BLIND SPOTS IN ARCHITECTURE

BLIND SPOTS IN ARCHITECTURE – II. RIXARCH Conference Proceedings

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BLIND SPOTS IN ARCHITECTURE

Conference Proceedings

RIXARCH 2024

II. INTERNATIONAL ARCHITECTURAL DESIGN CONFERENCE

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INTRODUCTION

EFE DUYAN, RUDOLFS DAINIS ŠMITS

Blind Spot

1. a point of entry of the optic nerve on the retina insensitive to light

2. an area where a person's view is obstructed.

A blind spot, or punctum caecum, is the point of entry of the optic nerve on the retina insensitive to light. Most of the time we don't notice our blind spot because each eye supplies information to the brain, filling in what's missing; or, sometimes the brain filling in the missing information with what it thinks should be there. It is also a certain psychological tendency to fail to see the impact of biases on one's judgment and think of their perceptions and judgments as accurate and free of bias.

Recent architectural thinking has a tendency to acknowledge blind spots and biases. In transitioning to a more green, digital, and socially inclusive architecture, we have been trying to shed light on our blind spots. Scholars embrace the built environment democratically; historians write the past in vulnerable and honest ways; engineers rethink buildings in socially conscious ways. Pedagogy has become increasingly flexible and is trying to place itself in the education, research, and business triangle. Our urban policies consciously challenge long-standing issues of destruction, earthquake, floods, pandemic, gentrification, overpopulation, and pollution. Architecture, urbanism, and design professions provide more opportunities and gender-equal conditions. Designers nowadays are well

aware of their role as difference-makers beyond technical achievements, iconic forms, and functional fulfillment.

However, did we manage to create a difference? Looking back at our history and our own blind spots, one can notice incredible difference-makers, such as the Latvian woman architect and educator Astra Zarina, who still haven't received the recognition they deserve. Zarina (1929-2008), who taught architecture for decades, influenced countless architects, including Steven Holl and Tom Kundig. She was born in Riga, Latvia, but emigrated to Seattle and earned her B.Arch from the University of Washington (UW) in 1953. She later obtained her M.Arch from MIT and worked in the Detroit-area office of Minoru Yamasaki. In 1960, Zarina became the first female recipient of the American Academy in Rome Fellowship for Architecture. Zarina consistently advocated for public spaces and the urban communities they fostered. Her restoration works, such as Civita di Bagnoregio, a dramatic hilltop, or urban perspectives, such as the Rooftops of Rome, express the care and generosity in her architectural thinking. Her teachings influenced a generation of architects, and she has been an inspiration for Latvian designers and women architects all around the world.

Inspired by Astra Zarina's lifelong achievements, we invite you to face our blind spots and celebrate the difference-making efforts in architecture.

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RIXARCH 2024 / II. International Architectural Design Conference will be held on April 12-13, 2024, in Riga, Latvia. RISEBA University Faculty of Architecture organizes the conference at the RISEBA Architecture and Media Centre H2O 6 Quarters.

The conference aims to bring together distinguished and emerging local scholars and host an international forum to facilitate discussions on current issues in architecture. The conference will cover various topics in architecture with a contemporary edge and from a multidisciplinary perspective.

ASTRA ZARIŅA | MY BLINDSPOT

RUDOLFS DAINIS ŠMITS

Riseba University, Dean & MA program director
Arhiteksti foundation board member

On July 10th. 2022, after an exhausting semester and extensive accreditation process I was looking to relax. I couldn't find a decent movie to watch and decided on a YouTube lecture titled Steven Holl: Architects no Architecture. Intrigued by the title and listening on to Holl's story I discovered that Astra Zariņa was his teacher and the director of the University of Washington (UW) architecture program in Rome. Steven Holl was her first student! (Holl, S, 2021)

Steven Holl explained that he was one of six students to attend the inaugural Rome program in 1970. Actually, the entire story may have remained undetected because I actually misheard Steven Holl pronounced her name. I rewound the video and confirmed to my surprise that he was speaking about Astra Zarina, and now convinced she was Latvian. He respectfully expressed that she had a major influence on his career as an architect. By good fortune, Astra Zariņa, architect, preservationist and pedagogue; astonishingly that evening Astra Zarina was introduced to me and soon set alight a group of emerging architects and students in Latvia.

"if you want to be an architect you need to learn how to cook", this uncustomary requirement challenged Steven Holl, one of seven principles attributed to Astra Zarina.

Astra Zariņa life work as an architect and influencer was truly my 'blindspot'. At the beginning of WWII Astra's family left Latvia and

immigrated to the United States via Austria, Esslingen, Germany and finally settling in Washington, U.S.A. Astra Zariņa gained her bachelor in Architecture from UW, Seattle and finished he master in architecture at the top of her class at MIT, Boston.

Astra Zariņa collaborated with the renown modernist Architect Gunar Birkerts who designed the Latvian National library and numerous other library and building throughout the world. Even though I knew that Gunar Birkerts had proposed various project in Italy and at one point possibly open an office in Italy. Unfortunately, I was not aware of his connection to Astra Zariņa. I was truly sightless to this fact.

Zarina and Birkerts began their careers together in Detroit, Michigan working for Minoru Yamasaki in the late 1950's and their collaboration and friendship continued for years to come. Yamasaki was a well known modernist who designed the World Trade Center, N.Y. According to Yamasaki, Astra Zarina was the best designer that ever worked for him, one of many recognitions to Astra's excellence.

In 1960 Astra Zariņa was the first women to win the American Academy in Rome and the following year the Fulbright Fellowship. Zariņa collaborated with Gunar Birkerts on several international competition projects and even though the focus of their architecture careers diverged they remained close friends throughout their lives. Zariņa, in her outspoken manner convinced Birkerts to invest in Civita de Bagnogerrio. Birkerts bought into Civita purchasing a derelict village property which Zariņa assisted to restore into a beautiful hill top villa. Her approach to restoration included careful research and attention to authentic materials and repurposing existing buildings necessary to revitalizing Civita (Cipalla, 2020).

Astra was a visionary and her course was set for Italy. From 1970 to 1980 she extensively travelled between Rome and Seattle to teach the first program she developed for UW. In 1976 Zarina established the Civita Hill town program and published *Tetti di Roma: la terrazze, le altane l belvedere* (The Roof Tops of Rome) in collaboration with renown

photographer Baltazar Korab. In 1980, Zariņa developed the idea for a permanent WU location in Rome at Palazzo Pio. She established and directed the UW Rome center at the Palazzo Pio from 1984 to 1995 and concurrently taught the program in Civita.

The buildings that Astra Zarina restored with her husband Anthony Heywood in the hill top village of Civita served as the center for the second UW Italian program developed by Astra. In 1981, Astra and her husband Tony co-founded the Northwest Institute for Architecture and Urban Studies (NIAUS), based in Seattle, which now is called The Civita Institute. Astra Zariņa passed away on August 31, 2008, survived by her husband who still resided in Civita. Astra and Tony agreed to donate the properties they restored in Civita including: beautiful terrace, garden, library and archive to The Civita Institute to ensure that her legacy lives on (Cipalla, 2020).

Astra's connection to Latvia has now been revitalized. The first group of teachers and students from Latvia traveled to Civita in November 2023. This effort was initiated by Riseba University, Faculty of Architecture and Design in partnership with Arhiteksti foundation and The Civita institute, the first annual teacher-student workshop - *Imagining My Civita,* in Civita de Bargnogerrio.

Twenty-one participants, faculty, architects and students spent five immersive days in Civita learning how to see; observing through drawing, painting, writing, urban mapping and cooking. The days were structured based on Zarina's tripartite teaching methodology: giving knowledge, taking action and making reflection which were redacted to: input talks, afternoon plenair sessions of Civita Bagnereggio and the surrounding landscape and closing with 'show and tell' sessions before dinner. Daily observations were made through sketching, painting, photography, journaling, poetry, smelling and urban and spatial mapping by various means. Eating and cooking together was essential to our experience together.

Each of us discovered and imagined Civita in our own way, we were changed, our eyes were opened each one of us contributing to what we

saw and experienced. RIXArch 2024 | BlindSPOT conference program has included the output of this workshop as part of Astra Zariņa's | Rome and The Teacher exhibit at the Latvian National Library which included opening lecture by Steven Holl and question and answer session moderated by SHA communications director, Marisa Espe.

Astra Zariņa has taught us the importance of architectural heritage, its preservation and the citizen that inhabits the city (civitas). She has emphasized that to truly see we must observe. She has opened the eyes of her students to the world and now again, our hope, is that her discovered values will inspire a new generation of architects and students. She taught her students to see and understand the city as a continuum, a series of interlocked , interrelated social spaces. She was a true pioneer, an early urbanist that understood architecture's relevance to society, place making and its participation in cultural production.

May her legacy continue – **"Look with all your eyes, look" (Jules Verne).**

SOURCES

S. Holl, Beginnings and Influences, Steven Holl Architects Architect, not Architecture (2021) , available from https://www.youtube.com/watch?v=IYwL2CZNh3I

Cipalla, Rita, Astra Zariņa 1929-2008, available from https://www.historylink.org/File/20991

KEYNOTE LECTURES

ROME AND THE TEACHER: ASTRA ZARINA

STEVEN HOLL

Steven Holl Architects

KEYWORDS: architecture, urbanisms, culture, restoration, history, education

Rome and the Teacher: Astra Zarina is an exhibition organized by 'T' Space / Steven Myron Holl Foundation, curated by Alessandro Orsini. The exhibition features photography, architectural models, drawings, and maps that, through an examination of public space, advocate for public-first urban design. Rome and the Teacher is based on I Tetti Di Roma, a theoretical text produced by Latvian architect and educator Astra Zarina (1929 – 2008) and photographer Balthazar Korab (1926 – 2013). Since the exhibition's presentation at 'T' Space in 2019, it has since traveled to 1point618 Gallery (Cleveland, Ohio); Gould Gallery, University of Washington (Seattle, Washington); and the National Library (Riga, Latvia).

For the occasion of the exhibition, Steven Holl summarized the seven core values of Astra Zarina: the value of urban space; the value of organic food, its color, its taste, its texture and presentation; the value of historic buildings; the value of the urban roofscape; the value of community; the value of ceremony and myth; the value of the earth, plants and animals. Holl extrapolates on these seven values, illustrating the enduring impact of Zarina's lessons on Holl's work and life.

HOW TO TACKLE FUTURE CHANGES IN ITALIAN MEDIEVAL VILLAGES

Case study: Colletta di Castelbianco

OLE WIIG

Architect MNAL, RIBA, FRIAS – BA(Hons)Arch Manchester, MArch Harvard

Village Architect, Colletta di Castelbianco

1.00 BACKGROUND

Throughout Italy there are numerous villages and urban settlements which represent urban qualities of great significance. A great number of these are several hundred years old, mainly established in the Middle Ages.

Throughout the centuries the villages have survived mainly through their basis in agriculture, which has provided sufficient livelihood for continued existence. As times change, and agriculture is becoming more mechanised and rationalised, the livelihood of the traditional village life is being threatened.

It is being acknowledged that life in these villages cannot carry on without change. The changes are of a physical nature as much as in function and

contents, apart from the other changes that are needed to sustain their livelihood. This case study focuses on how built form and urban adjustments will and should play an important role in tackling these changes. Also, to what extent it is possible, and advisable, to make new and contemporary insertions into the fabric, as well as extending the existing urban structures, without losing character and qualities.

Common to many such settlements, is the abundance of vacated houses that could be put to some good use, separately or jointly, and thereby also becoming economic catalysts for change. The four villages forming the *Castelbianco community* chosen for this study are either living communities or have been recently developed by utilising old ruins, and thereby demonstrate how changes have already been applied within the existing village structures. There is still, however, to be tested out how future changes and expansion could or should take place both within the villages or as extension to the structures.

2.00 PURPOSE

The main purpose of this case study is to analyse the situation as it exists today in this Ligurian community, and its potential for survival. The villages are situated in an area which has so far been screened from the influx of tourists. In this respect it is very 'genuine'. The villages are in some ways 'hidden secrets' that has so far not been 'targeted' by tour operators, although the number of tourists, and corresponding commercial development, has increased in recent years.

This case study focuses on how to obtain an understanding of the origin, planning principles and urban structure of Ligurian medieval villages. The study also focuses on how change can be accommodated whilst keeping the inherent qualities intact as living communities.

3.00 FOUR VILLAGES IN THE SAME COMMUNITY

The case study of the *Castelbianco community* covers:

Colletta, as a restored abandoned village with its new population and advanced living

Oresine, *Veravo* and *Vesallo* as living communities with inherent

qualities in the Medieval ruins, including some incongruent 'modern' interventions. The object is to recreate an harmonious whole with skilful restoration and architectural 'surgery'.

The interrelationship between the four villages is being strengthened by common denominators, both the individual villages as seen from a distance, but also the physical and thematic links between them

All four villages are very 'genuine', although the deserted village of *Colletta di Castelbianco* has undergone an unusual but interesting transformation.

4.00 COLLETTA DI CASTELBIANCO

Colletta di Castelbianco, is one of few Medieval villages – perhaps the only one - to have survived the passage of time intact. There was no trace of building work from later centuries anywhere in the village, almost as if it were an ideal model created by a philologist. Wandering around the maze of lanes, alleys, steps and terraces which surrounds the village like a cobweb, one can see the legacy of long-forgotten civilisations.

The village was abandoned in the nineteenth century, when its role as a link between the coast and the Piedmontese hinterland became obsolete. The village has, however, recently attracted world-wide interest following the restoration and telematic project which, in a matter of years, has transformed the uninhabited hamlet into a model for third millennium living.

The village rests on a ridge above valleys on either side and as such is always on a 'sunny side' of the ridge. This incredible location means that the sun also penetrates the *carruggi* (narrow lanes) and *ciasette* (small squares) all day. Although the need for sun shading is greater in Italy than

in Northern Europe, clever medieval planning resulted in wonderful sunny areas and meeting places throughout the village – always at short distance to the welcoming shade.

The new Collettiani arriving mainly from Italy, but also from other parts of the world, could see a bright future of the village through happy encounters and lasting friendships in the ciasetta and the bar, in the swimming pool and the amphitheatre created by the great village restoration architect Giancarlo di Carlo.

Colletta is a unique reconstruction of a medieval borgo. There have been a few contemporary interventions, including one new house built on a site of a previous house, but these have all been well integrated in the existing fabric.

Colletta's uniqueness warrants a special study. This case study focuses on details such as separate cells that make up the houses, about the same size as the terraces, both in width and height, and the way they slope down in much the same way.

The way the cells are grouped in clusters suggest some crustacean organism that has grown slowly, adapting itself to the support on which it has settled. Each cell merges into those around it on all sides: horizontally, vertically, obliquely, sloping down or climbing up.

Small cell-clusters make up the houses, which develop in variable patterns and configurations. What does not vary – or varies very little – is the size of each cell, and this is due to the coherence between the features of the space and the technology used to define it.

The cell structure allows dwellings to be formed in vertical, oblique and horizontal directions. Thus, houses can be enlarged or contracted. The lessons to be learned for modern cluster housing, adaptable for change, is imperative.

THE CIVITA INSTITUTE – A LIVING LEGACY OF ARCHITECT ASTRA ZARINA

NANCY JOSEPHSON

M. Arch

February 16, 2024

Astra Zarina was born in Riga, Latvia on August 25, 1929. She lived there until she was 15 years old when WWII fundamentally altered her life as she and her family became refugees. They fled first to Austria, then Germany, and finally arrived in the United States. During her adult years, she became an award-winning architect and a renowned professor. Astra, who needs only to be called by her first name, was the visionary force behind The Civita Institute. Her signature appears on several documents revealing her as The Civita Institute's primary founder and its most generous donor. Until her last years, just prior to her death in 2008, Astra "the teacher" was setting in motion a pedagogy within the nonprofit to continue her life's work with a mission about the pertinent relevance of Italian hill towns. [photo 'A']

A snapshot overview of Astra begins with her brilliance. She was fluent in 5 languages. She drew with fluidity, her sensual linework as much a signature as her name, capturing the essence of place or person in a few strokes. Her architecture, though not extensive, conveyed her time within modernism yet was enriched by an atypical understanding of essential

Photo A: Astra Zarina, University of Washington faculty photo, circa 1970; photographer unknown, courtesy of the University of Washington

social activities - at least when she was not out-manned. Astra was gorgeous, a showstopper when she entered the room. Carrying herself with confidence, her smile was magnetic, her make-up exotic. She was deeply beloved by many. Feared by some. Challenged by a jealous few. And forced into retirement by an interim dean in the School of Architecture where she was a tenured faculty member.

The foundation of The Civita Institute is underpinned by the nexus between Astra and Civita di Bagnoregio, Italy. Locals still call her "heroic" for re-awakening the local Civitonici to the value of their history, their work in the valley and in the town, and of their homes badly in need of repair and modern comforts. She tapped into their spirit of place, of their traditions, indeed, giving reason for their offspring to remain. What Astra gave to the Civitonici, though, they gave back to her. They helped her to heal her traumatic departure from Riga. They gave her a deeper understanding of her parent's attachment for their home country of Latvia. [photo 'B']

The Civita Institute began as the Northwest Institute of Architecture and Urban Studies in Italy and was called NIAUSI. It was co-founded as a Washington State nonprofit corporation in 1981 by Astra and colleagues

at the University of Washington, by prominent Seattle architects, and former students of her Italian Studies Programs. Its main focus became a fellowship program that sent mid-career professionals to Italy for self-guided learning.

Photo B: Bridge to Civita di Bagnoregio, Italy, circa 1950; photographer unknown, courtesy of The Civita Institute

In 2007 at age 78, Astra had a new idea, in which she and her husband, Anthony Costa Heywood, were willing to donate their properties to NIAUSI to facilitate. In that same year, they signed such an agreement in exchange for turning their properties into a research center in Civita.

Requirements were, among others, that NIAUSI would begin doing business as The Civita Institute and its new mission would be "to inspire and foster an interdisciplinary understanding of the unique qualities of Italian hill towns that remain pertinent to our contemporary experience, through the promotion of historic preservation, education and scholarly research, artistic creation, cultural exchange, and professional explorations." However, on August 31, 2008, Astra passed away. Then, on Feb. 7, 2013, Mr. Heywood signed a deed transferring ownership of the Zarina-Heywood estate to NIAUSI dba The Civita Institute, fulfilling Astra's final vision and intent. [photo 'C']

This Agreement is entered into as of the date first written above.

ASTRA AND TONY:

ASTRA ZARINA

ANTHONY COSTA HEYWOOD

[Executed notary forms for Astra and Tony attached]

[NIAUSI signatures and notary blocks are on following pages]

BAGNOREGIO

COMUNE DI

BAGNOREGIO · 19 GIU 2007

PEDICONE LUIGI

LEASE AND DEVELOPMENT AGREEMENT:
CIVITA PROPERTIES

10

Photo C: Signatures on Agreement with NIAUSI to donate the Zarina-Heywood estate in exchange for creation of a research center; document courtesy of The Civita Institute

Today, The Civita Institute offers several mission-driven programs at its facilities in Civita that primarily serve post-academic learning. Each year many continuing education sessions that have been pre-approved by the American Institute of Architects (AIA) focus on historic preservation and sustainability. There have been several drawing and watercolor sessions for adults. There have been university programs such as RISEBA held in November 2023. The Civita Institute has also maintained its Fellowship Program selecting 3-4 Fellows each year to conduct their studies for a month in Civita. A Membership Program offers educational benefits ranging from member-stays to online AIA Learning Units to virtual interviews with accomplished architects such as Steven Holl.

Photo D: Lo Studio, unrestored, circa 1970; photographer unknown, courtesy of The Civita Institute

The facilities now owned by The Civita Institute and made possible by the generous donation of the Zarina-Heywood estate, are its 'jewel in the crown'. Most have been restored, as was lo Studio in the 1970's. Demonstrating Astra's respect for the historical palette of Civita, and her shift in professional emphasis from strict modernism to historic preservation, its impeccable restoration of existing elements and materials – the fireplace, stone floors, white plaster walls, and chestnut woodwork – have become prototypical for the restoration of all 5 houses and the Sala Grande of The Civita Institute. Today, lo Studio houses educational programs and Fellows of the Institute. [photo 'D' and 'E']

The Civita Institute also manages and is adding to the extensive library of books and archive of photos, drawings, maps, and teaching notebooks owned by Astra and used in her professorial years from 1968 – 2003. Donated to The Civita Institute in 2010 by Mr. Heywood, the library continues to grow from contributions by members and fellows. It has been utilized by authors, journalists, educators, and filmmakers from around the world in exchange for The Civita Institute's simple request to credit the nonprofit in publication.

Photo E: Lo Studio, restored circa 1970; photo in 2022 by Stephen Day, courtesy of The Civita Institute

The RIXARCH conference theme, "Blind Spot", is applicable to the keynote presentation, 'The Civita Institute – A Living Legacy of Architect Astra Zarina'. For example, The Civita Institute's mission to explore the pertinent relevance of Italian hill towns is not about great lunches or unique selfies; it's about laboratories of preservation and sustainability, physical and social, that can guide us during our time of climatic and technological change.

Also in the keynote, new endeavors of The Civita Institute will give a glimpse into its future. For example, the new Memo of Understanding, *Protocollo d'Intesa*, with the mayor of the Comune di Bagnoregio, enhances mutual efforts to preserve Civita di Bagnoregio plus promote tourism that educates. The local Red Cross, *la Croce Rossa,* is providing drone photography to the Cultural Landscape of Civita di Bagnoregio Fellow researching stabilization strategies. The transformation of a medieval, hand-hewn cantina used as a storage and refuse bin into a work

and exhibit space is underway. And there is growth in *comunita',* in communities of members in Seattle, Portland, NYC, and also here in Riga! [Photo 'F']

A quote from Astra that is featured on the website of the American Academy in Rome states: "I'm an architect. I am also by nature a teacher. I love to see people develop, grow, discover themselves. When I work with them, I discover things too." The Board of Directors of The Civita Institute, its members, donors, and committees voluntarily work every day so that this nonprofit, so fundamentally shaped by Astra, can introduce others to the Italian hill towns that we may all continue to develop, grow, and discover.

Photo F: Signing Memo of Understanding between The Civita Institute and the Comune di Bagnoregio, November 3, 2023; photo by Stephen Day, courtesy of The Civita Institute

THE SIGNIFICANCE OF CULTURAL HERITAGE. HISTORIC TOWNS OF KULDIGA (LATVIA) AND CIVITA (ITALY)

JANA JAKOBSONE

Asoc. Prof. Dr. arch. Jana Jakobsone, RISEBA University, ICOMOS Latvia, Kuldiga District Council, CIVVIH Scientific Committee

KEYWORDS

cultural heritage, values, attributes, significance, risks, preservation, authenticity, spirit

Cultural heritage is very diverse, wide, and important topic. In today's broad scope and understanding, cultural heritage is almost everything that has happened up to this moment. Cultural and natural heritage is one of the most important factors determining the individual's personality or identity. In a global world, the preservation of environmental identity maintains cultural diversity and helps regions not to become a homogeneous mass, and therefore plays an important role in preserving cultural heritage. For an individual to have the opportunity to identify with his place and culture, cultural heritage: tangible and intangible, movable, and immovable, helps to bring it to this day. Tangible - built cultural heritage is man-made cultural manifestations in the natural

environment. Urban environment - historical cities, villages, settlements - are a widely studied, long-discussed part of cultural heritage. “One can say that the city itself is the collective memory of its people, and like memory it is associated with objects and places. The city is the locus of the collective memory.”

Currently, the world's most recognized cultural built and natural heritage is put together in the World Heritage List, which currently has 1199 properties . They are properties of both cultural and natural heritage, which have been nominated to the list and their Outstanding Universal Value has been recognized at the world level as unique, worth visiting, researching and especially to be preserved for future generations.

Preservation of cultural heritage. This sentence embodies a clear methodology, conditions, and steps in the world heritage conservation system. In this field, the most important and comprehensive document in the world at present is the Convention Concerning the Protection of the World Cultural and Natural Heritage, called the World Heritage Convention, which was adopted already on 1972 in The General Conference of UNESCO . This document was already developed and approved more than 50 years ago, until today it is actively used by everyone working in this field and it is still relevant. In various discussions of specialists, the talk was about updating this document, it was always said that this document is sufficient and if new approaches are needed, it can be done with the development of additional documents. International cooperation and protection are two basic things that are emphasized by this convention. Also, this convention defines the concepts and boundaries of cultural heritage, however, in later years, they were conceptually expanded in Operational Guidelines. In the last decade, specially making the leap into people centered approach in management of both culture and nature.

To understand the world cultural heritage preservation system built over 50 years, it is possible to divide this comprehensive movement into

concrete components. What is built cultural heritage. How, for whom and from what to save it. What threatens it.

1. Understanding the Heritage Site. Identifying heritage significance;

2. What does Outstanding Universal Value of heritage consist of?? Attributes. Significance of Localizing;

3. Significance of Grading. Searching for the most important;

4. Risk analysis. Understanding vulnerabilities.

The author has participated in the implementation of these steps in the preservation of cultural heritage in the Old Town of Kuldīga in Latvia, so that in 2023 it was inscribed in the World Heritage List, and therefore the State of Latvia, Kuldīga and the World Heritage Committee have committed to take the necessary actions to preserve this world-recognized value for future generations, as a testimony of "Located in the western part of Latvia, the town of Kuldīga is an exceptionally well-preserved example of a traditional urban settlement, which developed from a small medieval hamlet into an important administrative center of the Duchy of Courland and Semigallia between the 16th and 18th centuries. The town structure of Kuldīga has largely retained the street layout of that period, and includes traditional log architecture as well as foreign-influenced styles that illustrate the rich exchange between local and travelling craftspeople from around the Baltic Sea. The architectural influences and craftsmanship traditions introduced during the period of the Duchy endured well into the 19th century."

To understand this half a century of cultural heritage policy work, the doctrinal texts were analyzed, from which the development of heritage conservation approaches have evolved in the following stages:

1. Defending monuments and sites. One size fit all (1964 – 1994);

2. Use and significance. Other voices, multiple horizons (1994 – onwards);

3. Reciprocal benefits. Beyond heritage (this decade).

Approaches to heritage conservation and management in this half century have evolved from:

1. Object focus. Conventional heritage and heritage authorities. Top down, requires powerful managing authority, fabric as non-renewable resources, experts - central to the process, master/action plans, no community involvement;

2. Value focus. Values based. Heritage, heritage authorities and stakeholder groups. Top down, requires powerful managing authority, fabric as non-renewable resources, people - central to the process, insufficient criteria for prioritizing if conflict between stakeholders/alternative values, community involvement strictly within heritage managers rules under their ultimate supervision;

3. People focus. Living heritage. Heritage and community. Bottom-up, community-led, fabric as renewable resources, people central to the process, planning by community consensus, established criteria for community involvement.

Along with other things that determine the value of world heritage sites - Outstanding Universal Value, which meets criteria, management and protection, integrity, the authenticity is an important value which expresses historical cities and other cultural heritage objects. Authenticity in form and design, materials, and substance, use and function, traditions, techniques and management systems, location and setting, language and other forms of intangible heritage, spirit and feeling, and other internal/external factors. Attributes such as spirit and feeling are important indicators of character and sense of place. If the other values of authenticity can be clearly defined in the context of the universal value of the place, then the study of the value of spirit and the feeling in the context

of methodology and preservation has attracted the attention of researchers for a long time. How to value it, how to define it, how to preserve it. Spirit and the feeling can be evaluated and managed like any other value, by defining, mapping, and preserving it. The author conducts such a study in the world heritage site Old Town of Kuldīga and a potential world heritage site inscribed into Italy's Tentative List for World Heritage - The Cultural Landscape of Civita di Bagnoregio (2017) . Historical Town Civita in wide cultural landscape - is a complex of attributes - man made cultural expressions in fantastic and geologically fragile natural landscape, preserved from past. The vision of the architect Astra Zariņa helped preserve and revive Civita in the distant 1970s, when at the same time a convention on the preservation of world cultural heritage was adopted, which put into words the ideas she put into action. How to create a vision and ideas for the authentic preservation of Civita, including interpreting and bringing to life the authentic way of getting to Civita from the valley and the functions that were characteristic of it. We are observing Civita historic town and looking for the things making the genius loci of this place, mapping spirit of the Civita - clouds in the street perspectives. drawing, plants, landslide traces and structures, asymmetry, Civita stone, clay and plaster, intimacy, Etruscan route, sunset and sunrise at the outskirts of the town, open enclosure. It is a town above the clouds. This is a great place to explore things to preserve the spirit of Civita. The author concludes that both heritage sites have a distinct presence of genius loci, which can be analyzed and managed - purposefully preserved together with the other values of the heritage site.

Good architecture is distinguished from a simply built house by the fact that it appeals beyond the visual image - the spirit of the place. It is related to the idea of usage and the social and urban context of the surrounding environment, which is also one of Astra Zariņa's guiding principles. And such architecture is a cultural heritage to be preserved for the future, right from the moment of its creation. As shown by several examples in world architecture, where a building has been built and started to operate, it is included in the list of protected cultural sites, for

example, the Oslo Opera House and the Latvian National Library. May we succeed in creating more and more architectural sites, which are authentic and integral continuations of the place, which fulfill the social and urban context!

WHITE PAPERS

EXPLORING SHADED SPACES THROUGH EXPERIENCES OF BLINDNESS

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KEYWORDS:

Climate change, inclusive design, invisibility, public health, semi-open space

Current architecture production rarely considers use in the absence of sight, resulting in poor sensory spaces for blind or partially sighted people to experience (Devlieger & Froyen 2006, Vermeersch 2013).

Moreover, if spaces are designed without integration of non-visual sensory modalities, people who are sighted and people with low vision may have difficulties and risk of injuries due to the lack of visual attention (Pereira 2013).

This research focuses on the design of sun shelters to adapt urban beaches to climate change. Specifically, bathers during midday hours may complement the beach experience with a temporary stay in a semi-open shaded space to avoid excessive exposure to ultra-violet radiation (Pereira et al. 2022). In this context, it is pertinent to question what

materials and uses beyond sight may motivate the usage of urban beach sun shelters.

To capture the complexity of the reality under study we used qualitative research (Denzin & Lincoln 2005, Flick 2009).

Interviewed blind persons, exploring their experiences and creative ideas to design sun shelters. We carried out 32 interviews with participants aged between 16 and 70, from 16 countries including all continents [1-32]. Concerning data analysis, we used coding to select relevant parts of the interviews, specifically to find similarities and differences in experiences and perceptions (Dierckx de Casterlé et al. 2012, Flick 2009).

The analysis allowed identifying different uses. Several interviewees referred to a recreational space with open-air amusements [15], a playground with slide [23] and sand [1], table games [2, 11, 13, 24, 31], a space with a hi-fi [12, 22], a Swimming pool [25] specifically a natural one [4, 5], a space to dance [16, 28, 29] and cinema and theatre [29]. Also, several interviewees referred to a shaded area with seats to rest [11, 19, 23, 30], or where it is possible to lay down [8, 10] a space to read or listen to music [18-22]. Moreover, a few suggested a health and wellbeing area with massage [8] and aromatherapy [10]. Furthermore, several participants mentioned a shaded area for sports [1, 14, 17, 21, 27, 28, 31, 32], specifically for gymnastics [14, 17, 28, 32] and an area for playing ball [1, 31]. Some interviewees desired a covered space for meals [3, 5, 7, 8, 30]. Others mentioned drinks [9, 16, 19], specifically with an atmosphere of live music [6, 27]. A few participants identified a covered walkway connected with the beach [7, 10, 26]. Moreover, a few interviewees mentioned the possibility of a cultural space with the inclusion of sculptures to experience [30] and to learn [6].

Furthermore, the results allowed identifying different materials. Several participants referred to stone as an interesting material to use in sun shelters [2, 5, 7, 13, 15, 17, 20, 23, 27, 28], specifically for the floor [5, 7, 13, 15, 20, 23, 27, 28], with a smooth finish [5, 23], but not slippery [15]. For the walls a natural erosion finishing was preferred [2, 17] and for the

seats a smooth finish [23]. Some interviewees preferred the floor of sun shelters to have sand, in continuity with the beach environment [1, 2, 10, 17, 20, 26, 29, 32]. By contrast, some participants identified concrete as a possible finishing material [11, 18, 19, 29, 30, 31]. A few of them noted its durability in environments exposed to water [11, 18]. Also, some of them mentioned an advantage in a smooth concrete finish for the floor [19, 30, 31]. Moreover, some participants mentioned that a wooden floor is adequate for a sun shelter [11, 13, 16, 22, 30, 32]. One of them noted that with bare feet he likes the temperature of the wood [13] and another mentioned that the wood needed to be carefully finished to avoid skin injuries. [16]. Some interviewees referred to the acoustic quality of a wooden space [4, 12, 16, 32]. One of them mentioned that she likes the sound of walking on wood [32], whilst another noted that a wooden ceiling has better acoustics for hearing people speak [12]. Moreover, one participant mentioned that he likes the smell of wood [4]. Some interviewees referred to the adequacy of wooden furniture [3, 5, 7, 8, 13, 15, 21, 30, 32]. A few of them identified its temperature as a quality [3, 30, 32]. Others referred to the advantage of its durability [3, 5]. By contrast, one participant preferred tables in another more durable material [29]. A few interviewees preferred bamboo, specifically for walls [6] and for floors, to be more connected with nature [9]. Moreover, some participants identified wicker furniture as interesting [9, 11, 16, 20]. By contrast, an interviewee mentioned its disadvantage, which related to its durability [28]. A few participants mentioned cork as a possibility for sun shelters. One of them referred to its temperature as a quality [3] and another mentioned that its flexibility may mitigate risks related to falls [14]. Furniture in natural leather is a possibility for one interviewee [21]. A few participants identified canvas as an adequate material for seats [10, 24]. Also, a few interviewees referred to metal as an interesting material to use in sun shelters [10, 19]. One of them noted that aluminium is durable, light-weight and easy to clean [19]. By contrast, a few participants identified problems related with metallic materials, specifically one of them noted its durability in aquatic environments [5], another mentioned

the possible presence of sharp edges in contact with bare skin [18]. Furthermore, another stated that metal is further from pure nature [20]. Moreover, a few interviewees preferred synthetic materials for the floor, specifically rubber, due its qualities of flexibility [21, 24]. Some participants identified plastic as an interesting material for the furniture of sun shelters [10, 13, 18, 25, 26-28]. because it is light weight [10, 26], easy to stack and durable in water [27]. Moreover, one interviewee noted the advantage of easy-cleaning [28]. By contrast, plastic is not an adequate material for sun shelters according to some participants [3, 19, 20,32], due to its dullness in audibility when walking upon it [32] and poor resistance in furniture [3]. Furthermore, it can cause environmental issues [20]. Finally, a few interviewees referred to the idea of building sun shelters with local materials [8, 20].

Pereira et al. (2022) explored motivating uses for sun shelter users in urban beaches, interviewing bathers during riskier periods of higher ultra-violet radiation exposure. The participants' sample included only sighted users in contrast with the current research. However, the uses identified by blind people are all included in the mentioned study.

In short, the results identify preferences for natural materials in continuity with the beach environment. The findings provide unexplored knowledge surrounding the multisensory qualities of materials useful to mitigate visual biases in the design of sun shelters. Furthermore, they may contribute to the social inclusion of people with and without sight, and to health prevention in crowded spaces of urban beaches.

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Union; Organização Nacional de Cegos do Brasil; Swiss Federation of the Blind and Visually Impaired; Vision Australia.

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NOTES

[1] Portuguese 49 years old woman; [2] Portuguese 67 years old man; [3] Portuguese 70 years old woman; [4] Portuguese 16 years old boy; [5] Portuguese 49 years old man; [6] Brazilian 59 years old woman; [7] American 43 years old man; [8] Croatian 36 years old man; [9] Croatian 40 years old woman; [10] New Zealanders 45 years old woman; [11] Angolan 30 years old man; [12] Irish 48 years old man; [13] Portuguese 63 years old man; [14] Portuguese 68 years old woman; [15] Irish 50-59 years old man; [16] German 16 years old girl; [17] Chinese 54 years old woman; [18] Australian 61 years old man; [19] Australian 46 years old man; [20] Cabo Verdean 53 years old man; [21] Guinean 21 years old man; [22] Portuguese 23 years old man; [23] Angolan 29 years old woman; [24] Argentinian 38 years old man; [25] Swiss 40 years old man; [26] Canadian 52 years old woman; [27] Brazilian 48 years old woman; [28] Brazilian 46 years old man; [29] Canadian 56 years old man; [30] American 27 years old woman; [31] Venezuelan 38 years old woman; [32] Brazilian 25 years old woman.

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SARKIS ZABUNYAN'S ARCHITECTURAL IMPRINTS

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KEYWORDS:

Architectural representation, semiotics, icons, fingerprint, Sarkis Zabunyan

This presentation delves into the intricate relationship between artist Sarkis Zabunyan, his OPUS series, and the broader realm of architectural representation. Spanning his journey from the late 1950s to the present, Sarkis's engagement with architecture, particularly evident in the OPUS series, emerges as a multifaceted exploration of space, time, and the intersection of art with the built environment. Sarkis's foray into the world of architecture began in 1957 when he enrolled in the Interior Architecture Department of the Academy of Fine Arts in Istanbul. His early experiences, including working in Behruz Çinici's architectural office during military service in Ankara, marked what he later described as a "time of immersion in architecture." Notably, the years 1961-62 saw him intersecting with the renowned architect Louis Kahn. These formative experiences in architecture, particularly his role in mass housing projects, influenced Sarkis's paintings, a connection he acknowledged only three decades later (Zabunyan, 2010).

The OPUS series, initiated in 2008, serves as a significant chapter in Sarkis's artistic journey. The series involves the interpretation of

architectural plans through fingerprints, bridging disparate eras and concretizing abstract knowledge. In this exploration, Sarkis seeks to transcend traditional sign relationships and open new possibilities within the realm of architectural representation. A key theme in Sarkis's works is the juxtaposition of disparate elements, epitomized by his desire to merge unrelated architectures. His exhibitions, installations, and interventions in spaces like the Pompidou Cultural Center and the Nantes Museum of Fine Arts manifest this desire. The Maçka Art Gallery's transformation into a platform on wheels reflects Sarkis's inclination to bring together diverse architectures, creating a dialogue between the static and the mobile, the traditional and the contemporary. The OPUS series incorporates two central elements: neon signs and fingerprints. Neon, which emerged during Sarkis's time in a dark Parisian garage (1968-71), symbolizes the autonomy of art independent of space. The fingerprints become a significant motif, employed by participants, the artist himself, or even integrated into architectural plans. Leaving a trace, be it through personal belongings, imprints, or the artist's own fingerprints, becomes a central theme in Sarkis's work, culminating in the OPUS series.

Aykut Köksal's interpretation of Sarkis's Opus series is instrumental in understanding its nuances. Köksal distinguishes between plans based on vernacular/traditional buildings and those derived from pre-construction plans. The former emphasizes the building itself, akin to ruins, while the latter prioritizes the representation of the building before its physical existence. This division aligns with traditional architecture's lack of subject-object separation, contrasting with modern architecture's emphasis on representation post-Renaissance (Köksal, 2010).

To delve deeper into the analysis of architectural representation within the OPUS series, C.S. Peirce's semiotic framework comes into play. Peirce's tripartite structure of signs – representamen (R) or sign (S), object (O), and interpretant (I) – forms the basis of understanding how meaning is constructed. The first of the constituent parts of the sign (R/S) also

consists of a triad divided into three: the sign in relation to itself, the sign in relation to its object and the sign in relation to its interpretant. Finally, the sign in relation to its object is divided into three as icons, indexes and symbols The ten-sign classification system within Peirce's semiotics, with iconic signs classified as images, diagrams, and metaphors, offers a lens through which to examine the OPUS series and architectural representation in general (Farias & Queiroz, 2006).

Sarkis's fingerprints on architectural plans, when viewed closely, appear as singular imprints. These traces serve to transport the viewer from the object of the signifier to the subject that constitutes it, embodying a sense of personal connection. However, when viewed from a distance, these fingerprints transform into iconic and symbolic representations, leading the viewer to the idea of the building they signify. Peirce's distinctions between different types of signs are echoed in the OPUS series. The fingerprints function as both icons and diagrams, embodying structural similarity while also presenting possibilities for virtual constructions. The architectural plan, when read as a representation of a finished building, becomes an iconic sign. However, Sarkis pushes beyond this by interpreting it as a diagram, highlighting the potentialities and virtualities of a structure.

In conclusion, Sarkis Zabunyan's OPUS series serves as a rich tapestry of artistic exploration, architectural engagement, and semiotic inquiry. By disrupting traditional sign relationships through the incorporation of singular fingerprints, Sarkis transcends the representational constraints of symbols and icons, introducing a diagrammatic structure that opens the door to new artistic possibilities. The OPUS series, therefore, not only encapsulates Sarkis's personal journey but also contributes to the broader discourse on the intersection of art, architecture, and semiotics.

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THE POTENTIAL AND LIMITS: AN OVERVIEW OF BIOPHILIC DESIGN STRATEGIES

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As the climate crisis has been one of the most critical issues in the last decade, it is not surprising that sustainability and green design have been at the center of architecture, a self-proclaimed socially responsible profession. The mainstream design and academic discourse focused on sustainable buildings with longer lifecycles, diminishing the carbon footprint of the built environment, and energy use by our living machines. We know that buildings produce a considerable carbon footprint, and architectural efforts are diverted to minimize the resources and create eco-friendly space, in other words, to achieve technical perfection in sustainability. Nevertheless, architecture provides shelter as living machines and communicates with the inhabitants. Remembering Umberto Eco's architectural semiotics, architecture first communicates its function and provides a practical and ideological framework for living. As affordances, a neuroscience-related concept developed by Sarah Robinson, spaces are directly related to our body and mind and, thus, to our daily habits, a crucial aspect of climate-friendly social behavior and worldview. Secondly, architecture also communicates symbolically; in other words, through the perceived forms of its materiality, it conveys an esthetic message of various kinds. The communicative aspect of architecture, thus, brings about an opportunity to engage with the public

through the individual architectural experience, an opportunity to act on the socio-political realm confronting climate change.

While the technical perfection of green design brings concrete and short-term benefits, the esthetic and functional layout of the built environment will play vital roles in climate-friendly architecture. The concept of Biophilia suggests a framework, a wide and varied sum of design strategies in terms of functional decisions and esthetical outlook. Conceived by social psychologist Erich Fromm in the 1960s, biologist and naturalist Edward Wilson's 1984 book Biophilia put forward the hypothesis that humans are genetically predisposed to be attracted to nature.

Several writers developed biophilia as a design paradigm in the 2000s, and the interest in the concept has grown exponentially in the last decade. Several analytical attempts and categorizations have been made to define biophilic design as a set of strategies. The idea of biophilic design today incorporates a wide range of perspectives and techniques, which may have been too eclectic to pave an explicit path yet. Yet it provides valuable insight into the human-nature relationship rooted in biology, evolutionary psychology, neuroscience, and phenomenology. The question is whether it can adequately fill in the gap left by the technical perfection of green design and embody the functional and esthetical aspects of climate-friendly design to affect individual behavior and experience of space.

LABOR PROCESS AS A BLIND SPOT IN ARCHITECTURE

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KEYWORDS

Architectural labor, environmental politics, climate justice, just transition

This paper focuses on the labor process as a blind spot in architecture in the context of unethical urban space production within neoliberal capitalism and climate change. It first calls for a reevaluation of architectural theory to address the complex relationship between the architectural process and urbanization in the 21st century. Within this purpose, we as co-authors of this paper and architect-workers who once shared the same workplace, give reference to various labor conditions of architect-workers. Grounding on this contextual framework enhanced with self-experiences and observations, we then analyze the Just Transition strategy in connection with The Climate Resilience Workforce Act. Finally, we offer a new planetary position under the ongoing socioecologic trajectories.

In architecture, there historically exists a prevalent inclination to separate the labor conditions of architects from the wider context of "the production of nature as urban space" (Sert, 2020) implicit in the framework of neoliberal capitalism. Yet, given the current socioecological crises that plague our world, it becomes increasingly imperative to comprehend the intricate relationship between nature, the urban

environment, and society. In line with that, there are a few studies that try to develop concepts capable of guiding the complex interplay between the architectural process and the working conditions of architects (Aureli, 2015; Deamer, 2015; Sargın, 2017), particularly concerning the urbanization of nature in the 21st century (Aykaç and Sert, 2018; Sert, Aykaç and Zırh, 2021). Labor as a blind spot in architecture raises questions about the experiences of young architect-workers who simultaneously navigate their roles as citizens amidst the contradictions inherent in neoliberal production dynamics.

We observe in Turkey that an increasing number of young architect-workers are struggling to find opportunities to make a living within their chosen profession and they face exploitative labor conditions while they feel compelled to work on unethical projects. Contradictory working experiences and the fragility of labor could be exemplified through various situations including displacement stories. For instance, while some architects take sensitive and ethical positions for ongoing environmental consequences in their countries, they may work in international offices and become workers on ethically problematic projects in their own countries or abroad, unaware of the conditions of that geography. To clarify, an activist citizen and architect-worker in Turkey may work on a mega-scale and ethically problematic project carried out in Dubai. There are similar situations about becoming a cheap laborer and working on detached architectural processes. In China, an architect-worker can create 3D visualizations for very low wages in a project carried out in Turkey. To take plausible wages, make a future, or even survive, architect-workers may work on projects detached from local facts and conditions. Those examples show that the current fragile condition of architectural labor needs a wider frame showing the heterogeneity of situations. And those also show that architectural labor is contradictory, placeless, mobilized, and open to displacement.

During times of significant change, inquiries about the definition of a common good or the morally correct course of action become prominent.

A crucial shared responsibility between architecture and ethics is guiding architects in discerning what such actions might entail. On September 27, 2023, Climate Resilience Workforce Act was introduced in the US. The Climate Resilience Workforce Act can be seen as part of a policy-oriented strategy known as Just Transition. Scholars such as Stevis and Felli (2015), Routledge et al. (2018), Morena et al.(2020), and Velicu and Barca (2020) argue that Just Transition is one of the most important schemes considering the potential it carries for transcending the historical disagreement between environmental and labor politics. The Climate Resilience Workforce Act (2023) includes post-disaster recovery and preventing problems of climate change and ecosystem degradation. If architect-workers are classified as climate resilience workers under the new legislation, labor in architecture could be a transformative power for the future. This could pave the way for architectural labor to tackle climate issues, diminish reliance on private development for sustenance, and play a role in creating a more equitable and livable urban environment. It is imperative to address the immediate and severe consequences of extreme weather events. In the 6th Assessment Report of the European Union Intergovernmental Panel on Climate Change (IPCC) dated March 2023 (Synthesis Report of the IPCC Sixth Assessment Report (AR6) 2023,84.) we can see the below arguments and it is noteworthy to underline. "Climate-resilient development strategies that treat climate, ecosystems and biodiversity and human society as parts of an integrated system are the most effective strategies. Human and ecosystem vulnerability are interdependent."

Although it is possible to understand the unity of fate between ecosystems and humans through vulnerability, it is quite challenging to achieve a unity of theory and practice within the field of architecture that evaluates their entanglement. Adding to this, underlining that working-class people (including women, low-income people, LGBTQIA+, and racialized people), are less responsible but most vulnerable in this 'human society' term, is vital (Bond 2012, Gaard 2015). Our study with young architect-workers in Turkey has shown that these two processes are inseparable. In our

research (2021) we pointed out that offices producing and involving socio-ecologically unethical projects also engage in unethical practices concerning the labor rights of architect-workers and compromise the integrity of their work. Unpaid internships, long and exhausting working hours, unpaid overtime payments and accompanying occupational diseases and burnout, diminishing satisfaction and motivation are typical common grounds for the young architect-workers in Turkey. The Chamber of Architects in Turkey represents an example of separating environmental and labor politics. Just Transition is developing at the intersection between climate justice and labor politics including the field of architecture. Our theoretical framework on the labor process as a blind spot is grounded in the local context of Turkey. However, it is a call for planetary solidarity to communalize our emerging precariousness and positionalities in architecture and the climate justice movement.

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CONCEPTUAL ARCHITECTURAL DESIGN THAT MAKES A DIFFERENCE IN ISTANBUL: REVEALING THE UNSEEN POTENTIAL THROUGH A FOCUS ON BLIND SPOTS

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KEYWORDS

Conceptual Architecture, Istanbul, Design, Urbanization, Blind Spots.

This paper presents a new approach to conceptual architectural design in Istanbul, a city renowned for its rich history, dynamic culture, and diverse urban landscape. Istanbul's unique topography offers numerous

opportunities for architectural innovation, yet many untapped "blind spots" in the city's urban landscape remain underutilized. Drawing upon insights from Angel, Blei, & Lamson-Hall (2017), Harvey (2019), and Istanbul Metropolitan Municipality (2017), among others, this study explores how architects and urban planners can discover and leverage these hidden potential areas through innovative design concepts, ultimately enhancing the city's urban experience and functionality.

The development of Istanbul, both historically and contemporarily, has often focused on iconic landmarks and well-established neighborhoods, overlooking less prominent areas that have the potential to contribute to the city's vitality. Therefore, this paper emphasizes the necessity of a comprehensive, conceptual design strategy that directs attention towards these blind spots, ensuring their integration into the urban fabric.

Echoing insights from Lefebvre (2018) and Ministry of Environment and Urbanization (2021), the paper emphasizes the necessity of a comprehensive, conceptual design strategy that directs attention towards these blind spots, ensuring their integration into the urban fabric.

Through analyzing existing case studies and insights from The World Bank (2019) and United Nations Human Settlements Programme (UN-Habitat) (2020), the study illustrates how architectural interventions in Istanbul's blind spots can address various urban challenges, such as infrastructure deficits, underutilized public spaces, and social inequities. Innovative design concepts, such as adaptive reuse of abandoned structures, revitalization of neglected waterfronts, and creation of green spaces in densely populated areas, are explored in detail.

Moreover, the study highlights the importance of community engagement and collaboration, resonating with findings from United Nations Development Programme (UNDP) (2020) and United Nations Environment Programme (UNEP) (2019), among others, emphasizing participatory design processes to transform these blind spots into vibrant, inclusive, and sustainable urban environments.

The paper concludes by emphasizing the potential socio-economic benefits, drawing upon insights from United Nations Population Fund (UNFPA) (2021), United Nations (2016), and Urban Land Institute (2019), advocating for a paradigm shift in Istanbul's architectural and urban planning strategies. In an era of rapid urbanization and changing urban dynamics, this paper calls for a paradigm shift in Istanbul's architectural and urban planning strategies, encouraging a more holistic and inclusive approach that harnesses the hidden potential within the city's blind spots. By contextualizing the city's architectural dynamics within broader global trends, the study offers a nuanced understanding of the opportunities and constraints facing Istanbul's built environment. Ultimately, this conceptual architectural design approach, informed by a synthesis of scholarly research, aims to catalyze a significant and positive transformation in Istanbul's urban development, contributing to a more vibrant and resilient future.

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UNFOLDING THE LIFE OF A TOWNHOUSE. EXPLORING 18TH - 19TH CENTURY TOWNHOUSES IN AIZPUTE CITY.

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Zane Vēja, Mg. Arch.

KEYWORDS

Architectural heritage, spatial changes, recostruction, townhouse

The historic center of Aizpute dates back to the 13th century when it gained city rights. At that time, it was called Hasenpoth in German. The city exhibits many layers of development, signifying its important role as the regional center from the mid-13th century to the late 18th century. During this period, most of the cultural monuments were created, including the historic city center, the Livonian Order Castle, St. John's Church, the synagogue, the manor mill pond, and watermills, among others.

The residential buildings in Aizpute have undergone various changes, with their original plans adapting to the needs of each specific era, portraying rhythm of life of the people who lived there and reflecting all the political events of the 20th century. These various layers of time can be deciphered from historical evidence, plans, descriptions, and the buildings themselves, revealing three main stages of reconstruction: the

original or historical building plans, the 1930s-1940s/Soviet occupation years, and the current situation or modern-day.

This article unfolds two townhouse stories, compiled from various studies and archival materials, aiming to provide a more comprehensive understanding of their past and to evoke a vision for the future. These are two completely different narratives, united by a common goal - to understand the past, restore the building while respecting and honoring this knowledge, and to envision a future that meets modern needs.

Right in the heart of Aizpute historical center at Kuldīgas Street 5, a single-story wooden residential house is located. It was built in 1856 as a private residence for a local manor family from Aizpute. In 1898, the house was purchased by a grain merchant from Aizpute, who converted the building into rental apartments. The purchase price indicates that the building was in quite good condition. There is no information suggesting that there were shops or workshops in this house. According to materials from the Latvian State Historical Archives, the building was rented out as a single apartment, consisting of 10 heated rooms and a kitchen on the ground floor, and 3 heated rooms in the attic conversion, along with a bathroom accessible only to the tenant, a basement, a wheelwright's workshop, a stable with a hayloft, a woodshed, pigsties and small livestock sheds.[1] The residential house had unusually high ceilings for that time (2.85 meters), creating spaciousness, and additional indoor spaces were separated by double doors, indicating a relatively high level of luxury, as well as the foresight to include a bathroom and a well-equipped entrance hall in the building at that time.

[1] The text refers to the 2019 research of Ivars Silārs from the materials of the State History Archive of Latvia.

Image 1. Facade of the building on Kuldīgas street 5, 60-70s of the 20th century. Archive material of the Aizpute Local History Museum.

Image 2. The facade of the building on Kuldīgas street 5, renovated in 2022. Photo from owners archives.

The new owner's vision coincided and took shape based on the above-mentioned period, renovating it as a rental building consisting of two short-term rental apartments on the street side, and a long-term rental apartment on the side of the yard. Since there were no traces of the original layout, the short-term rental apartments were supplemented with small sanitary units and kitchen niches, partially preserving the layout created in the middle of the 20th century. The interiors of the apartments are also playfully dominated by furniture from the 60s-70s of the 20th century and other interior elements. The owner also sees the renovation of the habitable attic space on the second floor as an unrealized potential.

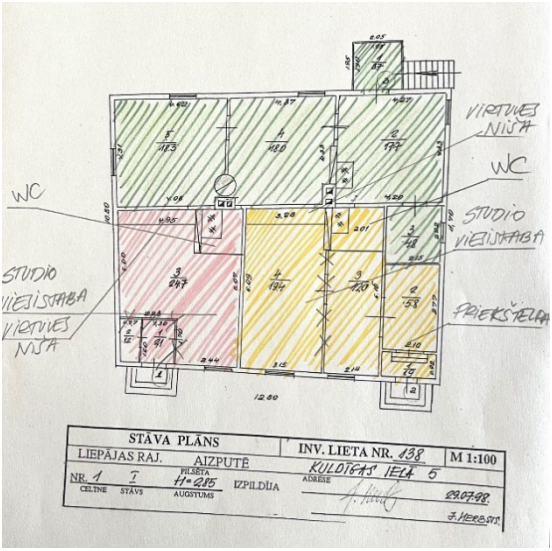

Image 3. Zoning of the renovated building layout. Scheme made by the author.

Image 4. Interior view of the short-term rental apartment. Photo from owners archives.

Aizputes city's development towards Kazdanga expanded relatively later and at a slower pace. Possibly contributing to this expansion in that direction was the establishment in 1904 of Gertrude Lindberg's Cardboard Factory, located at 5 Atmodas Street. The development along Jelgavas Street has been very varied over time. In the city plan of 1797, there were once the city's meadows and pastures located here. The residential building at Jelgavas Street 16, was built in 1905 and situated very close to the aforementioned Cardboard Factory, now the metal hardware factory "Kurzemes Atslēga".

Image 5. Townhouse in Jelgavas street 16, Aizpute. 2023 (photo taken by the author)

The original plan of the building reveals a single-family residential building, possibly with shop premises on the first floor, on the left side, at least that is what can be deduced from the 1926 reconstruction plan. This conclusion is supported by the fact that the building belonged to a widow, and the rent of the shop premises was one of the ways to maintain the property. Based on this plan of the household building made in 1926 and the drawing of the facade, it can be concluded that the entrance on the right side was more luxurious, with a vestibule and intended as the entrance of the owners' parade to the building, while the entrance on the left side was simpler, closed with shutters, and served as an entrance to the shop. This plan reveals the intention to rebuild the building, providing for the creation of two rooms in the roof structure and providing stairs to them in the courtyard facade.

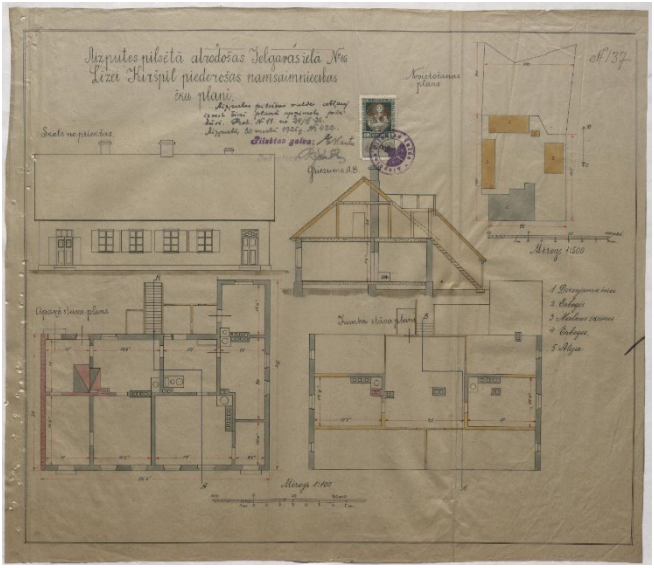

Image 6. Plan and facade drawing of the household building. 1926 Archive material of the Aizpute Local History Museum.

On the other hand, the existing floor plan reveals spatial changes that most likely occurred in the 1930s-1940s, driven by the increasing urban population in the city. The significant reasons for this could be the growing influx of peasants into cities, the increasing number of jobs in factories, and the relatively easier and more modern lifestyle in the city. During these years, residential buildings in cities underwent significant changes in their layouts – buildings were divided into as many small apartments as possible, each with a vestibule containing a kitchen with a stove or oven and one separate room. This house, too, was divided and adapted to the needs of that time, creating 6 apartments, four on the first floor and two on the second. The toilet facilities were located outside, in the courtyard.

Each of these buildings has its own unique story, not all of which are fated for us to discover. However, through careful exploration, the missing

puzzle pieces are found, and joining them together reveals the rich life experiences of these buildings. Meanwhile, the uncovered facts allow the new owners to choose the continuation of this narrative—whether to consider the evidence of the past in their new building plans, and if so, to what extent, and how to adapt them to modern needs.

THE FUTURE OF DWELLING: AN EVOLUTION OF DESERT DWELLING

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KEYWORDS

Arid-tropical architecture, desert dwelling, systemic-interdependence, vernacular architecture.

In 50 years, the UAE went from a population of nomadic tribes, small ports, pearl divers, and fishing villages to a global financial and tourism hub. Before the skyscrapers, in the 18th and 19th centuries, the population of the Trucial States (Trucial Sheikhdoms) of the region's British protectorate lived very differently than they do today. Vernacular dwelling existed mainly in three forms; coral reef, mud or stone brick construction, Barasti-style huts made of palm (Arish) walls supported by wooden frames, and tents made of sheep, camel, or goat wool and hair. Dwellings existed in groupings of walled family compounds planned around courtyards that followed local traditions of privacy, gender segregation and social interaction. A type of arid desertic architecture that used natural ventilation and shadow casting to deal with the temperature and humidity of an arid environment. The UAE has only two main seasons:

winter and summer, separated by two transitional months. For which a combination of material choices, building placement and design, resulted on dwellings that succeeded in maximizing shade, lessening solar radiation's thermal gain, controlling the building's temperature, and improving airflow.

In the West, urban development and architecture are often referred to in terms of Pre-War and Post-War, since historically, the second world war was the major event which led to significant changes in how people lived and how cities developed. But in the UAE, the most defining moment in the country's history came in 1958 with the discovery of oil reserves in the Emirate of Abu Dhabi. This event introduced new capital to the country, adding a large foreign population which dramatically changed the culture and the architecture of the region. An era of rapid development started, displacing some of the traditional building typologies in favor of western influenced construction, which in most cases was alien to the local climate and culture of the region. A type of midcentury modernization became the blind spot on the evolution of a regional architectural language. Modern architecture in the UAE did not hold the same values as the local vernacular architecture being detached from its historical, social, and cultural context, resulting on a loss of identity. The building became a symbol of modernity, and while growing vertically was not needed in a region with large amounts of land, the buildings provided marketable images for tourism and foreign investment. Architecture became a way to express wealth and social status. The displacement experienced due to modernization is most evident at the residential level, where contemporary dwellings not designed for a desertic climate, rely on air conditioning to survive temperatures that lately have reached 52 degrees Celsius and will continue to rice due to global warming[1]. The per capita consumption of electricity in the UAE is in average 12,963 kwh, the 6th highest worldwide as of 2021[2]. According to the World Economic Forum, the increased energy consumption due to a reliance on air-conditioning systems will only contribute to a cycle of mounting energy demand and will worsen global warming[3]. Sustainability is not yet

prioritized in the UAE, for every new sustainable building, there are many others that largely disregard the climate. The residential relationship to the desert has been lost. As temperatures continue to rise, dwellings that are not based on traditional, passive cooling architecture will become more expensive to run. It is time to look at desert dwellings more critically, harnessing traditional wisdom and sustainable technologies to propose building methods and socioeconomic inclusivity for a uniquely Emirati architectural language to develop.

This article will present the work done at the *Extreme Environment Studio* at the American University of Sharjah on the Fall of 2023. The Extreme Environment Studio works as the name suggests, in extreme environments, where sustainability, self-sufficiency, the use of local materials and methods and a circular economy, are essential for the working of the project. The sites the studio uses are directly related to places where the repercussions of climate change are evident. The course engages sustainability with a dynamic and fluid framework that is added onto a conventional design process, being redefined, and reassessed for each project every semester, due to their site locations. For this semester the studio focused on taking the vernacular residential typology presented above and readapting it for contemporary leaving. In doing so, the studio focused on creating self-sufficient dwellings that explored grid independence in terms of energy production, water harvesting and storage, urban farming, sequestration of carbon, support of the local biodiversity, and waste management, allowing the learner to rethink the design process, and contribute positively to the local ecologies. While environmental sustainability is important, we also concentrated in social sustainability. The pandemic has taught us the importance of community as a significant factor in shaping the future of urban development in the Middle East. So, the creation of community through social design became one of the aspects of social sustainability that were worked on the most. With these ideas in mind, our 500-level studio worked for a semester on proposing urban sustainable residential projects that focused on a level of systemic interdependence between environmental and social

sustainability. The original vernacular residential typology (native compound) was deconstructed and re-adapted into a model able to respond to the socio-cultural, environmental, and technological needs of the culturally diverse people that inhabit this region. Some learners worked in groups of two and a couple worked independently. Most projects looked formally into; an understanding of sun paths, proximity of volumes for shade creation, the use of screens (Mashrabiyas in Arabic) and landscaping as privacy generators, material thickness for thermal insulation, and cover as sun protection and temperature control. Socially, they looked into multi-generational living, rental units for income generation, and communal spaces designed for social interaction. Technologically, they worked on producing dwellings that give back to the user by savings energy, water and other amenities creating interdependent systems that save and produce money instead of wasting it in maintenance and bill payments. But the ultimate goal of the studio was to create learners with agency, that start to work with sustainability as an inherent aspect of the design process. Designers with social responsibility, that understand the impact their work has on society.

LIVING TOGETHER WITH OTHERS

BERIL ÖZMEN

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KEYWORDS

Collaborative housing, shared living, user initiative, social sustainability, non-profit sector

Nowadays families have segmented into pieces by the dynamics of modern life, mobility of family members to the other places by the reason of jobs, education, better life conditions, marriage. Another reason is the household types has drastically changed in especially urban settings such as single parents, elderly-lones, people sharing houses. In this perspective, most of the family members living without the psychological, social, and economical support of their friends and families in their housing or neighbourhood settings. This may be preferable in younger ages because of the busy urban life offers enough choices and amenities for them. However, in the urban jungle, people need to communicate with others, helping each other, sharing their common interest, attending hobbies or celebrate things collectively, filling the blanks in their lives if any, in their immediate environment.

This problematic addresses better housing solutions, rather than pointing out standard typology of housing like one or two-bedroom house, and everybody locking their door and confines themselves in their private flats, then when they go out to the public area and feeling anonymous can also be virtuous. However he /she may realize that not knowing anybody special to socialize in his / her housing complex where there are usually not much intermediate places

such as semi-private or semi-public zones in between indoor and outdoor to meet some acquaintances.

There has been a tendency to solve those issues launched since 1980's, which can be observed starting in the Northern Europe (Denmark, Sweden, Netherland, Germany, Finland), and then goes to the States so far. Those type of housing complexes based on 'constructing a living together' which have been called 'collaborative housing' or 'co-housing' as an umbrella term.

This phenomenon stands on a housing realization which is created by a group of people know each other or create a community in this purpose, both provides the tools to share their life with their neighbours in their private and common spaces within the housing. Consequently, people feel belonging to those group of inhabitants, solidarity to each other, solving problems or making chores together, who lives in the same complex. Therefore, this model of housing enlightens the blind spots which focus of new needs of society to mingle, socialize, help each other. It also reconsider the power of citizens involving into a new housing typology due to participative attitude of housing solution through to its users.

However, this movement may not have been correlated with all societies yet, it might have been an opposite trend can be observed towards implementation of this type of housing in some countries due to the lifestyle or tradition such as in small / rural communities needs can be organized by the support of tradition of the society around them. For instance, since Turkish people who were relatively culturally warm, welcoming, hospitable, and used to have close relations with their neighbours. Yet people tend to live alone in apartment blocks in the todays' living condition in most of the urban environment in Turkey. This may be resulting from the need of reflection of status, independence, economic power and most importantly protecting territorial and psychological borders in the age of security and placelessness. At the first sight, people seem not to prefer in a collaborative living in a housing complex for themselves, and they are mostly pleased to live in their gated housing estates.

Even if it looks very promising in a couple of benefits that we may gain shared spaces for contemporary urban life, promote tenants' involvement & self-

governance, supporting user involvement and empowerment and more affordable than the private sector. In the meantime, it forces environmental and municipal policies to create new ideas for sustainable housing subsidies, reduce housing speculation, avoid gentrification, influence the profit-seeking strategies of the real market, support to avoid land speculation and participative approach in a civic engagement, make use of social capital more efficiently, etc. This approach could be useful to re-use / retrofit for existing housing either in the vacant housing stock or in abandoned buildings.

Obviously, there are shortcomings as well. New policies to adopt for provision of plots, , creating totally new innovative hybrid programs against to all known factors in the housing market, negotiation with the local authorities to get allocation in suitable urban plots, creating socially sustainable life-style, non-profit organizations need a special leasing system, multi-disciplinary actors network should involve with these projects. In sum, economic and ecological housing solution for the new developments are recommended as a new agenda to be carefully prepared.

Although some initiatives and alternative housing thinkers exist and co-housing concept and configuration and the literature have already known extensively in academia, any example co-housing have still not been on practice in Turkey. Therefore, the aims of this research are two-fold. First is to understand any prejudice exists in individuals towards collaborative housing solutions to participate in this innovative living style. Secondly, to disseminate the dynamics that may create this entity of housing, both organization and initiation, and to measure the benefits of society to gain from its positive characteristics from creating solidarity to belongingness between inhabitants in a composite community as the opposite of loneliness, especially for the population getting older to secure their future lifetime in a positive manner.

As a field study, this subject will be observed in the existing various housing settings in Kuşadası, an Aegean seaside touristic town, to gather further information from the inhabitants and interview with them what aspects in this model of housing would apply in their lives. Through connection with the reviewed knowledge from the literature, it sheds lights on any possible form in the realization of a community-led housing model in this town. At last, using

this result would lead prosperity in life for a group of people and maybe make a trivial difference, however it will make more for the further research area of housing.

DEVELOPMENT OF HYBRID TIMBER BEAMS WITH TRAPEZOIDAL STEEL SHEET WEB

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KEYWORDS

Modern timber, structural design, timber-steel hybrid beams, lightweight structures, circular construction, sustainable structures

Since the earliest periods of human civilization, people have used wood for different purposes such as making tools, weapons, paper, furniture, and countless other functions. They have also used wood as a construction material by subjecting it to various processes, depending on the historical period and purpose.

Glausiusz (2020) states that remains excavated from the 1.5-million-year-old Homo Erectus site called Peninj in Tanzania are the oldest evidence of woodworking. Here, researchers found remains of acacia trees attached to stone axes. As Whiddington (2023) claims, the oldest structural remains were found in Zambia. Dated back to 476,000 years ago, this primitive structure consists of two interlocking wooden pieces joined by a notch.

Until the industrial revolution, timber structural systems were widely used along with masonry techniques. After the revolution, they were

replaced by more innovative systems such as reinforced concrete (RC) and steel systems (Celik, 2017). Nowadays, this situation shows signs of returning to the favor of wooden structures again, thanks to various technological developments in the last 30 years. The technological developments mentioned have been achieved by applying at least one of the followings:

- Improving material strength
- Developing new joint/connection systems
- Creating hybrid system designs.

This study chooses the method of creating hybrid system designs, focusing specifically on floor beams.

Main motivation to expedite the technological improvements on modern timber structural systems is the search for more sustainable ways of economy. Since construction industry is at the top priority of carbon emission rankings, it has received its share from the situation. According to the United Nations Environment Program (2022) "...CO_2 emissions from buildings operations and the materials used in the construction of buildings are estimated to account for around 37% of global energy and process-related emissions" and "In G7 countries alone, material efficiency strategies, including the use of recycled materials, could reduce greenhouse gas emissions in the material cycle of residential buildings by over 80% in 2050."

Unlike RC and steel structural systems which use limited resources and cause carbon emissions throughout their life cycle, timber systems promise ecological and economic sustainability. This promise comes primarily from the fact that industrial forests are renewable and they provide a harmless and unlimited source of raw materials. Another fact is the obvious advantage in the carbon emission rates. Timber, far from releasing carbon into the atmosphere, acts as a "carbon sink" by absorbing carbon from the atmosphere in an amount that depends on the species and age of the originating tree, therefore it is "carbon negative" on the raw

material scale. Moreover, timber requires relatively few additives and physical processes after the harvest. It can be turned into a local material in almost any environmental condition and its lightness causes less pollution while transportation -again, when compared to other systems.

Another advantageous aspect of timber structural systems is that the elements can be re-used as is, needing minimal effort for renovation. Moreover, new technologies have significantly increased the lifespan of the system by increasing the organic, chemical and mechanical strength of timber and have also created positive outputs in recycling/ upcycling studies.

Steel often accompanies timber in the inter-elemental connection details in currently applied modern timber systems. In addition to the conventional joint parts such as shoes and nails, current connections also include screws, plates and various details that they are used together.

“The steel industry is recycling three-quarters of the steel coming from the packaging market, nearly 100 percent of automobiles at end of their useful lives, and more than 90 percent of steel from infrastructure, appliances and construction”, as American Iron and Steel Institute (2023) claims. In addition, as the high elasticity modulus of steel is combined with the correct geometry, savings can be achieved by obtaining high strength from a small amount of material. The fact that modern timber systems can be formed from linear and planar elements, similar to steel systems, and the similar weight/strength ratios of the two make it possible to use these materials together on the scale of structural elements and/or composite parts of those elements.

As a result, hybrid use of timber and steel in floor beams could be useful to obtain high performance structural members by combining positive sides of both timber and steel materials. Therefore this work focuses on developing such members by using the following processes.

-Preliminary designs of hybrid beams have been conducted by examining the previous innovative designs of timber, steel and timber-steel hybrid beams alternatives. In other words, alternative designs for hybrid floor beams are proposed.

-Two alternative timber beams have been designed per Eurocode 5: One with an OSB (oriented strand board) web and another with a timber web. Both have two-pieced timber flanges that are perpendicularly connected to the web via galvanized screws.

-One steel beam with a cold-formed trapezoidal steel web and one-piece steel flanges has been designed per Eurocode 3.

-Using Eurocodes 3 and 5, a hybrid beam has been designed with cold-formed trapezoidal steel web and two-pieced timber flanges that are perpendicularly connected to the web via screws. (hereinafter referred to as the "hybrid beam")

-Locally available timber samples are planned to be tested under tension (ie. material coupon tests).

-Thin-walled trapezoidal steel webs are planned to be obtained from re-using vertical units of commercial scrap ship containers.

-Relevant features of vertical units of commercial ship containers specified in international commercial container standards (ISO 10855-1:2018) are taken as basis in steel web's calculations.

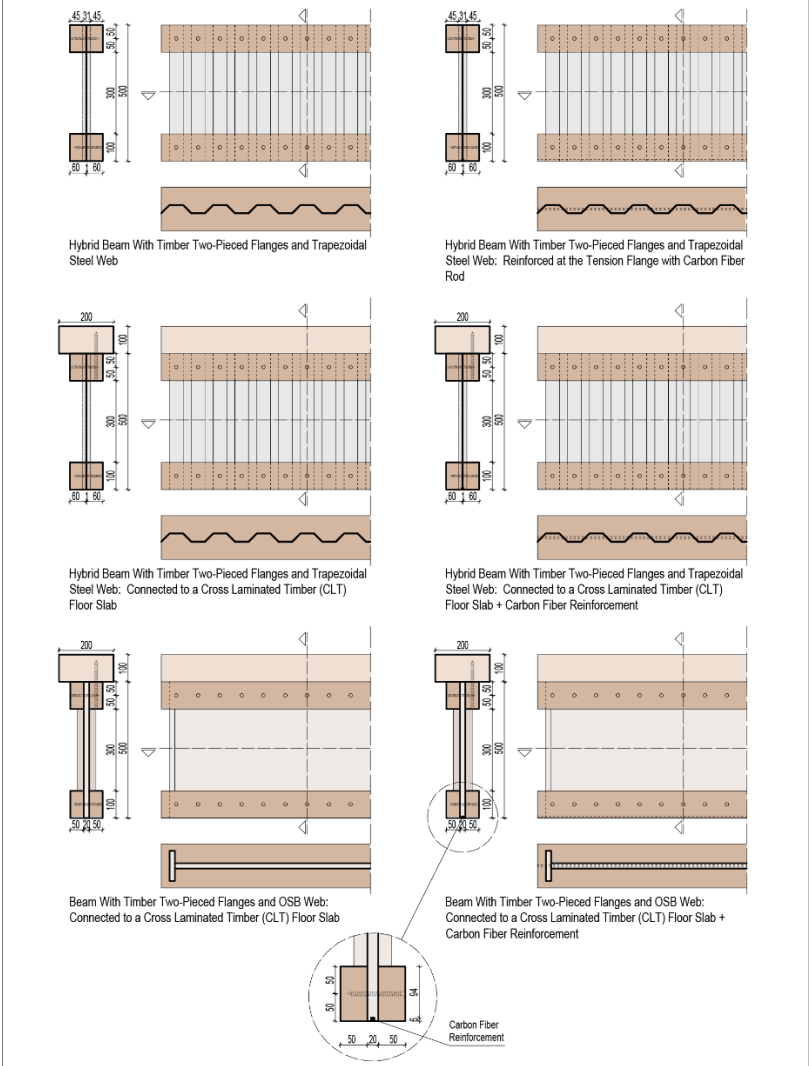

Figure 1: Designed beams

The ultimate purpose of this conceptual work is to manufacture and test (3-point or 4-point flexural testing) different versions of timber, steel, and hybrid beams. Such testing will provide vertical load versus vertical mid-span deflections curves for each proposed floor beam. By this way, it will be possible to compare strength, stiffness, ductility, and modes of failure of the beams. Also, an effectiveness measure is planned to be introduced.

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OVERVIEW OF STRUCTURAL TECHNOLOGIES IN HISTORIC RAILWAY BUILDINGS OF TURKEY

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KEYWORDS

Railway structures, historical routes, preservation, material diversity, cultural heritage, Ottoman legacy, construction.

Railway constructions of the Ottoman era, as well as the historical railway structures located in Turkey while establishing the routes, are tangible examples of Ottoman heritage along the main transportation arteries of the Ottoman Empire. These include the Rumelia, Baghdad, and Anatolian railway lines (Figure 1). Railway structures constructed along these routes are not only physical entities but also symbols of the cultural significance intertwined with the history of the Ottoman railway network. Beyond their physical presence, these railway constructions hold cultural importance, portraying them as iconic representations of the Ottoman railway heritage.

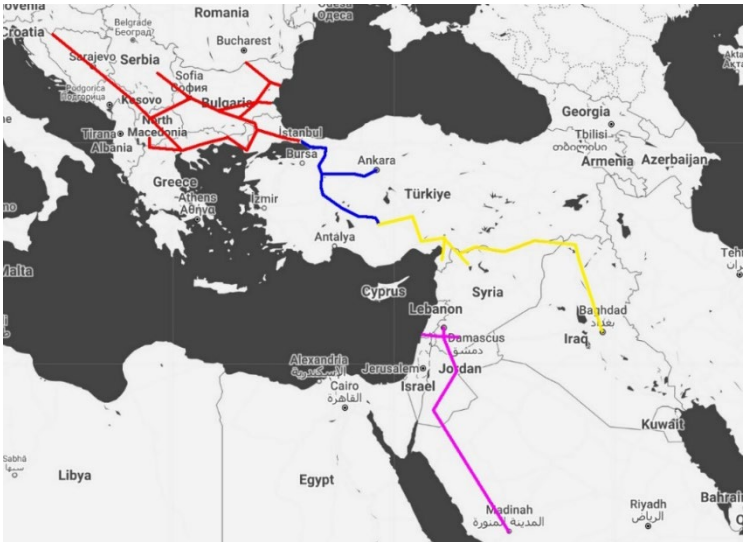

Figure 1. Railroads of the Ottoman Empire: red for Rumelia, blue for Anatolia, yellow for Anatolia-Baghdad, and pink for Hejaz.

Historical railway structures that have survived to the present, including buildings, bridges, and tunnels, were meticulously designed and constructed given the conditions of their period. These structures not only integrate into the railway lines but also preserve and convey the atmosphere and aesthetics of the Ottoman era. In this context, such structures should not be viewed merely as physical elements, but rather as reflections of the transportation infrastructure that the Ottoman State built with great difficulty, contributing to the continuity of transmitting history to future generations. These Ottoman railway structures in Turkey carry historical and cultural significance beyond being mere physical remnants of the past.

When determining the locations of railway structures from the Ottoman period, various factors, including strategic, geographical, and economic considerations, were examined. These structures were situated based on

their physical placements and designed with structural features that could establish a complex network, showcasing similarities and differences with one another. This approach enables the structures to demonstrate a quality that surpasses their physical locations, presenting a nuanced portrayal of their interconnections within the context of strategic, geographic, and economic considerations.

A railway system should not be limited to station buildings, but should also include various facilities within the railway field that serve different purposes. These facilities include railway tracks, platforms, warehouses, workshops, and water fountains. Technical expertise of architects and engineers is of significant importance in this regard. For example, laying tracks, excavating tunnels, and constructing bridges and viaducts were all necessary skills to ensure the continuity of the railway line and overcome challenging geographical conditions. Railways serve not only as a means of passenger transportation but also as infrastructure for freight transportation and maintenance activities. Railway stations should not be perceived solely as physical spaces for transportation activities, but rather approached more comprehensively. They play a significant role in regional planning and economic interactions, extending beyond being mere transit points. Therefore, railway stations play a crucial role in regional planning and economic dynamics, extending beyond their function as mere transit points.

Ottoman railway structures located within present-day Turkey were built after the mid-19th century. Foreign companies, mostly from Germany, had a significant influence on the design and construction processes due to the challenging conditions of that time. After examining on-site and historical documents, it is clear that the structures were primarily constructed using natural stone, stamped brick, wood, and structural steel. These materials were often used individually or in combination with one another. Beyond these aspects, the design and construction of these structures exhibit unique features that distinguish them from modern technologies. For instance, during the construction process, techniques such as riveting

were utilized, emphasizing the importance of the structural system. Durability against time and continued standing of these well-planned systems today underscore the significance given to the structural framework during construction.

Upon examining the railway structures in Turkey, which were primarily designed by foreign companies, it is evident that truss systems made out of steel or wooden (or hybrid) are frequently used in roof details. These truss systems, whether basic or intricate in design, enhance the durability of structures while simultaneously creating visual aesthetics. It is observed that various configurations are skillfully employed in truss systems to achieve this goal. On the other hand, use of stamped brick and riveting techniques sets the constructed railway structures apart from modern standards and technologies. Integration of stamped brick into the load-bearing system to maintain structural integrity and the use of riveting technology to ensure structural stability demonstrate a dedication to traditional construction methods. In addition, use of durable materials such as stone and brick in building walls, especially when combined and reinforced with wood or steel, and constructed with thick walls, indicates techniques that enhance the durability of such structures. A common feature of historical railway structures is the use of wide windows in station buildings, which are constructed with high ceilings for comfort, allowing for natural lighting and ventilation within the interior space.

As part of Turkey's preserved cultural heritage, the historical locomotive warehouse building located within the grounds of Haydarpasa, Train Station on the Anatolian side in Istanbul (Figure 2), the historical ‘cer atelier’ in the Pendik Train Station area (Figure 3), and the historical diesel warehouse building in the Halkali Train Station area (Figure 4) on the European side have been thoroughly examined.

Figure 2. Haydarpasa Train Station Historical Locomotive Warehouse.

Figure 3. Pendik Train Station Historical Cer Atelier.

Figure 4. Halkali Train Station, Historical Diesel Warehouse.

Serving as examples of railway constructions skillfully built by foreign companies throughout their histories, these structures have survived until present by challenging conditions and natural disasters (including earthquakes). Examining these structures, rather than station buildings, provides more information about their unique design features and structural complexity. These buildings symbolize the rich architectural and structural heritage of railways. They were constructed on a large and expansive scale.

During the examination of the implementation areas, dimensions, and characteristics of building materials related to the Ottoman-era railways, on-site field observations and detailed analyses of historical documents were conducted. A detailed research has been carried out to identify the specific features of the building materials used in the applied areas and to understand the evolution and structural changes/deteriorations that these materials underwent throughout history.

Historical railway structures have been in use (or in partial use) for over 150 years, demonstrating the utilization of architectural and structural knowledge of the era, as well as the best possible techniques. Examining railway structures designed and constructed by foreign companies allows for the observation of different countries' approaches to building knowledge and understanding.

In conclusion, railway structures in Turkey are a valuable heritage from both historical and engineering perspectives. Choice of building materials, their application areas, and their historical evolution make them not only architectural monuments but also cultural landmarks.

FREEDOM OF FORM: 3D PRINTED ARCHITECTURE, REVIEW OF DIGITAL DESIGN METHODS AND FABRICATION FEASIBILITY STUDY

ANDREJS KOPILS

KEYWORDS

3D printed architecture, additive manufacturing, generative design, industrial robot,

INTRODUCTION

The study explores 3D printed architecture, a rapidly growing domain in construction and design that utilizes 3D printing technology to create building components and structures. Additive manufacturing technology has the potential to transform traditional building and architectural practices, offering possibility for customization, efficiency, and sustainability.

One key advantage of 3D printing technology is its ability to craft highly customized and complex structures. Unlike conventional methods that rely on mass-produced prefabricated components, 3D printing allows for tailored structures, optimized to specific design requirements. The continuous nature of 3D printing, enabling the fabrication of optimized forms inspired by natural growth systems. This freedom of form

challenges traditional notions of building design, introducing new possibilities for architects.

Digital generative design methods, often called generative design, play a crucial role in this transformation. These processes offer opportunities for conceptual, formal, and tectonic exploration, resulting in architectural forms that are expressive, dynamic, responsive to the environment, and functionally efficient. As the field of architectural design progresses, the use of parametric generative systems is anticipated to become a fundamental aspect of the design process. Despite the available technology for generative design and additive manufacturing in architecture, their complete capabilities have yet to be fully realized.

The purpose of this research is to explore the potential of generative design and additive manufacturing methods within the field of architectural design and construction.

RESEARCH QUESTION

How is digital architecture transforming the way buildings are designed and constructed?

What role does computational design play in creating more responsive and adaptive architectural forms?

How are architectural robotics and 3D printing technologies enhancing the efficiency of construction processes?

How do digital architecture tools incorporate semiotic principles to enhance the meaning and communication of architectural designs?

In what ways are digital design processes integrating nature inspired principles to enhance the sustainability and efficiency of architectural forms and structures?

How is generative design transforming the approach to architectural projects, making them more adaptive and responsive to environmental and user needs?

How do the methodologies and technologies used in form generation for 3D printing influence the architectural design process and its outcomes?

What are the main challenges faced during the fabrication process of 3D printed architecture, and how can they be effectively addressed?

How do printing parameters such as resolution, print speed, and material properties impact the quality and feasibility of 3D printed architectural structures?

RESEARCH STRUCTURE:

The theoretical part of the study provides an overview of generative parametric design, and additive manufacturing methods, accompanied by case studies within the architectural field.

The empirical part of the study involves the following experiments:

- Employing a generative design method for the conceptual phase of architectural design.
- Utilizing a parametric generative system to generate the geometry for architectural elements.
- Testing the feasibility of the fabrication process by using an industrial robot for 3D printing of generated architectural elements.

Through these experiments, the research aims to contribute to the exploration and understanding of the potential of generative design and digital fabrication methods in architectural design and construction.

RESEARCH OVERVIEW

Architecture is going through transformative shift driven by digital innovations, which are redefining both the aesthetic and functional paradigms of design and altering traditional architectural methodologies. This research provides and overview of digital innovations in architecture

with the focus on digital architecture, computational design, architectural robotics, and 3D printing.

The discussion starts with workflows and tools that are implemented in digital architecture. Research further explores how computational design, through algorithms and software, is revolutionizing architecture by creating more complex, responsive forms that adapt to environmental changes and user needs, pushing the boundaries of architectural creativity.

Architectural robotics is then addressed, highlighting its impact on construction, producing components with unparalleled detail, customization, and complexity. This part of the research emphasizes the shift towards more adaptable and innovative construction processes enabled by robotics (Valente, Sibai, Sambucci, 2019).

Research provides examination of 3D printing's role in architecture, underscoring its ability to create uniquely customized structures with complex geometries, challenging traditional design conventions and promoting sustainability and efficiency (Kolarevic, 2003). Convergence of digital tools, computational design, robotics, and 3D printing is catalysing a fundamental shift in architecture towards more dynamic, responsive, and sustainable practices, significantly shaping the discipline's future.

Digital technologies are transforming architectural design, leading us into a new era where the limitations of traditional forms and structures are reimagined. The "Freedom of Form" chapter explores this shift, emphasizing architecture's liberation from past fabrication and design constraints and its enrichment with nature inspired design principles.

The narrative starts with the overview of application of semiotic methods in architectural design, highlighting how digital tools expand the expressive potential of architectural forms (De Schutter, Lesage, Mechtcherine, Nerella, Habert, Agusti-Juan, 2018).

Next, research illustrates how digital design processes draw inspiration from nature, promoting efficiency, sustainability, and aesthetic harmony

in architectural creations. Generative Design part of the research showcasing how algorithms enable the creation of complex, optimized, and adaptive designs, foreseeing an architecture that dynamically meets user needs and environmental considerations (Gardner, Haeusler, Zavoleas, 2020).

This evolution promises to broaden the creative scope for designers and shape a built environment that aligns more closely with both human needs and environmental stewardship.

The experiment part of the research investigates the feasibility and potential of 3D printing for architecture. It details a series of experiments focused on the process of creating architectural forms suited for 3D printing, from the initial design phase to the final printing, emphasizing the innovative approaches and technical considerations involved.

Finally, as the results of experiment part, research assesses key factors like resolution, print speed, and material choices that affect the outcome of 3D printed structures. This part of the study underscores the importance of balancing design goals with the realities of printing technology to achieve successful architectural results.

Overall, the study provides insights into how 3D printing is reshaping architectural practices, offering new possibilities for innovative design and construction.

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DATA DRIVEN DESIGN METHODS IN ARCHITECTURAL CONCEPT DESIGN

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KEYWORDS

data-driven design, urban data analytics, algorithmic architecture, parametric design, computational design methods, urban planning analytics, digital fabrication, architectural big data, neural networks in architecture, spatial data analysis, integration, optimization, architectural concept design.

In the contemporary architectural discourse, there's a palpable shift towards harnessing data to inform and transform the design process. This expansive research paper delves into the nexus of data-driven methodologies and architectural innovation, positing a new paradigm that synergizes quantitative analysis with creative design practices. Through an exhaustive examination of Data-Driven Architectural Synthesis (DDAS), Urban Data Mining, and Algorithmic (Parametric Intelligence) Design in Architecture (ADA), the study unfolds the myriad ways in which data can catalyze architectural evolution, enhancing both functionality and aesthetic appeal in built environments. The expanded abstract

meticulously outlines the structure and key findings of the investigation, providing a comprehensive preview of its depth and breadth.

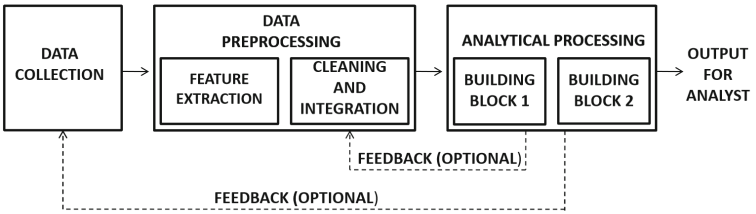

Figure 1 The data processing pipeline (Aggarwal, 2015)

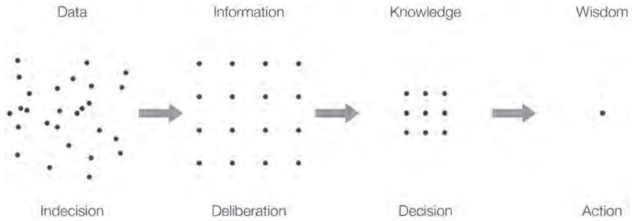

Figure 2 DIKW progression: Leveraging data to manage complexity. © R Deutsch (Deutsch, 2015)

The introduction lays the foundation by highlighting the burgeoning importance of data in contemporary architectural practices. It argues for a paradigmatic shift towards DDAS, Urban Data Mining, and ADA, advocating for an interdisciplinary approach that integrates data analytics into the heart of architectural creativity. This section sets the stage for a profound exploration of how empirical insights can reshape the way architects conceive and realize urban spaces, addressing modern challenges such as sustainability, urban density, and human-centric design.

Following the introduction, the paper presents a robust literature review that serves a dual purpose. Firstly, it traces the historical trajectory of data

utilization in architecture, encapsulating this journey within the concept of Chrono-Data in Architecture (CDA). This retrospective glance underscores the evolution from rudimentary data application to sophisticated, computational design methodologies. Secondly, the review pivots to contemporary practices, focusing on Neural Parametrics (NP). Here, the paper elaborates on cutting-edge strategies that employ neural networks and machine learning to parse and leverage data in architectural design. This section not only contextualizes the current state of data-driven design but also sets the theoretical framework for the empirical investigations that follow.

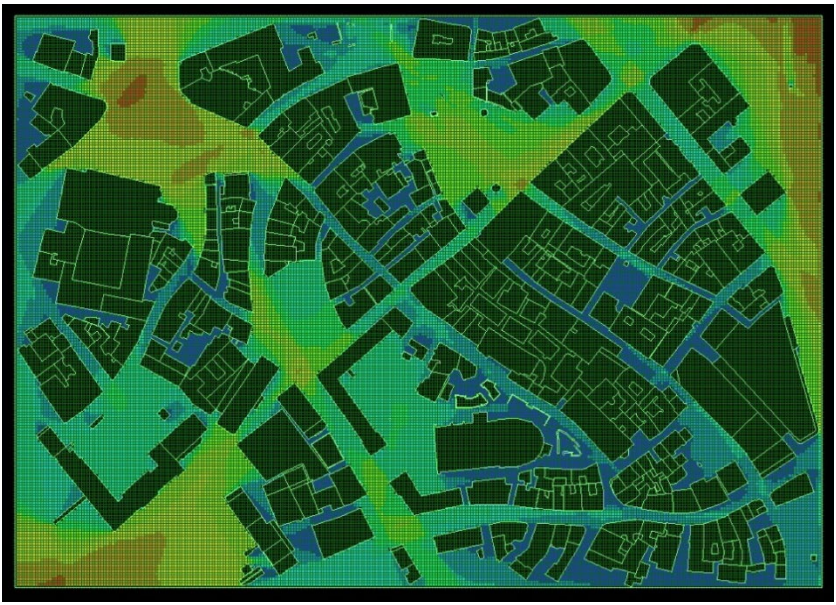

Figure 3 Axial Analysis. Comparison between mean and maximum values for visibility. (Produced by the author)

The core of the paper is the empirical section, where algorithms are applied to distill and apply insights from a vast array of data types relevant

to architectural design. This part is methodically structured to cover the identification and analysis of urban movement patterns, environmental data, and spatial utilization, categorizing them into Urban Flow Dynamics (UFD), Climato-Dynamic Design (CDD), and Interior Flow Dynamics (IFD), among others. Each category is explored in depth, with specific attention to how these data types can inform design decisions, from optimizing pedestrian flow to enhancing environmental sustainability.

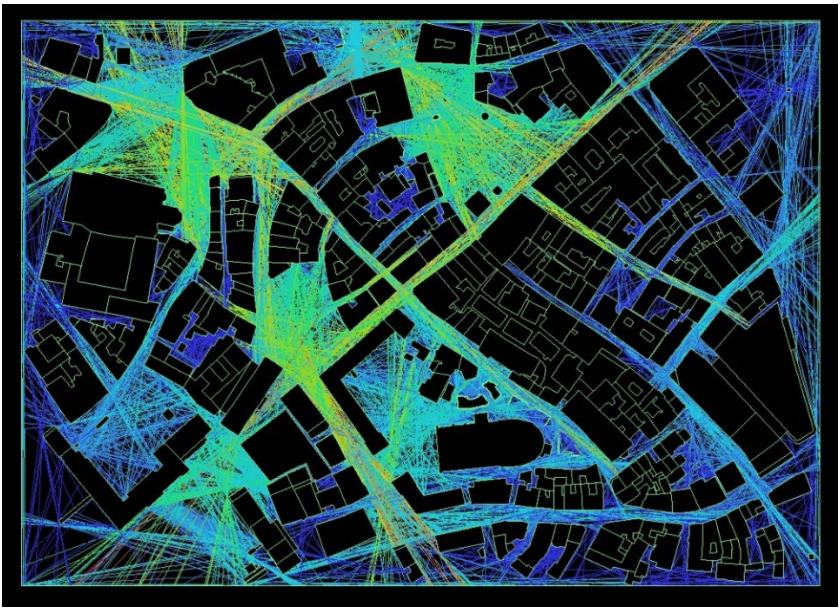

Figure 4 Axial Analysis. Comparison between mean and maximum values for permeability. (Produced by the author)

Central to the empirical exploration is the development of three innovative design rules derived from the analyzed data: Integration of Movement Vectors, Space Utilization Based on Activity Heatmaps, and Uniform Height for Same-Colored Zones. The paper elaborates on each rule, providing a comprehensive rationale and demonstrating how they

can be applied to actual design projects. These rules epitomize the practical application of the study's findings, illustrating the tangible benefits of a data-driven approach in architectural design.

```
# Prepare the data for the heatmap
heatmap_data = df_garages_filtered[['Latitude', 'Longitude']].values.tolist()

# Calculate the central point
central_latitude = df_garages_filtered['Latitude'].mean()
central_longitude = df_garages_filtered['Longitude'].mean()
central_point = {'Latitude': central_latitude, 'Longitude': central_longitude}

# Create a map centered around the central point
folium_map = folium.Map(location=[central_point['Latitude'], central_point['Longitude']], zoom_start=12)

# Add a heatmap layer
HeatMap(heatmap_data).add_to(folium_map)

folium_map
```

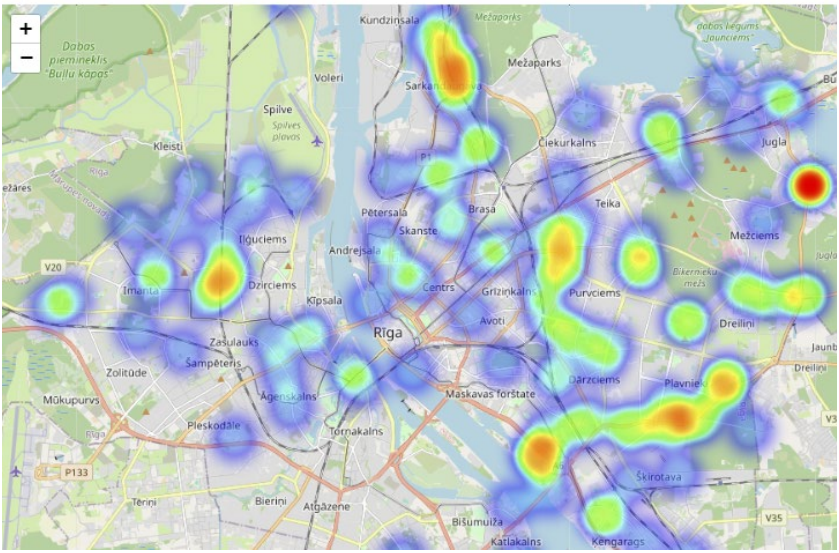

Figure 5 Heatmap density analysis of urban research objects using Python code. (Produced by the author)

This study demonstrates the powerful role of data in transforming architectural design, from concept to creation. By examining Data-Driven Architectural Synthesis, Urban Data Mining, and Algorithmic Design, it

showcases how data can lead to innovative, functional, and aesthetically appealing buildings. The research highlights the shift from traditional to data-informed practices, emphasizing the need for an interdisciplinary approach that incorporates data analytics into the fabric of architectural creativity. Through detailed analysis and the development of design rules, this paper reveals the significant impact of data on addressing modern architectural challenges. Ultimately, it argues for a future where architecture is shaped by the strategic use of data, leading to more responsive, sustainable, and human-centric urban spaces.

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REGENERATION OF WATER SPACE: GREEN GARDEN PROJECT IN WIRRAL WATERS

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KEYWORDS

Community Gardens, Sustainable Urban Development, Green Spaces,

Amidst the diverse and dynamic urban landscape of the United Kingdom, community gardens have firmly rooted themselves as popular focal points, sparking conversations about sustainable urban living and community resilience. In the evolving discourse surrounding community gardens, this master thesis endeavors to pivot the discussion towards an essential yet often overlooked element — water spaces. By exploring the integration of water features within community gardens, this research aims to uncover the potential synergies, challenges, and transformative possibilities that arise at the intersection of communal green spaces and aquatic environments.

Community gardens in the United Kingdom have become emblematic of a collective desire for sustainable and socially enriching urban living. The vibrancy of these green oases, cultivated collaboratively by local residents, stands as a testament to the communal spirit and environmental consciousness prevailing in contemporary urban societies. While the popularity of community gardens is widely acknowledged, this

research seeks to delve deeper, shifting the spotlight to the incorporation of water spaces within these green enclaves.

As community gardens flourish and the discourse on sustainable urban development gains momentum, the incorporation of water spaces raises critical questions: How can water features enhance the ecological and aesthetic dimensions of community gardens? What challenges and opportunities does the integration of water pose for urban planners, communities, and environmental advocates? Addressing these questions is pivotal for understanding the holistic potential of community gardens and their capacity to contribute to resilient and sustainable urban environments.

This thesis sets out to explore the intersection of community gardens and water spaces in the United Kingdom. By investigating the motivations behind incorporating water features, evaluating their impact on community dynamics, and assessing the challenges associated with their integration, this research seeks to provide a nuanced perspective on the potential benefits and considerations when combining communal green spaces with aquatic elements.

The motivation behind this research stems from a recognition that water, with its intrinsic qualities of serenity and dynamism, can enhance the therapeutic, aesthetic, and ecological aspects of community gardens. Personal experiences and observations of community gardens that have embraced water features underscore the need to explore this relationship further, understanding how water can be a catalyst for fostering a deeper connection between communities and their shared green spaces.

While the focus of this research is on the integration of water spaces within community gardens in the United Kingdom, it is essential to acknowledge the diversity of such spaces and the varied contexts in which they exist. The study will draw insights from a representative sample of community gardens, recognizing the need for a nuanced understanding of the complexities associated with the incorporation of water.

This study holds significance for urban planners, landscape architects, and community organizers by shedding light on the transformative potential of integrating water spaces within community gardens. Through a comprehensive exploration of motivations, challenges, and outcomes, this research aims to contribute valuable insights that can inform future urban planning strategies, promoting the creation of inclusive, sustainable, and aesthetically pleasing communal spaces.

The subsequent chapters will unfold a narrative that moves from an exploration of the historical and theoretical underpinnings to empirical findings regarding the integration of water spaces within community gardens. Methodological approaches, case studies, and a discussion of implications for urban planning will culminate in a comprehensive understanding of how water can be harnessed to enrich the tapestry of community gardens in the United Kingdom.

Anticipated outcomes include a revitalized waterfront, increased community engagement, and a heightened sense of ecological responsibility. The floating gardens not only offer a unique recreational space but also act as ecological anchors, fostering environmental education and promoting sustainable living practices within the community.

By proposing the integration of floating public gardens in Wirral Waters, this design project envisions a transformative step towards sustainable urban development. As the project unfolds, it is expected to inspire similar initiatives, sparking a dialogue on the potential of unconventional spaces to contribute meaningfully to the well-being of urban communities and the ecosystems they inhabit.

SMART COAT: SYMPOIESIS OF THE GENDERLESS ROBOT

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KEYWORDS

Spatial Perception, Apprentice of a Genderless Robot-Cobot, Architect's Role, Sympoiesis

Go back twenty years; we will find a world with no smartphones, smart buildings, smart cities, social media, cryptocurrencies, Siri, and metaverse. Every phone screen turned into an architectural place, public space, and theatre of everyday life and our presence turned to WhatsApp blue tick. New spatial needs are different from before because of touchscreens we are not getting a sense of the depth of physical and emotional awareness because everything is flattened. We are a virtualization of humans where the physical bodies are transformed into zeros and ones (Fraile, 2019), and genders melt behind the screens in intertwined private and public life. The traditional architectural space has been melted because reality has been flattened.

Besides the melted space, through the process of designing and making, the dialogue between man and material is directly related to the techniques and tools of that period. Digital tools and production methods

have changed the way we think, the way we discuss, and the way we construct architecture. Although digital processes represent a radical departure from normative practices, the disconnected relations between architect and construction are the fundamental problem. In the building industry, the process of design to construction relies on losing information from its inception to construction. The architect only delivers a set of drawings representing design intents; the rest of the control is not in the architect's hands.

Whereas the relationship between thinking and making is originally held by the craftsmen's hands. Craft is work to meet people's material needs that require experience, skill, and mastery based on the learning and teaching process (Sennett, 2008). The design and fabrication process involves complex cognitive activity that includes the human brain, human body, materials, and environment. In this system, all these elements interact with one another in different stages of any cognitive activity. (Ikeda, 2015). The cognitive process involved in the design-making process starts inside a human's brain, but cognition is not limited to the mind. According to McCullough, the craft is the application of personal knowledge to give a form. In this definition of cognition, tools become the extension of human brains and bodies. In the last decades, human-controlled tools in traditional production systems have transitioned to computer-controlled digital production systems.

Today, the integration of generative software and Human and machine cooperation can open a new type of designer-craftsperson, and digital craft can be a new medieval discourse in the digital era (Buratti, 2018). Thus, architects can become the 21st-century version of their medieval predecessors and can gain the artisan title again through digital technologies. But there has not yet been a production of a new generation of spatial experiences in which we locate ourselves within our environment and understand and interact with it yet.

Therefore 'Smart Coat' research aims to form from inside to outside, from the smallest unit to the larger unit, with human, machine, and object

interaction, designing and making process which is intertwined in the action of the artisan's hand. If we think backward being an apprentice of a robot and cobot can redefine the role of an architect and the broken ties between the designer and the construction. AEC's traditional relationship can be reshaped with humans and machines working in reconciliation and symbiosis.

All this interactive design and production process of 'Smart Coat Research' will collect and engrave all data from Pavilion Projects which are laboratories in terms of their use of new materials and methods, new tools, and new concepts. Pavilions push boundaries in terms of spatial and qualitative design and build approach and they are a hybridization between the determined and indeterminate. Pavilion design can be considered as laboratory work that is mainly related to the generation process of design rather than the end product (Tunçbilek, 2013). As freestanding structures, pavilions are objects of pleasure for architects.

Moreover 'Smart Coat Research' will question how can be reshaped the AEC's traditional relationship with humans and machines works in reconciliation and sympoiesis. Human and machine cooperation enables new complex forms to come true, and robots can be the new labor force of our digital age. (Yuan, Xie, et al., 2019). The human body and the body of the anthropomorphic robot mutually shape each other when we become feeling agents of our bodies (Velázquez, 2023).

If we think backward being an apprentice of a robot and cobot can redefine the role of an architect and the broken ties between the designer and the construction. All this interactive design and production process of 'Smart Coat Research' will questions in a sub-title how the gender of the robot affects thinking, imagining, designing, and even bonding with alive genders and does masculine adjectives and feminine adjectives provide different alternative forms.

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THE BLIND SPOT OF ARCHITECTURE: UNPREDICTABLE EXPERIENCES OF BODY IN EVERYDAY LIFE

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KEYWORDS

Architecture, Body, Space, Experience, Everyday Life

Urban everyday life emerges from the intersection of the life that buildings aim to establish within the framework of physical reality and the life spontaneously produced by the body. Despite the authorities trying to turn the city into a form, everyday life is affiliated with formlessness. As Augoyard (2007, p. 9) puts it; once the project is built, everything unfolds differently than planned. Walker (2004, p. 117) on the other hand, states that everything doesn't begin with a plan, and the presence of unplanned forms should be recognized. With this in mind, despite the attempts to formalize daily life through forms and structures, informality is inherent in unpredictable situations. In the words of Blanchot & Hanson (1987, p. 20) containing both rules and rule-breakings makes everyday life paradoxical. According to Simmel's (1997) views, paradox means the conflict between the fluidity of life and stable conditions. These

distortions are often ignored by architecture, which is why they are architecture's blind spot. In this context, the study aims to shed light on the unpredictable experiences of the body within the scope of space and architectural space.

A tension always emerges between what is predefined and what is experienced. The body attempts to create its living environment depending on its desires, while acknowledging the limitations it must operate within. It also has the ability to detach itself from the physical form. Hume (1924, pp.402-403) discusses that human actions are variable and irregular, and also asks what is more inconsistent than the desires of man. According to Sheringham (2006, p. 106), desire is the sole aspect that eludes the organization of forms in daily life. The form undergoes a deformation when it cannot contain the body's subconscious, and makes the subconscious overflow. Much like how physical form tends to prefer stability and solidity, life has a tendency to deform it with its contained energy. While the body is dynamic, physical space is static. The challenge of the unrestricted, organic, liberated body contrary to the environment interferes with the static, physical space. Hence, what is designed in everyday life turns futile and spatial experience becomes significant rather than providing a fixed description of space. Nonetheless, Hume (1924) also mentions that it is impossible for human actions to entirely become unattached from necessity. The body, containing physiological and psychological values together, is both influenced by its environment and influencing it, as well. As a result, body contains a capacity that can be generated by the smallest impact. The paradox that is present here is that life is in need of form to surface in this way. As life does not have form, it can only self-produce at the time a given form is in place. Considering this scenario, tension is essential to life, and creates the actual space.

Space may appear to be a void defined by physical constituents. However, it's connected to many invisible parameters that generate its existence. This is why the reduction of space to architectural space is criticised, as Walker (2009) also expressed. The space faces a series of changes from

planning on paper to getting built, and when it meets the body after construction, this transformation becomes perpetual. The actual space comes to life when the body exhibits unpredictable actions, despite the predictions and designs for the actions that the body will perform on the planned space. This space is independent of architecture. Grosz argues that architecture should accept the outside, deriving from Deleuze's concept of the 'outside'.

The notions outside the field are the architecture of exorbitance, as stated by the words of Grosz (2001, p.162) and this is the spatialization of architecture beyond its own borders. Rajchman (1998), additionally, discusses this concept in the context of Deleuze's 'le pli / fold', Koolhaas's 'lightness' and 'other geometries' notions. "Other geometries" means the geometries that let different possibilities and where the lived experiences can be explored, while "Lightness" describes emancipation from structure, typology and ideology. "Folding" is the capability of seeing the invisible, the perception of inexistent yet. Rajchman (1998, p. 20) interprets this excess as architecture purifying itself from general assumptions and limitations such as program. Architecture is accused of achieving superiority on the body. Koolhaas (1995, p.199) also supports this view by stating that everything is possible where nothing exists, and nothing is possible where architecture exists. As a matter of fact, it can be argued that the more the body's performance is displayed, the more architectural space liberates itself from the building. It can be considered possible that physical space is always in a conflicting relationship with the body. Bachelard (1994) argues that spatial dialectics shape the cognitive world of the body with the effect of the physical world, thus determining a poetic relationship between the built environment and the body in daily life. As Perrault mentions, the space is affected by cognitive data of the mind rather than the metric factors of the body (Zöllner, 2014, p. 55). The lived / experienced space is more than just a mathematical space and it transcends geometry at all times.

Architecture, which is not limited to physical structures being built, has shifted its focus away from the body today. Dovey (2014, p.23) mentions that, architectural discourse often overlooks the social creation of architectural space due to it being invisible. Thus, in the process of objectifying thought, architecture loses most of its paradigmatic identity. It could be argued that the body will continue to produce its own spaces, or the actual space, as assuming that architecture remains attached strictly to structures of domination. Repeatedly reproducing similar works instead of making new claims, and the identical experiences facilitated by the tangible environment, demonstrate an enhanced paradoxical identity of the space within the current era. It seems this period, in which thought and practice have separated in the most extreme level, provides the best opportunity to discuss the disjunction of space and body.

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THE RE-DEFINITION OF ARCHITECTURE THROUGH NATURE

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KEYWORDS

Nature, fractal geometry, algorithm, computational design

The exploration of existence has undergone various transformations from Ancient Greece to the contemporary era. The endeavor to define nature has been deliberated within vital, existential, and spatial frameworks. Collingwood (1945) delineates three fundamental perspectives on nature: the Greek View, the Renaissance View, and the Modern View. As ambiguity envelops the environment, he poses a Postmodern inquiry, asking, "Where do we go from here?"

He addresses this question through a historical reading and mentions that the design of history is being followed. Regarding architecture, it is possible to say that our way of reading history is more than a chronological structure, but rather a structure that is layered, sometimes repetitive, transformed and evolving. It can be said that the architectural reflections of fractal expansions originate from Baroque architecture, and it can be mathematically blended with Leibniz's monadology approach. This question is recognized as pivotal within the discourse of architecture.

The definition of nature directly shapes the discipline of architecture, a manifestation of vital action. Presently, computational design ventures, echoing the fractals and geometry of nature, adhere to a succinct operational principle. The convergence of virtuality and reality propels architects towards uncharted research domains.

This study probes the trajectory forward, contemplating the imperative for new definitions by scrutinizing the interplay between nature and architecture. In an era demanding radical transformations, the exploration navigates alternative avenues, considering the contextual landscape and available resources.

Unfortunately, today nature is discussed only through an understanding of the environment that is reduced to green. Considering the concept in question in its essence and considering all readings in an existential dimension, inspired by the views of natural science in ancient times, will also affect the perspective on architectural design. It is observed that the concepts of nature and the natural can take a place in an extremely reduced position in the architectural framework. These reduced approaches, which proceed in a one-way direction, also limit ways of thinking about the environment. Organic form, consisting only of folds; It is not an understanding consisting of artificial examples that resemble living creatures in nature. However, one of the most important discussion areas that needs to be questioned is undoubtedly the current state of sustainability and ecological architecture. As Adorno (2012) mentioned in The Jargon of Authenticity, it is as if these have turned into merely indicative jargon, a discourse emptied of its essence. However, considering the concept of nature as its essence will allow this gap to be filled with a deeper research.

Chu (2006) delves into Leibniz, offering a contemporary interpretation of monads, stressing that potential architecture must transcend mere replication of nature. Acknowledging the current network as a matrix of relationships, the alteration of variable components based on conditions and the establishment of novel patterns reveal foundational architectural

knowledge. Chu concludes by alluding to Chatin, suggesting that all is algorithm.

The fact that everything is in a pattern with each other may not always be enough to convey the architectural context and its scope. Mathematics, geometry and physics will be needed to make this more visible and perhaps to transfer it from the abstract to the concrete in the language of thought of design. At this point, computational design philosophy appears as a versatile thinking systematic. Experiencing that everything is renewed and reaches eternity through some components and their relationships corresponds to the definition of sustainability in terms of design language. Therefore, the parameter and the algorithm essentially correspond to the alphabet of a design language that is truly associated with nature. At this point, how the design can be improved, how the modules can move away from monotony, how the units in question can come together in a functional and structural sense, appear as design questions and areas awaiting the development of alternatives.

At this point, in summary, there is a need to re-define architecture. Although it seems to be drifting towards a structure that becomes limitless and ambiguous, the definition of this situation is actually an attempt to reach its own essence within a circle. It is possible to produce sustainable buildings without the concept of sustainability. This should be the main component of the design. Every building, every artificial production site should be able to focus on the use of materials and techniques and develop the design process based on this main idea.

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“I´M STUCK!” – WHAT DOES IT TAKE TO HELP STUDENTS TO OVERCOME DESIGN BLOCKS?

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KEYWORDS

Design Education, Architectural Design Process, Evidence Based Design, Design Patterns

INTRODUCTION

Architecture schools through creative design pedagogy provide academic education for professionals to produce creative, technologically adequate and environmentally responsive designs (KOWALTOWSKI et al., 2010). These designers should be sensitive professionals with scientifically sound knowledge, and capable of keeping up with social and technological advances in an age of uncertainties.

Teaching architectural design is confronted with ever more complex problem-solving issues and the design studio must stimulate students to develop scientifically sound, sustainable design thinking (KOWALTOWSKI et al., 2020). Design instructors must not only innovate in their teaching practices but need the support of organised accumulated design

knowledge. Students have difficulties in understanding and integrating the many essential design concepts that should underlie quality designs.

And students get stuck! So we ask the question: Which approaches and contents could help students to overcome design blocks? We present teaching examples of design processes, focusing on school buildings, and defend that the teaching process needs several inputs (KOWALTOWSKI, 2011; CLEVELAND. 2016).

TEACHING SUPPORT PROCESS

A step-by-step approach is essential to support students in their design development.

First, a breaking moment is essential during a design exercise to reflect on the large number of variables of design and their impact on design development. These variables are aesthetic, ethical and technical, and include the issues of siting, form and volume of buildings, functional relations and layouts, ventilation conditions, solar and wind orientation, location and size of openings, choice of materials and colours of exterior surfaces, detailing of shading devices and external area design. Students need a moment to reflect on these in a dynamic debate situation where variables are discussed through graphic representations to visualize design solution ideas .

Second, support material needs to focus on a design problem at hand. Multiple mass studies should be produced early and justified. Modular design based on an overlay of a grid must be encouraged as part of kick-off exercises to give students a sense of scale of the design problem at hand and reinforce that important decisions need to be made early in the design process, visualized in 3D and directly related to site characteristics (KOWALTOWSKI et al., 2020).

Third, Evidence-Based Design (EBD) should be applied as an important source of scientific knowledge (LIPPMAN, 2010). Artificial Intelligence (AI), based on available precedence information, promises to solve the complexity of problem-solving processes, but architectural design

precedence that may be supported by AI is insufficient to resolve the so-called wicked problems of design (PENA, et al., 2021). Aesthetically satisfactory and scientifically grounded solutions that are technically feasible, economic and environmentally sustainable require EBD knowledge. Students lack experience and need to collect and analyse research results to enrich their own design proposals. A large amount of EBD literature is available that should be transformed in design process data.

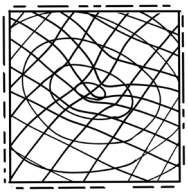
Forth, the concept of Design Patterns (DPs) is considered an appropriate design process format to translate EBD information. This concept, includes focused texts, representational illustrations, and diagrams that describe recurring design problems (ALEXANDER et al., 1977). DPs are design organisational entities that may be used to translate EBD information into a digestible format for the design process. Students should engage in translating this information into DPs to analyse scientific information to apply to design problem-solving and to find ways to express ideas graphically.

CONCLUSION

We will show results of examples of teaching events and student responses to new design process approaches. Also 15 DPs (Figure 1) developed by a final year student are presented with the application to his final design project. The DPs constitute a research contribution to school design and provided the student with a secure path towards a final degree-project on a professional level. Through our examples we show that students can develop a productive progress in design, gain confidence and an individual design process, preparing them for the future design world.

Figure 1

Pattern name	Graphical Representation	Concept

Boundaries		Visible/ perceptible boundaries are the limits of a determined learning area. A border, with a consistent entry and exit point, helps students focus on a specific activity and increases their understanding of the space.
Flexible & Reflexible Spaces		A flexible space changes according to the user's needs, allowing student choice and participation, and creating an environment that has a sense of ownership by the students.
Opportunities for Learning		Varied furniture, with both mobile and fixed elements, multiple educational tools, and different areas within a learning space (wet area, external area etc.) provides a range of opportunities for student learning within a space and allows for a diverse set of activities.

Spaces in Between

The spaces in between learning environments should be integrated with these, providing further flexibility and opportunities for learning in the school building.

Safety in Sightlines

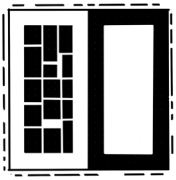
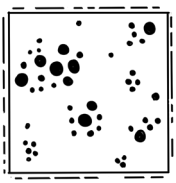
Safety in Sightlines encompasses the capacity of constant visualisation of all students by a teacher. This visual contact guarantees a teacher can maintain the safety and well-being of the students.

External Areas

The variety of open areas for play, with diverse settings and textures, enriches the environment, with opportunities for different profiles of users and learning experiences.

Basic Infrastructure		The physical structure of school spaces - the stability of the building, access to ventilation, air quality, temperature, appearance and maintenance - are factors that will influence how users see and appropriate this space.
Mindsets		Previous experiences and work practices of school staff and students have to be accounted for during the briefing and design process, as these will affect how new spaces will be used.
Staff Preparation		For an optimal learning environment, teachers must be accustomed to and prepared for the new situation and the dynamics they will partake in, broadening their understanding of how the environment can influence learning activities.

Participatory Design and Active Space		The inclusion of teachers and students in the briefing and design process will enable the configuration of spaces that are being designed to be fully utilised.
Integrated Technology		The inclusion, and full integration, of Information and Communication Technology (ICT) in the learning environment and school curriculum, has positive effects on student achievement.
Neighbourhoods		Neighbourhoods are the existence of different possible groups within a set of numbers of students, each block presenting different needs and advantages to the pedagogical process.

Ratio and Scale		The proportion of students per teacher and the scale of environments will affect the development of learning activities.
Movement and Interaction		The ability for students to move within the learning environment, and interact with other students in the learning process, sharing information, discoveries and doubts leads to positive learning experiences.
Territories		The learning environment should provide a shared sense of ownership, due to the active student interference in the space (furniture reconfiguration, display of work, time spent in the space), developing a sense of belonging and group identity.

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THE PEDAGOGY OF ASTRA ZARINA: ILLUMINATING THE BLIND SPOT IN HER LEGACY

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KEYWORDS

Pedagogy, student agency, blind spot, legacy, difference-maker, lifelong learning, Experiential Learning

> "Her goal was…to show us the wonder of what we were capable"
> (Torrell, 2013).

This reflection by urban designer and planner Lucy Sloman, American Institute of Certified Planners (AICP), student and teaching assistant on the University of Washington (UW) Architecture in Rome (AIR) foreign study program, former Planning Manager for the City of Issaquah, Washington (WA), USA and current President of CityWorks, Inc., as contributed to Zarina's nomination for the Institute of Classical Art & Architecture (ICAA) Arthur Ross Award in Education illuminates Zarina's legacy and more specifically the brilliance of her pedagogy. Colleagues and students have credited Zarina as one of the "primary influences on their professional practice and how they see and engage with the world" (Torrell, 2010-2013). Zarina's legacy as a difference-maker is increasingly acknowledged in academia and the profession, but the pedagogy she

employed remains a blind spot. Zarina's impact has been typically prescribed to the force of her personality; however, my research shows that it was the underlying innovative pedagogy she employed that continues to empower her students.

Professor Emerita Astra Zarina in Lo Studio at Civita, 1980 -- Photo by Betty R. Torrell

It is a given that Zarina was multitalented. Latvian American architect Gunnar Birkerts, Fellow of the American Institute of Architects (FAIA) and Fellow of the Latvian Association of Architects (FLAS), described her as a colleague and collaborator who was, "…one of the most gifted and creative minds I have known" (Torrell, 2010-2013). Zarina received the following three recommendations for a position as Visiting Critic in the UW Department of Architecture and Urban Planning. Renowned Pacific Northwest architect Paul Hayden Kirk, FAIA described her as, "one of the most talented people in the field of architecture I have ever known." Architect Richard A. Kimball, Director of the American Academy in Rome

(AAR), (1960-1965) described her as "a most thorough and thoughtful architect." Portland, Oregon based, Italian American architect Pietro Belluschi, FAIA and later Dean of the Architecture and Planning School at the Massachusetts Institute of Technology (MIT), stated, "In my long career I have known a great many people engaged in the profession of designing buildings; only a handful of them had the magic gift and you (Zarina) are one of them…" (Kirk et al., 1964). As UW Department of Architecture Professor Emeritus and colleague Phillip Jacobson stated, Zarina possessed, "multiple talents, interests and attainments – practicing architect, designer, researcher, urbanist, writer, visionary, historian, academic administrator and above all a dedicated and superb teacher" (Torrell, 2010-2013). It is this last role that I believe is her true legacy through her influence on the lives and work of the students who have become leaders in the professions of urban planning, urban design, architecture, preservation, and design.

The influence of her teaching on the professional lives of her students was formally recognized by academia when she received the UW Distinguished Teaching Award in 1979. Daniel S. Friedman FAIA, then UW Professor of Architecture and Dean of the Department of Architecture and Urban Planning described her influence, "Over the long arc of a distinguished teaching career, both in the U.S. and Italy, Astra Zarina influenced thousands of students who continue to benefit from her inspiring passion and genius for architecture, Italy and education" (O'Donnell, n.d.).

Students and colleagues have often described Zarina's inspiration as a result of her unique personality; "brilliant, funny, open, opinionated, lively, inspirational, passionate, eye-opening, remarkable, intimidating, nurturing, stinging and healing, generous, witty, dedicated, tough and caring, stimulating, sincere, helpful, encouraging, talented, demanding and passionate" (Torrell, 2013); all qualities that make a successful educator. As Ann Hirschi, Seattle based architect and certified arborist recalled, "I entered Professor Zarina's design studio on my first day as an

architecture student at the University of Washington, fresh off the prairies of Oklahoma. From that point in 1976, she guided me on a journey that has influenced my life to this day. It did not take me long before I had signed up for the Italian Studies program she conceived and directed during the summer and fall of 1977; first in the hilltown of Civita di Bagnoregio and then in Rome. That period gave me the grounding for much of my professional work" (Torrell, 2010-2013). And as respected Seattle based architect Edward Weinstein FAIA, founder and Principal of Weinstein A | U, has observed, "Astra was not a reserved personality. She was opinionated and passionate and challenged her students to exceed their expectations of themselves. For most of us, she redefined the professor-student relationship" (Torrell, 2010-2013). And although you can't discount the contribution of her personality as inspirational, you cannot ignore her pedagogy as significantly influential to her students' success.

When I began to examine her teaching methods, the clues to her wide ranging and profound influence became apparent in her pedagogy. As an educator, I have become interested in the role of student agency in student's long term achievement, and it has become clear to me that the cornerstone of Zarina's pedagogy was the instilling of agency in her students. Zarina's teaching methods are a valuable case study for the development of student agency as references to agency are repeatedly found in students' descriptions of her teaching methods. As Portland, Oregon based architect Michael Dowd, Principal of Dowd Architecture Inc., recalled from his experience as a student on the Italian Hilltowns (IHT) program, "We also learned that sitting in a classroom was not enough…one must take personal responsibility to learn throughout your life in and out of the academic setting." As IHT alum and former Senior Planner for the City of Bothell, WA, David Boyd, AIA recalled, "It was in Civita that Astra introduced me and the other students to…learning by directly engaging with the patrimony of the ancient cultures that formed such a rich environment for all types of human activity…inspiring my work in architecture, urban design and planning as well as my

appreciation of history, culture and life." And as Ed Weinstein further recalled, "She introduced us to a way of observing and engaging in the world that was not even considered in the academy" (Torrell, 2010-2013).

Professor Emerita Zarina with Students on the UW IHT Program, 1979 -- Photo by Betty R. Torrell

There are a number of instructional theories in which student agency is central to student success and it is not a coincidence that Zarina's teaching methods employed many of these active learning methods under the larger umbrella of Constructivist Learning Theory. In short, "Constructivism is the theory that says learners construct knowledge rather than just passively take in information. As people experience the world and reflect upon those experiences, they build their own representations and incorporate new information into their pre-existing knowledge (schemas)" (University of Buffalo, n.d.). Much of Zarina's teaching methods, which could be now described and cataloged under the broad umbrella of Constructivist Learning Theory; Experiential Learning

(ExL), Applied Learning, Collaborative Learning, Authentic Learning, Problem-Based Learning (PBL) and Reflection (Knobloch, 2003) were applied within Zarina's curriculum years before the tenets of these methods became codified and commonplace in design education.

Although many of these methods overlap, let us examine one of these that promotes student agency; Experiential Learning (ExL). Experiential Learning refers to a pedagogy developed by Aristotle. In "The Nicomachean Ethics," Aristotle famously states: "For the things we have to learn before we can do them, we learn by doing them." ExL is a process of education through experience, followed by reflection on that experience: and "…is part of the larger category of active learning, because it directly involves students in the process of their own learning (Top Hat, 2019). There are four elements, described as pillars of ExL;

learning in real-life contexts,

learning by doing,

learning through projects, and

learning by solving problems (Knobloch, 2003).

Central to these elements, in ExL the learner must be willing to be actively involved in the experience. ExL invites the student to "take charge," that is, become the "agent" of their own learning. Students on the foreign study programs that Zarina founded and conducted were involved through active learning of all four pillars.

But what is student agency and how does it contribute to long term student success and students' future roles in the profession? Historically, the creation of student agency or "taking charge" has been articulated through various scholarly perspectives. Dewey (1910) emphasized that human agency is embedded in choice and deliberation, contrasting behaviorism and determinism. Vygotsky (1978) highlighted how individuals adopt agency by engaging in social contexts, using tools, and negotiating social practices. Other scholars have underscored how agency intersects with contesting institutional norms, making choices, and

constructing identities through dialogue and language. But most importantly here, Bandura (1986) linked agency to self-efficacy and the pursuit of control in one's learning activities.

Moreover, the concept of student agency, as conceptualized currently in the Organization for Economic Co-operation and Development (OECD) Learning Compass 2030, centers on students' capacity and volition to positively influence their own lives and the broader world. It encompasses setting goals, reflective action, and responsible decision-making to bring about change. When students are active agents in their learning, they demonstrate higher motivation, engage in self-directed goal setting, and acquire the crucial skill of "learning how to learn" for lifelong application of learning (OECD Future of Education and Skills 2030 Concept Note, 2019).

The pedagogy of student agency is then a point of entry to understanding Zarina's legacy as a difference-maker for her students in their future accomplishments and contributions. Building from these theoretical orientations, a model of agency empowers students by giving them the ability and confidence to actively shape their own learning experiences through the development of autonomy, critical thinking, adaptability, curiosity, self-regulation, and purpose. In summary, when students develop agency, they are more likely to set meaningful goals and connect learning to personal aspirations instilling a sense of purpose and promoting sustained engagement and lifelong learning beyond formal education; all skills that empower them to make a difference. (OECD Future of Education and Skills 2030 Concept Note, 2019).

This paper aims to illuminate a blind spot in Zarina's legacy, focusing on her pedagogical approach that facilitated the cultivation of student agency through Experiential Learning methods and underscoring the transformative potential of pedagogical strategies in nurturing lifelong learners poised to enact meaningful contributions to the world. This student agency fostered through her pedagogy continues to empower her students to effect positive change as difference-makers in various

capacities, including educators, mentors, and innovators, shaping not only the built environment as practitioners as architect Michael Dowd relates, "Her influence lives on in the hundreds of buildings and spaces designed by her students…," but also through their contributions in their professional capacities as related by urban designer and planner Lucy Sloman when she says, "I regularly cross paths with her students in city government, large architectural firms, and small construction companies," and as catalysts for societal transformation as related by renowned Seattle based architect Tom Kundig, FAIA, Royal Institute of British Architects (RIBA), and Principal, Owner & Founder of Olson Kundig, "The strongest testaments to the quality of Astra's mentorship are the young practitioners who advanced under her tutelage to become successful visionaries themselves. Today I work alongside many of Astra's students, many of whom are renowned worldwide, and still see her inspiration and teachings reflected in their work" (Torrell, 2010-2013).

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SPECTRES OF THE FRAME: A PEDAGOGICAL EXPERIMENT OF TEACHING ARCHITECTURE THROUGH THE USE OF FILM, PERFORMANCE, AND STORYTELLING IN AN AFRICAN CONTEXT

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KEYWORDS

Architecture, Film, Storytelling, Experiment, Interdisciplinary, Pedagogy.

INTRODUCTION

The relationship between architecture and various forms of artistic expression has become an intriguing avenue for exploration in the ever-evolving landscape of architectural discourse. This paper discusses an experimental teaching practice and learning strategy of Unit 20 at the University of Johannesburg's Graduate School of Architecture. It elaborates on the unit's broader theme of architecture's relationship with film, performance, and storytelling in Africa. Unit 20 seeks inspiration

from the rich tapestry of oral narratives, cultures, and films often overlooked in the discourse on African architecture. Furthermore, it discusses our teaching methodology in the design studio that uses a multi-disciplinary and collaborative approach to encourage students to explore diverse architectural research themes, representations, and design processes. The studio also urges students to look beyond the current canon and draw from oral narratives, cultures, and films. The paper will use some outcomes from students to analyse the studio's teaching experiment and discuss its challenges, failures, and successes. What makes the unit's approach to teaching of critical importance to the transformative pedagogy teaching at the graduate school of architecture is the way the studio explores, interprets, and reimagines the meaning of architectural briefs (the frame) through which architecture is derived. This paper argues that an interdisciplinary approach to architectural briefs can teach students to expand their understanding of space beyond the architectural canon and to be more aware of social and cultural issues in their context. Using films, the self, and storytelling as teaching tools, can challenge the students to draw design inspiration from their lived experiences, oral narratives, and films.

To initiate the teaching experiment, we started the year by exploring architecture through different stages: from the self to group work and then to the cityscape. These explorations were through three briefs: *The Selfie Studio, Anthology, and What If?*

THE SELFIE STUDIO

Most architectural briefs in our context are devoid of the self. It is generally about the client. However, to design for others, the architectural profession requires us to draw from our inner selves. Therefore, the purpose of this brief was to challenge students to look to oneself in order to look to the other. Moreover, by looking at ourselves, we begin to understand what we possess as strengths and what shortcomings we want to develop. The objective of the brief was to construct an ideal self-

portrait or self-presentation that captured the narrative the student wanted to control, explore, maintain, develop in the studio during the year.

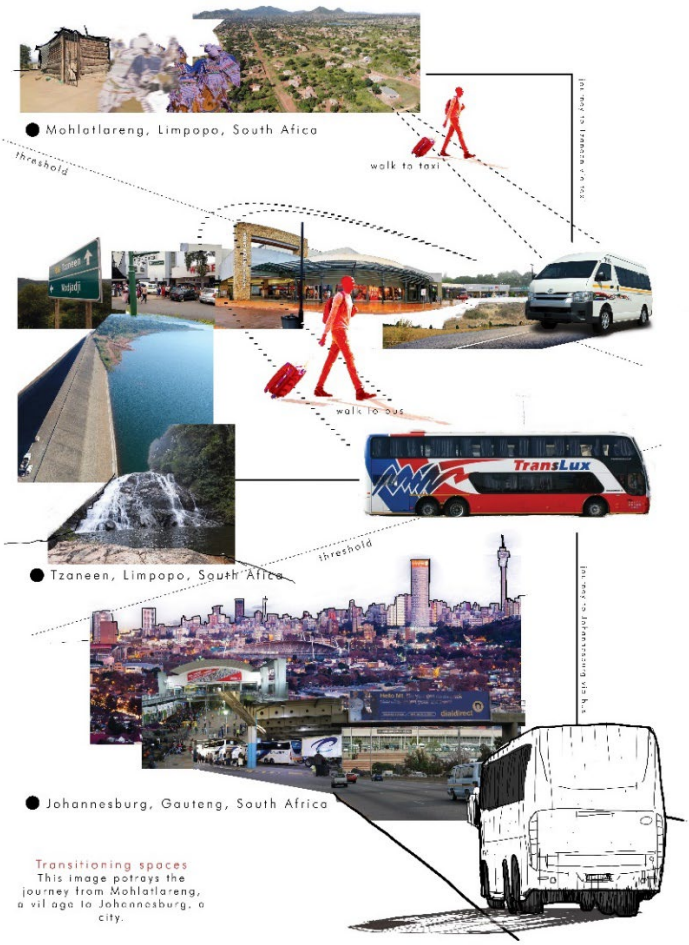

Figure 1: Self as Transition. A Selfie Studio Project by Pitsane Makgopa,2022.

Although not directly related to space, this brief prompted the students to engage the self to their origins, the self as a scale and as a model. The Selfie Studio allowed the students to describe their interests and how they see themselves through drawings, text, and videos. Some major ideas that resulted from this brief were: being in-between or an intermediary: being situated somewhere between two extremes or categories; versatility: being able to adapt or be adapted to many functions or activities; ephemeral: things being transitory and existing only briefly. These definitions brought awareness, agency, and insight of the self and how it could either be maintained or controlled throughout the year to aid the production of architecture. The outcome of the brief can be summarise in four key points, namely: cultural sensitivity, storytelling through architecture, adaptability and resilience.

Under cultural sensitivity, architecture is deeply intertwined with culture and society. Personal experiences help students better understand cultural nuances and incorporate them into their designs. They are designed with cultural sensitivity to foster more contextually relevant spaces and be respectful of the local community. Storytelling through architecture is where personal narratives and experiences are woven into the architecture to create a narrative that transcends the physical space. Architecture becomes a storytelling medium that connect people to the history of the designed environment, its purpose, and its essence.

Adapting to different circumstances and having the resilience to overcome challenges are often central to lived experiences.

In architecture, this resilience can be valuable in responding to changing project requirements and unforeseen obstacles in the design process. Encouraging the students to bring their lived experiences into the studio enhanced the creative process. It resulted in more meaningful, user-empathetic architectural designs and a culturally sensitive environment that assisted the teaching team in understanding the students.

ANTHOLOGY (PLAY)

The emergence of the theatre as an enclosed architectural form in the sixteenth century coincided with the codification of new perspective laws in art and the political emergence of the bourgeois city-state. (Graham, 1983). For the first time, architecture froze the positions and seating arrangements of spectators viewing the dramatic spectacle into an ordinary perspective that reflects visual coherence and a new political hierarchy (1983pg170). Places and times created a self-contained narrative. Scenes changed, but the spectators remained in a fixed position, passively experiencing the "ideal" one-point perspective illusion created by the play (1983pg170). Drawing from Dan Graham's *Theatre, Cinema, and Power* (year), the studio's next exploration delved into what it means if theatrical settings that created a self-contained narrative could be expanded through play to immerse spectators in a visually cohesive and controlled narrative and perspective. This frame (the brief) explores how we can derive architecture through theatre as a tool. It asked the students to draw from their Selfie Studio work: In each of your selfies are personal stories, stories of identity, culture, place, and time. When put together, these individual stories create narratives portrayed in theatre and cinema. In cinema, what is real and what is imagined is never straightforward. Reality is always seen through an imaginary frame – your perspective.

The students were divided into four groups and tasked to create a single story that connected their individual stories. The presentation of this singular story were to be expressed through architectural drawings and models and the students were challenged to explore different modes of representation. The project below was titled *Who Am I?* and used architectural representations to tell a story of the self, its emotions, and how it was affected by space.

Figure 2: WHO AM I? A group project by Pitsane Makgopa, Kyle Kallides, Robin Swift, 2022.

Who am I? What am I? Where am I? These questions began to frame the project as one that looks at ourselves, our emotions, and how space can

affect them. The students explored how colour informed certain perceptions of space and that many stories are told visually. As such, architectural model-making, as a visual medium, can be used to tell stories through time and place. They investigated the "self" through theatre and interactive media. The narratives were controlled by the audience, where the audience became the play's protagonist and effectively chose their fate. The architecture of the set plays a significant role in containing and framing the story being told. The play was experienced through a model and digital interactive media. In creating a new narrative and perspective through the multiple narratives told in the Selfie Studio, students got to know each other and how their unique characteristics came together.

WHAT IF? EXPLORING THE CITY AND ARCHITECTURAL THEMES THROUGH THE LENS OF FILM.

Professor Wendy Everett, from the University of Bath, put forward the concept of the 'what if' narrative (Everett 2004, as sited in Abdel-Ghani, 2022), referring to the notion of connectivity and chance as the primary devices for storytelling. What happens spontaneously becomes much more powerful and significant than a pre-planned action. (2022pg191). The next pedagogical experiment stage explored the notion of What if? in two ways, firstly through a two days' workshop, *what if?* The architecture of Spontaneity with Taher Abdel-Ghani from New Giza University in a brief that engaged the student to explore the intertwined physical and non-physical narratives of urban spaces through films. Reimagine the city of Johannesburg through filmmaking without preparing a script or pre-deciding the sequence of photographs. Each student was task to create a 3-5mins film using any theme. The main themes that surfaced and were discussed in the workshop were romance, manipulation, and imperfection. In the film Love, Jozi which explored the theme of romance, the camera intentionally maintains a steady gaze, focusing downward to emphasize a sense of entanglement. The deliberate cinematography connects with the theme of romance, portraying the city from a distance

or through external perspectives, amplifying a profound yearning for intimate connection.

Figure 3: LOVE, JOZI. A project by Kaalid Dangor, 2022.

The second part of the experiment of the What if? narrative was about the development of their architectural themes for design projects. They were to analyse films with multiple storylines and map these stories on an urban space's abstract and material construction. The students were asked to pick three films with different genres from a list. Based on their chosen films, Johannesburg as a prompt site, and their interest, we asked: What if Johannesburg were to be reimagined? What if their interest in the film is just about light, sound, movement, sequencing, framing, directing, or social injustice? What is their story? What will be your architectural theme and major design project for the year?

Unlike traditional briefs with predetermined architectural themes, this brief set out to challenge students to develop a theme for their major design project from a non-architectural discipline. This method aimed to stimulate the students' creativity by tasking them to draw inspiration from diverse sources. It promoted more dynamic and innovative approaches to architectural design. This exercise prompted several students to come up with exciting themes. An example of one of the themes that might have never been discussed without this experiment was *Ornament is Prime: What if romance is the primary role of architecture?*

Figure 3: Ornament is Prime. The Major Design Project of Khaalid Dangor, 2022.

The student began to employ surrealism to convey that logic plays no role in love. The student explored this notion of love further by questioning why specific architectural aesthetics lack appeal. Why do some kinds of architecture inspire people and others fade from notice? He stated that design warrants notice! If all we value is an inherent function, then what

is the purpose of colour, or beauty? Something being bland is worse than it being ugly.

Idea of making a film with no pre-planned script allow students to be more instinctive, allowing them to trust process as way of making. As a result, it created a diverse range of representation of the city in a cinematic way. It also became a reflective process, as students constantly questioned what if? what if there was a script? What else could have been captured. Instinctive design often involves making quick decisions based on intuition and gut feelings. This skill is valuable in the fast-paced and dynamic field of architecture, where deadlines are common, and the ability to make informed decisions swiftly is crucial. It also allowed us as studio teachers to understand how the students embrace ambiguity, how adaptable they are, and how to work with them in developing and luck thereof.

CONCLUSION

The experience gained from stepping outside the existing architectural frame allowed us to engage more deeply with the students, understand who they were and their cultural formation, and allowed them to explore what resonated with them. This presented a pedagogical shift from traditional architectural studios that wrote briefs with preconceived outcomes, processes, and outputs for students to demonstrate their competency in conventional architectural production. The interdisciplinary approach to design teaching and research by Unit 20 encourages students and staff to develop an appreciation for the expansive evolution of the architectural profession. Architecture does not exist in isolation; therefore, we believe that exposing students to interdisciplinary education such as film, sociology, psychology, and more would broaden their perspective and help them understand the interconnectedness of different disciplines and how they can collaborate to create more comprehensive and practical designs.

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BUILDINGS AS TEACHERS: ASSESSING THE IMPACT OF ARCHITECTURE AND DESIGN SCHOOL BUILDINGS IN PEDAGOGICAL AGENDAS, PROCESSES, AND OUTCOMES

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KEYWORDS

Architectural and Design Pedagogies, Design Studio, Architecture and Design School

This research examines the role of the school of architecture building as a learning setting in the education of architects and designers. For educators and learners in architecture and design, their immediate learning environment can become a source of knowledge by demonstrating the implementation of theories and technologies. However, the building's physical environment and influence on education are often overlooked (Nasar et al., 2007). Beyond curricular programs,

architecture and design school buildings are not just neutral containers of activities but also relevant components of the pedagogical experience by accommodating learning environments and providing direct evidence for multiple subject topics.

When considering the influence of the building on education, several lines of inquiry can be opened. There are questions about building performance, including acoustic control, thermal comfort, and wayfinding, but these are not exclusive to architecture schools. Beyond these aspects, it seems necessary to understand the relationship between the building and the pedagogical agenda of the school. Does the building facilitate the pedagogical mission? Or, in the opposite direction, is the teaching approach influenced by the physical environment? How do faculty and students engage with it as an example of implementing design philosophies, agendas, and technologies?

A theoretical framework to address these questions can cover topics with diverse scopes by considering the building's tangible and intangible influences on pedagogical agendas and by analyzing the studio space as a distinctive component of design education. Brazilian architect Angelo Bucci explains how the architectural features of the School of Architecture of the University of Sao Paulo, designed by João Vilanova Artigas in the 1960s, contributed to the academic experience. According to Bucci (2015), "The building was another professor who spoke to you, sometimes emphatically in a loud and clear voice, sometimes repeating patiently those lessons inscribed in our minds." Through materiality and spatial sequence, Vilanova's building exemplifies a design philosophy that influences teaching approaches, the production of students, and the practice of graduates. At another scale and as a unique environment at the center of design and architecture education (Koch et al., 2002), the studio space can enhance diverse learning modes, including digital and analog practices. Students spend most of their time in the design studio for instruction and the production of drawings and models, often balancing individual and collective tasks. A multiscalar analysis will consider the

building and the design studio to examine the impact of the physical environment on education agendas and processes.

The case study of this research is the building of the American University of Sharjah's College of Architecture Art and Design (CAAD), located in the city of Sharjah, United Arab Emirates. The building houses architecture and interior design programs with a studio culture similar to many other schools implementing a National Architecture Accrediting Board (NAAB) curriculum. The CAAD building is divided into two areas, both organized around a multistory atrium with a dome. Foundations, architecture, and most Interior design students are located in one of these areas with three stories and specific year-level studios on each side in an open-plan configuration (figure 1). In the other area, Art and Design Studios and other teaching areas surround an atrium that is also the main entrance hall of the building.

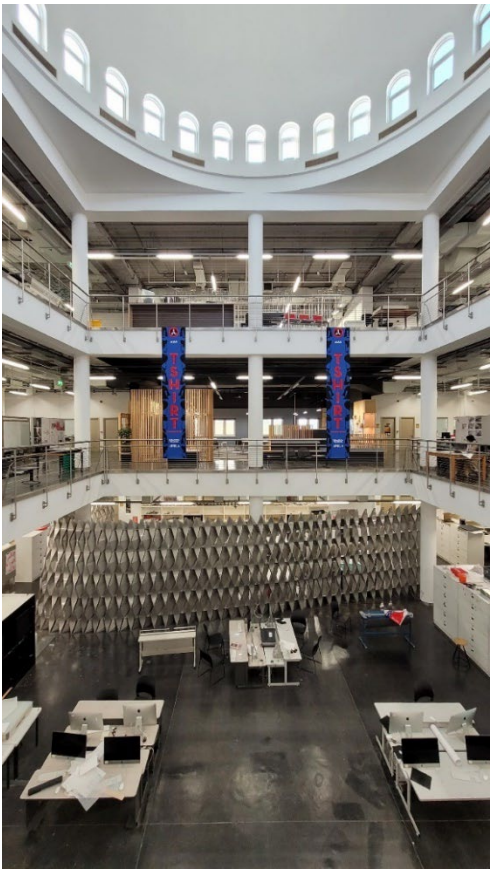

Figure 3. Atrium of the CAAD building (Photo by Author).

Foundation studios are located on the lower level, and architecture and interior design studios share spaces on the upper levels. Open floorplans and the multistory atrium enhance acoustic and visual transparency.

Through interviews and focus groups that included students, administrative personnel, and faculty, this research engages the users' experiences and attempts to characterize how the community perceives

the role of the building in the learning process by focusing on the *fit* between pedagogical approaches and the building's physical environment, the way the building provides practical guidance about design issues, and how it responds to its geographical and cultural context. In addition to interviews, the research collected insights from existing surveys about the studio culture distributed yearly to students.

As a teaching device, the CAAD building provides essential evidence of building and construction practices, also working as a *ruler* when sizing questions appear during desk crits and reviews. As an example of Robert Venturi's and Denise Scott Brown's *decorated shed* (Venturi et al., 1966), the exterior blends with the traditional Islamic architectural motifs of other buildings on campus, contrasting with a more neutral interior space with contemporary features. However, the research findings define its primary influence on teaching pedagogies through facilitating curriculum coordination and supporting the school's design-build initiative. From this perspective, there is a *fit* between the building environment and the pedagogical agenda. The main concerns referred to building performance aspects and indicated the need for non-teaching spaces to promote the integration and well-being of community members.

Findings highlighted the challenges and opportunities linked to the building's open interior environment and its impact on many aspects of the learning experience. From a negative viewpoint, the lack of acoustic and visual control affects experiences across all user groups. The open environment also challenges students when balancing individual and collective activities or defining working and social moments. However, the lack of physical bounds is also considered an asset that enhances collaboration and facilitates design pedagogies. Despite the noisy environment, the current conditions promote cooperation and coordination of academic agendas, allowing students and faculty a higher level of communication across sections and year-level studios and overcoming administrative barriers. One of the fundamental departmental goals is for faculty to teach core design studios (second,

third, and fourth years) in tight coordination, sharing narratives, programs, sites, and deliverables. The building's existing open physical layout reflects this purpose, enhancing the *fit* with its pedagogical mission.

In addition to teaching spaces, users agree that the building should facilitate collective encounters outside required course times to build a community, with areas for informal encounters and relaxation. The open studio environment facilitates social encounters and informal interactions, but users agree that these events should happen in dedicated spaces. Furthermore, users seek additional opportunities to exhibit in-progress and completed creative work and design studio outcomes. Another aspiration is a more significant interdisciplinary interaction between the different disciplinary majors in the building.

Finally, the building facilitates the school's pedagogical agenda by promoting and accommodating opportunities for design-build projects. The rather generic layout of the building and its monochromatic materiality (an issue described by some students as "boring") provides a neutral background for developing carefully integrated faculty-led and student-built projects. Since 2013, nine projects have been developed inside the building, providing additional amenities and enhancing the qualities of otherwise generic spaces. These projects' range of scope and the awards collected have contributed to defining an academic identity.

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RE-APPROXIMATING RURALITY: THE ULTIMATE BLIND SPOT OF A HYBRID FUEL-CORE CITY

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KEYWORDS

blind-spot, rural,city,core,hybrid,virtual,eco

1. INTRODUCTION:

The contemporary city is an incognito in a threatened contemporary world. The city that will come in a world that will come is a huge *blind spot*.

How can the contemporary city be characterized? What are the most serious risks it will face? How will it continue to grow? What role will artificial intelligence play? What are the typological implications of the physical and social hyper-mobility of so-called “digital nomads”? And finally, how will the boundaries between the built-up city and the countryside be defined?

The 20th century brought a series of remarkable revolutions to architecture, which were initially set in the Western world but ended having a global impact. Driven by the Modern Movement, these revolutions followed one another at a frenetic pace and speed. What we call the Modern City was a continuous (and hasty) laboratory - from the functionalist and zoned city envisaged in the Athens Charter, to the

horizontal city of Diotallevi, Marescotti and Pagano, or to the city of sectors in Chandigarh continuing through the city of superblocks in Brasilia, the experiments of the English New Towns, the linear cities and satellite towns, the models of the city structured on the distinctive elements of roads, neighborhoods, intersections and landmarks by Kevin Lynch, or even through the later proposals by Team X and its most assiduous and important members Jaap Bakema, Georges Candilis, Aldo van Eyck, Giancarlo De Carlo, Alison and Peter Smithson and Shadrach Woods. There is, however, a common factor in these different models (and in others) that conditioned them: the continuous and accelerated growth of cities. As a result, the city no longer had any discernible boundaries and the differences between rural and urban areas were definitively blurred.

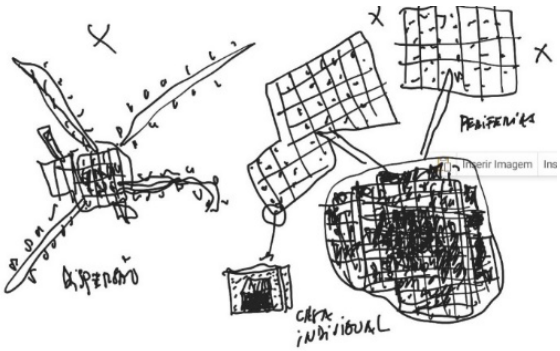

Fig.1- Urban suburbs

Comparing the 20th century with our 21st century, we can say that in these first two decades of the 21st century, the changes have been even faster and, in some ways, more dramatic. Why dramatic? - Because in this case we have reached a point where the planet is under threat.

Confronted with the climate crisis we're facing today, what answers can architecture and architects provide? Certainly, by adopting and

developing new construction technologies and reducing the carbon footprint, by implementing fewer polluting technologies and materials, but also, and above all, by resorting, once again, to innovation. In this context, what will be the dynamics of rural areas and agricultural areas needed to feed a growing and more demanding population? This is the aspect we are interested in analyzing in more depth later ahead in this paper.

2. THE URBAN SPRAWL AND THE "CORE CITY"

The "Core City" was a concept that we launched in 2010 in "A cidade Núcleo-Manifesto para uma cidade concentrada" (Univ. Lusíada editora, Lisboa,2010) which proclaimed the need to divide the city into "nuclei", with new centralities, promoting the urban concentration.

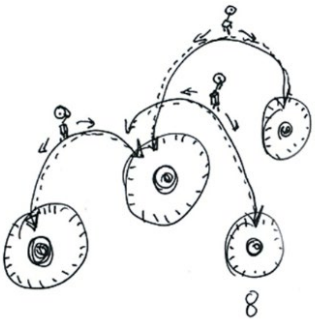

Fig.2-The Core City was divided into different "nuclei", with different centralities, connected by communication technologies

A six-point manifesto took up the essential proposals of that "Core City". It was a reaction to what was then considered the greatest problem of the contemporary city and the greatest global challenge in terms of the organization of urban and peri-urban spaces: the urban sprawl.

This phenomenon was associated with various causes, including poor land use planning - but above all with the exponential increase in the world's population and the growing concentration of populations in urban areas.

The "Core City" proclaimed urban concentration and an unlimited dispersion of information networks capable of connecting people and things on a global scale.

In this process of concentration, (which will not be the *"building rhizome"* proposed by Ignasi Solà-Morales), there was a positive consequence, at least in theory: the preservation and reuse of soil for agriculture. In a world where the population is growing exponentially, how can we feed it?

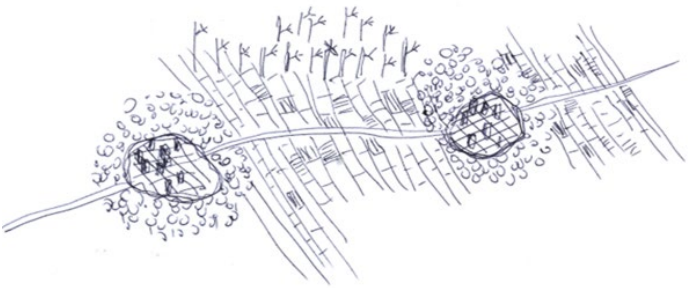

Fig.3-The Core City

This concentrated city model, the "Core City", combined urban construction areas with green areas, which simply included forests, green parks, and agricultural areas. In an integrated interdependent structure, but ecologically and socially valued.

3. THE "HYBRID CITY"

The world has changed. A world that is currently facing clear climate change caused by an accelerated environmental degradation. And cities have changed too... Physically, today's city continues to grow and continues to generate empty, discontinuous spaces - spaces that, in some cases, are nothing more than rural spaces absorbed by the rapid growth of the city's urban limits. We know that rural space cannot disappear – they are necessary to feed a growing world population, especially in the least developed part of the world, but it is a *blind spot* that we do not know how it will behave in the (near) future.

Functionally, today's city is not limited to the classic functions of housing, services, commerce, industry, leisure, and circulation. Today's city integrates other functional areas: sewage treatment plants, photovoltaic plants, wind farms, waste treatment and recycling plants, urban gardens, composting areas, cisterns, and ponds for water reserves, etc. And in many cases, some of these areas are within urban perimeters, occupying empty spaces. These are not peripheral areas that are increasingly vital to the cycles of urban life - they are Heterotopias - innovative and complex places (blind spots?) largely configuring a city we call "hybrid".

In this context, a new urbanism must emerge. The "Hybrid City", a concept we are now developing, " (in "A Cidade Núcleo-Manifesto para uma cidade híbrida/The Core City-Manifesto for a Hybrid City", Victor Neves. Univ Lusíada Editora, Lisbon, 2023) must organize the urban structure (integrating various functional valences), but it will also have to develop, organize, and regroup the countryside, probably reintegrating it into the urban space with new valences that must respond to environmental and climate change. Areas for producing clean energy, recycling areas, reserve areas (for energy and water) and agricultural areas.

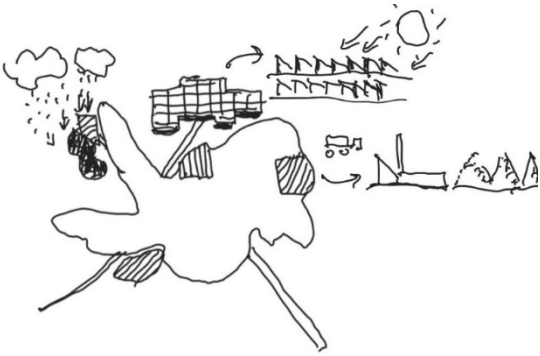

Fig.4- The Hybrid City regroups the countryside, reintegrating it into the urban space with new valences.

The "Hybrid City is, then, a city in continuous movement and a city where there is a continuous interaction between the perceived city, the city continuously conceived through design, the lived city and... the unavoidable and global virtual world. This is the city that can be thought of, designed, and managed by artificial intelligence, however much it may annoy some urban planning purists.

The reality we have today, backed up by the experiences that architects, universities, companies, and research laboratories have developed and provided some clues about the need of developing concentrated, but hybrid, territorial planning, based on a circular, regenerative economy, on urban design and not on numbers. This process is still unknown. A blind spot.

4. THE EXPERIENCES IN ACADEMIC ENVIRONMENT

At the Faculty of Architecture and Arts of the Lusíada University in Lisbon, in conjunction with our digital platform *arq@challenge*

(https://www.arqchallenge.pt/) we have developed some experiments about the hybrid city and the relationship between the boundaries of city and the countryside. On this matter we have used a gridded urban matrix, which we called "virtual city", a model of self-referential architecture and city, in the tradition of the nine-square-grid that John Hejduk developed with his students. It has served as a toolbox for experimentation in a city that was already transhistorical and trans- contextual, but which did not yet know how to deal with rural spaces, agricultural spaces, forests...

Two examples of that:

1-The projects developed in the Project II-4th year course. Firstly, in 2014-16, the students were asked to design a NON-SPRAWL CITY, a dismantled city, an almost utopian mobile city that was set up in the urban voids of the existing city.

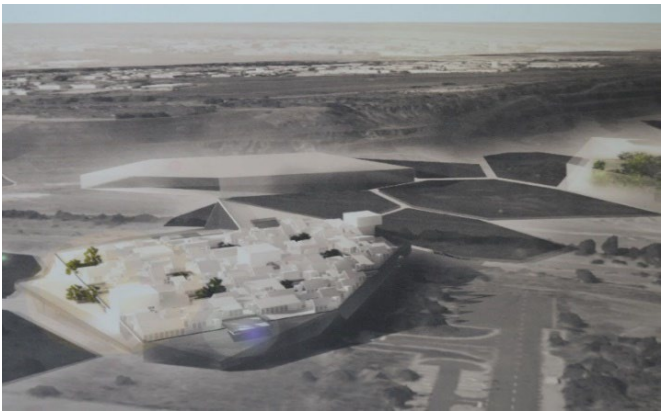

Fig.5- NON-Sprawl City - Project II course, 2015-16, Student: Andreia Fortunati

2-Later, in the year 2020-21, the students were asked to meditate on the dynamics of urban forms, in particular the concepts of boundaries and the relationship between town and countryside through innovation. An integrated vision of a sustainable CITY concept was proposed, which includes contemporary technological components and the values of history and ecology.

Fig.6- NON-Sprawl City -Project II course, 2015-16,Student: Carolina Joaquim

Fig.7-NON-Sprawl City -Project II course, 2015-16,Student:Ian Rodrigues

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(UN)SETTLED LANDSCAPES: TOWARDS A CAREFUL PHENOMENOLOGY OF SLOWNESS

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KEYWORDS

Landscape architecture, cultivation, climate adaptation, phenomenology

The massive occlusion and resulting flooding that occurred during July 2021 hit large (urban) areas in Germany, Belgium and The Netherlands. It was a clear sign of a changing climatological pattern that includes increasingly frequent extreme weather events. Even while all the data and available knowledge from scientific research should have led to the conclusion that such events were on the horizon, one problem has been building up below everyone's feet: the integral biophysical system of our cultivated landscape has eroded to a degree that has gone unnoticed.

What appeared as a stable, settled living environment slowly metamorphosed into an unsettled, fragile situation. The slow and distributed process of metamorphosis represents one of the largest blind spots that communities and experts fail to grasp in its fullness. Metamorphosis is always a process, but the shifts it induces tend to occur suddenly, setting effects in motion that appear unsettling because the run-up towards them seemed so mundane, incremental or insignificant.

A landscape's behaviour depends on the dynamics of systems that reciprocally shape it. What happens *over there* will soon be *here*. Many of these processes take the form of a drift and build-up: acidity levels, weather events, periods of drought, eutrophication all are threshold phenomena.

Human cognition is ill-equipped to deal with what Timothy Morton has called "hyperobjects". Such hyperobjects are related sets of events that are massively distributed in time and space. For instance, the deposited coal layers form a single, massive hyperobject, stretching back to the massive Devonian extinction event. Climate change is also a hyperobject, distributed across such temporal and spatial magnitudes that we often notice it only in the small things. Our (collective) cognition has not found the practices yet to come fully to grips with it, and so we oscillate between technological optimism and climate alarmism. In short, we lack the *accurate* type of ecological consciousness – despite alarming reports left and right.

The necessary cognitive change must mirror the gradual unsettling of our landscapes. One way to effectuate this is to adapt our design practices by slowing them down. Instead of just "problem solving" or "changing towards preferred situations", we require a new ecological consciousness or pedagogy that focuses on entangling with natural systems, embracing the view that a landscape is not designed but developed. The landscape (and likewise the city) are not fixed entities, but are caught up in ongoing processes, while also initiating new processes themselves. The scale and impact of these processes often eludes us.

To reverse our priorities, we must attentively slow down. Only when we slow down can we pay attention to landscape processes and phenomena that gradually unfold, whether it concerns water run-off, erosion or the development of habitats. This means that we have to step out of the prevailing logistic mindset. Often, when we plan, we emphasize efficiency, rationalization and predictability. But if we pay attention, we see that

every site offers possibilities to direct rather than ignore ongoing natural and artificial processes and phenomena. Necessarily, these processes and phenomena unfold in time and place – they transcend the confines of the site. Indeed, the idea of a site is an arbitrary cut-out of a larger complex of ecological, cultural social and geological processes. It introduces a division that is organizational and imaginary rather than real.

To slow down means to carefully re-evaluate our role in how these processes and phenomena unfold. It amounts to developing and nurturing a new ecological consciousness that steps away from the abstraction afforded by facts and numbers and seeks to act in the here and now – the "glocal" appears as a new imperative and range of operation.

A careful phenomenology of slowness counteracts the modern obsession with speed. This amounts to directing and curating processes of sedimentation and erosion, the dynamics of water run-off, the slow development of habitats and small landscape elements, succession cycles as well as the fact that landscapes suffer from "wear and tear" through usage. A careful phenomenology is full of care. It recognizes the reciprocity between the cultural and the natural domains, which intersect in the landscape.

Landscapes – by definition – are cultural landscapes. They are the sum total of processes of exploitation, cooperation and extraction. In all these cases, the result is a complicated interplay between human agents, animal population, and habitats. But cultivation implies not just exploitation, but the imposition of a regime that can be extended in the future.

Through careful analysis, we can utilize processes of water retention, succession and sedimentation. What is required is a view towards a new homeostatic balance – a different form of inhabiting the landscape. This means that problems must be reframed as processes, and that externalizing costs can no longer be a viable option.

Landscape architecture and urbanism are processual disciplines that must mimic the processes they influence. This means letting go from our

focus on objects, finished products or hermetically sealed sites, and embracing the ideas of curating change and intermittent stability.

THE BLIND SPOT: WOMEN ARCHITECTS IN THE PRACTICE OF PLANNING IN THE SECOND HALF OF THE 20TH CENTURY

JONAS BÜCHEL

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KEYWORDS

Blindspot / Women Architecture / Astra Zariņa / Childhood in Architecture

An imaginary meeting with Astra Zariņa in the architectural office of my childhood.

Why this article?

Once upon a time … A young boy's slightly too vivid emotions.

Yes. A confession. I'm traumatised. I'm a victim, I'm an architect's child. I've spent my childhood in an architectural office, under the drawing tables and in the jungle of the waste-paper baskets. I was rather a design project than a small human being and I knew the various colours and

abbreviations of the zoning territories earlier than I could read, write or possibly even speak.

Black and white, graphical inscriptions deeply engraved in my brain, pictures of an office in a proud flourishing transparent paper chaos over day, turning into a tiny little Rocky Horror Picture Show during the night – how did I spend the nights of childhood? Shortly before the turn of the day we were rushing to the next post office opened with a night service, bribing the postal worker to falsify the stamp's date while still finishing the last drawings or colourings on site.

It was an adventure, sometimes it was a bit harsh but all in all you had the opportunity to learn a profession without having even visited a school – you just needed to open your eyes, ears and, yes, your mouth: Cooking, eating, celebrating, discussing, struggling (screaming and pouting), and loving, sometimes on, sometimes under our round table (for sure, what else than a round table).

A clearly and unambiguously female-led architectural office in a massively patriarchal architectural society of the (supposedly modernizing) West German state of the 60s and 70s. Telephone call, a 12 year at service – I had often sat on the telephone, I liked the telephone service and was proud of my mother – I answered: "Architekturbüro Büchel, Jonas Büchel, good day". Answer: "Hello. Can I please speak to the architect (German language male version)?" Me: "One moment please, I'm connecting with my mother." Answer: "Can I speak to your father please?" Me: "I'll put you through to the head (German language female version) of the office". Answer: "No thanks, I'll call again later."

Two short and perhaps very personalized life developments. Two people with a touch of parallelism.

Astra Zariņa, born in Rīga in 1929 and subsequently fleeing her home country due to the war. First studied architecture in Karlsruhe from 1947 to 1949, including with Egon Eiermann, further studies in Washington, graduating from MIT. Practiced as a professor and architectural history researcher in the USA and Italy, and together with her partner as a globally

active, independent architect and planner. Loved and adored Italy and was frustrated with Germany and its patriarchal architects. Obsessed cook. Died at the age of 79.

Brigitte Büchel, born in Kolberg / Kołobrzeg in 1933 and subsequently fled her home country due to the war. Studied architecture in Darmstadt from 1953 to 1958, among others with Ernst Neufert, Heinrich Bartmann and Max Guther (all fellow colleagues of Egon Eiermann). Lived and worked in Finland for two years, among others with Aarne Ervi and Alvar Aalto. She worked as a freelance architect and planner together with her partner for 45 years in what she described as one of the first female-run planning offices in West Germany. Loved and admired Finland, Italy and a certain American architect with Latvian roots and was frustrated with Germany and its patriarchal architects. Obsessed cook. Died at the age of 79.

The memory of being together, cooking and experiencing the creation of food. Something Astra and Brigitte have in common.

Brigitte Büchel, approx. 1974: “You want to work for me, can you cook? – No, well, then we have to change that first."

Rudolfs Dainis Šmits, 2023: “Jonas, do you know that Astra was checking upon her students cooking abilities?” Jonas Büchel: “My mother was following her example and requested an interest in cooking from her employees”.

What does cooking mean, the power of creation that goes through the stomach? Especially with reference to the degrading role of women in the 20th century (and unfortunately still today) as a serving and satisfying worker in the household. For Astra and Brigitte, they were expressive moments of relief from the pressure in the office with the emphasis on the joy of creating a kind of primordial soup, a creative balance in the daily creative process. And exactly an exhilaration of joy and desire for the product. Brigitte always insisted that everyone was involved in the cooking process and that others, both men and women, cooks, were creative, and recognized and learned their independence. This is how the

woman who had to cook (and serve) like a slave for a large family became an emancipated force who used cooking as a gender-inclusive moment and thereby changed everyone around her. “First we cook!”

The concern that should explain itself. An architectural history defined by men, which repeatedly makes quasi-exotic attempts to explore or occasionally represent female architects. But as soon as we delve into the architectural history of the 20th century, we are astonished to realize that not only are we missing source material, we are missing a whole strand of architectural history, the designing and planning women who set out about 100 years ago to bring the world order of construction into disorder and to further develop it constructively.

In a country where Astra Zariņa was born, a country that she carried with joy and pride in her heart until the end of her life, it should be an honor for all of us – women and men, younger and older, architects, planners and people of every other profession, academics and non-academics – to initiate in-depth and detailed, long-term research that tries with all honesty to understand the complexity of the history of building, designing and planning by/through/with female architects.

Let’s work together on bringing light into the shadows of architectural history and let’s support, foster and promote young architects of all (!) genders in their search for an independent, fulfilling and successful working life.

DECOMMISSIONED PLACES: AT THE END OF THE FIRST NUCLEAR AGE

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KEYWORDS

Industrial design, urban, landscape design, revitalization

Understanding the Ignalina Nuclear Power Plant (INPP) and the intricate challenges it poses necessitates situating its historical context within the broader narrative of nuclear power. Emerging in the aftermath of World War II and amidst the geopolitical tensions of the Cold War, nuclear energy emerged as a revolutionary force in the mid-20th century, promising to redefine industries and reshape global geopolitics. As nations sought to harness the immense power locked within the atom, nuclear power plants proliferated worldwide, their towering cooling towers and gleaming reactors emblematic of humanity's pursuit of progress and prosperity.

However, alongside the promises of nuclear energy came profound anxieties and fears. Concerns about the potential for catastrophic nuclear accidents and the proliferation of nuclear weapons cast a shadow over the technology's development. The Chernobyl disaster of 1986 stands as a

chilling testament to these risks, shaking public confidence in nuclear energy and precipitating a reevaluation of its role in the global energy landscape. In the aftermath of Chernobyl, a wave of decommissioning swept across the globe, as governments and communities grappled with the legacy of abandoned plants and contaminated landscapes.

The INPP, located in Lithuania, embodies this broader narrative. While it played a pivotal role in supplying electricity for decades, safety concerns and shifting attitudes towards nuclear energy ultimately led to its decommissioning. The challenges posed by the decommissioning process are multifaceted, spanning technical, environmental, economic, and social dimensions. Safely dismantling the plant, managing radioactive waste, and mitigating environmental impacts are among the formidable hurdles that must be overcome.

In confronting these challenges, the story of the INPP underscores the broader tensions and trade-offs inherent in the transition to a post-nuclear era. It emphasizes the imperative for proactive, forward-thinking approaches to energy policy and environmental stewardship, as well as the importance of engaging with local communities and stakeholders to ensure a fair and equitable transition. Ultimately, the fate of the INPP serves as a poignant reminder of the complex legacy of nuclear power and the ongoing quest for a more sustainable and resilient energy future.

Navigating the decommissioning process of the INPP requires careful consideration of its historical, technical, and socio-economic dimensions. From addressing safety concerns and managing radioactive materials to mitigating environmental impacts and supporting local communities, a comprehensive approach is essential to ensure a successful transition. By learning from past experiences and leveraging innovative solutions, stakeholders can navigate the complexities of the decommissioning process and pave the way for a more sustainable energy future.

Constructed during the waning years of the Soviet Union, the Ignalina Nuclear Power Plant (INPP) stood as a testament to the era's grandiose ambitions and industrial prowess. Nestled amidst the serene landscapes

of northeastern Lithuania, the plant was envisioned as a showcase of Soviet technological might and centralized planning. Boasting two RBMK-1500 reactors, each capable of generating a staggering 1.5 gigawatts of electricity, the INPP ranked among the largest nuclear facilities globally, a towering symbol of engineering excellence.

However, from its inception, the INPP grappled with controversy and scrutiny. Modeled after the ill-fated Chernobyl plant, its RBMK reactors were marred by design flaws and safety concerns, casting doubt on the plant's operational integrity. In 1999, Lithuania's path to European Union membership necessitated the commitment to shutter the INPP, driven by concerns over safety compliance with EU regulations. Thus, commenced the intricate and protracted process of decommissioning, marked by technical complexities and geopolitical intricacies.

The closure of the INPP marked the end of an era, symbolizing the transition away from Soviet-era energy paradigms towards a more modern, sustainable future. Yet, it also underscored the enduring legacy of nuclear power, with its decommissioning serving as a poignant reminder of the inherent challenges and responsibilities associated with harnessing atomic energy. As Lithuania navigates the complexities of decommissioning and embraces alternative energy sources, the INPP's legacy will endure as a testament to the complexities of nuclear energy and the imperatives of safety and environmental stewardship.

As the Ignalina Nuclear Power Plant (INPP) stands at the precipice of a transformative juncture, the fate of this monumental relic of the Soviet era hangs in the balance. While some advocate for its swift demolition and removal, relegating it to the annals of history, others envision a different path forward—a path of adaptive reuse and revitalization, where the INPP undergoes a metamorphosis from a relic of the past to a symbol of the future.

This research embarks on a journey to explore this visionary path, charting a course for the adaptive reuse and revitalization of the INPP facilities and envisioning a bold new future for this iconic site. Central to

this endeavor is the concept of adaptive reuse, a strategy that advocates repurposing existing infrastructure for novel uses rather than resorting to demolition and reconstruction. Embracing adaptive reuse offers many advantages, ranging from cost-effectiveness to sustainability, and has been successful in breathing new life into industrial sites across the globe.

By embracing the principles of adaptive reuse, the INPP has the potential to undergo a remarkable transformation, shedding its former identity as a nuclear power plant and embracing a new role as a hub of innovation, sustainability, and community vitality. Through imaginative design and strategic planning, the site can be reimagined to accommodate a diverse array of uses, from research and education facilities to cultural and recreational amenities, breathing new life into the landscape and ushering in a vibrant new chapter in its storied history. The Institute of Nuclear and Electrical Physics represents the cornerstone of the visionary concept of adaptive reuse envisioned for the INPP facilities. This institute stands as a testament to the plant's rich technological legacy, poised to propel the fields of nuclear science and electrical engineering into the future. Equipped with cutting-edge laboratories, educational resources, and collaborative environments, the institute will serve as a magnet for top-tier talent from across the globe, fostering interdisciplinary collaboration and pushing the boundaries of scientific inquiry. Through its innovative research initiatives and educational programs, the institute will not only advance our understanding of nuclear and electrical phenomena but also cultivate a new generation of leaders and innovators poised to address the pressing challenges of the 21st century.

Realizing the ambitious vision of repurposing the INPP into the Institute of Nuclear and Electrical Physics presents a myriad of challenges, foremost among them being the evaluation of structural integrity and safety considerations. Decades of operation and subsequent decommissioning have inevitably left their mark on the INPP's infrastructure, raising concerns about its ability to support new functions. Structural degradation, corrosion, and potential radioactive

contamination are just a few of the complex issues that must be meticulously addressed through rigorous analysis and strategic planning. Ensuring the safety of future occupants and the surrounding environment is paramount, necessitating comprehensive assessments of the site's condition and the implementation of robust remediation measures where necessary. Only through thorough evaluation and meticulous attention to safety considerations can the INPP be successfully transformed into a beacon of scientific innovation and progress, serving as a testament to the triumphs of adaptive reuse in the face of formidable challenges.

To tackle the multifaceted challenges ahead, this research puts forth a comprehensive conceptual framework for the adaptive reuse of the INPP facilities, carefully balancing the imperatives of safety, sustainability, and functionality. At its heart lies a dedication to honoring the site's historical significance while embracing the demands of the modern era. This framework encompasses a spectrum of strategies and interventions, ranging from structural fortification to environmental rehabilitation, all aimed at ensuring the enduring viability of the revitalized facilities.

Beyond the technical intricacies of adaptive reuse, this study delves into the broader urban landscape surrounding the INPP. How can the rejuvenated site seamlessly integrate with the surrounding community? In what ways can it enrich the economic, social, and cultural fabric of the region? These probing questions drive the town planning aspect of the research, which envisions a future where the INPP transcends its role as a relic of the past to become a thriving nucleus of activity and innovation, breathing new life into its surroundings. Through meticulous planning and visionary foresight, the INPP has the potential to emerge not only as a symbol of resilience and adaptation but also as a catalyst for positive transformation in its broader urban context.

In conclusion, the adaptive reuse and revitalization of the Ignalina Nuclear Power Plant (INPP) represents a multifaceted endeavor that demands careful consideration of technical, environmental, and socio-economic factors. The proposed conceptual framework aims to strike a delicate

balance between preserving the site's historical significance and embracing the imperatives of safety, sustainability, and functionality.

Through structural reinforcement, environmental remediation, and innovative design interventions, the author envisions the INPP transformed into a vibrant hub of scientific research, education, and innovation. The establishment of the Institute of Nuclear and Electrical Physics within the repurposed facilities promises to catalyze groundbreaking discoveries and advancements in nuclear science and electrical engineering.

Moreover, our town planning integration efforts seek to seamlessly integrate the revitalized site into the surrounding community, fostering economic growth, social cohesion, and cultural vibrancy. By envisioning the INPP not merely as a relic of the past, but as a dynamic asset with the potential to enrich the fabric of its urban context, in the aim to harness its transformative power to create a more sustainable and resilient future for all stakeholders involved.

In navigating the challenges ahead, it is imperative that stakeholders collaborate closely, drawing upon a diverse array of expertise and perspectives to inform decision-making and implementation processes. By embracing the principles of adaptive reuse and forward-thinking urban planning, it is possible to unlock the full potential of the INPP, transforming it from a symbol of the past into a beacon of innovation and progress for generations to come.

THEOREMATIC MUSIC COMPOSITION AS A NEW WAY OF ENGAGING WITH COMMONS

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KEYWORDS

Theorematic thinking, Participatory art, Collective production, Music composition, Everyday Life

This article explores a transformative journey from simplistic urban exploration to a profound engagement with the commons through the lens of "Theorematic Music Composition." Following two residents of Rotterdam (NL), the study converts their individual imaginaries into music compositions and live performances using theorematic reasoning. The resulting communal aspect, presented to an audience intimately connected to the subjects, serves as a pivotal point for reflection

Theorematic music composition (TMC) is an innovative approach to creating music that integrates principles of mathematical theory with artistic expression. Composers engage in systematic reasoning, inspired by concepts such as theorematic thinking pioneered by Charles S. Peirce. They use diagrams and logical structures to guide their creative decisions, exploring the intersections between mathematics and music.

One of the key features of TMC is the dynamic manipulation of external representations to create musical forms. Composers actively sketch and modify diagrams or use diagrams of non-musical data, fostering collaboration and innovation in the creative process. These diagrams serve as the foundational blueprint, derived from various sources such as other works of art, data, or even existing music compositions.

You can think of the composing process as creating a design for a bathroom ceramic tile. The design of the individual tile can be quite arbitrary, choosing the right patterns matching colors. However, the next step of arranging the tiles in an order would be based on acquired data, like how much time the user spends on each tile or how much water would be touching each tile. The innovation of TMC lies in arranging these musical "tiles" in a manner that reflects the acquired data.

Ultimately, TMC results in meticulously crafted musical forms derived from a diverse range of sources, including other works of art and empirical data. Especially making way to creating communal compositions based on the audience itself.

The “Oude Westen” project can be summarized as organizing a social, participatory music project. Situated on the western edge of Rotterdam's city center, Oude Westen holds a pivotal position within the city's Urban Design Strategy 2030, a plan devised in 2007. Within this strategic framework, the municipality earmarked Oude Westen, alongside other neighborhoods, as a focal point for encouraging gentrification. In collaboration with housing corporations, the municipal objective is to invigorate the creative economy, thereby enhancing the district's value for prospective residents and visitors. Oude Westen was also a participant in the 'Rotterdamse Krachtwijken' initiative, seeking to uplift neglected neighborhoods in terms of safety, economic vitality, education, and employment prospects (Nieuwland, 2020, p. 02).

To kick off the project, Office of Metropolitan information (OMI) was asked to find two residents for the project (2021). The subjects were given a guideline to map their walking routes of their choosing and to transcribe

these routes into nodes of repeating concepts. A set of questions were asked to the subjects to clarify why these routes were chosen and what made them unique. Later, an interview was made with the subjects to cover the answers to these questions and their additional comments.

Eventually these routes contained detailed memories and experiences of the neighborhood through the eyes of two very different individuals. In "The Image of the City," (Lynch, 1960) Lynch describes urban design as a temporal art, acknowledging the dynamic nature of cities. This concept emphasizes that city design cannot rely on controlled and limited sequences like music, as the sequences within a city can vary, reverse, interrupt, and intersect. Lynch categorizes cities into paths, nodes, edges, districts, and landmarks. He also states that "we must consider not just the city as a thing in itself, but the city being perceived by its inhabitant".

But Lynch's top-down view of the city was challenged by the likes of de Certeau. As de Certeau describes (2011) ": "memory is a sort of anti-museum: it is not localizable. Fragments of it come out in legends… "Here, there used to be a bakery." "That's where old lady Dupuis used to live." It is striking here that the places people live in are like the presences of diverse absences. What can be seen designates what is no longer there: "you see, here there used to be ...," but it can no longer be seen" (p. 109)." In the interview of one of the subjects there was a similar remark about the Oude Westen: "I can always be busy with the past and the beautiful memories, but also the now and here, and with my grandchild I try to put that into perspective."

After receiving the maps from the subjects the author walked around their chosen routes, recording audio, taking photographs and making analysis for the next three weeks. Then the composing phase began with creating the diagrams for each route. Finally, musicians Giuseppe Doronzo (baritone saxophone and reeds) and Johannes Fend (double bass) performed all the pieces at OMI's location, broadcasted live online. During the performance, they followed live animated graphical notations of the compositions. The funding of the concert was covered by the "Balcony

Sessions" subsidies made possible by Fonds PodiumKunsten during the pandemic.

In conclusion, the study proposes a bottom-up construction of social imaginaries through a collage of individual imaginaries, emphasizing the author's role as a listener rather than an imposer of meaning. Focused on "Theorematic Music Composition," the research contributes to the understanding of engaging with commons by integrating individual narratives, offering insights into the development of inclusive social imaginaries through shared artistic endeavors. The article, titled "Theorematic Music Composition As A New Way of Engaging with Commons," underscores the significance of this innovative approach in fostering a deeper connection with communal spaces.

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DECISION-MAKING AS SYMBOLIC SPACE. UNDERSTANDING URBAN PRACTICE WITH BOURDIEU

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KEYWORDS

Bourdieu; decision-making; symbolic space; spatial practice; urban project.

URBAN DECISION-MAKING AND THREE DOMAINS OF SOCIETY

This article applies Bourdieu's Theory of Practice (Bourdieu, 1977) to investigate the decision-making process as a symbolic space within the context of urban practice. Urban practice, characterized by its amalgamation of social, physical, and symbolic elements, serves as a fertile ground for exploring the intricacies of decision-making. By adopting this perspective, the focus of discussions on urban decision-making shifts from operational to causal levels.

Within the process of spatial change, decision-making emerges as a pivotal 'crossroads,' where non-material phenomena are moulded to effect changes in physical space. The analysis of spatial transformations thus lies, albeit simplified, within the realm of intangible, yet potent, driving forces of human actions, juxtaposed with the tangible, countable, and observable phenomena of physical space.

To enhance analytical clarity, the conceptual framework of society from critical realism is employed. This framework delineates three societal domains – the real, the actual, and the empirical (Bhaskar, 2013). The real domain constitutes the hidden and analytically inaccessible realm of generative mechanisms, such as motivations, values, beliefs, attitudes, as well as potentialities, powers, and unrealized events. Conversely, the actual domain encompasses observable and measurable events and facts, while the empirical domain encapsulates the sensemaking and experiences of these events (Boje, 2018; Holt-Jensen, 2018).

According to Bhaskar, the real domain not only encompasses the actual and the empirical but also includes things and events that exist or occur unperceived or unexperienced by human beings (Bhaskar, 2010:1-2; Boje, 2018). Thus, the real level exhibits two primary characteristics: it is intangible and all-encompassing simultaneously.

The act of announcing a decision takes place on the actual level, representing a visible outcome of generative powers operating within the real domain, often obscured, and challenging to apprehend in the moment, thus less accessible for quantitative analysis. Events occurring at the actual level, particularly those manifested in physical space, lend themselves more readily to quantitative analysis, offering seemingly plausible and rational explanations for causal relationships. Consequently, the actual level tends to be more enticing for academic research, drawing researchers and financial backers of research to engage predominantly with the actual and empirical domains. This focus revolves around methods, models, approaches, and outcomes of decision-making, overlooking the deeper, often concealed dynamics within the real domain.

INATTENTIONAL BLINDNESS OF URBAN DISCOURSE

Nevertheless, the socio-psychological dimension inherent in the socially and culturally embedded process of decision-making, encompassing motivations, values, attitudes, and perceptions of individuals and groups, may receive relatively scant attention from planning scholars. This

phenomenon often leads to a state of "inattentional blindness" (Drew, Võ & Wolfe, 2013) within planning scholarship, relegating the exploration of the socio-psychological dimension to the periphery of urban discourse and research agendas.

The article redirects attention from the actual to the real levels, illuminating the invisible aspects and contributing to the discourse on how to address the tacit dimension of decision-making within the spatial transformation process, spanning from planning to construction. It elucidates the interconnections between the social dynamics of spatial transformation processes and the historically and culturally influenced modes of thought and feeling, conceptualized as symbolic space, among planning professionals. The argument posits that urban practice professionals, operating within a context of predominantly project-based urban development, wield explicit or implicit influence over spatial transformations across all scales. Focusing on the urban project as a temporary institution, the article assumes that, regardless of project scale, the symbolic space—crafted by professionals according to internal criteria and standards—significantly shapes decision-making processes and attitudes of other stakeholders, irrespective of their cultural background.

Decision-making, as a critical component pervasive across all stages and levels of spatial practice, commands significant attention in urban discourse. While there exists a substantial body of literature on urban decision-making covering diverse topics such as governance, policy, public participation, and sustainability, much of it tends to emphasize operational aspects—focusing on tangible, measurable dimensions at the operational level. This predominant focus often involves scrutinizing patterns, techniques, behaviours, and outcomes of decision-making, addressing questions of 'who is doing what to whom' (Flyvbjerg, 2004:302).

However, amidst this prevailing emphasis on operational aspects, there are voices advocating for a deeper understanding of the 'why' behind

decisions. Over the past century, notable urban planners have contributed extensively to this discourse with ideas which are now considered classics in urban scholarship. Kevin Lynch explored the perceptual aspects of urban form and decision-making; Paul Davidoff advocated for increased citizen participation in planning; Charles Lindblom highlighted the importance of incremental decision-making and "muddling through" in public policy and planning; Donald Schön emphasized reflection and problem-solving in decision-making among urban planning professionals; while others like John Forester, Judite Innes, Patsy Healey, and Leonie Sandercock contributed to our understanding of collective and community decision-making in collaborative planning and communicative action.

RATIONAL PLANNING MODEL IN UNDERGROUND

The paper interprets recent discussions on the discrepancy between modus operandi and opus operatum as a resurgence, contextualized within the growing uncertainty and complexity of a discourse on rationality and collaboration that appears to be waning. This discourse, predominant in urban planning and design literature at the turn of the 21st century, shed significant light on phenomena such as the rational planning model and its contestation of communicative planning theory. Moreover, it made a substantial contribution to the development and dissemination of inclusive urban planning and design instruments in practice.

The principles of collaborative planning have given rise to new urban metaphors such as place-making, co-creation, co-production, commons, and commoning, fostering democratic atmospheres in urban planning and design. However, the paper argues that despite this significant shift towards collaboration, the historical tension between collaborative and rational planning modes, while not explicitly framed in terms of rationality in current discourse, persists and manifests in two major aspects. One aspect involves the overemphasis of modelling as a

rationalized planning instrument, while the other centers around the tension between inclusive and exclusive approaches, as well as power dynamics within the planning and design process.

The first concerns the taken-for-granted assumption that decision-making, when 'informed', inevitably leads to a 'right' decision and consequently a 'good' spatial action. This belief underpins the proliferation of 'how-to-do-it' manuals and analytical models, both qualitative guidelines and quantitative analyses based on 'big data', aimed at supporting informed decision-making. While these models may offer valuable insights, these are often regarded as the definitive principles of urban practice and serve as the basis for political, professional, and managerial decisions, frequently resulting in unintended financial, social, environmental, and psychological consequences. Over the past two decades, a significant body of literature has emerged on the contentious nature of decision-making (Albrechts, 2003), the complexity of the process, and the adverse outcomes of large-scale urban development projects (Altshuler&Luberoff, 2004), highlighting, among other challenges, the overestimation of instrumental logic, which is formulated as an overestimation bias (Flyvbjerg, 2021).

The second aspect amplifies scholarly concerns that the ascent of project-based management in urban development and the managerial ethos of urban governance (Swyngedouw, Moulaert & Rodriguez, 2002) contribute to the erosion of democratic atmospheres, suspecting the ideological engagement of urban professionals and the neoliberal orchestration of participation (Metzger, Allmendinger & Kornberger, 2021), witnessing the deliberate suppression of conflicts by powerful actors and the unequal distribution of power (Block, Steyvers, Oosterlynck, Reynaert & De Rynck, 2012).

Symbolic space in spatial trialectic

The findings delve into aspects of rationality, power, and decision-making, applying a recent concept from a sociological discourse that offers a fresh interpretation of the well-established Bourdieusian conceptual

framework of field, habitus, and capital (Wacquant, 2022). This interpretation introduces a spatial trialectic into urban analysis, examining the interrelated and interdependent spaces of the symbolic, social, and physical. The symbolic space, shaped by historical and culturally influenced modes of thought and feeling, informs the decisions and actions of both the general public and, more importantly, urban practice professionals who are omnipresent throughout the decision-making process. This perspective highlights the distinct role of urban practice, which seeks spatial transformation by leveraging symbolic forms of capital and power as instrumental tools.

The concept incorporates the psychological aspect of the real domain in the social dimension of the actual domain, facilitating a nuanced analysis of typically concealed decision-making processes and providing methodological access to psychological dynamics. This integration allows researchers to meet a challenge of engaging with psychology of collective endeavours such as urban planning and design. Additionally, it offers a refined vocabulary for discussing the 'microphysics of power' (Metzger, Allmendinger & Kornberger, 2021) within everyday decision-making in urban development, planning and design projects. Understanding the true causes of decisions, whether leading to success or failure, promotes professional reflexivity, potentially resulting in policies and interventions that better align with the needs, values, and aspirations of the diverse individuals and communities within urban areas.

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SYMBIOTIC INTERRELATIONS: EXPLORING THE INTERPLAY OF MULTI-DIMENSIONAL URBANISM

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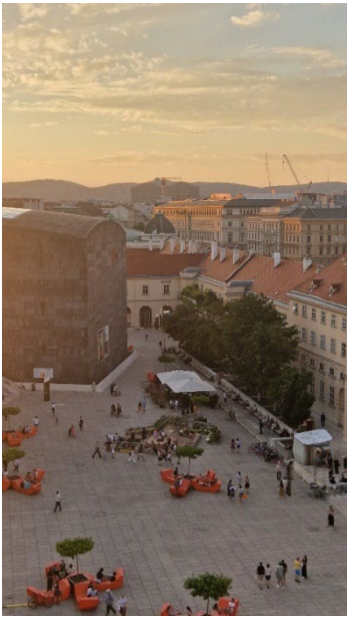
KEYWORDS

Urbanism, Landscape, Multifunctional Space,

The stage, as a dynamic and diverse entity, serves as a platform for communication and artistic expression, constantly evolving to shape future values and content through the expression of form and its materialization. Its design embraces continuous change in space and time, achieved through the harmonious integration of human, nature, and technology.



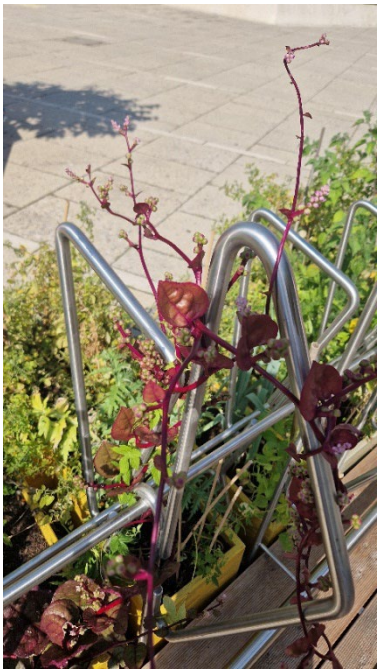
The Summerstage 2023 located at the vibrant urban Main Plaza of the Museum Quarter in Vienna transcends its role as a mere functional frame of public representation of artistic and intellectual performances but transforms the immediate surrounding space to encounter climatic and human relaxation. Sustainability, in this context, is not only achieved through the physical presence and implementation of organic and pure durable materials but also how it encourages interaction and the resonance of collective experiences throughout every day. To address the issue of temporary functional limits, the stage has been designed in such

a way, that it performs through its multifunctional potential 24 hours a day. During the hot summer season, it serves as a public oasis, that attracts people and animals alike and transforms a former concrete transit zone into a relaxation and communication island.

This paper delves into the evolutionary trajectory of the Summerstage, propelled by a forward-looking choice of durable, flexible, and budget-friendly materials, climate-resilient vegetation, and an integrated self-sustaining water irrigation system. As time unfolds, the once distinct materials seamlessly meld to create a symbiotic living structure. The design articulates a sophisticated system that seamlessly integrates

solar energy panels to facilitate mechanically controlled water pumping. Moreover, it incorporates rainwater collection via a perforated surface on the stage platform. This innovative integration underscores a commitment to sustainable practices and renewable energy utilization within architectural frameworks. However, due to budgetary constraints,

these advanced functionalities have undergone various cost reductions. Consequently, the inclusion of these sustainable features has been earmarked for subsequent enhancement, with the aim of augmenting the design's environmental responsiveness in future iterations. This strategic decision allows for the initial deployment of the core structure while preserving the vision for a fully integrated, eco-efficient solution.



The stage, envisioned as an ecosystem, communicates dynamically at various times of the day and undergoes a gradual transformation over time. This evolution not only underscores the initial design's adaptability but also highlights the stage's capacity to function as a living, breathing entity within its environment. The spatial composition is characterized by three distinct zones, each featuring unique vegetation:

- An urban garden undergoing constant trans-formation, where fruits and vegetables thrive at different times throughout the year, transforming the urban space into a fertile field where visitors can actively engage in harvesting.
- A “meadow” adorned with tall grass, providing a touch of nature and evoking the ambiance of a picnic in the woods within the dense urban environment.
- A small stage that fosters intimate dialogues. Nestled amidst nature, visitors are encouraged to collectively shape their thoughts and engage in meaningful conversations.

We seek to demonstrate the integration of inclusive digital design into a classic handcrafted production medium, emphasizing the essential open processes inherent in an adjustable design path. The exploration of potentials and the inherent flexibility of the design strategy contribute to enhancing adaptability within an urban context.

Leveraging the adaptability inherent in contemporary design methodologies, alongside a streamlined process from design to fabrication, has fostered a potent convergence of coding and architectural design. This synergy has proven instrumental within the production strategy, embodying a fusion of digital precision and traditional craftsmanship. Such a holistic approach not only aligns with the rapidly evolving landscape of architectural design but also adeptly accommodates the exigencies of dynamic alterations within an exceedingly constrained timeline from conception to realization. This methodology underscores a forward-thinking embrace of technological advancements, ensuring that the workflow remains both flexible and efficient in the face of stringent time limitations.

This initiative represents an approach to address the impact of climate change in urban areas. Focused on fostering a culture of engagement, our project seamlessly integrates nature into the urban landscape, providing a space for direct interaction with the environment and promoting a sense of communal care. In challenging conventional urban design norms, our

dynamic stage redefines public spaces to accommodate diverse activities and participants.

Strategically located in a previously neglected urban zone at the plaza, the stage has transformed the area into a vibrant and inclusive urban island at the MQ. It serves as a versatile platform, offering a comfortable resting place for the homeless, a lively party stage for an older demographic, and a stage for various events, including Pride performances, DJ sessions, philosophical discussions, literary talks, public readings, and intimate gatherings.

By transcending traditional urban furnishings, our project exemplifies adaptability and coexistence, allowing different groups to share and shape the space. This multifunctional stage not only breathes new life into the urban setting but also contributes to a more resilient and socially connected community. Through this initiative, we aim to inspire further exploration of alternative solutions for urban areas in the face of ongoing environmental challenges.

BEYONG THE EVENTAL: URBAN INSTALLATION AT DUBAI DESIGN WEEK 2023

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KEYWORDS

Dubai, Urban art, Socio-urban participation, Hermeneutic Phenomenology.

"An event can be an occurrence that shatters ordinary life, a radical political rupture, a transformation of reality, a religious belief, the rise of a new art form, or an intense experience such as falling in love."[2]

Zizek's above definition of an event, as an occurrence that shatters ordinary life, brings about a contrasting view regarding the meaning of everyday experience that George Perec once referred to as 'infra-ordinary,' hence "banal, quotidian, obvious, common, ordinary."[3] The

[2] Slavoj Zizek, *Events: Philosophy in Transit* (UK: Penguin, 2014).
[3] Georges Perec, "L'Infraordinaire," in *Species of Spaces and Other Pieces*, translated by John Sturrock, 207-250 (London: Penguin Books, 1998), 210.

intent of this juxtaposition is not to conjure a classification of various event types, but rather to question the very essence of event-ness, particularly in the context of urban experience. For, urban experience could be considered a transformative event if taken from the viewpoint of a tourist of traveller. Contrastingly, that same experience is considered banal and infra-ordinary from the viewpoint of a city dweller, who is habituated to the scenes of his everyday metropolis. Does such differentiation then extract event-ness from everyday urban experience, in order words does habituation dissolve the city from its eventfulness? While we could agree that habituation, defined as the absence of an urban visual stimulus as proposed by Simmel, renders the city with a sense of 'greyness,'[4] it is also possible to reckon that occasional urban events, such as expos and festive markets, which are usually overloaded with visual stimuli, have little transformative impetus since they present little beyond an intensification of everyday occurrences. Still, such occasional events are critical instances that can reveal much about the nature of urban experience at a specific place and time; and are events in their own right given their intensification impetus. This paper will attempt to explore this proposition through the specific case study of Dubai Design District (D3) and its 2023 urban art installations for Dubai Design Week that took place between 7th to 12th November 2023.

THE EVENT IN-BETWEEN HORIZONS

According to Simmel, the metropolis is an amalgam of visual stimuli that are endorsed by particular political and economic orientations, hence "the form of life in the metropolis is the soil which nourishes this interaction

[4] Georg Simmel, "The Metropolis and Mental Life", in *Rethinking Architecture: A Reader in Cultural Theory*, by Neil Leach, (New York: Routledge, 1997), 73.

fruitfully."[5] Accordingly, he claims that the nature of experience in metropolitan urban settings has a direct impact on people's emotional and haptic sensibilities, where habituation not only refers to the lack of visual stimuli but also to the lack of personal attachment to them. Accordingly, if we are to investigate the notion of event-ness in urban experience, the aim here is not to look for new, disruptive of transformative occurrences but to seek the meaning out of such occurrences and their effects on people's conscious engagement with urban events.

On the one hand, it could be argued that an urban event, such as the building of a monument or the destruction of another, is assumingly triggered by a shift or transformation of the 'ordinary' visual stimulus, hence requiring some form of re-assessment to the change, or a reorientation of consciousness towards it. Influenced by Heidegger's idea that an Event is more than a "departure from a historiographic and objective understanding of historical events,"[6] Zizek argues that an event is "a change of the very frame through which we perceive the world and engage in it."[7] In turn, he proposes the triad of "framing, reframing, enframing," as a model to discover the meaning of such change and its effects on future possibilities.[8] Yet, such approach is not unprecedent, where Ricoeur's concept of *Triple Mimesis* also assumes that urban experience is characterised by "prefiguration" related to "the act of inhabiting"; "configuration" that refers to "the act of building"; and "refiguration" that institutes a level of exchange between the "act of inhabiting" and the "act of building" through an opposition of the first vis-

[5] Simmel, "The Metropolis and Mental Life", 69.
[6] Zizek, *Events*, 31.
[7] Zizek, *Events*, 10.
[8] Zizek, *Events*, pp. 7-32.

à-vis the second.[9] Granted, it could be understood that Zizek's frame, taken from an urban point of view, relates to the act of dwelling, in the Heideggerian sense,[10] as well as inhabiting, as defined through Ricoeur's trilogy, becoming a method through which the intertextuality of urban experience unfolds.

On the other hand, it could also be counterargued that occasional urban events, like D3's Dubai Design Week, are little beyond symbols of an already existing dialogue that is intensified through the recurrence of such events. The point of disparity here is that Heideggerian Events, or *locales* in an urban sense, transform the space of urban experience rather permanently and in turn lead to the transformation of collective consciousness and possibly extend to include the future of urban behaviour too.[11] In contrast, occasional urban events, such as Dubai Design Week, could be paralleled to Gadamer's festivals, whose very occasionality does not assume permanent change but rather participation in a temporal event. A critical implication here is that occasional urban events become a suspension of ordinary everyday experience. But does this mean that such suspension incurs a detachment of the festival from real life events? Gadamer's ideas are here are of special importance, shedding light on the nature of the festival and possibly on the meaning of urban event-ness too. Such meaning according to Gadamer is hinged on participation and dialogue, disclosing something of the nature of what is shown through festive events. This implies that festive participation is itself mimetic, opening up more than is available to us in our everyday

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[9] Paul Ricoeur, "Mimesis and Representation," in *A Ricoeur Reader: Reflection and Imagination*, edited by Mario Valdes, 137-158 (Toronto: University of Toronto Press, 1991).
[10] Martin Heidegger, "Building, Dwelling, Thinking," in *Basic Writings*, edited by David Farrell Krell, 343-363 (New York: Harper Collins, 1993).
[11] Heidegger, "Building, Dwelling, Thinking," 356.

experience of the space.[12] For, the "as if" nature of occasional events suggests the playfulness of social participation, where *play* becomes the primary frame through which dialogue and communication take place. Similar to festive experience, an artistic event possesses such mimetic impulses, requiring "constructive activity on our part."[13]

Using the above theoretical arguments as backdrop of investigation, the following will attempt to understand the evental nature of Dubai Design Week and its transformative effects, if any, on social participation. The paper focuses strictly on the external art installations that were accessible to all D3 goers before and after the event, questioning "what occurs in the presence of static works of arts, and what occurs in the festival-like event of theatre."[14] To do so, the following will examine the value of urban art installations at D3 and will enquire whether such installations instigated a meaningful dialogue among the different players of the event. First the paper will describe the setting of the event—Dubai Design District (D3)—and will identify the different art installation present on the urban scene and their physical relationship. Then the paper will then analyse the feedback of 100 event participants and will look into the meanings disclosed through their experience of the art installations, aiming as such to reveal the nature of dialogue in occasional urban events and to question whether such dialogue can instigate meaningful socio-urban revelations that can possibly move beyond the evental.

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[12] Hans Georg Gadamer, "The Relevance of the Beautiful," in *The Relevance of the Beautiful and Other Essays*, edited by Robert Bernasconi, translated by Nicholas Walker, 1-57 (Cambridge: Cambridge University Press, 1986), 119.
[13] Gadamer, "The Relevance of the Beautiful," 37.
[14] Ibid.,

RESILIENT BY DESIGN: MAKING SCHOOL BUILDINGS RESILIENT FOR THE CHALLENGES OF THE 21ST CENTURY

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KEYWORDS

School building design, Climate Change, Design for Resilience, Future-Proof Buildings

INTRODUCTION

The 21st century presents many challenges to architectural design, to prepare the built environment for an unpredictable future. School buildings face particular and serious challenges. Education and its infrastructure are part of an essential system for a country's social and economic development. The vast literature on school architecture to

support the teaching and learning environment discusses technical, economic, functional and environmental comfort aspects, as well as subjective, psychological, cultural, social and pedagogical questions. A relation between learning productivity and a quality school environment has been reaffirmed by several studies over time. For educational reasons, school building design in the 21st- century should include architectural elements and concepts to nurture human diversity and to support a greater range of learning and contemporary teaching activities to prepare young people for their future and the challenges of the coming decades.

As well as the dynamics of education, school design must prepare for further challenges. In developed countries, school building design has undergone great changes. School environments should not only be healthy places but flexible. Traditional compartmental projects are replaced by a mix of spaces and increased openness supported by IT. Furniture is comfortable. Students gain freedom and personalised learning is valued with ready access to resources. As new pandemics are expected, lessons learned from Covid – 19 are put in place to assure a safe environment for teaching and learning.

Climate change impacts the safety and comfort conditions of students, teachers and staff. Also, during extreme events and disasters, public school buildings are key urban infrastructure nodes to shelter vulnerable populations and serve as logistic centres. Thus, resilience will be increasingly demanded soon. The planning of new buildings should address the issues of safe locations free of risk of flooding and landslides. Access to schools needs adequate distribution in the urban fabric, serving as safe havens for proportions of the populations. School size must be defined not only in relation to local student population but also to shelter specific numbers of residents. Civil defence programmes should protect citizens from natural as well as human-made disasters. Human activities, such as the burning of fossil fuels, deforestation, industrial emissions, releasing greenhouse gasses into the atmosphere need mitigation to reduce global warming and extreme weather patterns. For the exiting

building stock, refurbishment of school buildings is underway in developed countries with a focus on energy efficiency. In developing countries however this is not the case, with many buildings ill prepared not only to cope with pedagogical trends, but also with health and climate emergencies.

We will outline actions to mitigate the impacts of the challenges ahead and propose design processes to face school architectural design for the future with creativity and responsibility. We will focus on examples from Brazil, a country which has in recent years been impacted by many emergencies, wildfires, floods, mudslides, violence and - on the wake of the recent heat waves – the first power outages ever - in an economy short of resources.

SCHOOL BUILDING DESIGN

Whether built or refurbished, school design will be influenced by several factors: economic, political, practical, technological and environmental considerations. Design trends as well as public policies, availability of infrastructure and specific pedagogical demands also have an impact (Woolner et al. 2007). Literature on school architecture criticizes that technical considerations - standards, square footage, energy efficiency, among others are the main design concerns with reduced attention for aesthetic issues and a lack of creative or innovative solutions to pedagogical needs (Dudek, 2000; Taylor 2008). In many countries standardized architectural programs and even designs are common. The traditional enclosed classrooms with minimum dimensions, for a typical group of 30 students and their teacher is still widespread as the basic teaching environment process (Kowaltowski, 2011).

This typical school design process is essentially linear, and some steps considered essential in the literature, such as problem seeking are absent in an attempt to save time and money (Taylor, 2008; Deliberador, 2016). Generally, there is a great concern in meeting the demand for student places, giving less priority to the quality of buildings, which can lead to the replication of solutions without evidence of their efficiency and often little

concern with the context, its access, neighbourhood, as well as for and characteristic of the site.

In developing countries, like Brazil, investments in education are important to improve economic and social indicators. The debate on how to reach higher student achievement rates is based on multidisciplinary factors, and the quality of the physical school environment must be part of improvement plans. In many parts of Brazil, new schools are still necessary, and the existing stock of buildings must be refurbished and brought up to date to embrace the dynamics of education, thus school building quality is an ongoing concern.

A major issue for contemporary school design is the impact of climate change on the built environment. Especially schools need to be resilient to the new climate extremes as public schools are essential buildings in times of disasters to house people from risk areas and those directly affected by floods, landslides, drought and heat or cold waves. Thus, school buildings must be resilient to climate change impacts.

To increase the resilience of buildings, technical, functional and environmental comfort, as well as economic aspects must be considered in design solutions. For schools, subjective, psychological, cultural, social and pedagogical questions must be addressed as well.

The analysis of facts, concepts, desires, opinions and ideas should determine architectural necessities during the programming phase of a design process. Participatory design processes are recommended to stimulate a briefing debate. Engagement in planning and design issues is increasingly relevant, and viable communication between design professionals and users is necessary (Uglione & Azevedo, 2017).

RESILIENCE

But what makes a building resilient to extreme conditions? Location and specific context related factors have a major impact. However, the location of an existing stock of school buildings cannot be changed, therefore these

structures need refurbishment. In view of the urgency regarding the impact of climate change many studies address the concept of resilience. An all-encompassing definition of resilience is that of being "the potential to absorb and cope with impacts of climate shocks and extremes in the short-term, and to learn, reorganize, and redevelop, preferably to an improved state, in the longer-term. Strategies to build resilience combine preparedness for immediate response to extreme events with long-term sustainable development objectives that increase socioeconomic and environmental capacity to function under new climate conditions" (Engle et al., 2014, p. 1296).

Comfort et al. in 2010 addressed the issue thoroughly with a definition of resilience as it relates to disaster management. Mitigation, prevention, preparation, and response and recovery are important. Quality of response, capacity to improvise, coordination, flexibility, and endurance are also determinants and the complexity and global interconnectivity of modern systems are identified as key elements in specific crisis, relating to governments, mobile populations, power grids, financial systems, or the Internet.

SCHOOL BUILDING RESILIENCE

Many studies have focused on how to produce resilient systems, and built environments (Kohler, 2018). For school building design and refurbishment some factors are priority.

From the recent pandemic of Covid-19 we know that architecture can reduce specific risks. Especially for schools, educational spaces should prioritize the health of children and young people but also teachers and staff of schools. For airborne diseases such as that caused by the Covid-19 virus ventilation and circulation of airflow as well as spatial or dimensional design is crucial. Other emergencies demand attention to other aspects such as wind resistance, weather tightness and structural integrity to resist extreme weather conditions and earthquakes. Further

precautions should address criminal attacks such as shootings and even terrorist attacks on schools.

However resilient architecture needs to go hand in hand with sustainable design to mitigate the impacts of climate change and mitigate climate change itself (Kosanović et al., 2018). Thus, energy efficiency is a prime issue in the design and refurbishment of school buildings globally (Bull et al., 2014).

We present a study to address the resilience of school buildings. Brazil, as a developing country, was chosen with specific attention given to risk areas prone to flooding and landslides in coastal regions of the country. Brazil to date has no mandatory refurbishment policies to mitigate climate change, therefore to gain knowledge on the existing situation and its needs is essential.

The location of schools will be mapped in relation to risk areas. For schools with major risks, guidelines will outline strategies for evacuation and eventual relocation of schools. Schools near risk areas will be analysed to outline actions to make buildings and grounds more resilient to the above-mentioned dangers and the integrity of both the physical structure of a building and its users in emergency situations.

Actions should address changes to turn buildings resistance to extreme weather conditions (wind, rain, heat, dust storms). Brazil has a predominantly tropical climate and heating or snow loads will not be considered. To avoid excessive air-conditioning for cooling, energy efficiency will be addressed through better shading of external surfaces, insulation of walls and roofs and ventilation conditions, especially cross ventilation. Lighter wall and roof colours are fairly simple ways to mitigate heat gains and should be included. All actions will be assessed in relation to costs and technical viability based on rigorous simulation studies on environmental comfort, safety, security and energy efficiency.

Building design refurbishment should also address possible actions to adapt educational spaces to the needs of new ways of teaching, with access to infrastructures considered essential in the 21st century. Thus,

considering that the pandemic asked for larger rooms, educational needs are the flexible use of space with access to diverse settings. Primarily schools have to be safe places. Physical, and psychological safety and property security must be considered. Measures to guard against violence and theft need investigation, going beyond fences, perimeter walls and bars on windows.

CONCLUSION

The results of this study should serve the community of our case study to refurbish existing schools through step-by-step actions in making educational spaces resilient to possible extreme events, preparing these for future educational needs and providing safe havens in times of local disasters. The study also should accumulate knowledge for new school building projects, to determine their locations and design details for better school architecture. Finally, for the process of introducing effective changes in school architecture a design process will be outlined to address priorities effectively. Prospective users should be included in such a process to assure not only that important issues are included but that users are aware of changes introduced, their objectives and the relationship of the built environment and the behaviour of its people in favour of optimal conditions.

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HOUSING DESIGN ANALYSIS METHODS IN THE CONTEXT OF THE COVID-19 PANDEMIC

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KEYWORDS

Architectural Design Process, Design Methods, Housing Design Analysis, Covid-19 Pandemic

This research discusses methods for architectural design analysis. Housing designs are evaluated concerning user preferences as impacted by the COVID-19 pandemic. Architectural analysis is essential to support the design process and to produce scientific conceptual knowledge. Ideation and decision-making are supported by a detailed analysis phase, and design solutions are verified through structured methods based on design parameters coming from repertoire analysis. User values are prioritized.

The COVID-19 pandemic was an event that changed the way people relate to the built environment, especially their homes. During this period, the home environment was adapted in many cases to adjust to specific needs

to avoid the spread of the disease, and during periods of lockdown, families were helped to live in isolation. Work, schooling, leisure, and daily living activities had to occur simultaneously and exclusively in residential spaces. To analyze these adaptations undertaken by users, our goal was to contribute with design parameters for housing design as a whole and future possible pandemics.

To reach this objective, the first step was to identify appropriate analysis methods. To select methods, criteria were established. Evaluations were to be qualitative, and user satisfaction was the essential criterion for analysis. Furthermore, the application of the method should result in defining design strategies for the adaptation of housing projects to the context of the pandemic.

Our search for appropriate methods identified three methods. These were: the Balanced Scorecard Method (Wong et al., 2009); Comparative Floorplan Analysis (Van der Voordt et al., 1997); and the Kano Model (Xu & Juan, 2021). The methods were analyzed to assess which method would efficiently analyze housing designs concerning ways of life changes impacted by the pandemic. To proceed with this task, the methods were analyzed concerning their attributes and ease of application, the clarity of the results, and the presentation format to support the design process.

Attributes were defined theoretically based on the classic architectural literature of Baker (2003) and Unwin (2020), with an emphasis on user values. Baker (2003) brings forward a more philosophical approach to analysis with themes such as Forces, Genius Loci, Nature, Art, Poetry, the Meaning of Use, as well as Culture, Status, Programme, Orientation, Views, and Geometry. During the pandemic, various concepts gained importance to users, primarily nature, the meaning of use, the programme, and views. The residential unit´s layout and dimensions and the building's relation to its surroundings became essential to supporting dwellers' psychological and physical well-being. Through Unwin (2020), other attributes were identified. Unwin concentrates on architectural elements more directly for analysis. Barriers and openings are considered, as are structure, light,

colour, temperature, ventilation, sound, smell, texture and touch, scale, and time. To consider design elements that perform more than one function is also essential.

The theoretical study created a list of specific attributes. The method that efficiently met the greatest number of attributes was considered appropriate for our research objectives. Each method was applied to analyze the same housing project. Thus, each method was quantitatively and qualitatively evaluated concerning the number and degree of detailed attributes that could be analyzed. The Kano model proved to be the most efficient, as it was able to answer questions relating to essential aspects concerning user satisfaction and theoretical attributes.

The Kano model has well-defined evaluation stages and criteria, which encompass both subjective and objective aspects. Furthermore, the method was adapted by XU and Juan (2021) for the context of the pandemic. A specific list of questions that, as a result, can be graphically presented facilitates understanding and application to the design process based on a visual language.

The questions were developed in a way to correlate the results with the attributes defined by Unwin (2020) and Baker (2003) and were based on the specific list of attributes created from their theories. Furthermore, the specific themes of each question were defined based on a systematic literature review conducted on architectural design for housing in the context of the Covid-19 pandemic. The most discussed topics regarding the relationship between the user and their home during the pandemic were identified. The questions covered topics such as study and home office dedicated spaces; good technology infrastructure; ventilation and natural lighting; entrance transition space for hygiene; multifunctional rooms; outdoor spaces; increased residential space; low-density neighborhoods; artificial lighting; and privacy.

Analysis questions should be answered according to the Kano model, where users should reflect on the previously mentioned aspects in their homes, considering whether these aspects exist or not in the housing

layout. The objective was to collect information about the user's perception, taking into account the context of the pandemic. To apply the Kano model, the user must observe two situations: the first one where a certain characteristic is present in their home and the second one when the same characteristic is absent in their home. The user must respond to how they feel in each situation using the following terms: Like; Must be; Neutral; Live with; and Dislike. The pairs of responses obtained for each of the characteristics are analyzed in sets, using a pre-defined table by the Kano model. By crossing both results, the definition of how each characteristic is seen by the user is obtained. The Kano model classification is through the terms: Attractive, Indifferent; Must be and Reverse. These terms were defined to identify which characteristics of the project are capable of generating more satisfaction and fulfilment for users.

The Kano model, however, is not capable of defining different degrees of importance for each of the items to accurately assess quality attributes. Taking that into account, Yang (2005) developed a refined Kano model, modifying the quality components of the Kano model, and categorizing them into eight types based on their significance to users. These were divided into highly attractive and less attractive, high-value-added and low-value-added, critical and necessary, potential, and carefree. Through the refined Kano model, when two attributes cannot be simultaneously fulfilled due to technical or financial constraints, it is possible to assess which one is more crucial for customer satisfaction.

The refined Kano model outlines attractive quality attributes as follows:

Highly attractive quality: An effective competitive characteristic, serving as a strategic quality to enhance user satisfaction.

Less attractive quality: This factor may reduce attractiveness to customers; if cost considerations arise, the provision of this quality factor can be initially overlooked.

One-dimensional quality attributes in the refined Kano model are explained as:

High-value-added quality: These factors can significantly increase user satisfaction and providing them should be a priority.

Low-value-added quality: Despite generating lower user satisfaction, these factors must still be provided to prevent an increase in user dissatisfaction.

The must-be quality attributes in the refined Kano model are described based on users' attention:

Critical quality: If these elements are necessary for customers, their provision must be ensured.

Necessary quality: The housing design should strive to offer this element to prevent user dissatisfaction.

The refined Kano model outlines indifferent quality attributes in the following manner:

Potential quality: These elements have the potential to evolve into attractive quality features. The housing design should contemplate providing these elements strategically to attract users.

Care-free: In instances where cost considerations are a factor, the housing design may opt not to provide these elements.

From the answers obtained for each of the attributes and through their analysis based on the refined Kano model, it was possible not only to understand which characteristics are important for users in their homes but also to classify them according to the level of importance of each of them to users. In this way, through this investigation, it is possible to assist architects in the development of residential projects that are more in line with the needs of users, considering the advent of the Covid-19 pandemic and the new needs of residents.

For further development of our research, local housing projects based on the Brazilian government social housing programme called My House My Life (Programa Minha Casa Minha Vida - PMCMV) will be analyzed to contribute to post-pandemic housing design under the recently launched

phase of the PMCMV. Our findings thus contribute to supporting the architectural design process through the development of a design analysis method for post-pandemic housing design, both for the refurbishment of the existing building stock and for new constructions.

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"META LIBRARY: A VISION FOR THE FUTURE LIBRARY IN THE CONTEXT OF TECHNOLOGICAL PROGRESS TOGETHER WITH DELIVERING EXCEPTIONAL READING AND SENSORY EXPERIENCE "

KSENIA SAPEGA

The rapid advancement of technology has profoundly impacted diverse facets of contemporary life, precipitating a fundamental shift in architectural paradigms. The conventional library typology, originally conceived as a repository for paper books, is undergoing obsolescence in light of changing reading and information consumption patterns. This master's thesis aims to scrutinize the trajectory of this transformation, seeking to prognosticate the future of libraries in a dynamically evolving world. A pivotal aspect of this investigation revolves around the evolution and enrichment of the sensory experience during reading. Delving into the intricate relationship between privacy levels and library spaces, the research endeavours to discern insights applicable as filters in shaping the design of library spaces in subsequent projects. By redefining the experience of reading and interaction with information, the library may

potentially assume novel social roles, necessitating further exploration into its capacity to meet the distinct needs of the neighbourhood as a compelling attraction spot.

The research scope extends to scrutinizing the dynamic functions and utilities of 21st-century library spaces, charting the historical trajectory of library functional arrangements, and addressing impending challenges. Beyond its utilitarian role, the study delves into the spiritual and aesthetic dimensions of libraries. Referring to Juhani Pallasmaa's "The Eyes of the Skin: Architecture and the Senses," which underscores the significance of sensory experience in architecture, including multisensory perception, stimulation of memory and imagination, the thesis advocates for architects to consider the temporal dimension of spaces and user movement. Inspired by Pallasmaa's work, the research will focus on the specifics of reading spaces. The thesis posits the library as a symbolic epicentre of enlightenment, attributing to it a social value transcending mere utility. Envisioned as a bridge between individuals and knowledge, the library is portrayed as a promoter of intelligence and education, fostering connections through passion, interest, and the stimulation of positive emotions. To enhance immersivity, additional entertainment functions for the library, such as interactive narratives about libraries grounded in a global context through archive exhibitions, immersive experiences to traverse book stories via intelligent technologies, and a book reparation workshop service, will be defined.

Birkenhead, UK, has been selected as the research area, where the municipality aspires to comprehensively regenerate the area into a commercial hub with heightened job opportunities and educational prospects. Preliminary social analysis indicates a significant gap between existing residents and future socioeconomic prospects. The research aims to define the exact criteria of functionality and symbolic meaning for the Birkenhead library. Envisioned as a Meta Library, the project aims to serve as a communal space facilitating interaction between the current population and incoming specialists, acting as a catalyst for motivation

and development while simultaneously providing an avenue for others to integrate into the existing context through a shared reading experience.

EXPLORING COMMUNITY INTEGRATION AND INCLUSIVITY THROUGH ARCHITECTURAL EXPRESSIONS

BAIBA RIEKSTIŅA

Currently, there exists a significant emphasis on the unification of diverse societal strata and their respective groups, alongside efforts for mutual integration. The EU Cohesion Policy, outlined in the "Priorities for 2021-2027" delineates five policy objectives aimed at fostering growth during this period. Among these objectives, a joint action plan encompasses five actions, notably addressing the pursuit of a more socially inclusive Europe. The widespread acceptance of marginalizing specific groups due to their diverse beliefs, expressions, or any other physical, social, or spiritual background is no longer prevalent. On the contrary merging diverse groups and cultures to form a cohesive society through mutual understanding, cooperation, and shared values is put in forefront. As it is possible to observe the evolution (change) of our society, it is prompting inquiries into the integration of these changes into architectural design principles and their expressive mechanisms.

Despite the rapid shifts in public opinion, in Latvia, the question of how to effectively establish and plan the integration of social functions in an accessible and inclusive manner remains relevant, since many buildings designated for social purposes are separated from other vital societal

processes and at the moment, it is not possible to observe significant changes in the planning of such typology buildings.

My master's thesis research aims to examine and find out the current array of architectural tools, expressions, and global strategies that contribute in the formation of preconditions or set frameworks in the development of integrated social functions or/and generate inclusive architectural environment.

In the research of the master's thesis and the development of an architectural design proposal for community-integrated social care, a primary challenge will involve addressing the planning aspects of recently designed and built social care (SAC) institutions on a global level. This undertaking demands a comprehensive investigation into the dynamic relationship between functional utility and architectural form, with a focus on identifying overlooked areas (blind spots) in past architectural design approaches for these building typologies. The objective is to ascertain opportunities for reorganization or even redirection of these priorities. The goal is to create a seamless connection between function and form while giving greater priority to human needs, addressing both physical and particularly mental well-being.

In the practical phase, the design proposal will draw from the research findings. A conceptual framework will be crafted to reimagine the integration of social care infrastructure within a built environment, offering a fresh vision for this integration.

PARAMETRIC DESIGN TOOLS FOR ADAPTIVE LANDSCAPE ARCHITECTURE

INGUS BIRZNIEKS

This research delves into the innovative realm of parametric design tools and their significant impact on the development of adaptive landscapes in contemporary landscape architecture. It commences with a comprehensive overview of the array of parametric design software, technologies, and other advanced algorithmic methods. These tools are critically examined for their capabilities in enabling complex design processes, enabling architects to craft landscapes that are not only aesthetically compelling but also highly responsive to an array of environmental variables and user interactions. The core of the research lies in assessing the adaptability and flexibility inherent in parametric design, which allows for the creation of dynamic landscapes capable of adjusting to evolving climatic conditions, ecological shifts, and varied human activities.

A significant portion of the research is dedicated to evaluating the sustainability aspects of parametric design in landscape architecture. This involves an in-depth analysis of how these tools aid in optimizing resource use, enhancing biodiversity, and achieving ecological balance, thereby contributing to the creation of environmentally responsible and sustainable outdoor spaces. The research presents a series of case studies that exemplify the successful application of parametric design tools in

diverse landscape projects, ranging from urban park developments to intricate green infrastructures and ecological restoration initiatives. These case studies not only demonstrate the practical application of parametric design principles but also highlight the innovative solutions these tools offer in confronting contemporary landscape challenges.

Furthermore, the research addresses the challenges and limitations that designers encounter while integrating parametric design into landscape projects, including technical, educational, and practical aspects. It also explores the evolving role of these tools in encouraging collaborative and cross-industry approaches in landscape architecture, bringing together experts from various fields to achieve cohesive and holistic design outcomes.

In conclusion, the research forecasts future trends and developments in the field, projecting a growing reliance on parametric design tools as essential instruments in the advancement of adaptive and organic landscapes. This study ultimately establishes parametric design not merely as a technological advancement but as a fundamental shift in the conceptualization, planning, and realization of modern landscape architecture, paving the way for more innovative, sustainable, and adaptable outdoor environments.

REDEFINING URBAN SPACES: DESIGNING A CONTEMPORARY, EMPLOYEE CENTERED BUSINESS DISTRICT IN VALMIERA

MELDRA BĒRZĀJA

Relevance of the research theme:

With the shift towards hybrid and remote work, creating vibrant and inclusive physical spaces that accommodate to the needs of a diverse workforce becomes essential. Creating vibrant, inclusive environments line up with modern workforce expectations, fostering collaboration, innovation, and wellbeing. Theme highlights the significance of urban planning in supporting businesses, attracting talent, and enhancing overall quality of life for workers.

Purpose of the research:

The research investigates the transformation of urban spaces into employee-focused contemporary business districts, emphasizing the benefits of encouraging environment for work, collaboration, and employee well-being.

Subject and object of the research:

Subject: Research aims to redevelop an urban area into a contemporary

business district that prioritizes the well-being and satisfaction of employees in the city of Valmiera.

Object: The goal is to assess how the redesign of urban spaces impacts employee productivity, happiness, and overall quality of work life within the newly designed business district.

Methods used in the research:

Thesis uses applied research method, analysing theory of designing business districts and changing needs in the workplace to create a design proposal for Valmiera city.

Relation between the theoretical and practical part of the bachelor thesis

The relationship between theory and practice will ensure that the design aligns with theoretical insights while practical implementation validates these theories in a real-world context. The result is a contemporary district that prioritizes employee well-being through informed rchitectural solutions.

Main question:

How can architectural design enhance planned business district to focus on employee well-being while integrating sustainability and functionality?

Hypothesis:

Implementation of progressive architectural strategies emphasizing design, sustainability, and functional efficiency will notably advance

planned business district, nurturing an environment that prioritizes employee well-being.

PERSPECTIVES ON PLAYFULNESS: A NEW PARADIGM FOR DESIGNING PUBLIC OUTDOOR SPACE.

ANNA SAUROVA

The master thesis focuses on the conversion of public outdoor spaces, especially parks, squares or squares, from non-functional and unattractive to playful, attractive and usable spaces. Playfulness in architecture engages the user on a sensory and emotional level while creating a pleasant and memorable experience that adds a dimension of dynamism to the built environment, promoting a sense of joy and connection between people and the spaces they inhabit.

The research aims to make a valuable contribution to the field of urban design and to positively influence its quality. To achieve the set goal of the research, a series of tasks have to be performed, starting with a thorough analysis of literature sources on urban design and the role of the public in the life of the city, case studies of the current situation and successful urban design projects, and ending with the determination of the wishes and needs of end users.

The topic of this research encourages thinking about how the playful integration of design elements in the creation of public outdoor spaces can

contribute to the well-being of the city, and public involvement and define a new identity of the cultural environment.

The master thesis was inspired by the American landscape architect Martha Schwartz, known for her innovative and modern designs. Her work reflects a different approach to landscape architecture, incorporating art, bold forms and a deep understanding of the relationship between people and their environment. Her works include the integration of art and landscape, bold and playful aesthetics, social interaction and engagement, as well as innovation and experimentation.

As a result of the study, based on careful research, analysis and practical recommendations, a new paradigm in the design of public outdoor spaces will be proposed, an example of which will be realized in the part B of the Master's thesis.

ISOLATION ISLAND. THE FUTURE OF A GAS STATION IN A PROVINCIAL TOWN.

CAMILA YAKUBOVA

The urban landscapes have witnessed the reduction of families, growing popularity of a single lifestyle and a surge of community that keeps creating new boundaries and enhancing the physical barriers of one's house and nation. As a result, first isolated socially youth was further isolated from the urban fabric and deprived of communal spaces vital for social interaction and personal development.

This master thesis embarks on an exploration of a new typology of a public hub by adapting and re-using the ubiquitous gas stations. Almost never seen as public spaces, gas stations have loyally served as an inadvertent meeting point for urban youth throughout the years. It can be especially seen in smaller provincial towns of Latvia, where due to the lack of quality public spaces and leisure opportunities local youngsters come together to cruise from gas station to gas station stopping for a snack and a chat. However, the collective efforts to shift away from fossil fuel reliance, led to the prompt decline in their significance.

This research is structured in four chapters. Chapter one will investigate the phenomenon of modern isolation and attempt to draw a profile of its latvian edition. Chapter two will focus on the current role of a gas station as a non-place space, how it became a crossroad of social interaction in provincial towns and possible future of this typology. Chapter three will showcase a selection of case studies and formulate the design brief. At last

chapter four will conclude the research and present the theoretical basis for part B of this thesis, whose ultimate goal is to offer a prototype model and a set of design principles that could not merely mitigate the urban isolation among young people but also give the relics of fossil fuel infrastructure a future other than another junk space.

ANALYSIS OF PROPORTIONS IN LATVIA'S VILLAS AND MANSIONS.

SINTIJA KĻAVINSKA

The art and science of architectural design have long been associated with the pursuit of creating spaces that not only attract the eye but also create a sense of balance and harmony in their visual appeal.

Among various architectural forms- villas and mansions, represent a combination of aesthetics and well-orchestrated design while providing an environment that harmoniously combines luxury and functionality.

In this Master's thesis, I am analyzing and researching mansions and villas that belong to Latvia's architectural heritage. Their proportions and divisions in the sense of floor plans, masterplans and elevation layouts, possible intersections and invisible connections, that helps to create balance and harmony in the visual appeal of their architectural form and spatial representation.

To create the analysis, the understanding of what defines villa, manor, and mansion and their differences needs to be reached and stated. The difference between the definition of architectural form and the use of space, by using graphical material, is made.
The collection of graphical materials for the analysis includes- finding masterplans, floor plans and elevations, historical data, and taking measurements to redraw them, so a more detailed inspection of proportions, divisions, uniformity or heterogeneous planning systems can be concluded.

The main point of analysis and comparison are characteristics that create spatial visual appeal.

Latvian mansion proportion, division and elevation are compared with Andrea Paladio's architectural guidelines of villas and LeCorbusier Villa Savoye , to understand the guiding features created by both architects while making their decisions on design.

Le Corbusier and Andrea Palladio represent two influential architects from different periods of architectural history and their approaches to villa design reflect their respective philosophies and styles. The research based on their works, should help better understand which characteristics and guidelines are more represented in Latvian villa and mansion architecture or, perhaps, there is none of them.

By analyzing the proportions of their villas, one can appreciate the differences in their design philosophies, which reflect broader changes in architectural thought from the Renaissance to Modern period. They difference in philosophical and in relation with nature approaches did not disturb their striving for the harmony and balance in their design. Modular principles that were popular in modernism architecture and classical ratios can be found in Palladio's works.

Le Corbusier's functionalist approach and Palladio's classical harmony offer unique perspectives on the role of proportion in architecture.

By finishing the analysis, the intersections lines between Latvian Mansions and Palladio, Le Corbusier's works should be found and defined. The question -what principles

were used to create the existing spatial balance and proportions in Latvia's mansion architecture should be answered.

TEACHING ARCHITECTURAL DESIGN STUDIO WITH THE INTEGRATION OF BUILDING INFORMATION MODELLING TO UNDERGRADUATE ARCHITECTURE STUDENTS

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KEYWORDS

Architectural Education, Building information Modelling, Architectural Technology, design integration

The evolution of digital technologies in recent decades has transformed them into a dominant factor in our lives and they are constantly changing the way we live, communicate and work. These developments have left their mark on the way we design, construct, and manage the built environment. The development of Building Information Modelling (BIM) in recent years has left behind the era of simple digital applications, redefining the processes, relationships, and roles in the production of the built environment. Traditional processes and boundaries of professions

as we know them are being challenged and transformed. Professional practice faced with the increasing demands of globalization and the climate crisis leads the change by creating new standards, while architectural education follows.

In the legacy of modernism and the arts and crafts mentality of the Bauhaus workshop, the School of Architecture of the National Technical University (NTUA) has developed over the years a strong tradition of studio teaching, with a healthy workshop culture and an emphasis on the two-way relationship between design and construction. A proven model, it has provided generation after generation of students with a solid foundation for their professional development. At the same time, this very dynamic often seems to resist innovation, as is the case with the introduction of advanced architectural technologies and BIM, which are often met with mistrust and have a relatively low penetration in design studio teaching.

In this context, this paper discusses the case of an elective course in building technology, launched in 2021 with the aim of experimenting with hybrid teaching methods, expanding, and updating the studio experience with the exposure to BIM technologies as a new model of built environment production, in alignment with the contemporary professional practice. The learning objective of the module is to expose students to the design of an advanced building component, such as the façade of a high-rise building, both conceptually and technically. Furthermore, students are expected to use a BIM platform as a tool for their exploration in the various design stages, from massing to concept design to detail. The first task is to develop a concept for a multi-story building, through the exploration of the interface between form and structure. In the next stage the task is to develop a concept for the facade and use the parametric tools of the program to develop the detailed design of a typical module of this façade, with optimization of the environmental function, in accordance with their design intent and feeding back into the concept design.

Before the start of the term, students are required to fill in a detailed questionnaire on their educational background and previous experiences regarding the studio teaching in the school and with their general experience with architectural technologies in design and construction. At the end of the module, students were asked to comment and evaluate their experience, express their thoughts, and encouraged to offer their suggestions for the improvement of this educational experience, and the school curriculum in general, how to prepare them more effectively for the for challenges of the profession.

The results of the survey suggest that students consider they have strong background from the core courses and feel confident in tackling complex architecture and building design problems. However, their exposure to modern architectural technologies and processes is mostly limited to productivity and form making software such as AutoCAD, Rhinoceros and rendering applications, while few have experience in form making parametric software such as rhinoceros, and fewer in BIM software such as REVIT or ArchiCAD.

As a possible explanation it is suggested that some studio tutors are skeptical with digital technologies, considering them as productivity and visualization tools rather than a challenge for creativity. Most have been trained in a rather intuitive and artsy approach to design, but it is not clear whether this approach can always stand against today's challenges. Input from disciplines other than some structural input is not viewed as essential, often considered as something to be merely added upon after the completion of the design. But technology has always been an integral part of building, and history shows that technological innovation has always been at the core of major developments in architecture.

In their suggestions for improvement, students recognize that exposure to digital design technologies is an essential skill that needs to be developed early in their studies. The increasing complexity of building systems interwoven in the building fabric requires integration early in the design process, and BIM comes as an appropriate design tool to the growing

needs of managing complexity. The early integration of environmental and sustainability strategies in the design is a good example of interdisciplinary collaboration, and the introduction of interdepartmental collaborative projects is suggested as a necessary step improve the education of engineering and architecture students alike and better prepare to face the challenges of a rapidly changing and highly collaborative and diverse professional environment.

MAPPING THE UNSEEN: INTEGRATING MARGINALIZED NARRATIVES IN ARCHITECTURAL DISCOURSE

ELIF GÖKÇEN TEPEKAYA

In the evolving landscape of architectural and urban discourse, the concept of mapping transcends its traditional boundaries, emerging as a vital, performative act that dynamically interweaves with the fabric of lived experiences. Drawing inspiration from Brian Harley's critical deconstruction of cartographic traditions, this research aligns with post-structuralist feminist perspectives to reimagine mapping. It posits mapping as an inclusive, fluid practice, challenging the established rigidities of conventional cartography and architectural theory, particularly in its representation of space, power dynamics, and the visibility of marginalized groups.

At the focus of this study lies the conviction that mapping is far more than a mere representational tool; it is an active, ongoing performative act. It serves as a critical methodology that reshapes our perception, understanding, and engagement with space, particularly in the context of architecture and urban planning. By adopting this lens, the research seeks to illuminate the complex, often ignored narratives of marginalized communities — including wanderers, immigrants, women, the elderly, children, queer individuals, and people with disabilities. These groups, traditionally relegated to the peripheries of architectural discourse, are

brought to the forefront, asserting their rightful place in the shaping of urban spaces.

The study explores how contemporary mapping practices, viewed as subjective and evolving actions within architectural design, emphasize the process of spatial interpretation and interaction over fixed-end results. This approach not only challenges established norms but also fosters a multiplicity of perspectives, enriching our understanding and experience of urban environments.

By highlighting the role of these 'Invisibles' in urban narratives, the research aims to catalyze a shift in architectural theory and practice. It advocates for tactics where mapping becomes a tool for inclusivity, a means to reconceptualize and reimagine urban spaces in ways that honor and integrate the diverse tapestry of human experiences.
In conclusion, this study aspires to contribute to a more equitable and inclusive architectural future. It underscores the necessity of embracing a broader spectrum of spatial experiences and narratives, paving the way for a more responsive, empathetic, and just urban landscape.

URBAN HABITAT: A NEW PARADIGM FOR MEDIUM-SIZED, PRIVACY-CENTRIC LIVING IN RIGA'S URBAN LANDSCAPE

REINIS SALINS

This Master's thesis introduces 'Urban Habitat', an innovative housing model envisioned for the urban periphery of Riga, Latvia. Inspired by the architectural principles of Pier Vittorio Aureli and Oswald Mathias Ungers, 'Urban Habitat' represents a harmonious fusion of private villa comfort and urban flat efficiency. This medium-sized building concept is strategically designed to integrate within Riga's urban clusters, offering an optimal balance of communal connectivity and individual privacy.Addressing Riga's urban challenges, such as the aging housing stock and the suburban living preference, 'Urban Habitat' emerges as a cost-effective solution. It creatively addresses the need for private, spacious living within the urban fabric, proposing a unique residential experience that combines the seclusion of suburban homes with the vibrancy and accessibility of city life. This model stands out for its economic viability, presenting an attractive option for diverse urban dwellers.The thesis explores a range of architectural configurations for 'Urban Habitat', delving into various building typologies and their potential for grouping and integration within urban settings. This adaptability is crucial, given Riga's varied demographic trends and urban forms. The study proposes that 'Urban Habitat' can be customized to suit different neighborhoods, reflecting Riga's unique cultural and historical

contexts.Drawing insights from the “Rīga X” project, ‘Urban Habitat’ is conceptualized as a key component in transforming Riga into a more livable, culturally rich city. It envisages a living space where cultural, educational, and business elements are seamlessly integrated, making these habitats more than mere residences; they become vibrant centers of community and cultural life.Theoretical frameworks from renowned urban thinkers inform the development of ‘Urban Habitat’. This synthesis of innovation and established urban planning theories underpins a practical yet progressive approach to Riga’s housing needs.

The methodological approach includes qualitative and quantitative research, field studies, and analysis of housing market and demographic trends in Riga. These studies are instrumental in identifying suitable locations for ‘Urban Habitat’, highlighting the significance of strategic positioning in the success of this housing concept.The expected outcome is a comprehensive and economically viable design proposal for ‘Urban Habitat’, demonstrating its potential to revolutionize urban living in Riga. This thesis aims to show how ‘Urban Habitat’ can provide a financially feasible, socially enriching, and environmentally sustainable housing alternative.In conclusion, ‘Urban Habitat’ offers a fresh perspective on urban living in Riga, striking a delicate balance between private sanctuary and urban engagement. It represents a new urban lifestyle – economically sensible, intimately private, yet integrally connected to the city’s pulse. This thesis contributes significantly to the field of urban planning and architecture, redefining medium-sized urban living with a focus on privacy and community.