 2021 at the University of New Mexico, School of Architecture + Planning (UNM SA+P), one of the more affordable institutions in the country, offering undergraduate and accredited graduate degrees in architecture accredited by the National Architectural Accrediting Board (NAAB). In the 2020–21 academic year, when the case study course in this paper was taught, the UNM SA+P had an annual in-state undergraduate tuition of $8,161.00 which is, when the case study course was taught, which is 28% lower than the recent average cost of architecture schools tuition.[5] The school is located in Albuquerque, New Mexico, USA, 268 miles north of the nearest port of entry along the México-United States border. In 2018, according to the *American Immigration Council*, 10% of New Mexican residents were immigrants, meaning there is a substantial amount of mixed-status families in the state, as nearly 58,000 U.S. citizens and New Mexico residents lived with at least one undocumented family member.[6] Furthermore, New Mexico has one of the highest poverty rates in the US.[7] The education rates in New Mexico rank 42 in the country, with the third highest poverty rate, ranks 34th in unemployment[8], and nearly half of the student body at UNM are first-generation college attendees.[9] This means that the students at these institutions come from communities that need the agency of an equitably built environment. Therefore, education and knowledge production must be seen as a liberating power, and their experiences must be leveraged to uncover counter-modes of practice.

10   René D. Flores, Ariela Schachter, "Examining American's Stereotypes about Immigrant Illegality," *Contexts* 18, no. 2 (2019): 36–41.

11   Guy Standing, "Migrants: Victims, Villains, or Heroes?" In *The Precariat: The New Dangerous Class*, (New York: Bloomsbury, 2016).

The Border as a Design Studio Topic

The México-United States border and its communities remains a reductive topic in news media and policy debates as narratives of violence, trafficking, and immigration.[10] Succumbing to these narratives have been trends in architectural education to view the border region and its complex filtering of capital, material, and labor as a fortification problem to solve. This approach is deeply rooted in a traditional architectural scope as design projects focus on either the materialization, de-materialization, or circumvention of the México-United States boundary. Many of the design projects published or circulated from these studios operate on the stereotype that immigrants and laborers reside close to the border, thereby overlooking how the border manifests in buildings and spaces beyond the legal boundary. This stems from architecture programs that prioritize preparing industry-ready graduates and, therefore, adopt a vocational model of education rather than preparing their graduates to investigate and uncover the agency to address sobering perspectives of our practice. This industry-driven model limits the academic institution's potential to produce new knowledge through research and exploration.

In the Spring of 2021, a graduate research studio taught at the University of New Mexico, School of Architecture + Planning, titled "Citizenry Exclusions," explored the México-US border as not a static barrier but as a translation of experiences and spaces. This studio included 10 students enrolled in the Masters of Architecture program. Of the total, five students were either from New Mexico or had been long-time residents, while two were from another part of the country, and three were international students intending to stay in the United States following their studies. The significance of this makeup was that not all students had the typical experience associated with border subjects. So, in introducing the studio topic, students read a chapter from Guy Standing's book, *The Precariat: The New Dangerous Class*, called "Migrants: Victims, Villains, or Heroes?" which discussed the nuances of the characterization and circumstances of migrants. Together, we discussed how the term "border subjects" can broaden to include those whom the economic and security policies of the border have impacted.[11] An example discussed was how labor markets are activated across the border and beyond by purchasing a vehicle at a dealership in the United States. By loosening the subject's relationship to the border in these discussions, the studio took a unique approach by examining citizenry as a form of civic participation—not legal status.

These topics have traditionally been relegated by the traditional scope of architectural education and had limited scholarship. Yet, the students part-

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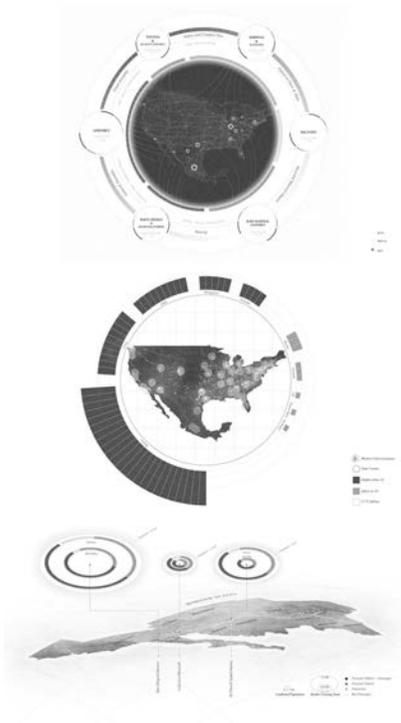
1   These mappings track labor between Mexico and
     the United States and remittance flows from
     mixed-status communities to other countries. This
     research led students to recognize the Mexico-
     United States border as not merely a boundary
     between two countries but each country's border
     with the rest of the world. (Research and Drawings
     by Natasha Ribeiro and Sam Fantaye)

2   Students produced a series of tracings of trans-
     border commuters over time to identify spaces
     where the power dynamics of the border can be
     reversed. This study prompted Ribeiro to re-resign
     the *Port of Entry Booth* and the *Crossing Enclosure*
     for moments of congregation and gathering. Her
     work recognized that trans-border commuters
     could activate these constricting spaces to build
     solidarity and community. These proposals added
     timber to the port of entry's palette to address the
     pollution produced by mass volumes of idle
     vehicles waiting to cross the border. The long
     commute times at the border were further
     addressed in redesigning the *Typical Single-Family
     Home*, where a shear between levels uncovered
     spaces that allowed residents to share domestic
     activities that are often too difficult to manage or
     complete for trans-border populations. (Research
     and Drawings by Natasha Ribeiro)
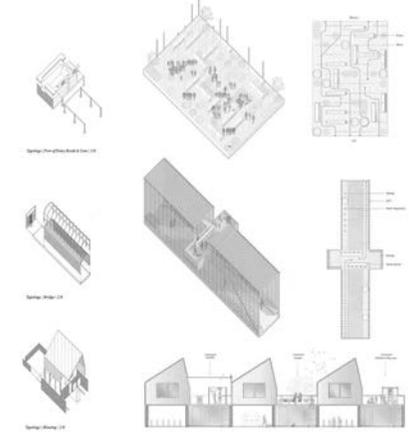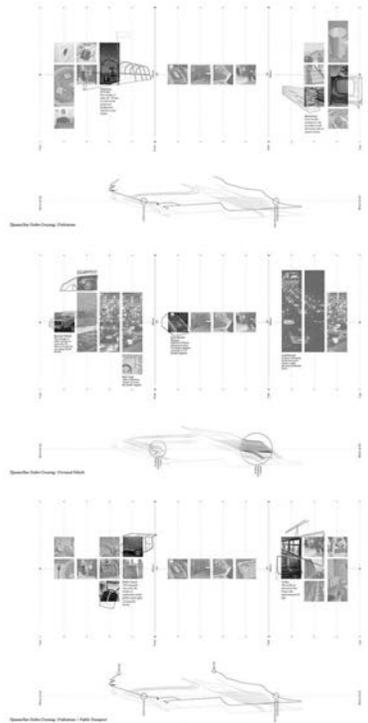
12   Charlotte West, "Thousands of Students Cross
     the Southern Border Everyday to go to Col-
     lege," *The Hechinger Report,* April 8, 2021.

icipating in these courses have first-hand experience as border region residents or newcomers to the state or country. In one way or another, they experience subjectivity and have an untapped sense of empathy with the more direct collateral groups of the border. Therefore, the studio's methodology started with maps that identified and traced collateral human and or environmental subjects that have yet to be framed by the architectural scholarship on the border.

(Un)mapping the Border to Find New Subjects & Typologies

To ensure students developed their own positions on the Mexico-United States border and legal/illegal immigration, a topic that has become politically divisive in the United States, the semester began with a study that would contextualize the border's political, economic, and social impacts. The exercise was called "Typologies I: Political Geographies," which asked students to draw the border without affirming the Mexico-United States boundary and remapping the social, ecological, economic, and infrastructural flows that filter through. An emblematic study from this exercise was a series of drawings by Natasha Ribeiro and Sam Fantaye that found manufacturing and assembly sites, which leverage the border labor markets, to be nearly evenly distributed across Mexico and the United States. [1] Their study suggests that economic and security policies at the border shape a broad population of subjects globally.

In the second exercise, "Typologies II: Dependent Systems," students identified the collateral human and non-human subjects shaped by the border as a filter. In this exercise, Ribeiro furthered her studies by focusing on the trans-border population in Tijuana, Mexico. While national news media regularly profile the populations crossing the border as groups seeking long-term settlement in the United States, they fail to recognize that many who cross are border residents crossing daily for work, school, or home. To them, the border is a typical daily commute. Yet, the average time spent waiting at the port of entry can be as much as four hours, which is valuable time away from their home life. [12] "Time" became a measure for the border that threaded (1) the Port of Entry's US Customs Booth, where commuters experience subjectivity and confrontation, (2) the Crossing Enclosure orders commuters into a single-file line, and (3) the Home in Tijuana, where commuters' home is interrupted by the length of travel to and from, as the architectural focus of Ribeiro's project. These typologies were further examined and redesigned in "Typologies III: Buildings," with the objective of analyzing the siting, construction, and material of each uncovered typology to propose counter-models and spatial zones where the public can be framed. [2]
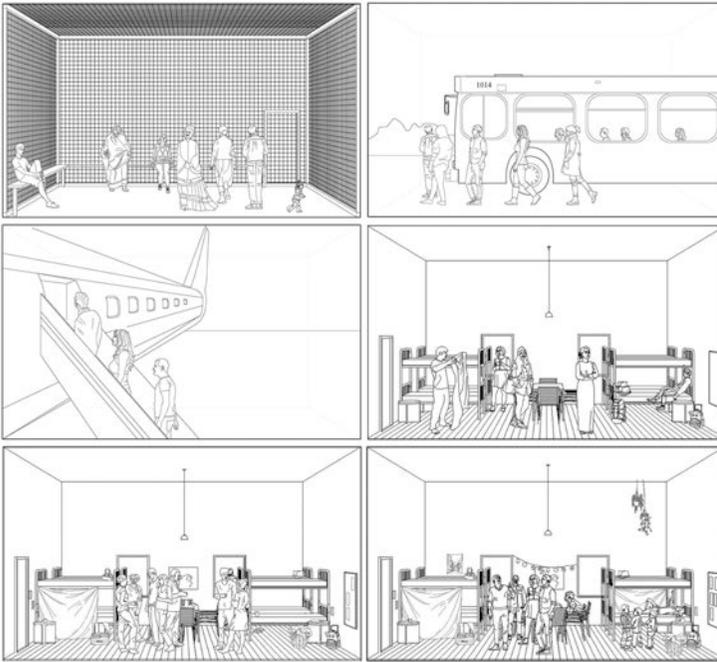
3

3   This drawing series follows the spatial experience
     of deportees following ICE raids and arrests.
     Beginning with cage-like facilities in Aurora,
     Colorado, then traveling by bus to Florence,
     Arizona, where groups board a plane to Central
     and South American countries like Mexico,
     Honduras, and Guatemala. Once arriving,
     deportees are permitted to stay in a facility for
     several days while they find work and residence.
     Through his drawings, Romero highlights furniture
     arrangements and alternative enclosures that limit
     the latent solidarity among them. (Research and
     Drawings by Nicholas Romero)

Another thread of research that emerged in this phase was Nicholas Romero's study on the flow and sites of deportations from the United States to Mexico. Rather than mapping this from the scale and frame of the map, Romero felt it important to draw deportees through space and time in order to determine moments of potential community building. He surveyed what little photographs and recorded interviews exist of immigrant detention and landing sites in the United States or Mexico to draw a series that framed space and subject equally to convey the untapped influence the enclosing architecture could have towards building solidarity among deportees. [3] Romero's work was significant in the studio since it tracked the "other direction of migration" heading south and gained a latent understanding of border issues while leveraging the architect's ability to investigate and imagine space and activity, thus expanding our disciplinary scope.

It should be noted that the objectives for each exercise are presented before its distribution. The intent is to share in the trajectory of the studio and allow student perspectives and the developing directions of their projects to determine the logical next steps in the studio. At this point in the studio, the students already have a far clearer sense of their interests and how they'll transition from research to design. Therefore, as the instructor, I am responsible for setting the learning objectives following the school's curriculum. However, I share the responsibility of structuring the process and deliverables of each exercise with the students. In doing so, we can counter the" directions" and "orders" driven curriculum and towards exercising management and leadership skills.

Prototyping New Border Typologies

The final exercise, "Prototypes," asked students to propose a new generation of typologies of border region architecture. By this point, students have a new sense of the "border beyond the boundary" by tracing the flows that intersect the border to identify an architectural scope in the typologies that most influenced and shaped the border subjects. Additionally, students developed a heightened sense of responsibility in the studio and their project as they determined the focus and methods.

The project that emerged from Ribeiro's research proposed a network that provided "distributed shared spaces, such as bedrooms, living rooms, gardens, (etc.) to enhance the daily lives of Tijuana-based cross-border commuters." Her project would allow respites along the border commute where domestic and communal life can resume. Recognizing another collateral subject of the border, Ribeiro also emphasized that by dispersing the home and
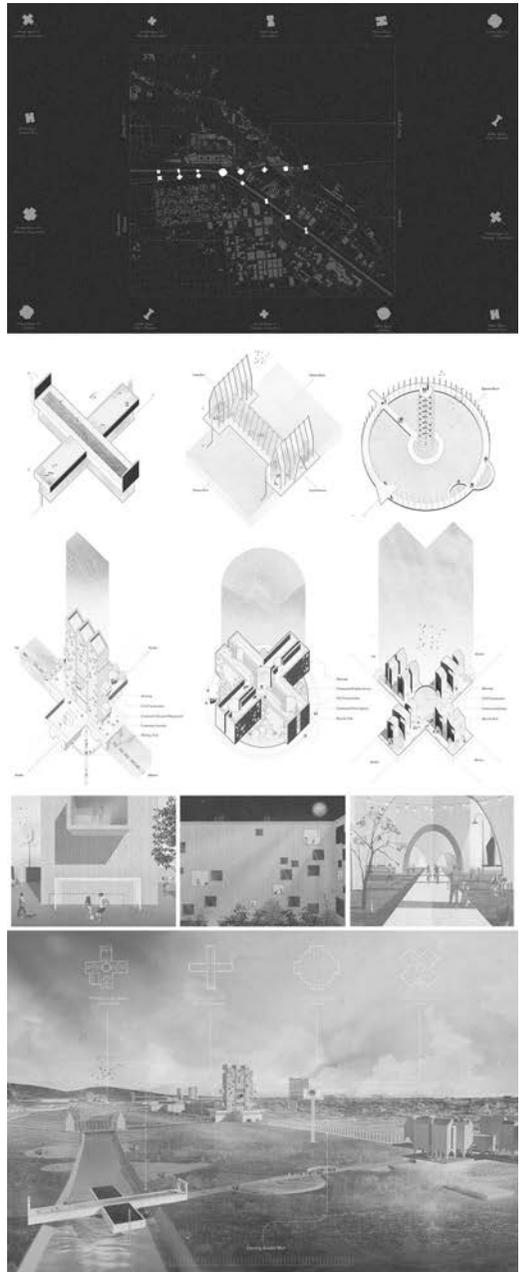
4

4   While the Mexico-US Border boundary is often seen as a transient, this project
      proposes new mixed typologies that draw and neutralize the political, economic, and
      ecological edges that make up the border. Ribeiro continued to seek ways in which the
      border's long commute times could be addressed, which led to proposals for mixed-use
      housing that also engaged the region's diminishing environment and ecologies. The
      form of her project was shaped by the many intersections that a border has but has yet
      to materialize. (Design Work by Natasha Ribeiro)

work throughout the border region, we'd greatly "reduce the region's carbon emissions due to less driving and diminished idling cars." [4]

A project by Njia Blair began by tracing a major migration route to dense Midwest cities like Chicago. Blair then identified how mixed-status families continue contributing to their communities and the economy while remaining concealed. Even in sanctuary cities, there is a fear that disputes local sympathy that during the Trump presidency, the administration's feverish crackdown on illegal immigration would ultimately catch up with them. Blair identified the food truck, the grocery store, and the home as spaces that simultaneously allowed for participation in the community while having a sense of security. After a series of studies that redesigned and combined interfaces and spatial devices, Blair designed a new inner block enabling a "nested" public domain in Chicago communities. [5]

In this studio, we set out to obtain a new understanding and reach of the Mexico-United States border. One that would have a way to a larger unconscious body of border subjects shaped by spaces beyond the border. In our research together, we identified groups shaped by these dynamics and proposed new typological counter-models that can foster collectivity and solidarity, such as housing, schools, and markets. While producing high-caliber work is an essential outcome of every studio, it is not the only measure of success, as ethical reasoning and empathy outcomes are as critical as coherent arguments and technically sound work. Thus, advancing from the "practical" model of a working-class curriculum and combining elements of skills-learning through drawing research and developing intellectual rigor by asking students to adapt their architectural knowledge to identifying and designing for new subjects. One of the most valuable outcomes of this studio was that students no longer saw the border subjects in their research and design work as different from themselves but instead realized their parallels and complicity in their own lives, thereby transcending the boundary between architect and subject.

Disciplinary Impacts

This course was taught in a region where many architecture schools emphasize the production of industry-ready graduates. While it is an objective in these courses to provide them with the skills and competency for professional practice, it is a parallel priority to do so without conditioning them for the social inequity they may find in the profession. Therefore, the studio's content, structure, and pedagogical approach were grounded in countering the hidden curriculums in architectural education associated with shaping students based on economic class and pre-determining their future in the prof-

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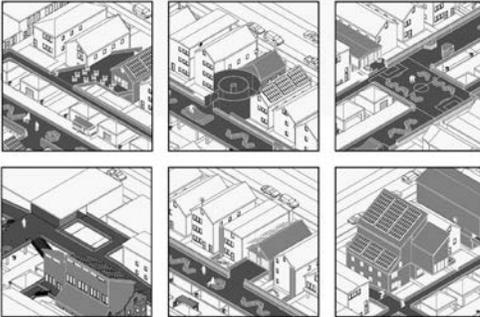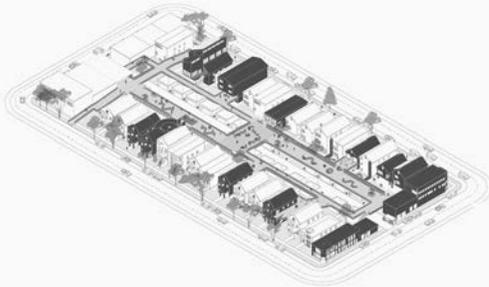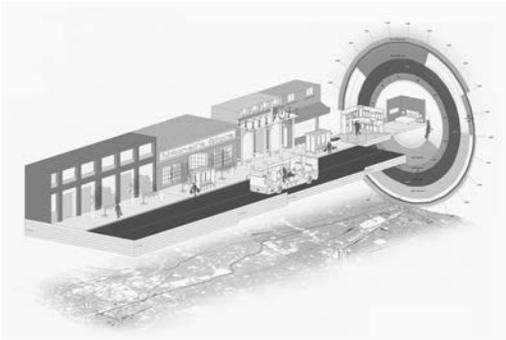
13   Kathleene Parker, "Population, Immigration, and the Drying of the American Southwest," Center for Immigration Studies. November 6, 2010.

14   The City of Chicago, "Climate Impacts in the Southwest," United States Environmental Protection Agency, November 2, 2023.

5   Starting with a mapping that traces an immigrant laborer traveling to Chicago for work from the surrounding suburbs, Blair developed an overlaid drawing that threaded the spaces they activate over time. This study led to a scheme that situated a network of semi-public spaces in a typical city block where this population can work, live, and gather within or nested between private property boundaries. (Design Work by Njia Blair)

ession. Instead, the experience in these studios asks students to develop projects that position the role of community leadership and social responsibility.

The effects of an architectural education in which diversity and a growth mindset are valued have the potential to transform how architects will interface with these growing populations. The students who graduate from the University of New Mexico School of Architecture + Planning entering practice today will be crucial in supporting communities in New Mexico and the Southwest region. An opportunity exists to prevent the established exclusion dynamics that impact major cities today. Furthermore, the UNM SA+P is the only NAAB-accredited school in New Mexico. Because graduates tend to stay in the Southwest region to practice, many of the school's alumni start or operate some of the most active architectural practices in the state. As the American Southwest continues to experience population growth in mixed-status communities [13], urban sprawl, as well as the increased effects of climate change [14], an architectural education that instills social and environmental justice values can produce practitioners that design with the community in mind. These social and cultural potentials exceed the vocational model at many architectural programs. The concluding position of this article is that architectural education must not limit learning objectives based on a student's economic background but instead value their unique perspectives, identities, and *walks of life* to build toward a more just architectural discipline.

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Wright's Influence in Architecture Schools:
An Overlooked Organic Legacy in American Architectural Education

Robert McCarter

1   Jonathan Lipman, "Postscript," in *Frank Lloyd Wright: A Primer on Architectural Principles*, expanded edition, ed. Robert McCarter (London: Phaidon Press, 2005), 290–291.

It has long been asserted that Frank Lloyd Wright (1867–1959) had little to no impact or influence on American architectural education during his lifetime, as well as in the years following his death. This perception was the motivation for the 1991 publication of *Frank Lloyd Wright: A Primer on Architectural Principles*, assembled and authored by a group of university faculty, including myself, who were teaching courses on Wright in American architecture schools. The publication, which began as a proposed issue of the journal *Oppositions*, endeavored to address the absence of essays critically analyzing Wright's work so as to reveal the underlying principles that act to order his architecture—something that has been common practice in academia for many years regarding the works of other modern architects, most notably Le Corbusier and Mies van der Rohe, but which has been rare in the case of Wright. As Jonathan Lipman, one of the authors, noted, from Wright's death until the 1980s, "the opinion [within Ivy League schools of architecture] was that Wright was a genius, but his work was too idiosyncratic, non-academic and inconsistent to provide useful models" for analysis. Yet Lipman also noted that when subjected to the "rigorous analysis to which the works of Le Corbusier were routinely subjected… Wright's work in fact yielded up its own inner logic" and ordering principles.[1]

In America, this type of critical analysis was initially applied to modern architecture at the University of Texas, Austin, where from 1951–55, Harwell Hamilton Harris, Dean of the School of Architecture, assembled a young faculty that included Bernhard Hoesli, Colin Rowe, Robert Slutzky, John Hejduk and Werner Seligmann. These architect-teachers went on to evolve methods of spatial and morphological analyses that dominated and characterized much of architectural education and criticism for the latter half of the 20th century: Hoesli at ETH Zurich, Rowe at Cornell, Hejduk and Slutzky at The Cooper Union, and Seligmann at Syracuse. Also beginning in the 1950s, an important strengthening of this analytical approach, fusing formal and spatial aspects with equally critical constructional and experiential aspects, was achieved by a group of British architect-teachers, all of whom were trained as architects, including Kenneth Frampton, Richard MacCormac and John Sergeant. The 1991 publication brought together essays on Wright by a number of these architect-teachers, including Hoesli, Rowe, Seligmann, Frampton, MacCormac and Sergeant, as well as essays by their students (who were also architect-teachers), including Partick Pinnell, Lipmann and myself, thereby serving as the beginning of efforts to redress the relative absence of critical analyses of Wright in academia.

Yet any paucity of pedagogical influence originating from Wright's architecture and thought in American academia during his lifetime was arguably largely his own fault, for he was consistently and scathingly critical

2   Louis Sullivan, "Characteristics and Tenden-
     cies of American Architecture (1885)," reprint-
     ed in *Kindergarten Chats and Other Writings*
     (New York, 1979), 177 and 182–183.

3   Marie Frank, "Emil Lorch: Pure Design and
     American Architectural Education," *Journal of
     Architectural Education* 57, no. 4 (2004), 28–
     40.

4   David Van Zanten, *Sullivan's City* (New York:
     Norten, 2000), 74–8.

of university architecture schools throughout his life. Wright's antipathy towards academia arose from his belief that an appropriate modern American architecture, such as he pursued in his work, had no relation whatsoever to the dominant educational models that he saw as demeaning architecture's disciplinary history by reducing it to a formal style for use in designing contemporary buildings, and which emphasized comparison over analysis. In this, Wright learned from his architect-teacher and mentor, Louis Sullivan, who, while keenly feeling the absence of a true American architecture, warned against efforts to speed its arrival by "transplanting and grafting" historical styles onto the American continent. Sullivan believed that any true indigenous American architecture would develop on a regional basis, with variations dependent upon climate, landscape, and local building methods (a definition that will later be taken up by Lewis Mumford in defining American regionalism). Having experienced it himself, Sullivan was skeptical as to whether contemporary architectural education in America, based as it was on academic exercises in the predetermined classical style, would ever allow the development of forms that followed function, much less an appropriate American architecture. Sullivan believed instead that architectural education should cultivate what he called the "common sense" of analytical thinking.[2]

In the decade from 1900 to 1910 when Wright's Prairie Period designs were conceived, his Oak Park Studio was made up of a group of talented young draftsmen and women, and in this context it should be noted that several of Wright's draftsmen, including George Willis and Charles Tobin, had been educated in what was called "pure design" by Emil Lorch at the Chicago School of Architecture, housed in the Art Institute. "Pure design" was developed by Lorch in Chicago starting in 1899, and later employed at the University of Michigan, where Lorch led the architecture school from 1906 until his retirement in 1940. Based upon the pedagogic techniques that Alden Wesley Dow and Denman Waldo Ross developed at Harvard at the end of the 1800s, "pure design" was an art educational program that employed abstract form-based exercises emphasizing pattern and formal ordering systems, paralleled by the analysis of Oriental ornamental patterns in search of first principles, all with the intention of allowing students to avoid adopting existing historical forms so as to be able "to develop a truly American architecture."[3] Relating in a number of ways to the Froebel kindergarten training Wright himself had been given as a child, and which he taught his own children in the late 1890s, the method of instruction known as "pure design" was highly abstract, and, according to David Van Zanten, "Lorch's innovation was that he sought architectural bedrock in patterns and conventionalizations of nature rather than in function or statics."[4]

Wright, who spent less than a year in university studies, rejected formal academic architectural education by setting up his own alternative "school," the Taliesin Fellowship, founded in 1932 and continuing long after Wright's death. The student-apprentices lived at Taliesin, worked in Wright's house, farm and architectural studio, as well as building new structures, all of which involved "learning by doing" or making related to both the pedagogical methods of Wright's friend, the philosopher and educational theorist John Dewey, as well as medieval craft guild apprenticeship training precedents. Wright's assessment of American university architectural education remained consistently negative through its transition from the dominance of classical Ecole des Beaux-Arts pedagogical influence, which reached a peak in the early 1900s, to the emergence and eventual dominance of Modern architectural education and Bauhaus-influenced academic programs starting in the 1930s. In addition, throughout his life, Wright regularly refused to lecture at university schools of architecture unless invited by the students, rather than by the faculty or administration.

In this lack of academic influence, the situation with Wright has parallels with the Finnish architect Alvar Aalto, whose work, like Wright's, was inspired by natural structures and local landform, and who dominated the architectural profession in Finland to an even greater degree than Wright did in America. Goran Schildt, Aalto's biographer, was scandalized to discover that, in the later years of Aalto's life, the archives of the Architecture Department at the Helsinki University of Technology—all the buildings of which Aalto had designed—did not contain a single image of his works, and that the students were never asked to study Aalto's designs during his lifetime. Similarly, as any architect educated in America during the last half of the 20th century can attest, Wright, unquestionably the greatest American architect, was, with the exception of history survey courses, almost entirely absent from the architectural curricula of virtually every one of the over 100 schools of architecture in America.

Yet the legacy of the influence of Wright's work and thought in American schools of architecture, both during his lifetime and after his death, was more pervasive and profound than the perception imparted by the lack of critical analyses or curriculum and courses on Wright's work might at first seem to indicate. To take an Ivy League example, starting in the late 1940s the work and thought of Wright was a surprisingly strong influence in the school of architecture at Yale University. One of the primary reasons for this was the faculty member and historian Vincent Scully, whose teaching increasingly focused on American modern architecture, and even more precisely on the work of Wright. Scully's intense examination of Wright's works, and his enthusiastic descriptions of the experience of space in

5   William S. Huff, "Kahn and Yale," in *Louis I Kahn: l'uomo, il maestro, ed. Alessandra Latour* (Rome: Kappa, 1986), 337. Henry Russell Hitchcock, *In the Nature of Materials: The Buildings of Frank Lloyd Wright, 1887–1941* (New York: Hawthorn Books, 1942); Frank Lloyd Wright, *An Autobiography*, op. cit.

6   Robert A. M. Stern, "Yale 1950–1965," *Oppositions* 4 (New York: IAUS/Wittenborn, 1975), 36.

7   Edwin Gilbert, *Native Stone* (Garden City: Doubleday, 1956). In the novel, Louis Kahn is the obvious model for the character of chief design critic Homer Jepson, and William Huff ("Kahn at Yale," op. cit., 331–333), points out that the student-hero of the novel, Rafferty Bloom, was based upon an actual student of Kahn's at Yale, Duncan Buel, whom Kahn later hired in his office, where Kahn constantly referred to him as "Rafferty."

8   This period is comprehensively documented in Alexander Caragonne, *The Texas Rangers: Notes from an Architectural Underground* (Cambridge: MIT, 1995). Hoesli's continued later deployment of Wright's work in the education of architects at the ETH is documented in J. Jansen, H. Jörg, L. Mariani, H. Stöckli, *Teaching Architecture: Bernhard Hoesli at the Department of Architecture at the ETH Zürich* (Zürich: ETH, 1989), and the more general influence of Wright's work on European architects is documented in Heidi Kief-Niederwöhrmeier, *Frank Lloyd Wright und Europa* (Stuttgart: Karl Kramer, 1983).

9   The story of the school is documented in John G. Williams, *The Curious and the Beautiful: A Memoir History of the Architecture Program at the University of Arkansas* (Fayetteville: University of Arkansas Press, 1984). It is worth noting that Jones taught for two years at the University of Oklahoma before accepting a position at his alma mater, University of Arkansas.

Wright's buildings, had an effect on the students as well as his fellow faculty members, including Louis Kahn and Buckminster Fuller, along with visiting critics such as Pietro Belluschi and Eero Saarinen.

During this period, the work of the architecture students at Yale was strongly influenced by the designs of Wright. William Huff, a student at the time, recalls that the spirit of Wright hung heavy over the school; "Those students who were 'with it,' literally carried Hitchcock's *In the Nature of Materials* under one of their arms and spouted verbatim passages from [Wright's] *An Autobiography*, which they carried under the other." [5] In particular, the student work from the studios taught by Eugene Nalle, the charismatic instructor of the first year program, was typically characterized as closely paralleling the recent work of Wright. [6] That Wright's influence remained strong at Yale through the 1950s is evidenced by the fact that it was a Wright-inspired designer who was cast as the student-hero of Edwin Gilbert's novel, *Native Stone*, a book based directly upon the Yale school of architecture and its faculty in this period. [7]

However, taking a broader overview of developments in the US, it can be argued that the influence of Wright's designs and ordering principles on architectural education was the most extensive and deeply rooted not in the East Coast region, which was largely dominated by the Ivy League schools and their embrace of European "International Style" Modernism, or even in the Mid-west region, where the vast majority of Wright's works were built, but in a number of schools of architecture in the American South. These include the University of Texas in Austin from 1951–58, where Wright's influence can be seen in the teaching of Dean Harwell Hamilton Harris, Bernhard Hoesli, John Hejduk and Werner Seligmann; [8] the University of Oklahoma, under the leadership of the architect Bruce Goff, where Wright gave public lectures in 1946, 1952, 1954, and 1958; and the School of Architecture at the University of Arkansas, Fayetteville, from 1953 onwards, where Wright's influence was actively engaged in the curriculum and teaching by E. Fay Jones (for whom the School is now named), who was one of the most celebrated and accomplished of the architects who choose to work in Wright's very long shadow. [9] In order to demonstrate Wright's influence in architectural education in greater depth, we will here explore only one example, that being the pedagogy of the School of Design at North Carolina State University, Raleigh, from the 1940s to the 1960s.

As to why during this period the Southern region was open to the influence of Wright's principles in architectural education, we refer to the thinking regarding the then-emerging concept of regionalism of two of the principal players in this story. The historian and cultural critic Lewis Mumford, one of the founders of American regionalism, gave a series of lectures at

10   Lewis Mumford, *The South in Architecture* (New York: Harcourt, Brace and Co., 1941), 17.

11   Mumford, op. cit., 13, 17, 30–31.

12   Mumford, op. cit., 30–32.

13   Mumford, op. cit., 27.

14   It is interesting to note that Wright wrote a critical book review of *The South in Architecture* the same year it was published, in which he rejected Mumford's positive interpretation of the work of Jefferson and Richardson, as well as the assertion that Wright himself was expanding and deepening Richardson's legacy; Frank Lloyd Wright, "Mumford Lectures," in *Frank Lloyd Wright: Collected Writings, Volume 4, 1939–1949,* Bruce Brook Pfeiffer ed. (New York: Rizzoli, 1994).

Alabama State College in 1941, which he published that same year as *The South in Architecture*. In this remarkable and too-seldom-studied book, Mumford sets out his definition of regionalism, one that does not result from simply imitating the forms of historic buildings in the region, or employing the local building materials, or engaging the regional climate. Rather, Mumford proposes a regionalism that results from an analysis of historical buildings and an engagement with contemporary social and cultural values, arguing that such an approach has—through the work of the architects Thomas Jefferson and Henry Hobson Richardson, both born in the South—"enabled the South, in particular, to leave an imprint on buildings far removed" from that region.[10]

Mumford holds that regionalism avoids the "appreciation of historic buildings [that is] confined to the surface," or "the narrow antiquarian preoccupation with the past," rather reflecting the understanding that "every regional culture necessarily has a universal side to it. It is steadlily open to influences which come from other parts of the world, and from other cultures, separated from the local region in space and time or both together."[11] A constructive architectural regionalism is the result of a building tradition that is open to universal concepts coming from outside the region, which are in turn assimilated and adapted to local conditions. Appropriate regional development involves the recognition of the inherent "tension between the regional and the universal… every culture must both be itself and transcend itself; it must make the most of its limitations and must pass beyond them; it must be open to fresh experience and yet it must maintain its integrity. In no other art is that process more sharply focused than in architecture."[12] Mumford holds that the most important character of regionalism originates in the social and cultural; "The forms of building that prevail in any region reflect the degree of social discovery and self-awareness that prevails there."[13] In the context of this essay, it should be noted that in the book's final chapter, "The Social Task of Architecture," Mumford presents Wright as the architect who most effectively expanded and continued Richardson's legacy in the US, and whose architecture exemplified an appropriate character for the various regions in which he worked.[14]

Thirteen years later, Harwell Hamilton Harris further refined the definition of regionalism in a 1954 lecture to the Northwest Regional AIA. At the time of the lecture, Harris was the Dean of the School of Architecture at the University of Texas at Austin; a leading disciple-at-a-distance of Wright; as well as one of the most important practicing architects in the US. Harris was the designer of both the astonishing and too-little-known Havens House in Berkeley, California, of 1940, immortalized in the photograph by Man Ray, as well as what was arguably the first Case Study House, John Entenza's

15   Harwell Hamilton Harris, "Regionalism and Nationalism in Architecture," in *Architectural Regionalism: Collected Writings on Place, Identity, Modernity, and Tradition,* ed. Vincent Canizaro (New York: Princeton Architectural Press, 2007), 57–58.

16   Harris, in Canizaro, op. cit., 60–61, 64.

17   Henry Leveke Kamphoefner (1907–1990) was Dean at the School of Design from 1948 until 1973, when he returned to teaching. I entered the School of Design as a first year student in fall 1973, part of the last class accepted by Kamphoefner (as he never tired of reminding me in later years) before he stepped down as Dean. While an undergraduate student in the school, I took Kamphoefner's seminar and had Harwell Hamilton Harris, who had been teaching in the school since 1962, on several design juries. When I returned to the School of Design to teach as a Visiting Critic in spring 1985, I had the privilege of having Harris as a faculty colleague.

own house of 1938 in Los Angeles. In his lecture—which was strongly influenced by Mumford's concepts as presented in *The South in Architecture*—Harris begins by stating that regionalism in architecture is not so much the result of "climate, geography, the presence or absence of certain materials," as it is the result of the attitude of those who practice architecture and their clients—"regionalism is a state of mind." Harris outlines two types of regionalism, the first being the "regionalism of restriction," which is focused on continuing traditions and "living patterns rooted in a vanished past;" and as a result "it cares more for preserving an obscure dialect than for expressing an idea." Harris opposes this "regionalism of restriction" with another type of regionalism: "the regionalism of liberation… This is the manifestation of a region that is especially in tune with the emerging thought of the time… [This regionalism's] virtue is that its manifestation has significance for the world outside itself."[15]

Harris goes on to describe the differences in the ways the two types of regionalism deal with outside concepts and contemporary influences, or what Mumford called the "universal." Harris describes the "regionalism of liberation" that flourished in California in the 1930s, when ideas of modern architecture coming from Europe were met with a living architectural tradition. "California's acceptance [of these ideas] was partial but intelligent, largely confined to what it found relevant," which were incorporated into the "flexible and living California tradition." In New England, on the other hand, the "rigid and entrenched tradition" of a "regionalism of restriction" at first resisted and then surrendered to the modern architectural ideas coming from Europe; "New England is now accepting European ideas whole." Yet Harris maintains that universal concepts need to be engaged by the "regionalism of liberation" in order to be realized; "To be expressed, an idea must be built; to be built, it must be particularized, localized, set within a region. And what are important are not the limitations of the region but the resources of the region. A region's most important resources are its free minds, its imagination, its stake in the future…" Harris concludes by stating: "For an architecture to be really great it must express the variety, freedom, expansiveness, and love of the physical world that are the product of the best regionalism—the regionalism of liberation."[16]

An examination of the influence of Wright's principles and work on the teaching at the School of Design, North Carolina State University begins and ends with Henry Kamphoefner.[17] Educated at the University of Illinois (1926–30) and Columbia University (1930–31), Kamphoefner established his practice in Sioux City, Iowa in 1931. His municipal Music Pavilion and Outdoor Theatre at Grandview Park of 1936 was recognized with major awards from both the American Institute of Architects (AIA) and the Royal

18   David Louis Sterrett Brook, *Henry Leveke Kamphoefner, the Modernist Dean of the North Carolina State University School of Design, 1948–1972* (PhD dissertation, NCSU Graduate Faculty, 2005), 14; original source, Henry L. Kamphoefner, "The School's Beginning," *North Carolina Architect* 25, 5, (1978), 10.

19   Brook, op. cit., 53; original source, "Harvard Architect Joins Design Staff," *Technician* (North
             Carolina State College of Agriculture and Engineering of the University of North Carolina), 18 September 1950; announcement of three-week series of seminars at the School of Design by Hudnut in 1950–51 academic year.

Institute of British Architects (RIBA). Despite his Beaux-Arts classical education, during this period Kamphoefner became keenly interested in Modern architecture as well as the work of Wright, and he visited Wright and stayed two nights at Taliesin in 1932, the year Wright founded the Taliesin Fellowship. Of particular pertinence in this context is Kamphoefner's memory of Wright telling him that "every building that he [Wright] had built was based on a unique structural experiment." [18]

Kamphoefner's educational career began when he was appointed to the faculty at the University of Oklahoma (OU) in 1937, where he later served as Chair of the School of Architecture from 1944–48. During his eleven years in Oklahoma Kamphoefner endeavored to engage the school in the Modern architectural educational model that was then emerging across the US, as well as leading the efforts to have Modern buildings realized on the campus.

In 1948, based in part on the recommendation of Joseph Hudnut—then Dean of the Harvard Graduate School of Design, former Dean at Columbia University during the time Kamphoefner was a graduate student, and the figure whom Kamphoefner later characterized as "the father of modern architectural education" [19]—Kamphoefner was hired as the founding Dean of the School of Design at the North Carolina State College in Raleigh. Energetically engaging the opportunity to build a school of architecture from the ground up, during his first year as Dean Kamphoefner removed the majority of the existing faculty and brought four University of Oklahoma faculty members to the School of Design: George Matsumoto, Terry Waugh, Duncan Stewart, and James Fitzgibbon. In addition he hired Lewis Mumford, Buckminster Fuller, Matthew Nowicki and Eduardo Catalano as faculty, as well as initiating the Visiting Faculty program, one of the first of its kind, which during the school's first seven years brought in such leading professionals as Wright, H. Th. Wijdeveld (the Dutch architect and editor of *Wendingen* who had been offered the directorship of Taliesin by Wright in 1931), Le Corbusier, Mies van der Rohe, Richard Neutra, Marcel Breuer and others for extended workshops. Particularly notable was the peripatetic Fuller's seven-year involvement in the School of Design, from 1948 to 1955, and his connections to the school in this period were strengthened when he set up a practice in Raleigh with Fitzgibbon and T. C. Howard, a local structural engineer.

From the outset, Kamphoefner intended that the school foster the emergence of a regionally inflected "organic architecture," to be accomplished by emphasizing the study of nature, structural geometries, and in particular the integration of spatial design and building structure. In his 1948 letter to Mumford offering him a position on the faculty, Kamphoefner stated that the

20   Brook, op. cit., 35; original source, letter, Henry L. Kamphoefner to Lewis Mumford, 12 February 1948, School of Design, Dean's Office, 1945–1994.

21   Brook, op. cit., 37.

22   Frank Lloyd Wright, *An American Architecture*, Edgar Kaufmann, ed. (New York: Horizon Press, 1955), 96, 196.

school was being organized "for the development of an organic and indigenous architecture," emphasizing the regional approach Mumford advocated.[20] In deciding to hire Nowicki, who was recommended by Mumford, to be the head of the architecture program, Kamphoefner had been deeply impressed by Nowicki's work on the United Nations Assembly Building in New York, later saying that he was "absolutely overwhelmed" by Nowicki's ability to integrate structure into architectural design.[21] Kamphoefner's belief, shared with his mentor Hudnut, that architecture faculty should also maintain active practices was so strong that when J. S. Dorton offered Kamphoefner the commission to design the North Carolina State Fair arena in Raleigh, Kamphoefner proposed instead that it be designed by a faculty team led by Nowicki. The Dorton Arena, a 7600-seat elliptical-plan *tour de force* of integrated structure and spatial design, with a saddle-shaped roof supported by steel cables spanning between two peripheral angled parabolic compression arches, was completed in 1952, and was later named one of the ten most important buildings of the last 100 years by the AIA.

Within two years of its founding, the School of Design was already being recognized as having a highly diverse faculty who were open to outside ideas, committed to a pedagogy of learning by making, supportive of each student's individual intuition, and sharing the intention of encouraging the development of an organic and indigenous architecture, paralleled by the integration of structure and inhabited space. Here it is important to note that from the beginning the curriculum developed by Kamphoefner and the faculty required every student of architecture to take courses in landscape architecture from the first year onwards, making the landscape and climate an integral part of every design project. While the teaching of the faculty was not dominated to any particular design or pedagogical formula, many of them were influenced by the work and thought of Wright, sharing a design approach that emphasized Wright's consistent insistence on learning from nature, natural geometries (as exemplified by D'Arcy Wentworth Thompson's book, *On Growth and Form*, which was a required textbook in the studios), and natural structural forms. In his lectures and writings of this period, Wright invariably noted the importance for his work of his first-hand analysis of the internally integrated forms of natural objects such as the crystalline geometries of rock formations, which Wright called "proof of nature's matchless architectural principles," and the dynamic structure of the saguaro cactus, which he called "a perfect example of reinforced building construction," both of which exhibit the integrity that results from a coherence of spatial composition and construction order.[22]

The School of Design Bulletin of 1950, published two years after the school's founding, articulates the principles ordering the curriculum and

23   Bulletin of the School of Design, North Caroli-
na State College (1950), 1. Bold type
in original.

24   Bulletin, op. cit., 2–3. Sigfried Giedion, *Mecha-
nization Takes Command* (New York: Nor-
ton, 1948).

pedagogy of the school, as well as setting it apart from certain practices of other schools. Reinforcing the central importance of integrated structure and the study of nature in the school's pedagogy, the Bulletin opens with the definition: "NATURE, The source and medium of creation—demanding subordination and granting freedom of its expression. **The birthplace of all structure**."[23]

In the Bulletin's signed preface, Mumford introduces the school's primary principles, shared by Kamphoefner and the faculty, of regional-appropriate design, technology defined by human needs, and education of the entire person. "Architecture, in the fullest sense, is the art of humanizing the environment," he begins, arguing for a return to the all-encompassing definition of the architect's task as first defined by Alberti, ranging from the individual to the city. Unlike the more famous architecture program at Harvard, where history was eliminated from the curriculum in this period, Mumford states: "We believe in the modern movement in architecture because we conceive it, not as a breaking away from history and tradition, but as a deeper rooting of architecture in the soil of the region and the community, with the fuller utilization of the universal forces that bind humanity as a whole together." Mumford's conclusion includes a subtle but unmistakable criticism of the leading historian-critic at Harvard, Sigfried Giedion, and his recent book, *Mechanization Takes Command*; "Only by helping to create fully developed men and women can we hope to reverse the present tendency to let mechanization take command. The architect cannot humanize his whole environment unless he learns to humanize himself. These tasks and these goals are essential, we believe, to the health of our Democracy."[24]

The Bulletin's "Conclusions," unsigned but likely authored by Kamphoefner, contains another unmistakable critique, this time of the famous aphorism of Le Corbusier from the 1920s, which is here countered by a reference to Wright's definition of the primary task of architecture being to provide physical and psychological shelter; "The study of well-being of the contemporary man…continues to be the inspiration for our work… It is no longer 'The Machine to Live In' that stirs our imagination. It is the eternal feeling of a shelter to which we subordinate our creative ideas." The inspiration of nature, underappreciated by previous generations, requires a "conscious revival of its importance" for architecture. In counterpoint to "the mechanized concept of values" and "the mechanized life of a metropolis… the coming chapter of our life might be inspired by the regional approach to life," resulting in the school having a pedagogical philosophy "which well might be termed as a new humanism." Presaging Harris's definition of the regionalism of liberation, the author states: "An architect must be a promoter of new ideas beneficial to the life of men." Indicative of the preponderance

25   Bulletin, op. cit., 23–24.

26   Brook, op. cit., 54.

27   After Nowicki's death, Le Corbusier was
      appointed architect for the capital complex at
      Chandigarh, which is considered one of Le
      Corbusier's greatest works.

of practicing architects on the school's faculty, the essay concludes with an argument for the fundamental humility of the architect; "Architecture…is an art of collaboration with a client… [and for this reason] humility must be part of [the architect's] professional ethics."[25]

In May 1950, Wright came to Raleigh, where he had an animated discussion with a large group of School of Design students in the shade of a tree during the day, after which Wright lectured in the evening to an audience that included the faculty and students of the School of Design, architects from around the region, and members of the public. The lecture took place in the recently completed Reynolds Coliseum, the university's sports hall, and the 5000 people who attended constituted the largest audience ever to hear Wright speak, signaling the emergence of the School of Design as an important leader in American architectural education. In the lecture, Wright, who had earlier characterized Kamphoefner as an "architectural missionary" during his time at the University of Oklahoma,[26] called for the school to nurture an American organic architecture, based on the close study of nature and natural structural forms.

During its first two decades, the teaching in the School of Design emphasized the search for an appropriate organic or indigenous architecture alongside the development of individual intuition, as well as emphasizing learning from natural form paralleled by the exploration of the most advanced building structures. The School was recognized for its integration of architectural design and structural research in teaching undertaken by faculty such as the Argentine architect Eduardo Catalano, who joined the faculty in 1949 and whose own 1954 house in Raleigh, with its twin wooden hyperbolic parabola structural beams supporting a tensile roof and bearing on only two points, was one of the very few buildings praised by Wright. Catalano, who had been recommended to Kamphoefner by Marcel Breuer, was appointed head of the architecture program following Nowicki's untimely death in 1950 in an airplane crash on his way to the new capital of India's Punjab region, Chandigarh, for which he was the lead architect.[27] In addition to Catalano, Kamphoefner brought in a number of leading architects who engaged structures in their work to teach at the School, including Horacio Caminos, Felix Candela, and Eduardo Torroja. The School soon became known for the faculty and students' advanced thinking on thin shell and various folded and parabolic structural forms in reinforced concrete.

The structurally innovative designs made by the students in the studios, along with faculty research, invited essays, as well as selected presentations of the twenty Visiting Lecturers Kamphoefner brought to the School each year, were all publicized in the *Student Publication of the School of Design*, the first issue of 1951 being dedicated to the memory of Nowicki. The cont-

28   Roger Clark, *School of Design: The Kam-phoefner Years 1948–1973* (Raleigh: NCSU College of Design, 2007), 23; this publication is largely based on the notes assembled by Robert Burns.

29   Kahn's lecture was published as Volume 14, No. 3 of the *Student Publication of the School of Design*, part of a remarkable series that also documented the 1964 lectures of Alvar Aalto, Le Corbusier and Paolo Soleri.

30   See *Student Publication of the School of Design*, Volume 14, op. cit. On Candela, see his "Reinforced Concrete Shells," *Student Publication of the School of Design*, North Carolina State College (1960), Volume 9, Number 2, 27–46.

31   Roberto Gargiani, *Louis I. Kahn: Exposed Concrete and Hollow Stones, 1949–1959* (Lausanne: EPFL Press, 2014), 225–229.

ents of each issue of the *Student Publication* was determined by the students, often by way of school-wide votes, and each issue was assembled and published by the students, with the assistance of a faculty advisor. The *Student Publication*, founded shortly after Yale University School of Architecture's student journal, *Perspecta*, documented the rigorous, diverse and innovative pedagogical work and research of the School, fostered by Kamphoefner's consistent demand for excellence, and as a result the *Student Publication* was of critical importance in establishing the "national reputation, visibility, and prominence" of the School of Design. [28]

The Visiting Lecturer program Kamphoefner established brought many important, high profile practitioners to the School, and the architect-lecturers were often deeply affected by their time there. As an example, in 1964 Louis I. Kahn, a personal friend of Kamphoefner's, lectured on his early designs for the Bangladesh National Capital complex in Dhaka at the School of Design. [29] During this period Kahn was struggling to resolve the roof of the Assembly Building at Dhaka, and while he was in Raleigh, Kahn met Candela, who showed him the thin-shell concrete octagonal-plan, parabolic-section roof vaults of the "Los Manantiales" restaurant and the St. Vincent Chapel, both in Mexico City. Kahn's final design for the Assembly Building roof at Dhaka, resolved shortly after his visit to the School, was composed of a set of eight parabolic concrete shells that are strikingly similar to Candela's thin-shell structures. [30]

Another example of the School's fertile combination of Wright-inspired organic architecture, with its emphasis on learning from nature, and advanced structural experimentation, also involves Kahn. After the completion of his Yale Art Gallery in 1952, Kahn continued to experiment with the building's open-web tetrahedral floor slab and its possible prefabrication. While Kahn was unsuccessful in convincing the faculty at Yale, where he taught until 1958, to explore this structural type, he found there was intense interest in other schools. As Roberto Gargiani has noted in his study of Kahn's early concrete architecture; "The main centers of experimentation on the prefabrication of tetrahedra in keeping with Kahn's vision are the School of Design"—with Caminos, who assigned tetrahedral concrete floor structure exercises in studio in 1961—"and the Massachusetts Institute of Technology"—with Catalano, who departed the School of Design in 1956 to become Dean at MIT, and who supervised the 1962 thesis on precast floor systems of Robert Burns, a School of Design graduate then in the Master of Architecture program at MIT. [31] The close parallels between the inspiration for structural concepts to be found in natural forms in Kahn's design process and in the design thinking fostered at the School of Design is indicated by Kahn's statement to his nephew regarding D'Arcy Thompson's book, which

32   I noted this reference by Kahn in my copy of
     On Growth and Form, but cannot at this
     moment locate the source. In 1973, when
     I entered the School of Design as a first year
     student, D'Arcy Thompson's book remained
     among the required textbooks.

33   Catalano and Caminos went to MIT, Matsumo-
     to to University of California Berkeley, and
     Fitzgibbon and Laskey went to Washington
     University in St. Louis.

34   Brook, op. cit., 88.

35   Burns from an interview in 2000, as para-
     phrased by Brook, Brook, op. cit., 67.

was assigned as a standard textbook at the School of Design; "If a person could read only one book during their life, it should be *On Growth and Form*." [32]

Rather than diminishing with his death in 1959, Wright's influence in the School of Design may be said to have increased in the next decade. During the late 1950s and early 1960s, a number of the original faculty appointed by Kamphoefner, including Catalano, Caminos, Fitzgibbon, Matsumoto and Leslie Laskey, accepted positions at other architecture schools. [33] Seeking to maintain the school's commitment to the organic and regional approach, in 1962 Kamphoefner hired Harwell Hamilton Harris, who had stepped down from the Deanship at University of Texas at Austin in 1955 and then practiced in California. With Kamphoefner's encouragement, Harris, one of the most talented of those architects who worked in Wright's long shadow, moved his practice to Raleigh. Kamphoefner intended the hiring of Harris to be understood as a statement of principle, as he indicated in his letter to the university chancellor, where Kamphoefner argued that through his teaching Harris would demonstrate to the School of Design students "the principles and practice of compatible site and building relationships." He also valued Harris for understanding and practicing "those principles of design first developed by Frank Lloyd Wright." [34]

Robert Burns, the 1957 Paris Prize-winning graduate of the School who Kamphoefner appointed as head of the architecture at the School of Design in 1967, and who was among Kamphoefner's closest colleagues in the School of Design in his later years as Dean, noted that Kamphoefner's organic and regional approach was intended to be a break from the European modern tradition of the "International Style," which Kamphoefner felt endeavored to establish an internationally uniform definition of architecture. In contrast, Burns argued that Kamphoefner's approach fostered the development of a diverse and varied yet appropriate American architecture that engages the landscape and nature, "in keeping with the philosophy of Frank Lloyd Wright." [35]

In conclusion, I would like to note the parallels between the architectural pedagogy in the School of Design from the late 1940s to the late 1960s, and the situation in American architecture schools today. Burns pointed out that Kamphoefner intended the pedagogy of the School of Design to be an alternative to the then-typical embrace of European modern architecture formulas by American schools. This involved not only the rejection of the "International Style" of universally applied architectural form and construction in professional practice, but also the parallel pedagogical methods employed in schools. The last included variations on the "atelier" studio system, wherein students learn to employ a narrowly defined form-making

36 The atelier system of studio pedagogy was central to the Ecole des Beaux-Arts, but it was equally important at modern schools such as the Illinois Institute of Technology during Mies van der Rohe's time teaching there (1938—58), and the Architectural Association (London) during Alvin Boyarsky's tenure as director (1971—1990). In all cases, the architectural design process in the atelier-studio was high-ly orchestrated and closely modeled on the design process of the professor, often result-ing in dramatically different kinds of design work emerging from competing atelier-stu-dios. The atelier system at the AA, in which atelier-studios were headed by Rem Koolhaas, Zaha Hadid and Bernard Tschumi, among oth-ers, has been enormously influential due to the fact that several former AA faculty, upon being appointed as school head at other insti-tutions, have sought to restructure the school along the lines of the atelier-studio system of the AA; this includes most notably Tschumi's tenure as Dean at Columbia University (1988—2003) and the period of Wiel Arets directorship of the Berlage Institute (1995—2002).

37 David Van Zanten, "Kahn and Architectural Composition," unpublished paper read 24 Jan-uary 2004, "The Legacy of Louis I Kahn," Yale University.

38 Kahn, quoted in "Kahn on Beaux-Arts Train-ing," ed. William Jordy, *Architectural Review* 155 (June 1974), 332.

formula; [36] the de-emphasis of architectural history in the curriculum and its evacuation from the design studio; the emphasis of theoretical thinking over engaged making; the suppression of individual intuition, which is dismissively reduced to personal "expression;" all culminating in tightly scripted formal "experiments" disengaged from their physical and cultural contexts, and "inventions" conceived without an evaluation of appropriateness or any reference to disciplinary history.

The pedagogy of the School of Design took the opposite approach, emphasizing a Socratic studio pedagogy involving individual interpretations of shared ordering principles; learning by making, wherein both the evaluation and evolution of a concept involves its embodiment in the made; an emphasis on thinking and making, where theory comes from practice, and not the other way around; the engagement of multiple sources of inspiration, including natural geometries, structural analysis and architectural history; the support of each student's individual intuitive interpretations of the program; the evaluation of the experiential qualities of designs, as well as their appropriateness; all culminating in place-specific, regionally, materially, socially, culturally and ecologically appropriate and sustainable designs that were understood to be an integral part of, and contribution to, a larger disciplinary history.

Today both the profession and the schools are increasingly dominated by the pursuit of a universal self-generating formalism, digitally enabled and parametrically determined, intentionally disengaged from regional material culture, landform, climate and the particular qualities of place, and emphasizing surface pattern-making over experiential place-making. It can be argued that current international formalism is simply the most recent variation of the cyclically recurring universal stylistic formulas, from the Beaux-Arts, to the International Style, to today's digitally-generated surface manipulations. David Van Zanten has characterized these kinds of uniformly interpreted design formulas as the "art of command," where predetermined formal parameters are applied without regard to the qualities of material, context, climate, and program. Van Zanten contrasts the "art of command" to the "art of nurture"—practiced by both Wright and Kahn—which is concerned with doing what fits into pre-existing conditions and what is appropriate as regards the qualities of material, context, climate, and program. [37]

Late in life, Kahn, who taught continuously from 1947 until his death in 1974, summarized his pedagogical method by stating, "I teach appropriateness. I don't teach anything else." [38] Today such an approach as that developed at the School of Design in the period examined here may serve as a model for contemporary architectural education in search of the appropriate.

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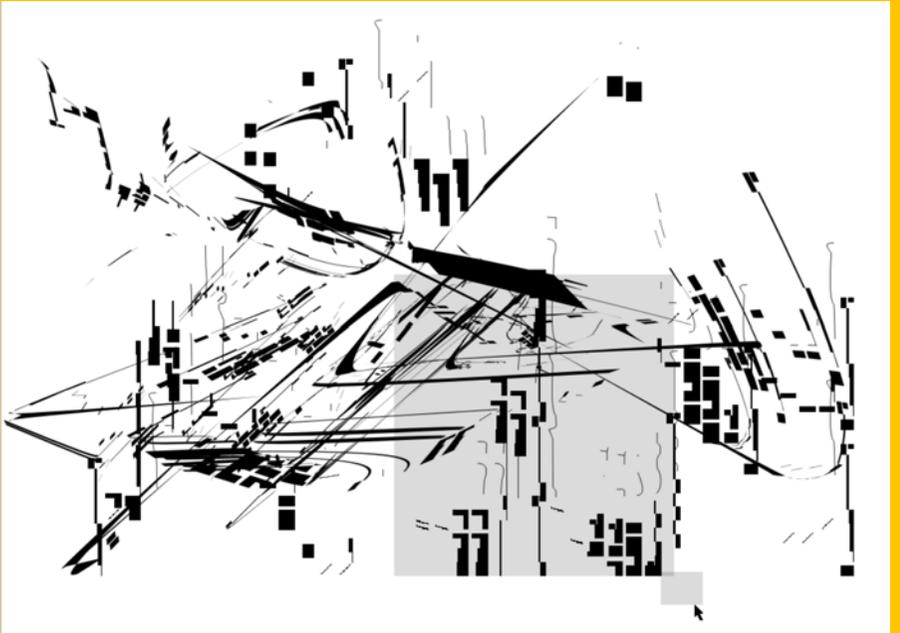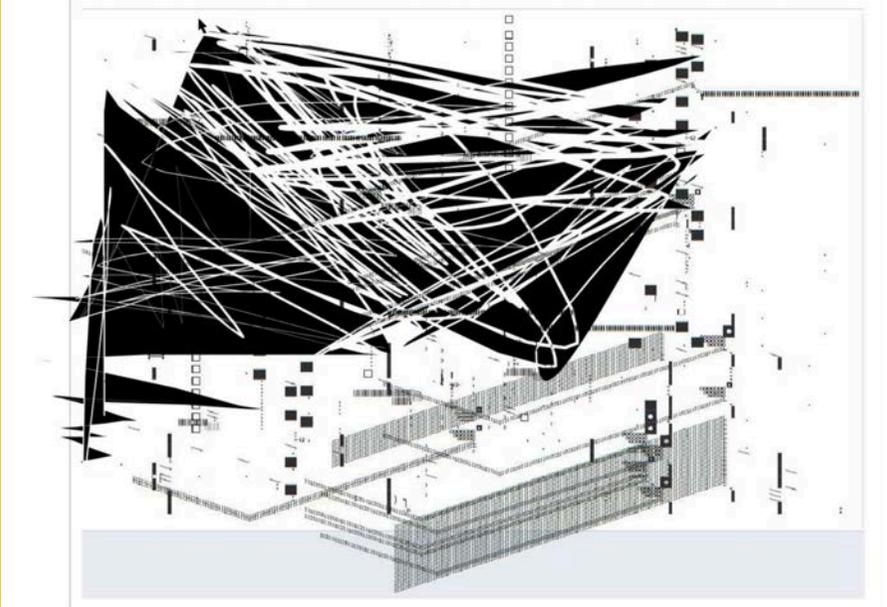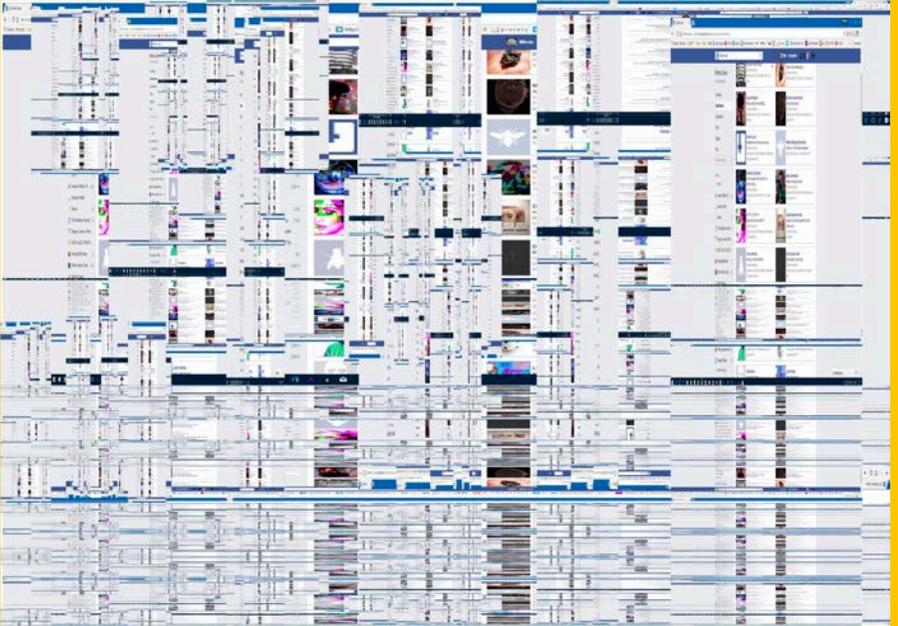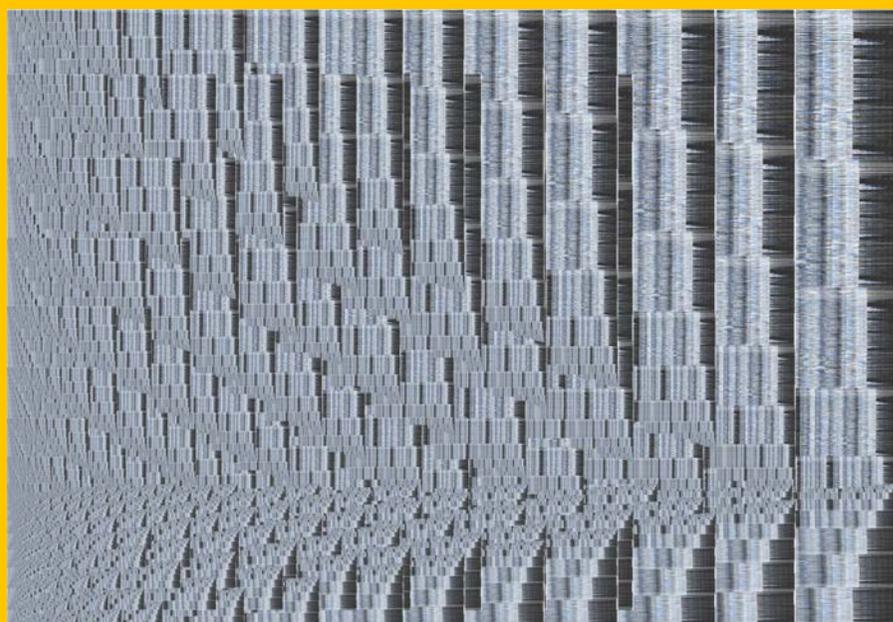
Biographies

César A. Lopez is a first-generation Mexican-American architectural design researcher, and educator. He draws from his life in the Mexico-United States Border Region as critical knowledge to explore the entanglements between architecture, territory, and the politics that dictate them. César is an Assistant Professor of Architecture at the University of New Mexico, School of Architecture + Planning, where he teaches core and research-based design studios, visualization courses, and seminars on the politics of representation. His pedagogical approaches and innovations were recognized with the 2023 New Faculty Teaching Award by the *Association of Collegiate Schools of Architecture* and *American Institute of Architectural Students*. His design work and research have been exhibited on prestigious platforms, presented at national/international symposiums and conferences, and published in consequential journals such as *ARQ, inForma, Bracket [Takes Action]*, and *Pidgin*. In 2023, César was awarded the Rome Prize in Architecture by the American Academy in Rome.

Carolina Dayer, ph.d., is an architect and associate professor at Aarhus School of Architecture in Denmark. In addition to her extensive teaching engagements at the master's level, she is currently working on two research projects entitled: 'Ingenuity and Humour: Architecture in Times of Global Crises' and 'Cultures of Maintenance.' She is author and co-editor of *Material Imagination: Reconnecting with the Matter of Architecture* (AADR, Spurbuchverlag, 2023), *Confabulations: Storytelling in Architecture* (Routledge, 2016) and *Activism in Architecture: Bright Dreams of Passive Energy Design* (Routledge, 2018). In 2021, she exhibited the artistic-research project: *Insiders, Othered Histories* at On-Site Gallery in Denmark. She was design associate editor of the *Journal of Architectural Education* from 2017 until 2021. She will co-chair an upcoming session at the EAHN 2024 international conference in Athens entitled: 'Cultures of Maintenance: Upkeep and Repair.'

Aki Ishida is Interim Associate Director of Virginia Tech School of Architecture and Associate Professor of Architecture teaching undergraduate design studios and courses on building technology and health and built environment. She is also a Senior Fellow of Virginia Tech's Institute for Creativity, Arts, and Technology (ICAT) where she collaborates with engineers and artists. She founded Aki Ishida Architect PLLC in New York City, and prior to that, she worked at the offices of Rafael Vinoly Architects, James Carpenter Design Associates, and I.M. Pei Architect.

Aki's work, in both writing and design, centers around aspects of architecture that are temporal, impermanent, and ever-changing, including maintenance of buildings, production studies of architecture, and mutable readings of glass transparency. She is the author of the book *Blurred Transparencies in Contemporary Glass Architecture: Material, Culture, and Technology* (Routledge, 2020), which examines material glass in broader cultural and social contexts.

Dr. Ephraim Joris is an architect, researcher and educator. He is a faculty member at Willem de Kooning Academy in Rotterdam. He practiced architecture in several countries and co-founded the architectural practice AP-London in 2007. With his work he developed a focus on renovation and restoration strategies in combination with the design of new urban settlements, from South East Asia to the Mediterranean, integrating ideas on rapid urban growth, social sustainability and climate resilience.

His research explores ways in which historical memory is reactivated in the development of contemporary architectural and urban proposals. As an educator he has been teaching architecture design studios at graduate and master level at various institutions around the world.

His teaching meditates architecture as an inescapable political instrument. His studio puts forward images of architecture reading into topics such as post-colonial culture and historical amnesia.

Robert M. MacLeod, AIA is a Professor at the University of South Florida School of Architecture & Community Design. He served as Director of the school from 2009–2023. Professor MacLeod's academic research focuses on urban design and community planning issues within the "unfinished project" of the contemporary city, public space infrastructure, conditions of suburban sprawl, and redevelopment strategies for abandoned commercial centers and edges.

MacLeod was the co-director of the University of Florida Hong Kong/China Research Studio from 2004-09 and has developed research

and professional work related to the Asian mega-city and podium building type. As an educator, Professor MacLeod's teaching and pedagogical development efforts have received several awards. He has worked with architecture offices in Orlando, Florida and Boston, Massachusetts. He is a partner in Sanders MacLeod Studio, an architectural practice with diverse projects, ranging from residential to urban design works.

Nancy Sanders is an Associate Professor at the University of South Florida School of Architecture and Community Design, where she has served as the Coordinator of Undergraduate Studios since 2009, developing and overseeing the school's foundational curriculum. She was previously a tenured Associate Professor at the University of Florida where she was the founder and co-director of the Hong Kong/China Research Studio. She was also an Assistant Professor at the Chinese University of Hong Kong from 2000–2003. Sanders received her Master's Degree from Harvard University Graduate School of Design, where she was nominated by the faculty for the prestigious James Templeton Kelley Prize. She is a partner in the architecture firm Sanders MacLeod Studio in Tampa, Florida. She has previously worked for Office for Metropolitan Architecture Asia and Taoho Design in Hong Kong and for Andrea Clark Brown Architects in Naples, Florida.

Igor Marjanović is the William Ward Watkin Dean of the Rice School of Architecture in Houston, Texas. As a scholar, educator, and curator, he is committed to the discipline of architecture as a critical agent of our multicultural world. His research integrates the teaching of studio and theory with historical scholarship on architectural pedagogy and practice, examining the role of drawings, exhibitions and publications in the emergence of international architectural culture. His collaborative research projects have resulted in critically acclaimed books and exhibitions such as _**Drawing Ambience**_, _**On The Very Edge**_ and a monograph on Chicago's _**Marina City**, which was featured on PBS Newshour._ He holds architecture degrees from the University of Belgrade, Serbia (Yugoslavia), University of Illinois at Chicago and the Bartlett School of Architecture in London.

Robert McCarter is a practicing architect, author, and Ruth and Norman Moore Professor of Architecture at Washington University in St. Louis since 2007. He has also taught at the University of Florida, Columbia University, and at six other institutions in the US, Netherlands, Peru, and Italy.

During his 38 years in academia, McCarter has taught at least one design studio every semester, and he has taught more than 2,000 students. He has had his own architectural practice since 1982, in New York, Florida and St. Louis, with twenty-five realized buildings. He is the author of twenty-five published books to date, including _A Moment in the Sun: Robert Ernest's Brief but Brilliant Life in Architecture_ (2023); _Louis I. Kahn_ (2nd edition 2022); _Place Matters: The Architecture of WG Clark_ (2019); _Grafton Architects_ (2018); _Marcel Breuer_ (2016); _The Space Within: Interior Experience as the Origin of Architecture_ (2016); _Steven Holl_ (2015); Aldo van Eyck (2015); _Herman Hertzberger_ (2015); _Alvar Aalto_ (2014); _Carlo Scarpa_ (2013); _Understanding Architecture: A Primer on Architecture as Experience_ (2012, with Juhani Pallasmaa); _Louis I. Kahn_ (2005), and _Frank Lloyd Wright_ (1997). Among other awards and honors, the curators of the 2018 Venice Biennale of Architecture selected McCarter as an International Exhibitor, and his exhibit was entitled "Freespace in Place: Four Unrealized Modern Architectural Designs for Venice; Carlo Scarpa's _Quattro progetti per Venezia Revisited_;" and he was named one of the "Ten Best Architecture Teachers in the US" in December 2009.

Strongly tempted by the expanded opportunities offered by the 'contamination' of apparently distant themes and disciplines, he includes within the profession of architecture research and didactic activities.

He lives and works in Firenze, where he runs his own office FRANCOPiSANiARCHiTETTO, practising design at all scales "from the spoon to the city" and for public and private clients. The office recently completed in Quarrata PT _Il Giardino dell'Abbraccio_, a memorial park for the victims of Covid.

As an educator, he has taught as both professor and lecturer in different universities and schools of Architecture in Italy and abroad.

From 2016 he is editor-in-chief of Il Quaderno — the Architectural Journal of the International Studies Institute Florence, a peer reviewed topical journal published in Firenze which features and collects original contributions and ideas on architectural education.

In 2021 he wrote the book _20x14.Reflections on Studying Abroad_, published by ORO EDITIONS, San Francisco.

Mia Roth-Čerina, PhD, is an architect and professor at the Department of Architectural Design at the Faculty of Architecture, University of Zagreb. Her interests in practice, teaching and research

intersect and focus on educational spaces and exploring new modalities in architectural education. From 2010 to 2017 she has served as the Croatian delegate of the international UIA working group Architecture & Children and has been elected as council member of the European Association of Architectural Education in 2018. She has participated in numerous research platforms linking contemporary policies and global concerns to architectural education, the latest one being 'Architecture's Afterlife: The multisector impact of an architectural qualification'. Projects designed within the practice she leads with Tonči Čerina have won national and international awards. In 2023 they curated the Croatian pavilion at the 18th Venice Architecture Biennale.

Nasrin Seraji AA DIPL FRIBA is an architect and educator, she has taught at many architecture schools including, The Architectural Association, Columbia University, Princeton University. Professor and Head of Department of Architecture at HKU She has served as Dean of École Nationale Supérieure d'Architecture Paris-Malaquais, professor and Head of the Institute for Art and Architecture at the Academy of Fine Arts in Vienna as well as professor and Chair of the Department of Architecture at Cornell University. Saraji's practice and research concentrates on collective housing as well as new models of urbanism which she calls '*Integrative Architecture©*'. Her Book and Exhibition "*Housing Substance of our cities*" in 2007 is a critical view on one hundred years of collective housing in Europe, it traces and superimposes the conditions in which collective housing was produced and contributed to the foundation of the modern European cities. Her co-edited book "*From Crisis to Crisis: debates on why architecture criticism matters today*" examines how reading, writing and criticism can address urgent issues that architecture faces today. Nasrin Seraji has lectured widely, In Europe, North America and Asia and South Africa. She is a fellow of the Royal Institute of British Architects and an Officer of the Order of "Arts et Lettres" and the Order of Merit in France. Her forthcoming book on architectural education is to be published by Actar in Fall 2025.

Abstracts

Educating the Pluriversal Practitioner

Mia Roth-Čerina

Keywords: Architectural Education, Architecture Curriculum, Architecture's Afterlife, Transversal Skills, Pluriversal Practice

The paper explores the imperative need to redefine architectural education in response to societal shifts, climate crises, and the evolution of the architectural field. Efforts to reform architectural education have delved into issues like decolonizing curricula, challenging western-dominated canons, and rethinking the role of architects. However, these efforts often fall short of fundamental change due to imperatives of newness, object-oriented outcomes and entrenched hierarchies. Architectural education historically emphasized knowledge in various fields. While the transversality of the discipline has long been acknowledged and defined in terms of hard skills, the Architecture's Afterlife research project examined soft skills or behaviours gained during education, such as endurance, critical thinking, determination, and collaboration skills, proving them increasingly vital in contemporary practice. These behaviours are universal, transferable, and adaptable to changing socio-economic conditions and technological advancements. Two are particularly prominent, being defined as most used in practice, albeit being implicitly gained during education: resilience and collaboration. The origin of resilience is questioned, identified as a most useful and needed trait yet gained through the hierarchical dynamics of architectural education, where students learn to navigate power structures, and therefore perpetuate the inherent problems preventing the profession in becoming truly responsible. The processes through which this resilience is gained could be instrumentalized within the liminal phases associated with them and interpreted as an opportunity to shape and instill a meaningful ethical foundation, define the purpose of the discipline, and influence the trajectory of learning in subsequent stages. Collaborative practice is further emphasized as an essential aspect of contemporary architectural education and future operation. The paper discusses how architectural education could evolve to prioritize collaboration, interdisciplinary exchanges, and community engagement, reflecting on historical patterns of spatial practice. While experiments in architectural education challenging traditional methods of learning have occurred throughout history, many have been abandoned or assimilated into conventional teaching practices. The challenge lies in addressing not only the content and processes but also the hidden power dynamics within education. Renewed calls for reforming architectural education emphasize the need for educating a profession that acknowledges relationality and the necessity of operating with both rational and emotional skills catering to an interconnected world. This was a prominent topic of the 18th Architecture Biennale in Venice, affirminig a shift in what is understood as architectural practice. Works engaging with marginalized communities and addressing issues of peripheral and indigenous spatial practices implied a decolonization of curricula, spotlighting education as the medium of future change. The present dominance of small architectural practices also reflected a shift in mode of operating in the field and underscored the importance of educating future architects to navigate diverse roles and

responsibilities. Redefining architectural education for redefined practice involves expanding the concept of transversality to include both knowledge and behaviors. Soft, emotional skills, such as resilience and collaboration, are essential for meaningful architectural engagement. Architectural education should use the potency of its liminality to direct students toward becoming agents of change, fostering inclusivity, diversity, and interdisciplinary collaboration, challenging traditional power dynamics and embracing evolving challenges for a redefined and expanded practice.

Schools of Thought:
From "Alles ist Architektur" (Everything is Architecture) to Environmentalism, Passing by Parametricism.
Nasrin Seraji

Keywords: Discipline, Architecture, Assertive, Time, Slow

From "Alles ist Architektur": Toward Environmentalism, Leaving Behind 'Parametricism' argues that the only way toward a new ecological paradigm is *Environmentalism.*

Reality is the only source of imagination, abstraction seems to be a notion of the past, and if this is the case, how can architectural curriculums of the post climate crisis era break the continuity of a tradition practiced and upheld in architectural schools around the globe for more than fifty years?

The paper maps the changes in curricula and the armature of architectural education and its traces in architectural practice from 1968 to the present; passing by giants such as Alvin Boyarsky at the AA, John Hejduk at Cooper Union, the Duo of Colin Rowe and Oswald Matthias Ungers at Cornell University, Hans Hollein and Woolf Prix at the University of Applied Arts in Vienna and Bernard Huet in Paris as well as myself at the Academy of Fine Arts In Vienna. The paper will demonstrate how they ignited the post Beaux-Arts architectural education and how they each designed a new model that has inspired many schools to date. The singular figure of Giancarlo de Carlo as the only activist architect-educator will be an equaliser, a gage, and allow for comparison as well as the test for the relevance of history, sociology and political engagement and activism in architectural education. He is also an architect whose work and writings are of extreme actuality today, since even the Pritzker Family (an institution and an indicator) has diverted its attention to socially conscious and environmentally sensible architecture.

Humour, Wit and Resolution:
Give Me the Details!
Carolina Dayer

Keywords: Details, Material Culture, Scarcity, Ingenuity, Idiosyncrasy, Humor

There is a saying in Argentina, in response to a sticky situation with no logical or apparent solution, that the ad-hoc, short term solution is atado con alambre: "fixed with wire". This everyday cultural practice, employed by architects and non-architects to describe all kinds of situations, derives from the tradition of working with what is at hand, adopting provisional solutions, and moving forward with whatever means possible. To solve a predicament with 'wire' is to keep it working for another day, and

when that day comes, a better solution will present itself. Sometimes, that day never comes. But simultaneously, each act of resolution is characterized by a personal touch of creativity and a surplus sense of pride and effectiveness. Often, these fabrications are culturally recognized as humorous due to their graceful execution and unconventional pragmatism. Such practices, highly present in self-built domestic constructions, are not unique to Argentina. All across the globe, details of this form of ingenuity populate urban and suburban built environments, offering not just solutions, but character and unmapped cases of practical wisdom. Similarly, formalized architecture design practices are often faced with economical and logistics constraints that contribute to an attitude towards thinking astutely in order to get the most out of the least. "Poor architecture" as Lina Bo Bardi explained in 1984, is not about poverty, but about the capacity to express the maximum through minor means.

Building details contain valuable data to assess social, cultural and material matters concerning built environments. Forty years have passed since architect and educator, Marco Frascari published the influential essay, "The Tell-The-Tale Detail", in which he argued that details are generators of architectural knowledge through the mirrored activities of construing and constructing. Frascari positioned the role of details as producers of architectural theories and practices, able to demonstrate meaning and narratives of cultural significance. Beginning from Frascari's notion of the detail that 'tells the tale' and Bernand Rudofsky's valorisation of the informal built environment, this paper examines five critical case studies in different locations in South America and Europe to expose theories and practices that building details produce in a context of global crises. The paper further discusses pedadogies of ad-hoc production and informal making as key for updating academic notions of aesthetics that emerge through cultures of repair. Focusing on both professional and non-professional building activity, the paper will expand and update the conventional understanding of building details by visualizing the formal and informal knowledge production that operates within them through ingenuity and humour. Interview fragments with architects that practice and teach will be included in the essay.

Lantern Field and Contested Cultural Identity:
Museum Installation as a Platform for Education, Practice, and Criticism

Aki Ishida

Keywords: Installation art, design build, Asian American identity, curatorial practice.

What can practice of architecture bring to education of an architect? Design-build projects, in which students working alongside faculty and community-based clients, design and construct a building, pavilion, or an art installation, has become a commonly integral part of architecture school curriculum.[1] Also called live projects, these often serve as a vehicle for both service and pedagogy.[2] Besides imparting knowledge in construction details, fabrication, managing of client expectations, and negotiating the complex budgetary and legal constraints of the professional world, how can design build project challenge pedagogical conventions, or ask cultural questions that become unearthed during community engagement? Reflecting upon *Lantern Field (2013), an art installation by faculty*

and students of Virginia Tech for the Smithsonian Institution, affords critical examination of an impermanent design-built project as a form of pedagogy and practice. Situated in a museum charged with a contested history of Asian identity in the West, a transdisciplinary team of students and faculty created an art installation that applied discoveries from architecture, music, and computer engineering. The project educated both the students and the public about Japanese culture by interpreting the traditions of lantern festivals and craft in Japan. It did so in a distinctly American context, in a space of Western gaze, thus raising questions of Japanese American identity. Lastly, it brought together architectural practice, public engagement, education, and curation, using museum as a public platform.

Lantern Field, led by Japanese-born architect and educator Aki Ishida, was designed over the spring semester of 2013 and installed on April 6, 2023 during the National Cherry Blossom Festival in the courtyard of the Smithsonian's Freer Gallery in Washington, DC, a part of the National Museum of Asian Art. Lantern Field involved public participation on two levels: in making of the lanterns and in activating the light and sound once the lanterns were installed. During a day-long public workshop in the Freer courtyard, the museums visitors folded the mulberry paper lanterns under the guidance of design team. The field of lanterns grew over the course of the day as they amassed on the bamboo frame suspended beneath the vaulted ceiling of the loggia facing the courtyard.

The surfaces of both the folded papers and the ceiling captured the mutable brightness and hues of natural light during the day and electric light at night. As people walked under the lanterns, the sensors detected their presence and activated the gradual shift in light, which oscillated between white and deep magenta, and the sound of bamboo chimes, which intensified the longer people lingered. The multisensory artwork coalesced expertise and ideas that could only result with a transdisciplinary team.

While *Lantern Field* is rooted in traditional Japanese craft and rituals, traditions are interpreted liberally for a present-day context outside of Japan. *Lantern Field* is situated not in wooden shrines or Kyoto row-houses but in the National Mall, in a marble Italian Renaissance courtyard building designed by the American architect Charles Platt. The Freer Gallery (1932) houses artifacts collected by the American industrialist Charles Lang Freer and includes the Peacock Room, an exemplar of Japonisme, by James McNeill Whistler and Thomas Jeckyll. In *Lantern Field,* Ishida, who was raised in Japan, helped to mitigate the problems of cultural appropriation[3] that can often result from Asian cultural events held in the West. She served as a cultural interpreter for the team to whom the rituals and artifacts were less familiar.

Lantern Field was decidedly an educational experience through curation of an interactive, ephemeral artwork made with public participation. Notably, the project was initially proposed to the education department of the museum, then subsequently reviewed and supported by the Asian art curators. It interrogates the role of curatorial practice to engage a group of faculty and students for a collective learning experience.

By applying practice to education, architect-educators create platforms in which to ask indeterminate technical, cultural, and socio political questions around an array of issues: combining traditions with digital technology; notion of impermanence rooted in Buddhist and Shintoist thoughts; Asian American identity outside of Asia; problems of Japonisme and the western gaze through which art was created and collected.[4] A design build project can raise pedagogical questions that challenge conventions and cultural assumptions and prepare architects who not only are equipped with technical and practical skills gained from a live project, but also to think critically about the socio-political contexts in which architects design today and in the future.

1.   Hayes, Richard W. *The Yale Building Project: The First 40 Years.* New Haven, Conn.: Yale School of Architecture, 2007.

2.   Harriss, Harriet, and Lynnette Widder. *Architecture Live Projects: Pedagogy Into Practice.* First edition. Oxon: Routledge, 2014.

3.   Murai, Noriko, and Alan Chong. *Inventing Asia: American Perspectives Around 1900.* Boston: Isabella Stewart Gardner Museum, 2014.

4.   Ono, Ayako. *Japonisme in Britain: Whistler, Menpes, henry, Hornel and nineteenth-century Japan.* Andover: Routledge, 2003.

O Architecture, Where Art Thou?

A New Episode of the Never-Ending (and Fertile) Love Story Between Architecture and Context

Franco Pisani

Keywords: Context, Site, Physical Presence, Survey, Built Environment.

Is Architecture still alive?

Yes, Architecture is alive, and it exists in context! To rediscover the beating heart of architecture it is imperative to understand the contextual milieu within which it exists.

Architecture and context have always had an intimate relationship with intricate plots, where cultural, political, economic and technical demands inseparably merge.

Context is an unfinished choral text from which architecture takes meaning and energy. In turn, Architecture contributes its own "episodes" to the contextual narrative. Context is like a cloud, whose precise form develops from a previous form at a given moment and is doomed to fade and transform within the imminent future, thus leading to a continuous evolution.

Understanding the dialectical relationship between the structure of the context and the formal structure of architecture is a pressing, necessary question to revive architecture and make it fertile again.

Architecture, its transdisciplinary role saved by the shelter of context, in turn graciously sets context as the focus of its own interests. Architectural design uses the built environment as a quarry of data to inform future projects, both from a conceptual and a physical point of view.

Understandably, the most physical component of context is the **environment,** both built and natural.

Today, more than ever, the built environment asks for sensitized design and the multifaceted character of architecture. Architects, as professionals, should be able to consciously read, interpret and fix. Architects are needed for their learned capacity to envision, thus pairing—entwining—theory and practice. In other words, they are needed to

promote concepts and ideas that can help the built environment evolve toward an accessible and enjoyable place where life can happen.

The built environment is and will be the target of architecture, whether we speak of the natural expression of the rural environment brutalized by intensive exploitation, or the urban environment traumatized by a century of economic speculation.

Architects can continuously reshape their ability to read the built environment as an opportunity to contribute a verse to its narrative plot. Under these conditions, reading, understanding and interpreting the built environment become critical design tools.

There are multifarious tools used to read the built environment. They range from the analogical and traditional to the most advanced and digitally precise. All of these instruments are necessary for a correct understanding of the project. Yet, they are not enough. The fundamental tool for reading the built environment is physical—haptic—experience.

Teaching one to read the contextual narrative means promoting the importance of the contextual *experience,* to become a user of architecture and to be able to impart a language of architecture and as such, fiction is perhaps the most acute means to infiltrate mass media culture and the dominance of the ephemeral *image*. Architectural design is, in and of itself, a form of fiction. Teaching students to appreciate the built environment and to speak of architecture through its lexicon of words and drawings is the first important step toward a new awareness.

This paper will explore unique methods and strategies in the form of unconventional design studio assignments and exercises that focus on the vital importance of context, and in so doing teach the public what architects can do for them.

FRANCOPiSANiARCHiTETTO – Via del Casone 3r, 50124 FIRENZE, franco@francopisani

The Transforming Body as a Spatial Instrument

Ephraim Joris

Keywords: Freedom, transforming body, transmedial knowledge.

In a world in which we critically challenge previous linearities, inherent to dominant hierarchical power structures only to reveal a world which is fundamentally unstable, the multiplicity and ambiguity of knowledge construction ought to be acknowledged. This paper comments on a studio environment cultivating an open-ended approach to learning and thinking allowing students in architecture together with teachers and practitioners to engage in a collaborative process of co-creating knowledge. Such acts of co-creation cut through various disciplines such as film, theatre, sculpture and architecture for nothing exists in isolation. This is seen as an important mode for students to critique their socio-cultural context and thus actively engage in autoethnographic research. Here we like to emphasize the importance of transmedial knowledge construction, incorporating multiple modes of representation and diverse media as part of personal learning experience.

With this paper various moments in studio teaching are looked at in which both body and space are allowed to change collaboratively allowing the practice of space-making (as in architecture) to be experienced through qualities of ongoing transformation and adaptation. In doing so, we acknowledge the hybridity and complexity of knowledge construction. When bodies and space interact, they make interestingly vague, previous boundaries, preceding binaries and nurture continuous interplay

The concerns of both entities, academic and professional, reside in the generational, technological and cultural evolution of teaching, research, and practice. Recent trends to professionalize architecture curricula are seen in the NCARB's iPal curricular path to registration wherein one's architectural education is paired with a simultaneous dive into professional practice and the registration exam. However, we posit that the bridging of the gap resides less in "teaching them how to make working drawings" than in the reality of an evolving professional census, and the boundless possibilities offered by a plastic, malleable curricular logic that collapses the liminal into a fluid condition of education and practice.

Recent graduates came of age and are confronted with heretofore unseen existential global threats coupled with a reshuffling of social order. Their interests and demands will shape the profession moving forward. As the discipline is less male, less white, and less monolithic, hierarchies and assumptions will unravel. As we call for a world of heightened inclusivity and expanded communitas, we will explore architectural education as a critical rite of passage, celebrating its role in fostering skepticism and the unconstrained interrogation of the status quo.

1   Esposito, Roberto. *Communitas: The Origin and Destiny of Community*. Stanford University

2   Turner, Victor. *"Liminal to Liminoid, in Play, Flow, and Ritual: An Essay in Comparative Symbology".* Rice Institute Pamphlet — Rice University Studies, July 1974.

3   "liminal", *Oxford English Dictionary*. Ed. J. A. Simpson and E. S. C. Weiner. 2nd ed. Oxford: Clarendon Press, 1989. OED Online Oxford 23, 2007.

A Case Study on Hidden Curriculums in the Architectural Studio

César A. Lopez

Keywords: Classism, Curriculum, Pedagogy, Practice, New Subjects.

In 1980, Jean Anyon, a researcher in education and policy, presented a theory central to this article. It lies at the intersection of education and classism called "Social Class and the Hidden Curriculum of Work," where Anyon states that public schools in complex industrial societies make available different types of educational experiences to students in different social classes, which has a direct impact on the type and structure of "work" that students experience in the classroom and beyond.[1] The curriculums Anyon identified were categorized as *working class*, *middle class*, *affluent professional class*, and *executive elite*. By borrowing these descriptions, an argument emerges that architectural education relies too much on producing industry-ready graduates and not enough on providing them with the skillsets to interrogate our discipline's entanglements with political and economic structures.

This article will begin by unpacking these curricular models and then comparing architectural education to a *working class* which is intrinsically tied to "practical" education models and prioritizes regiment, docility, and obedience in students to prepare them for routine and mechanical-based work, like that of a "trade" or "field" worker who is unfamiliar with the larger process. This will frame that schools that see architectural education as "vocational training" shape students based on their social or economic status, thus conditioning them for the social inequity they may find in the profession. The

methodology in these design studios begins with tracing and researching the human and environmental subjects shaped by the building students will eventually design to inform new typological imaginations. Ultimately, this article is critical of the studio model as a way to educate architects, which continues to filter and privilege students with certain natural abilities or the right "pedigree" for a professional career.[2] Instead, the theories and case studies discussed point to a counter model that centers the design studio as a liberating experience, fosters new knowledge, and leverages new social, political, and cultural perspectives to uncover new modes of practice. [3]

These case studies were taught at one of the most affordable institutions in the United States, in a region with low education rates and high levels of unemployment and poverty. Most of the students participating in this study are first-generation students with mixed-status families in communities that need the agency of an equitably built environment. They have experienced the marginalization that Anyon described in the "working-class" curriculum and are guided through

a new spatial format, structure, and content that begin to dismantle the hidden curriculums they experienced in their education to date. Focusing on subjects first, we position the architect as "socially invested" in issues beyond form and aesthetics instead of "their design" or following the whims of formal trends. While producing high-caliber work is an essential outcome of every studio, it is not the only measure of success, as ethical reasoning and empathy outcomes are as critical as coherent arguments and technically sound work. Thus, combining the working-class curriculum with the intellectual rigor to expand the traditional scope to include broader social, environmental, and political issues, thus encouraging their values in their future practice.

1   Jean Anyon, "Social Class and the Hidden Curriculum of Work," *The Journal of Education* 162, no. 1 (1980): 67–92. http://www.jstor.org/stable/42741976.

2   Garry Stevens, "Struggle in the Studio: A Bourdivin Look at Architectural Pedagogy," *Journal of Architectural Education* 49:2 (1995): 105–22. https://doi.org/10.2307/1425401

3   Carol S. Dweck, *Mindset: The New Psychology of Success* (New York City: Random House, 2006).

Wright's Influence in Architecture Schools:
An Overlooked Organic Legacy in American Architectural Education
Robert McCarter

Keywords: Regionalism, Pedagogy, Organic, Place, Structure

An essay examining the influence of the architect Frank Lloyd Wright on architectural education in the US, which has been downplayed, overlooked, or edited out of the existing histories. Part of this is due to Wright's own attitude towards formal university architectural education, which varied from ambivalence to outright hostility. It will also be shown that examples of Wright's influence in US architecture schools have tended to be centered on

universities in the American South headed by Wright-inspired architects, including University of Arkansas (E. Fay Jones), University of Oklahoma (Bruce Goff), and in particular the University of Texas at Austin, where Harwell Hamilton Harris briefly headed a faculty that included Colin Rowe, Robert Slutzsky, John Hejduk, Werner Seligmann, and Bernard Hoesli. Hoesli would continue his deployment of Wright's works in the teaching of architecture during his many years at the ETH in Zürich. As a case study, the essay focuses on the School of Design at North Carolina State University, headed by Henry Kamphoefner from 1948-1973, where the school's pedagogy engaged John Dewey's principle of "learning by making;" faculty member Lewis Mumford's principle of regionally appropriate architecture; and several of Wright's principles, including the idea that his buildings are generated from a structural idea—this leading to the hiring of a number structural engineers to the faculty (Felix Candela, Horacio Caminos, and Eduardo Torroja) and faculty members whose work may best be characterized as structurally-inspired (Matthew Nowicki and Eduardo Catalano). Kamphoefner also established one of the very first Visiting Critics programs in the US, bringing figures such as Buckminster Fuller, Louis I. Kahn, Le Corbusier and Frank Lloyd Wright to lecture and teach short courses at the school. Wright lectured to the largest audience of his entire life at the School of Design in Raleigh in May 1950. Following Wright's death in 1959, his influence on the School of Design continued with the hiring of the architect Harwell Hamilton Harris, former dean at University of Texas at Austin, who taught at the school and practiced in Raleigh for the rest of his life. In contradistinction to the vast majority of US architecture schools, the pedagogy of the School of Design emphasized a Socratic studio pedagogy involving individual interpretations of shared ordering principles; learning by making, wherein both the evaluation and evolution of a concept involves its embodiment in the made; an emphasis on thinking and making, where theory comes from practice, and not the other way around; the engagement of multiple sources of inspiration, including natural geometries, structural analysis and architectural history; the support of each student's individual intuitive interpretations of the program; the evaluation of the experiential qualities of designs, as well as their appropriateness; all culminating in place-specific, regionally, materially, socially, culturally and ecologically appropriate and sustainable designs that were understood to be an integral part of, and contribution to, a larger disciplinary history. It is argued that today such an approach as that developed at the School of Design in the period examined here may serve as a model for contemporary architectural education in search of the appropriate.

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