

LIVENARCH VII

livable environments & architecture



OTHER ARCHITECT/URE(S)

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7th International Congress

September 28-30 2021 Trabzon TURKEY



KARADENİZ
TECHNICAL UNIVERSITY
FACULTY OF ARCHITECTURE
DEPARTMENT OF ARCHITECTURE

FARCH



LIVENARCH VII

livable environments & architecture

7th international congress

OTHER ARCHITECT/URE(S)

september 28-30 / 2021

trabzon – Turkey

karadeniz technical university

faculty of architecture

department of architecture





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karadeniz technical university, faculty of architecture, department of architecture

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“Human Rights and Architecture”

Cornell University, New York, USA



Alper DERINBOĞAZ

“Spatial Ecologies”

Salon Architects, İstanbul, Turkey



Linda NUBANI

“CPTED 50 years later. A Compendium of Perceptions and Misperceptions;
Standardizations and Ordinances; and Evidence for Impact”

Michigan State University, East Lansing, USA



Juhani PALLASMAA

“The Existential Dimensions in Architecture”

Helsinki University of Technology, Helsinki, Finland



Vibhuti SACHDEV

“Cultural Identities in Modern Living”

Sushant University, Gurugram, Haryana, India



Hüseyin YANAR

“Beyond Perfection: The Architecture of the Other”

Tampere University, Helsinki, Finland



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ACKNOWLEDGEMENTS

First of all I would like to say that I am very honored and proud to have held the 7th LivenARCH Congress, which has been organized since 2001 at Karadeniz Technical University, Department of Architecture. The excitement and enthusiasm of organizing such a congress, which has become an institutional and traditional event of the Department of Architecture of Karadeniz Technical University, continues to increase with each new congress. I fully believe that this congress will continue as long as the Karadeniz Technical University Department of Architecture exists.

Karadeniz Technical University Department of Architecture is at the center of the arrangement and organization of the congress. This is a team effort and this team consists of internal and external stakeholders. The fact that the team, organizing the congress works faithfully without losing the amateur spirit, deserves great thanks.

“LivenARCH: Livable Environments and Architecture” which offers a framework where we can talk and discuss as long as humanity and architecture exist, the main theme has been determined as “Other Architect/ure(s)” at the 7th LivenARCH Congress. Here, the importance of discussing the “other(s)” that provides the existence or legitimacy of the center in an environment where architectural theory and practice is built on. Related to this issue, the one is taken as the other whether in the sphere deemed legitimate or in the domain assumed to be illegitimate.

In the theme of “Other Architect/ure(s)”, non-central, undiscussed, undetected architectures and ways of thinking about architecture are pointed out. Within this concept, all theoretical, conceptual, practical and even everyday leaks are included, except for the usual, known, conventional, unique expressions. It is aimed to be able to create uncanny centers and new peripheries to familiar architectural discourses and assumptions, and to ask new questions for architectural thoughts. In other words, with the theme of “Other Architect/ure(s)”, it is sought to realize and reveal other architectural histories, other global/local architectures, other construction practices, other spatial data about the city and people, in which all central assumptions have been removed.

In this context, “LivenARCH 2021: OTHER ARCHITECT/URE(S)” Congress aims to discuss all the “other(s)” in the main topics of architectural thought,



theory and history, practice, city, man and space from different scales and perspectives such as;

Politics/Policies/Laws/Regulations/Ethics

Economy

Nature/Environment/Public Health

Human/Behavior

Technology/Material/Sustainability

Philosophy/Theory/History/Discourse

Criticism/Method

Identity/Culture/Tradition

Urban/City/Landscape/Rural

Design

Interior Design

Conservation/Transformation/Re-use

Education

Arts/Aesthetics

In accordance with the main theme and subheadings determined at the congress, presentations were made in which of them conveyed their own knowledge and experience with invited speakers from different proficiencies. The invited speaker sessions were designed to be before and at the end of congress sessions. These sessions enriched our congress, opened horizons in terms of the congress theme and created new discussions. In this context, the participation of 9 speakers invited from Turkey and abroad in this congress has been finalized.

They are in alphabetical order:

ALPER DERİNBOĞAZ, Salon Architects, İstanbul, Turkey

ANTONIO URQUIZAR-HERRERA, University of Distance Education, Madrid, Spain

ESRA AKCAN, Cornell University, New York, USA

GÜVEN ARİF SARGIN, Middle East Technical University, Ankara, Turkey

HÜSEYİN YANAR, Tampere University, Helsinki, Finland

JUHANI PALLASMAA, Helsinki University of Technology, Helsinki, Finland



LINDA NUBANI, Michigan State University, East Lansing, USA

REFİK ANADOL, Refik Anadol Studio, Los Angeles, California, USA

VIBHUTI SACHDEV, Sushant University, Gurugram, Haryana, India.

However, Refik Anadol, Antonio Urquizar-Herrera and Güven Arif Sargin, three of these nine invited speakers, could not make their presentations for various reasons. As a result, within the scope of the congress, 6 invited speaker sessions were held.

I would like to express my gratitude and thank the invited speakers who contributed to our LivenARCH-VII Congress by taking time out of their busy work schedules.

The scientific quality of the LivenARCH-VII Congress is naturally made possible by the rigorous review of the abstracts by the scientific committee. In this context, in the first stage, 160 abstracts were sent to our congress, and were evaluated by double-blind review method and 122 abstracts were accepted in accordance with the congress theme and the specified rules. As a result, 83 of these studies, which received positive opinions, completed all the processes and took their place in the congress program. We watched them with great excitement during the congress, in the form of two parallel sessions, in a total of 16 sessions. The papers presented to our congress

were: 3 papers under Human/Behavior, 12 papers under Technology/Material/Sustainability, 13 papers under Philosophy/Theory/History/Discourse, 4 papers under Criticism/Method, 10 papers under Identity/Culture/Tradition, 10 papers under Urban/City/Landscape/Rural, 11 papers under Design, 2 papers under Interior Design, 9 papers under Education, 2 papers under Arts/Aesthetics, and 7 papers under Conservation/Transformation/Reuse subheadings. I would like to express my gratitude to the members of the scientific committee, whose names are given below and who meticulously contributed to the selection process of the papers:

Seden Acun Özgünler (İstanbul Technical University, Turkey) Burak Asiliskender (Abdullah Gul University, Turkey), Serdar Aydın (Mardin Artuklu University, Turkey), Kathryn Bedette, Kennesaw State University, USA), Gonca Büyükmihçi (Erciyes University, Turkey), Ebru Çubukçu (Dokuz Eylül University, Turkey), Yüksel Demir (İstanbul Technical University, Turkey), Pınar Dinç Kalaycı (Gazi University, Turkey), Neslihan Dostoğlu (İstanbul Kültür University, Turkey), Pelin Dursun Çebi (İstanbul Technical University, Turkey), Halil İbrahim Düzenli (Samsun University, Turkey), Soofia Tahira Elias-Özkan (Middle East Technical University,



Turkey), Adem Erdem Erbaş (Mimar Sinan Fine Art University, Turkey), Erhan Berat Fındıklı (Istanbul Medeniyet University, Turkey), Tayfun Gürkaş (Özyeğin University, Turkey), Yusuf Kenan Güvenç (Girne American University, North Cyprus), Ferhat Hacıalibeyoğlu (Dokuz Eylül University, Turkey), Heidi Svenningsen Kajita (University of Copenhagen, Denmark), Pınar Kısa Ovalı (Trakya University, Turkey), Hale Kozlu (Erciyes University, Turkey), Franco Manai (University of Auckland, New Zealand), Manfredo Manfredini (University of Auckland, New Zealand), Feride Önal (Fenerbahçe University, Turkey), Hatice Gökçen Özkaya (Süleyman Demirel University, Turkey), Hossein Sadri (Coventry University, England), Aslı Sungur (Yıldız Technical University, Turkey), Levent Şentürk (Eskişehir Osmangazi University, Turkey), Zihni Turkan (Near East University, North Cyprus), Osman Tural (Eskişehir Technical University, Turkey), Ayşe Nil Türkeri (Istanbul Technical University, Turkey), Fatih Yazıcıoğlu (Istanbul Technical University, Turkey).

Institutionally, Karadeniz Technical University Rectorate, Faculty of Architecture Dean's Office, Department of Architecture Head Office helped us to benefit from all the facilities of our university. I thank them for this support.

We will never forget those who contributed to the institutionalization, development and success of LivenARCH congresses, those who are not among us, and we always remember them with love, gratitude and respect.

The participants, who showed interest in the LivenARCH-VII Congress, presented their work to this environment and shared them with us and opened them for discussions, are the most important stakeholders of the congress. I also thank them for their participation and contribution.

Together with the LivenARCH-VII Congress and the new LivenARCH congresses to be held in the coming years, we will continue to create an environment for researchers, practitioners, and the ones who think and discuss these issues, to express themselves, to share and to discuss the information they produce. Thank to those who participated and contributed.

Finally, my colleagues in the organizing committee, who took part in all stages of the organization of the LivenARCH-VII Congress and worked with devotion:

Asu Beşgen, Aysun Aydın Öksüz, Ayşegül Özyavuz, Derya Elmalı Şen, Gürkan Topaloğlu, Kıymet Sancar Özyavuz, Nihan Engin, Nilhan Vural, Reyhan Midilli Sarı, Serap Durmuş Öztürk, Özlem Aydın,

and



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and

Cansu Beşgen who prepared the graphic designs of the congress,

and

the academic, the administrative staff and the students of the Department of Architecture, to those whose names I cannot mention here, I would like to express my gratitude to you all.

This convention is the first online convention of LivenARCH conventions. If there have been any setbacks in our congress that we have overlooked, I would like to be forgiven for them. I would like to let you know that we will try to eliminate and improve the issues found to be lacking.

I wish your LivenARCH-VII Congress to be remembered as a good event that contributes to your academic life.

LivenARCH-VIII Congress coincides with 2023. The year 2023 is the centennial of the foundation of our Republic. On this occasion, I invite all participants to the LivenARCH-VIII Congress to be held in 2023. We are waiting for everyone to discuss and share new current issues and to benefit from the opportunities offered by Trabzon and the Eastern Black Sea Region at this congress, which I hope will be face-to-face.

I extend my love and respect to you all.

Best Regards,

Prof. Dr. Ahmet Melih ÖKSÜZ

LivenARCH-VII Congress Head

PREFACE

From the Editors

Aftermath of LivenARCH-VII...

The LivenARCH journey began 20 years ago on a roundtable in the Seminar Hall at the Department of Architecture in Karadeniz Technical University. This was the beginning of the first step to reach an international discussion platform about the problems and needs of architecture. Beginning with little notes and key words on a board, the first LivenARCH Congress was held in 2001 with the theme of "Nature-Cities-Architecture" chaired by Prof Dr Şinasi Aydemir. Since then, we held 6 international congresses in 20 years. The 2nd Congress was held with the same theme and chaired by Prof Dr Sonay Çevik. The following congresses; 3rd and 4th were chaired by Prof Dr Şengül Öymen Gür with different themes such as; "Contextualizm in Architecture" in 2007, "Re/De Constructions in Architecture" in 2009, aiming to touch the pulse of architecture. We organized the 5th Livenarch Congress, focusing on "Rejecting/Reversing Architecture", chaired by İlkay Maşat Özdemir, in 2017. There were discussions about reconstructing knowledge of architecture as is or discuss it completely through a reverse perspective. In 2019, 6th Livenarch Congress was organized; the chair being Ahmet Melih Öksüz and the main focus being "Replacing Architecture". A multidisciplinary approach was prevailing throughout the meetings. Just after the congress, efforts for the upcoming LivenARCH (LivenARCH-VII, 2021) were spared. The theme was chosen to be "Other Architect/ure(s)".

"LivenARCH- VII 2021: OTHER ARCHITECT/URE(S)" theme points out the ways of thinking about the ideas and the existences of architect/ure(s) that are not central, not discussed and not noticed. The main basis of the theme, except from the usual/known/ordinary/uncanny narratives, includes all theoretical, conceptual, practical, and even crisis productions manifested by everyday leaks. "OTHER ARCHITECT/URE(S)" are all the thoughts and actions formed outside the center, in order to ask new questions for architect/ure(s) in creating uncanny centers and new peripheries. In other words, it is where all central admissions are eliminated; it is a kind of noticeable state in which other global-local architect/ure(s), other architectural histories, other construction practices, other spatial data about the city and people exist.

The concept of "other", which began to be expressed with modernity, usually existed in the architectural agenda with its divergent and differentiated meanings. Architecture, along with the concept of "other", defines a form of a relationship that commutes between the center and the periphery, changing in time. In this form of relationship, to discuss the "other(s)" that ensure the existence of the center in an environment becomes important where architectural theory and practice are built on generating the center/essential/accepted.



In this context, “LivenARCH-VII 2021: OTHER ARCHITECT/URE(S)” Congress aims to discuss all the “other(s)” in the main topics of architectural thought, architectural theory and history, architectural practice, city, man and space from different scales and perspectives such as; Politics / Policies / Laws / Regulations / Ethics, Human / Behavior, Technology / Material / Sustainability, Philosophy / Theory / History / Discourse, Criticism / Method, Identity / Culture / Tradition, Urban / City / Landscape / Rural, Design, Interior Design, Conservation / Transformation / Re-use, Education , Arts / Aesthetics.

Against the presence of a pandemic, forcing the congress to be online, 160 papers were found eligible and were presented.

The book, you are reading now, has 3 volumes, with the papers from different universities, placed accordingly to the sub-fields by our Scientific Committee.

In the 1st Volume, you will see 5 Parts: 1 paper under the heading of "Politics / Policies / Laws / Regulations / Ethics", 2 papers under the heading of "Human / Behavior", 11 papers under the heading of "Technology / Material / Sustainability", 10 papers under the heading of "Philosophy / Theory / History / Discourse" 4 papers under the title of “Criticism/Method” were presented.

In the 2nd Volume, you will see 2 parts: 10 papers under the title/heading of “Identity / Culture / Tradition” and 10 papers under the title of “Urban / City / Landscape / Rural” were presented.

In the 3rd Volume, you will see 5 Parts: 11 papers under the title/heading of "Design", 2 papers under the title of "Interior Design", 6 papers under the title of "Conservation/Transformation/Re-use", 9 papers under the title of Education, 5 papers under the title of "Art / Aesthetics" were presented.

We, as the Livenarch team, wish you days full of groundbreaking studies in the field of architecture...

Özlem Aydın

Ayşegül Özyavuz

Kıymet Sancar Özyavuz

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PART VIII

DESIGN

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NATURE-CENTERED DESIGN: A COMPARATIVE ANALYSIS IN CURRENT ARCHITECTURAL APPROACHES

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ABSTRACT

Architecture is defined as the arrangement of the physical environment to meet human needs. At the same time, it is a process that extends from caves created by humans to take shelter by imitating nature with primitive human instincts to giant skyscrapers. Humanity consumed nature while producing its own built environment. However, humanity has forgotten this truth: Nature can live without humans, but humans can never live without nature. This manuscript aims to describe nature-centered design through the architectural journey of humanity. It also seeks an answer to the question of whether it is possible for humanity to create a nature-centered architecture.

Key Words: Nature-friendly Approaches; Nature-centered Design; Human-centered Design

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INTRODUCTION

Climate change is one of the main issues of humankind (IPCC, 2014) and is significantly connected with the way people live can (Crutzen, 2002). The impact of climate change on land use, productivity, and food security (IPCC, 2019), safety (Church & White, 2011), which is under threat from faster sea-level rise, livability (Roberts, 1976), ecology (IPBES, 2019), is expanding beyond humanity bounds. Adaptation is obviously unavoidable (GCA, 2020).

Humankind's response to environmental deterioration has evolved throughout time, particularly during the second half of the twentieth century, from an end-of-pipe approach to activities that are more oriented toward prevention. In essence, these activities and research centered only on the decontamination of systems led to attempts to reduce the cause of pollution at the source in research and innovation. It becomes obvious that the importance of design has increased throughout time in this environment due to the peculiarities of this development. This growing involvement is due to the following factors: the focusing moves from end-of-pipe controls and corrective actions to prevention (Charter & Tischner, 2001; Karlsson & Luttrupp, 2006; Ryan, 2013); emphasis is expanded to include a global perspective of the holistic life cycle from isolated parts of the product life cycle (i.e. production only)(Brezet & Hemel, 1997; Keoleian & Menerey, 1993); emphasis is shifted to the socio-cultural dimension, into territories in which a developer becomes a "hinge" (Jelsma & Knot, 2002; Vezzoli et al., 2018).

The built environment has become the natural habitat of human beings. Urbanization, which gradually gained speed after the industrial revolution, caused people to move away from nature. Despite the fact that the built environment keeps people away from their natural surroundings, studies show that individuals feel happier and calmer in settings where nature is reproduced (Diener et al., 2009; Nisbet & Zelenski, 2011). This forces the built environment to relate to nature in some way. The arranging of the physical environment to satisfy human requirements is characterized as architecture. At the same time, it is a process that ranges from caves built by people to take refuge by emulating nature with primitive human instincts to huge structures. While creating its own manmade world, humanity consumed nature. With an ever-increasing human population, industrialization, and the loss of natural areas as a result of a one-sided dominant relationship with nature, the amount of greenhouse gases in the atmosphere has nearly destroyed the ecosystem, and nature has become unable to repair itself (Aytis & Ozcam, 2010). However, humanity has forgotten this reality: without human beings, nature can exist, but without nature, humans can never exist. In order to address these problems, many approaches have evolved within this framework such as green design, sustainable design, ecological design, biophilic design.

But how effective are concepts such as green (Sussman, 2008), sustainable (McLennan, 2004; Ragheb et al., 2016; Salman, 2018), ecological (Daniels, 1997; Lawson, 1996), and biophilic design (Kellert et al.,



2015) which are named according to the degrees of this relationship established with nature, in protecting nature?

This article introduces the novel concept of “nature-centered design” through current architectural approaches which are defined on the relationship between nature and humans. It also explores whether it is possible for humanity to create a nature-centered architecture.

Historical Background Of Nature-Friendly Approaches In Architectural Design

Environment and environment-related topics have long been on the human agenda. Environmental consciousness is a component of daily life for cultures that lived in nature before the machine era. Humans had no intention of subjugating nature until the mechanistic approach, which created a key breaking point in science history. Human beings began to drift away from the concept of nature with the rise of the mechanistic viewpoint.

Thomas Malthus highlighted in the 1826 essay on the population principle that the world's population was increasingly pressurized on natural resources and pointed out that the global population has grown exponentially while available resources have grown arithmetically. Famines and wars would erupt at this rate because population expansion would outpace food production (Malthus, 1826). Then, Garrett Hardin presented the economic theory as the tragedy of the common people. In its theory, Hardin stressed the increase of the human population, the utilization of natural resources on Earth, and the welfare state. Finite resources will ultimately run out if the population continues to grow at the current rate (Hardin, 1968). The Population Bomb, written by Paul R. Ehrlich, was released the same year. The author examines topics with population and the environment. The population expansion, according to Ehrlich, puts strain on economies and resources. Overcrowding will result in calamities (Ehrlich, 1968). The first major meeting on worldwide environmental concerns and environmental policy development was conducted in 1972, at the UN Conference on the Human Environment in Stockholm (UN, 1972). Then, in 1976, the United Nations Habitat Conference on Human Settlements, also known by its name as Habitat I, and the largest human problem conference of its day, gave for the first time answers to urban issues such as poverty, homelessness, speeding up human movement from rural to urban regions, clean water, sanitation (UN, 1976). The political significance of the environment decreased between the mid-1970s and the 1980s. There have been various causes for this, including economic recession in the mid-1970s and the lack of complete environmental consciousness in the economic planning system. In 1987 a report entitled “Our Common Future” was produced by the World Commission on Environment and Development (WCED) in 1983. According to the Brundtland Report, the need for economic, social, and environmental development should be considered concurrently in order to achieve long-term development (WCED, 1987). The UN Conference on the Environment and Development in Rio de Janeiro in 1992, popularly known as the “Earth Summit”. The summit represents a big

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step forward in order for harmonizing environmental protection with world economic development (Agenda 21, 1992). Significant human settlement developments were tackled at the Second United Nations Human Settlements Conference (Habitat II). It highlighted the need for a roadmap for development to achieve sustainable development in the 21st century for the world's cities, villages, and towns (UN, 1996). Then millennium development goals representing global environmental agreements and promises to international collaboration have been established (UN, 2000). In 2012, The United Nations Conference on Sustainable Development, often known as Rio+20, produced a focused political conclusion statement that included clear and realistic strategies for implementing sustainable development. The outcome of the conference was the creation of a set of Sustainable Development Goals (SDGs), which would expand on the Millennium Development Goals and combine with the post-2015 development agenda (UN, 2012b).

Despite tremendous improvements, the development model remains incapable of achieving simultaneous and synergistic advancement on the social, economic, and environmental aspects. Poverty and inequality, as well as the depletion of natural resources and ecosystems, cannot be sustained by development (UN, 2012a).

The goal of architects and all layers of society should be to ensure the long-term viability of human life and nature. However, natural habitats across the world are dwindling. The absence of a biological-ecological framework, therefore, becomes increasingly important, affecting the physical and mental structure of society in a negative way. It is apparent that short-term, unsatisfactory solutions are tangible planning techniques that dominate our day. For this cause, the development of living situations that safeguard nature plays a major role in architecture. In order to address this problem, in the past several years, some approaches in architecture have emerged.

Current Architectural Approaches

Nature can survive in the absence of humans, but humans cannot survive in the absence of nature. This reality may be made visible via architecture, allowing us to engage with nature on a profound and transformational level. One key aim of the nature-friendly design is to reintegrate architecture into the natural flow and cycles. For present and future generations, it is necessary to link buildings to their origins in climate, soil, and location. Buildings and communities should be made whole via a sensible design that integrates life-enhancing technology that includes the fundamental components of light, water, healthy landscapes, and clean air whenever feasible for the benefit of humanity. Some approaches have emerged to achieve this.



Green design

Green design refers to features of design that intentionally attempt to make the finished product as sustainable and environmentally friendly as feasible. In architecture, green design is an approach that minimizes negative health and environmental consequences (Sussman, 2008). The Green architect or designer attempts to safeguard air, water, and soil via the application of environment-friendly materials and construction methods (Bauer et al., 2009).

The term "green" became a popular catchphrase in the 1980s. In the mid-to-late 1980s, there was a sudden abundance of greenery in the media and in advertising as public awareness of environmental concerns grew and green parties became more popular throughout Europe (Madge, 1997). In 1986, the Design Council's contribution to Industry Year was the exhibition, which was primarily focused on showing what green design was. The exhibition also emphasized topics such as energy consumption, durability, recyclability (Design Council, 1986). Green design, like other environmental protection principles, became popular in the 1980s and was later incorporated into design strategies. Between the 1990s and the 2000s, the term "green" was progressively phased out in favor of "sustainable" (Tabb & Deviren, 2014).

Ecological design

Ecology is just recognized as a branch of biology till the 1970s. In 1988, John Button mentioned around ninety concepts of the prefix "eco," but not ecodesign (Button, 1988). The phrase gained popularity a few years later, though it was used as early as 1989 by the Ecological Design Association as "Ecodesign" (the Ecological Design Association, 1990).

The ecological design established human-nature connections to environmental concerns, which have become increasingly important since then and have proven useful in the fields of architecture and engineering. Ecology is now a science that advocates for the use of renewable and safe energy, as well as the preservation of nature's cycles and species relationships. Similarly, ecology in design refers to a knowledge that makes efficient use of resources, causes less harm to the environment, and contributes more to human happiness in the long term (Elmalı Şen et al., 2010).

Ecological design is a design approach that recognizes individuals as a component of the global environment (Daniels, 1997). The design is focused on the idea that there is a balance between the natural environment and the structures. If this equilibrium shifts in favor of the building, all other systems suffer as a result (Lawson, 1996). By contrast, the new ecology which developed from the 1970s onwards rejected the idea of nature as a balanced system and emphasized instead the disequilibrium of natural systems (Worster, 1994). In many ways, ecodesign studies reflect are based on the first type of ecology rather than the second. The new ecology of chaos and complexity lays the complete foundation for the investigation.

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Pragmatically, if the real world actually doesn't operate like that, the design of systems or goods based on second types of ecology would fail (Madge, 1997). There is another implication of current ecological thought. According to Goldsmith (2008), there is a contrast between an ecological worldview and an industrial society's modernist worldview. He states;

"... methodically substituting the technosphere or the surrogate world of human artifacts for the biosphere-or the real world of living things-from which the former derives its resources and to which it consigns its waste products...."

Sustainable design

The sustainable design strives to decrease negative environmental consequences as well as the health and comfort of building inhabitants (McLennan, 2004). The fundamental idea of sustainable architecture is to be able to design structures that consume as little energy as possible (Salman, 2018). Sustainable development is widely recognized as the new development paradigm of the 1990s, with the UN Environment Program (UNEP) at the forefront of attempts to popularize the term. The World Protection Strategy (WCS) was proposed by the International Union for Conservation of Nature (IUCN) in the 1980s with the goal of guaranteeing the conservation of living resources via sustainable development (WCED, 1987). In emphasizing sustainable development society's principal aim, the World Conservation Strategy has made an important contribution to reconciling the objectives of a developing society with the environmental movement (Lélé, 1991). Many have taken the report's assertion that economic growth or development is still feasible as long as it is green growth as an endorsement of a "business as usual" approach with only a nod toward environmental preservation (Madge, 1997). This overlooks the true meaning of sustainable development, as contained in the oft-quoted idea of future generations. When the notion of sustainability is implemented to design, it incorporates not only the concepts of ethics and social responsibility but also the concepts of timeframe. In other words, it provides design principles for recycling and considering the product's life cycle. This inspires designers to create long-lasting and robust things. Designing durable things to eventually dismantle may sound like a contradiction, but it is incredibly vital in a sustainable world, says Papanek (1995). While advocating the sustainability of nature, Escobar (1995), who recommends that the topic be addressed from an economist's perspective, claims that the sustainability of culture is undermined. With this attitude, he claims that biodiversity, including flora and wildlife, is regarded as capital reserves rather than resources.

Biophilic design

The main goal of biophilic design is to create suitable places and eliminate the negative psychological consequences of living in a constructed environment. The design's ultimate objective is to enhance human



interaction with nature while also lowering the built environment's carbon impact (Kellert & Calabrese, 2015).

The biophilic design was inspired by research that shows that being in intimate contact with nature improves mood, cognition, and health, among other things (Browning et al., 2014). According to Kayihan (2018), in today's sustainable design methods, The design approach is the missing link. The major distinction between traditional sustainable design and Biophilic Design, according to Louv(2008), is that 'sustainable or green design is primarily about preserving energy and leaving a minimal footprint on the environment; Biophilic Design is about not only conserving energy but also creating human energy.

Fox and Xu (2017) discussed the perception and impact of BD is considerably changing among cultures, which undermines the rationale for its inclusion in a wider plan. Riley et al. (2019) found Biophilic Design interventions such as the green façades having a shorter service life than the rest of the building construction as regards materials and durability. This deficiency actively impedes the spread of BD principles in connection to the long-term viability. In terms of cost, Based on the conventional design approach, construction costs are usually much higher in nature-friendly techniques and Biophilic Design can add even extra expenses, which in some situations might render choosing biophilic features ineffective (Riley et al., 2019; Xue et al., 2019).

Nature-Centered Design Vs Human-Centered Design

Without a doubt, the fact that energy and natural resources are running out in this century, the rate of carbon dioxide released by excessive use of fossil fuels, and the climatic changes that our planet is experiencing have caused societies to reconsider their production and consumption patterns in every sector. Architecture is one of them. The goal of these approaches, which are based on the effort of creating an environment-friendly built environment and its theoretical infrastructure, is to regulate the relationship between humans and their environment and nature, as well as to prevent or delay the ecological disasters that are predicted in the near future. The issue is that each of these approaches places humans at the center of their attention. Nature-friendly strategies that place the human at the heart of the development cycle is critical today, because humans are the producers and users of artifacts and processes, as well as being constrained by finite resources. However, in the Anthropocene epoch, all human action, whether little or large-scale, has an impact on the environment. The human-centered design, by definition anthropocentric, ignores the inclusion of environmental or non-human variables into the design/management process. How many designers believe that the effects they create will have an impact on forests and coral reefs? Because rising global sea levels and species extinction are unlikely to have an effect on the success of your work. Because you're designing for humans, not non-human creatures.

The words such as green, ecologic, sustainable, biophilia refer to technical solutions to what are essentially unsustainable systems/regimes. They may

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slow things down, but they cannot lead us to a genuinely healthy, sustainable world. They can increase material and energy efficiency but cannot reorganize development based on resources significantly. Climate change, the loss of biodiversity, and environmental degradation are scientifically agreed upon. But society does not modify its attitude to economic growth, its understanding of production and consumption, despite everything. Building construction, according to Schttich (1997), will never be an environmentally friendly activity; nevertheless, individuals may reduce the potential effect by placing nature at the heart of the design.

Defining Nature-Centered Design

Nature can be described using the phrase “regenerative”. Nature has the potential to renew itself unless humans intervene. When all human-designed buildings and services, resource extraction, agriculture, and industrial processes are evaluated, an understanding that brings together processes by designing infrastructure that imitates and replicates how the natural world works, while putting all other living creatures at the center, must be developed.

Take as an example the building. Prior to construction, its location was forest, wilderness, agricultural land, or marsh, each with its own metabolic fluxes, which converted solar power, absorbed carbon dioxide, produced oxygen, and provided habitats, each with its own metabolic cycles, to a multitude of tiny animals. The act of construction modifies all these cycles. For constructing the building, woods are harvested in remote places, plastics are produced, and metals are refined. When the building is finished, - From here begins the period of human-centered methods- there will be a new series of cycles. The building is heated, cool, and lighted by gas, oil, or electricity. Carbon dioxide production and waste heat are discharged into the air. The inhabitants burn fuel to and from the building. Food cultivated in remote areas and trash disposed of in landfills is bought and consumed. In and out with human waste and other detritus, clean water is pumped and released. Multiply the building by tens of millions and envision nature's destruction. It has a significant influence on metabolic processes resulting from living patterns that place humans at the center of design decisions. If we believe humans to be the only noteworthy species on the planet, we will continue to damage nature without considering the first processes described. The future of humanity is dependent on nature. Moving away from a completely human-centered perspective of the world and building with nature will be a critical tool in developing a crucial new architecture for an empathetic world.



CONCLUSION

Green, sustainability, ecological design, and biophilic design are all terms that are used to rectify unsustainable systems and ecosystems for the benefit of nature.

Even if these concepts prevent the relationship between nature and humans from being completely broken, they cannot lead humanity to a truly sustainable nature-centered world. These practices slow down the damage caused by the built environment to nature, but they fail to reconstruct the damage done to nature for decades. Therefore, human needs to shift its design approach from human-centered to nature-centered as much as possible.

Unlike human-centered design, the nature-centered design, frequently maximizing empathy felt towards other living things emphasizes the health and future of the larger ecosystem. This implies redefining the concept of the “user” as not only individuals but all living things.

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'OTHER' FEATURES

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ABSTRACT

Information buildings are generally buildings with high interaction with people. While the construction processes of these structures are easy, their design processes are more difficult than the construction process. They must have many requirements in terms of their design. When these requirements are examined, its connection with the local people should be more than a normal architectural structure. Among the reasons for this is one of the design purposes of information buildings; It should enable the objects to be promoted to interact with people. Increasing people's interaction with the building should emerge as an architectural idea. In this scientific study, other features of promotional office buildings are examined. In line with the examinations, the design features of the buildings with such a purpose, the working principles of the structural systems, the details of the structural system features and the revealing of the characteristic features of the structural systems in the building were examined.

This study is about the examination of information buildings that were designed and built with the issues mentioned in the first paragraph. With this study, it has been learned that the information buildings are in an effort to meet not only the protection needs of the people, but also other features. Among the other mentioned features, there are features such as cultural communication and conformity with traditions.

Keyword: Information Buildings; Steel Structure; Construction; Habits; Design



INTRODUCTION

Since ancient civilizations, meeting the shelter needs of people has been in line with the culture, ethnic identity and traditions of the people. Every civilization has its own characteristics. The main issues affecting the architecture such as building techniques and building designs developed in line with these features have developed by differing. In this way, different design analyses were made in line with the needs of different cultures around the world. When approaching today, important issues such as culture, identity and tradition have facilitated the interaction between different societies, and the development of titles such as different building and construction techniques, design proposals has become easier when looking at the old times (Janetius, 2020).

The increase and rapid realization of communication between societies has accelerated the development of all civilizations as a result of the interaction of the titles with each other, on the contrary to the mixing of the titles of identity, culture and tradition. The developments in this subject have also affected the architectural subjects, which are the most active areas of the mentioned titles. The situations of societies have led to the emergence of different architectural movements. In this way, the buildings began to have different characters. The constructions realized in line with the characters of the buildings have enabled the development of detail analysis in the buildings and the details to serve the buildings effectively. In this way, the cultures of the buildings began to form. In this way, the details used in the buildings revealed the characteristic features created by different solutions on architectural issues. In this way, the buildings constructed with characteristic features have brought different features to the architecture by incorporating other features that are not found in architecture into architectural subjects (Janetius, 2020).

In this study, the presentation of other architectural issues to be examined will be explained through information buildings. In order to meet the requirements mentioned in the creation of the designs of the promotional office buildings, the architect/architects used different solutions. This situation is valid not only for promotional office buildings, but also for buildings with various uses. For the aforementioned requirements, other architectural issues of building designs will be examined, with buildings that have a cultural, identity and tradition-appropriate design, and the interaction of people with buildings designed with this kind of design concern. There are different features in each of the architectural works that have high interaction with people. These features have emerged in connection with the culture, ethnic identity and traditions that have developed throughout the history of civilizations and are developing until today. Architecture is a phenomenon that needs to be studied with different scientific branches in the context of these issues. Each architectural work developed in this context has been influenced by the culture of the region, ethnic identity, geographical characteristics of the region, the political situation of the region and finally the traditions of the region. The interaction led to the development of the science of architecture (Janetius, 2020).

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Other Features Of Information Buildings

Architecture, which is a scientific branch that requires knowledge on different subjects, creates a link between people and people's lives in many ways. In this context, the designs made should be in a design that can be distinguished without being different in the face of this situation. In the face of this situation, the architect/architects should analyse the requirements of the design well and complete the architecture. When the requirements are examined, issues such as the choice of building elements, building designs, structural system designs are the main preferences that make up an architectural building or structure. Apart from these topics, the system to be created has different requirements. There are design effects that do not require much technical knowledge, such as logistics during the construction of the building, the harmony of the building with its environment during the usage process, and the interaction of the building with the people suitable for its intended use. In the face of this situation, the building has different solutions other than architectural construction techniques. In these subjects, which we can call the other, buildings can be divided into private, social, etc., according to the purpose of use of the buildings. In terms of the effect of these issues on the design, the building should be examined as a whole and the interaction of the other architecture and the technical areas of the architecture should be increased. In this way, it is possible to construct a building or structure that can provide optimum benefit for its purpose. In this context, when the other is examined in terms of architecture, the habits, daily life and needs of people come to the fore (Janetius, 2020).

People's habits, daily life and needs may differ. In this subject, it is formed by the effects of people's culture, identity and tradition. The contents of these titles may differ due to various factors. The most important examples of this are geographical factors. For example, the needs of a local with a maritime culture, identity and tradition and a local people with a desert culture, identity and tradition are not the same. The architectural design to be realized in this direction should show differences. It was in this context that the structural systems of the buildings changed according to the regions. structural systems must have very different designs according to their locations. these can be tensile, frame or masonry construction techniques (Bjorn N., 2007).

The subject of culture has been a research subject studied by many different scientific branches. Cultural construction in architectural matters has been an effective issue from the design of the buildings to the end of their usage processes. For this reason, the designs to be realized should have adopted the culture of the region. While designing in information buildings, the spaces to be created should be built in accordance with their habits, without contradicting their culture, as the facades interact with the environment and can be easily observed by people. Their designs should arouse attention, curiosity and interest in their interaction with the local people. While all these elements are being realized, they should have a design suitable for habits. The works to be carried out on the design of information buildings should meet the daily habits of the local people. It should attract the attention of the local people in the processes that will take place after the habits are met.



While the building is attracting attention, disturbing design elements should be avoided. It should increase the sense of curiosity while attracting the attention of the local people. Buildings that increase the sense of curiosity increase the interaction with people. For this reason, the design process that needs to be carried out after meeting the habits should be managed effectively (James, Kevin, 2012).

The studies to be carried out to complete the design process should cover the study subjects of different scientific branches. The closeness of the studies carried out in this way to reality will increase and provide more accurate results. The results obtained in this way will be noticed by the architect/architects of the features that the design of the building should have. For example, the inferences to be made after examining the studies carried out in the sociology department will provide information about important issues such as the needs and daily life of the local people while the construction of a building is carried out (James, Kevin, 2012).

The development of different cultures together will lead to the development of different characteristics of the local people. In this way, each architectural work that will be formed as a result of the interaction of different cultures can cause the science of architecture to be divided into different branches. With this situation, it will ensure that the characteristic features of the buildings have the features that can be noticed. When the concept of culture is examined together with the other main titles, identity and tradition, it is the most suitable title for interaction with different cultures among other titles. As a result of this situation, as a result of more interaction, the similarities of cultures in the international sense increase. When this situation is examined in terms of architecture, it is seen that the construction techniques and designs differ as a result of the comparison of the designs of the structures built for special use in different cultures in a region. It has been observed that the buildings show improvement in terms of design and construction techniques when the interaction of different cultures is high. (Janetius, 2020) Identity is a sociological phenomenon that a society has and has effects on every moment of its life. This phenomenon is present in every situation where it reflects the general views of the society. As a result of many scientific studies, it has been seen that in the civilizations whose social identities have been examined, people prefer a lifestyle by sticking to identity phenomena. In the face of this situation, the works to be carried out in the field of architecture ensure that buildings and structures are used effectively in harmony with the identities of civilizations. Actively used buildings and structures must have different properties in line with their intended use. In this case, the identity features of the civilizations should provide some characteristics of the building in terms of design and technique, and the buildings should gain characteristic features. The spaces of the buildings are one of the factors that determine the daily life of people. The spaces to be created in this context should be created in line with the characteristics of civilizations that have survived to the present day. The spaces created have been created with the necessary analyses to meet the needs of the cultures of civilizations over the years. The needs of civilizations are determined in line with their identity characteristics. Studies carried out in this context should be aimed at investigating the identity needs

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of societies or civilizations and meeting these needs (Anastasia V., Anastasia N., 2014).

For example, privacy is an important element in the Middle East region. In terms of identity characteristics of the people living in that region, they prefer to live their private lives away from the society and in secretly.

In the architectural sense, the identities of the societies provide the formation of the characteristic features of the buildings. The effects of people's ideas on the works that need to be examined in the design process of buildings or structures should be prioritized. The use of buildings adopting designs in this way in societies or civilizations has been more effective because it is suitable for the daily life of the local people. The use of buildings adopted by societies or civilizations in the regions where they are located has been more than buildings with other characteristics. In this context, the use of buildings serves the purpose of use of the buildings if the design of the buildings is in direct proportion with the identity characteristics of the people. The aim of the information buildings is to increase the interest and attention of people and to increase their interaction with people. Information buildings, which have designs in line with the identity characteristics of societies, increase the interaction with people. Increasing interaction passively benefits the intended use of information buildings. Along with this effect, it is an important factor that the design features of information buildings are compatible with the identity features of societies or civilizations (Anastasia V., Anastasia N., 2014).

Information buildings, which contain identity features in their designs, have a social impact outside of their regional influence. In this context, the increase in the area of influence of information buildings that have a social effect increases the awareness of the building. Increasing the recognition of information buildings among people will ensure that the building has a design that will provide optimum benefit. In this way, the effect of publicity office buildings, whose construction has been completed, on people will be increased. While civilizations adopt structures or buildings suitable for their identity characteristics, there is no process of getting used to the building. This situation prevents the difficulties that will occur in the usage processes of the building. In this way, the problems that may occur while using the buildings can be solved easily. In this way, the life of the building can be extended. Information buildings with extended service life can reach more people. In this way, the use of information buildings increases and they can interact with more people. Increasing interaction, which is one of the design purposes, can be realized with construction techniques and designs suitable for the identity characteristics of societies. In this context, examining the identity characteristics, the process of using an information building can be affected by the decisions taken during the design process (Jack L., Arthur E., Kazunori H., 2005).

There are many features in architecture under the headings of culture, identity and tradition. In general, these features are shaped by the values of the local people in the region and the characteristics of the region. In this case, architecture should have a systematic that must meet the values of people, not just calculations. People's lives are designed with a systematic



order. The design of people's lives has revealed the necessity of examining many factors. The culture and identity titles examined in the first parts of the study are generally periodic and in terms of these features, they are easier to develop and change with interaction than the tradition title. In this case, the title of tradition is the habits that people or civilizations have historically preferred (Janetius, 2020).

When architectural values were examined under the title of tradition, it was seen that civilizations had historical habits. It has been observed that the buildings, which were constructed in accordance with the traditions of the societies, were used without alienation in the society. The technical features of the buildings designed with traditional design concerns and the detail analysis on architectural issues may differ. In this context, the construction of buildings can be realized with traditional methods rather than today's techniques. In this way, people's interest and attention can be obtained. To explain with an example, an information building that was built with a traditional design is not found strange by the local people and can attract the attention of people who come to the region for touristic purposes from outside the region (Anastasia V., Anastasia N., 2014).

Material preference is an important criterion for tradition. One of the most important factors affecting civilizations is geography. Along with geography, societies or civilizations show appropriate developments. For example, the preference of wood material as a construction material by northern European countries and the use of wood material together with this preference has become a part of the traditions of the people in those regions. In this way, the traditional characteristics of people have often emerged with external factors. It was formed in line with the order traditions of civilizations. In this case, the fact that the design processes that will take place are within the traditional studies will ensure that the positive benefits of the region are utilized. Designing information buildings by examining traditional features will enable the building to live together with the society. Apart from this benefit, it will provide the organization of construction works (Anastasia V., Anastasia N., 2014).

It is of great importance in the design of information buildings in line with their intended use. Different effects on people can be achieved with design features. Design features can often have a formalist approach. But design features have many different issues. Among these issues, the biggest impact is the design of the structural system. Apart from the structural system design, there are issues such as material preference. While designing structural systems in information buildings, they should be designed according to the spaces to be created. The design, which will take place in the context of the needs of the space, is the most important architectural phenomenon that will interact with people, as mentioned above. In this case, the structural system design to be realized should be considered in the design process of the building and designed in accordance with the issues of culture, identity and tradition (Anastasia V., Anastasia N., 2014).

The subjects mentioned in the study were continued by examining the sample. While examining the sample, first of all, general information, design

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information and structural system information were examined and examined under the headings of culture, identity and tradition. The review was carried out on the information building called Infobox located in Potsdamer Platz square in the city of Berlin, which was built in 1995 and then dismantled in 2001 (Schneider-Schumacher, 1995).

Examination Of Infobox

Germany is one of the largest countries in Europe today. Germany became the losing side after the second world war. The city of Berlin, which was the capital of Germany after the war, was occupied by the occupying troops. The occupied city of Berlin is divided into 4 different regions as American, British, French and Soviet regions. In line with the administrative decisions made after the division, it was decided to unify the regions. The only administrative unit that opposed this situation was the Soviet forces. The Soviet Union opposed the unification decision of the regions and formed the East Berlin administration. The East Berlin administration took a socialist approach to the economy. The West Berlin administration, which was formed by other occupation troops against this situation, developed economically and left the East Berlin administration behind. In this case, the German people on the east side of Berlin began to immigrate illegally to West Berlin. In order to prevent this situation, the Berlin wall, which was drawn as a border, was built. The wall was built in 1961 and demolished in 1989 (Potdamerplatz.de) (Neil, Quazi M., 2020).

Europe's largest construction site was planned, as the governments of Berlin, united after the fall of the wall, wanted the wall areas to be reopened. The site now forms the Potsdamer Platz square in central Berlin. An information building has been designed for different purposes at the construction site, which is called the largest construction site in Europe. The building, which was built first, was also used to manage the construction site. Secondly, the information building, which is designed for the local people to adopt the square and to create a new city centre, has the necessary opportunities for the public to reach all kinds of information about the construction site. In this context, the places created in the city centre with the informational activities carried out should be designed in accordance with the culture, identity and traditions of the local people. Since the place to be created is large-scale, it is an important phenomenon for the city centre to be created if the building to be promoted is made in accordance with the habits of the people (Nowobliska M., Zaman Q. M. 2013).



Figure 1. Potsdamer Platz construction site (Schneider-Schumacher, 1995)

The building was located in the city centre of Berlin in 1995. After the fall of the Berlin wall, the building was used as an information office, where control of the redesign and construction of the city and region was carried out. After the completion of the construction process in the region, the information building in the region was removed from the region in 2001 by carrying out the dismantling operations as designed (Schneider-Schumacher, 1995).

When the features of the building in terms of design are examined, it is seen that the building has a mechanical order in terms of culture. The high on ground level used in the design of the building was made to provide control over the land. It is planned to provide control and to have an effective field of view at the construction site. In this way, the city centre culture to be recreated is to ensure that the people following the construction processes are included in the culture. In this way, the inclusion of local people in a large-scale planning will ensure the development of community culture. Culture is an important necessity that can evolve as mentioned in the first chapters of the study. Thanks to this requirement, the spaces created were adopted and used by the local people. The cultural use of the city centre gains importance in such large projects.

The use of commercially created spaces is an important design process to adapt to the culture of the local people with the acquisition of people's habits. In order to achieve this process, the necessary works should be managed from the construction period and the public should gain a habit. In this regard, the effectiveness of information buildings and their interaction with the public gain importance. It is important to raise awareness of the promoted item by increasing the interaction with the public of an effective information building. The items to be promoted for the information building can be anything. It has a large-scale working area from a technological tool in a large-scale city centre. For this reason, due to the construction of information buildings, it should be carried out together with the works that will provide optimum benefit in terms of design and technique (Nowobilska M., Zaman Q. M. 2013).

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The infobox building, which was examined under the title of identity, was located in the centre of the construction site created in the region. It has been placed in a position that dominates the construction area in order to control the construction site in order to provide what is desired in the functional sense. The building was built with the aim of controlling the construction site operations and in addition to this purpose, the local people were planning to gain habit of the region. The building has a characteristic importance in terms of these features. While controlling the construction area, it allowed people to interact with the building inside the building and in the social areas. This situation enabled the building to be used together with two different functions. Vertical and horizontal circulation areas in the designed building are positioned differently from standard buildings for the desired functions. It is an important design approach in terms of the identity of the building. With the building's interaction with the community identity, it gives an identity to a newly designed city centre. In the face of this situation, it is planned that the identity characteristics of the people interacting with the building will be compatible with the designed new city centre. In this way, social identity developed and provided the human circulation of a new city centre. In this example, when the infobox building, which is the information building, is examined under the title of identity, it has created the interaction between the city centre created in the region and the local people, and has provided the development of the social identity of the local people (Jack L., Arthur E., Kazunori H., 2005).

The infobox information building, which was examined under the theme of tradition, was examined as an element that creates a new order. In the face of this situation, the building design was built with the structural system in mind. After its construction, the building was dismantled and removed from its location. Having a traditional design, the building has a modern design as part of the formation of a new city centre. It has been examined that materials such as steel and concrete, which are preferred as building materials, are preferred as traditional construction materials in terms of the region where the building is located. The fact that the building design is far from traditional design is due to the fact that the architect/architects are in a functional planning rather than aesthetic concerns. Since the building will be dismantled from the area after completing its function, an aesthetically poor design has been realized. Dismantling, which is one of the general features of information buildings, provides the opportunity to build without disturbing the traditional appearance of the region (Bollinger-Grohmann).



Figure 2. Elevation of infobox (Schneider-Schumacher, 1995)

When the structural systems of the building are examined, first attention was paid to the positioning of the columns in order to create clean spaces, as can be seen in the plans. There is a 7-meter spacing between the columns. There are stair towers that provide 3 different vertical circulation located in the middle part and on the outer facades of the building (Bollinger-Grohmann).

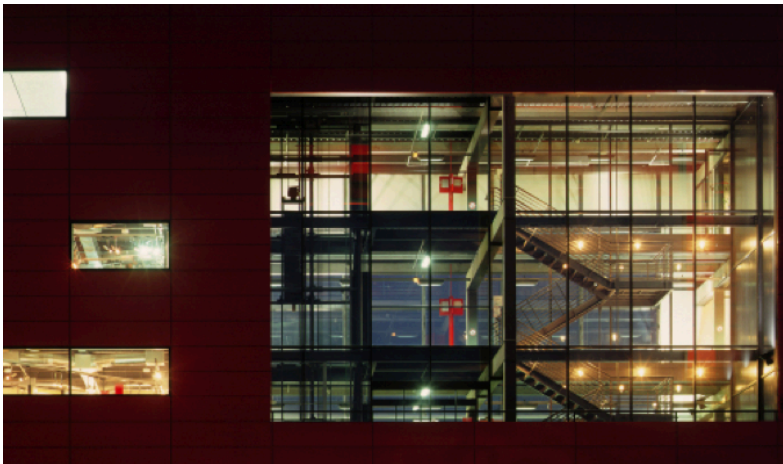


Figure 3. Elevation of infobox in night (Schneider-Schumacher, 1995)

The building has a height of 7 meters from the ground level. The total height of the building is 23 meters at roof level. The spaces used in the building are 5 meters between their floors. The total height of the spaces in the building is 15 meters (Bollinger-Grohmann).

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During the construction process, the structural elements used in the structural system designs of the building were brought to the construction site as prefabricated. The materials brought in the construction area were combined and the construction of the building was carried out as prefabricated (Bollinger-Grohmann).



Figure 4. Construction site of infobox (Schneider-Schumacher, 1995)

The 7-meter height at the ground level of the building creates a sense of lightness in the building by design. In this area, structural system elements are placed in accordance with the design. Vertical and diagonal structural elements are used at ground level (Bollinger-Grohmann).



Figure 5. Infobox structural system elements in ground level (Schneider-Schumacher, 1995)



Concrete filled steel circular section elements with a diameter of 40 cm were used in the design of the structural system in the region. Diagonal structural system elements are located at the ends of the building and between the columns in the middle. Concrete-filled steel elements were used in the design of the structural system elements used in the columns. The strength of the building has been increased by using the steel-concrete composite structural system element design of the structural elements in the connection of the building with the ground (Bollinger-Grohmann).



Figure 6. Facade cladding elements of infobox (Heiko Burkhardt, 2001)

For the façade features the designer are used steel panels on the exterior of the building. These panels were used as 2.5 meters x 0.5 meters.

CONCLUSION

The required features of the information buildings, which are the subject of the study, were examined. The features that must be met in order for the information buildings to be constructed in social areas to be successful and suitable for their intended use are explained. In this study, the main qualifications required for the information buildings to achieve the mentioned harmony were examined. With these features, it has been seen that the information buildings are in harmony with the people. The fact that information buildings are in harmony with people is a matter of great importance in terms of the purpose of use of the buildings. On this subject, the architect/architects should complete their designs in line with the other so-called features described in this study. The design of the information

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buildings, whose designs are completed in this way, serves the purpose of use of the building. These qualities are the features that determine the architectural perspective in line with these habits that make up the daily habits of the people. In this context, it has been seen that the mentioned qualities affect the structures, buildings and lifestyles. Architectural subjects are the subjects that determine the general lives of people. In this context, the buildings should be in harmony with the people while determining the way of living. Culture, identity and tradition issues, which can be called other in architecture in this regard, are important issues in the shaping of buildings. These issues are often of great importance that are not in the foreground. These features are more important in social buildings such as information buildings, which will be constructed in line with these qualities. In information buildings, these features affect the interaction with people. In this context, these qualities should be taken into account in information buildings.

It has been seen that the information buildings, whose design has been completed based on their qualities, increase the interaction with people. In the examined example, the Infobox information building, a building located in the Potsdamer Platz square in Berlin, has been examined in terms of its culture, identity and tradition, which are the main important qualities. In this context, as a result of the examination, it has been seen that the information buildings have an effect on the habits of the local people. Infobox information building, which is a building that affects people's habits, has been seen to be a building with features that will increase the attention of the public in terms of design. The Infobox building, which was successful in raising people's interest and attention, created a link between a newly created city centre and local people. With the design works carried out on this subject, the interaction of the public has increased and a new living space has been created with the public. While creating a new life, the culture, identity features and traditions of the people were examined. In this way, it enabled the local people to form their habits to the newly created city centre.

As a result, culture, identity and tradition features in information buildings were examined. In line with the examination, it has been seen that there is a required design feature in information buildings. In this context, it has been understood that the cultural, identity and tradition issues of the design studies that will take place are the subjects that need to be studied. When the subjects were studied, it was seen that the effect of information buildings on people increased. With the mentioned effect, it has been seen that people interact with the information buildings and in line with this interaction, it has a positive effect on the purpose of use of the building. Other so-called issues should be addressed more in order to provide optimum benefit in information buildings. These are the previously mentioned issues of culture, identity and tradition.



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REMOTE DESIGN FOR A BETTER LIFE: POPULAR HOUSING ON THE OUTSKIRTS OF SÃO PAULO AND RIO DE JANEIRO.

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ABSTRACT

With the social isolation imposed by the pandemic, vulnerability directly related to aspects of housing were highlighted in Brazil. Public health policy was limited to the isolation of the population in their own homes as the main way to contain the spread of the virus. The strategy, however, brought to light the lack of infrastructure for houses in Brazilian slums.

Locked down in their own homes, slum residents realized how they lack minimal infrastructure in terms of thermal, acoustic and environmental comfort. On last 2nd October, Rio de Janeiro registered a maximum temperature of 43.6°C (110.48°F) with a thermal sensation of almost 50°C (120°F).

Researchers from Technology and Visual Programming created an original strategy to develop remote diagnoses of the homes of favela residents. These diagnoses helped to develop a list of suggestions for improving the thermo-acoustic performance of homes.

Residents of regions in a vulnerable situation were trained during online remote workshops to register — by pictures from their own smartphones — the built environment in which they live. A team of researchers on acoustic, thermal and luminous comfort analysed the iconographic data. These diagnoses resulted in reports that were presented as a list of improvements that could be supported and implemented by them. The experience of reimagining those communities was performed according to the following fields (United Nations Sustainable Development Goals): poverty eradication; health and wellness; reducing inequalities; sustainable cities and communities.

Key Words: Popular Housing; Remote Design; Slums; Social Isolation; Brazil



INTRODUCTION

The pandemic on the edge of the city

Social inequalities concern the National Health Council (CNS) in confronting Covid-19 in Brazil (STEVANIM, 2020). In an article published by the magazine *Radis*, of the *Oswaldo Cruz* Foundation – FIOCRUZ, Stevanim points out (2020, p. 13) that there are “populations that, at this time, to ensure a minimum of home isolation, are with entire families — and, in some cases, with many people — restricted to the same space, even without knowing that any of them may already be infected. According to the author, access to basic sanitation, running water and household sewage, in regions with difficult access or on the outskirts, are factors that make it difficult to control the epidemic. Still in this regard, (2020, p. 13) the author states that “...the black population is generally the most affected by inequality, with less socioeconomic conditions to face this type of situation”.

The effects of the pandemic in Brazilian favelas highlight historical issues of social segregation in the Brazilian urban environment (PERES, 2020). Peres (2020, p. 25) presents the report of Raull Santiago, activist and social communicator, resident of *Alemão*, a complex of slums located in the North Zone of Rio de Janeiro. “The inequality pushed under the rug of history is now showing itself in a stark way. We race against time to ensure human survival in this catastrophic scenario.”

Data from a survey carried out by *Data Favela*, released on March 24, show that seven out of 10 families saw their family income fall in March. According to the report, 72% of mothers in the periphery feared, with the covid-19 pandemic, that their homes would lack food.

Nine out of ten mothers living in slums will find it difficult to buy food after just one month without income, revealed the *Coronavirus - Mães da Favela* survey, carried out by *Data Favela* and the *Locomotiva* Institute (GANDRA, 2020). The survey was carried out in 260 favelas in every state in the country. Brazilian favelas are home to 5.2 million mothers, with an average of 2.7 children each.

Also according to the survey (Gandra, 2020), seven out of ten mothers will not be able to maintain their standard of living for any period if they are left without income. The rest of them have a reserve to stay for a maximum of two months. The text shows the reality and feeling in the communities. 85% of these women said that the payment of their bills will be hampered by having to stay at home without income, and 58% said that taking care of their family will be hampered for the same reason (GANDRA, 2020).

In a more recent survey, *Pandemic in Favela – The reality of 14 million slum dwellers in the fight against the new Coronavirus*, also carried out by *Data Favela*, a partnership of Instituto Locomotiva, *Central Única das Favelas* (CUFA) and *Favela Holding*, was outlined a picture of the current moment of the pandemic (GANDRA, 2020). The survey was carried out with 3,321 residents of 239 favelas in all states of the country, between the 19th and

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22nd of this month. The study revealed, among other data, the perception of favela residents about the evolution of the pandemic. According to the text, for the majority (52%) the pandemic is still halfway through.

Data extracted from the survey (GANDRA, 2020):

- 80% of families are surviving on less than half their income before the pandemic. In 4% of cases, family income remained the same;
- 89% are concerned about the health of older relatives;
- 88% fear losing their job and income;
- 71% are concerned about the health of younger people;
- 70% are concerned about their own health.

The impacts of the COVID-19 pandemic on the economy of Brazilian favelas were also studied in the survey. The employment with a formal contract among economically active residents in favelas is half compared to the population living in urbanized regions. Unemployment in the favela is double (GANDRA, 2020).



Figure 1. Commerce had reduced customer movement and changed opening and closing hours with the new coronavirus pandemic. Published on 06.14.2020 08:25 Photo: Marcelo Camargo / *Agência Brasil*. Location: Afuá-PA, Brazil. Public domain.

THE CONTEXT

Open vulnerability

According to a document published by the National Movement of Homeless Population on March 24, and by other organizations (STEVANIM, 2020), with proposals from civil society to guarantee human rights, protection and care for these people, “the population on the streets it appears as one of the



most vulnerable social groups” (2020, p. 13) in the face of the COVID-19 pandemic, which highlights a scenario of inequality and social injustice.

According to Stevanim, (2020, p. 12) “indigenous people, quilombolas, riverside dwellers, homeless people, refugees, gypsies, favela and periphery dwellers, those living with HIV/AIDS, informal workers and other groups have something in common : as they are on the margins of society, they need to deal with inequalities in access to rights, which makes them even more vulnerable in the face of the covid-19 pandemic”. Also according to the author (2020, p. 12), “the definition of vulnerable is broadened in times of coronavirus and can also include health professionals themselves, who are more exposed to virus contamination and still need to deal with feelings such as fear, frustration and impotence”.

Indigenous have always been exposed to a situation of vulnerability since colonization (STEVANIM, 2020), as stated by the Coordination of Indigenous Organizations in the Brazilian Amazon (COIAB). “With the arrival of these types of viruses, the consequences are high mortality rates, especially for people in voluntary isolation and recent contact (Stevanim, p. 13).

Solidarity

While 49% of Brazilians made some kind of donation during the new coronavirus pandemic, this rate reached 63% in the country's favelas (GANDRA, 2020). The data is from the same survey Pandemic in Favela - The reality of 14 million slum dwellers in the fight against the new coronavirus, mentioned above.

The survey shows that the virus is not democratic according to the text by Gandra (2020). “It can even reach the rich and poor, but in practice, social antibodies make the virus more affect the slum dwellers who are in a worse condition to resist, than the asphalt dwellers”. The devastating effects of the pandemic on communities (GANDRA, 2020) range from the lack of access to private health insurance to basic factors, such as having clean water at home. For 76% of respondents, at least one day they lacked money to buy food during the pandemic. 89% said they had received some kind of donation during the crisis, with 91% in food, 79% in basic food basket, 55% in hygiene products and 53% in cleaning products. According to the study, Non-Governmental Organizations (NGOs) and companies are the ones that donated the most to the pandemic, with 69% of responses, followed by neighbors, friends or relatives (52%) and governments (36%). Gandra places the precarious pre-pandemic scenario (2020): 46% of slum homes do not have drinking water and 96% of residents do not have health insurance. They depend almost exclusively on the public system.

This organic growth of the urban fabric invaded and transformed the city into a growing, continuous movement that forcedly transposed natural and human boundaries (CURCIO, 2021). This unrestrained explosion as a counterpoint between the utopian ideal sought by urban planners and the bare reality. This concept opens a discussion for the existence of an

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interesting parallel between the physical constitution of the metropolis as an object of supposed unity and the production of objects for the then defined parts that make up this single functional organism. The user interface necessarily occurs with the object placed in the built space and not necessarily with the architecture itself. In practice, the user interacts with the furniture, equipment or devices used in this architecture, such as registers, doorknobs and/or handles. But visual interaction is also inherent in housing a space.



Figure 2. Favela skyline on the outskirts of São Paulo, sent by one of the virtual workshop participants. The panorama is similar on the outskirts of São Paulo and Rio de Janeiro.

The similarity between the mass built at different scales of perception and different points in the city is remarkable throughout the entire territory of São Paulo. And this takes place inside and outside homes. And there may be another relationship between urbanity and the concepts of life and nature. A living connection that springs from different homes, from people who don't know each other. The continuity or discontinuity of a certain constructed urban stretch, interspersed with the so-called urban voids, although it sometimes indicates a change of state in the cultural sphere, can draw attention to the plastic coherence it presents, even at points separated by considerable distances. The kitchen in the far east can present specific and collective similarities with the kitchen in the extreme south. And this is surprisingly remarkable.

THE EXPERIMENT

An unprecedented method

On October 30, 2020 a workshop was organized, planned by researchers Gustavo Curcio and Alessandra Shimomura, authors of this paper, which



was part of the event *UN-HABITAT - CIRCUITO URBAN 2020 / Pós-Covid-19 Cities: dialogues between Brazil and Lusophone Africa*. On the occasion, he organized the table: *POPULAR HOUSING: PORTRAITS AND DIAGNOSIS IN COMMUNITIES BEFORE AND AFTER COVID-19*. The event promoted the reflection of community residents about the space and was divided into 3 blocks of 60 minutes each. Researchers from Technology and Visual Programming created an original strategy to develop remote diagnoses of the homes of favela residents. These diagnoses helped to develop a list of suggestions for improving the thermo-acoustic performance of homes.

The event promoted the reflection of community residents in Brazilian metropolises about affective memories related to the space in which they live. Through a debate between low-income housing researchers and residents of these vulnerable regions, issues related to the perception of the various aspects of this vulnerability experienced by the residents themselves and highlighted by the pandemic were debated. An online and live photography workshop provided support for the public to take photographic records of their own homes in real time and feed a collaborative virtual gallery. The highlight of the event was the upload of these images on a website to create a collaborative record of the affective memories of popular housing and the landscape that surrounds each of these individuals.

The initiative aimed to promote diversity, cooperativism and culture through photographic records made by residents of communities in situations of vulnerability on the outskirts of the metropolises. The website brought the results of this visual documentation, visual documentation of the built environment, its aesthetic, constructive and formal characteristics with the clipping of the affection aroused by memories. The mosaic of images captured by the residents of the communities reveals their own view of the architectural and landscape reality that surrounds them. The valuing of the imagery repertoire aimed to awaken the feeling of belonging and high self-esteem, even in the face of a reality so marked by urban infrastructure problems evidenced by the pandemic.

The first, a round of conversation between researchers, discussed issues related to environmental comfort and the perception of aspects of vulnerability evidenced by the pandemic. The second was a photography workshop that provided instruments for the public to record their homes in real time and feed a virtual gallery. The themes for image capture were linked to thermal and environmental comfort, in cuts about heat, wind, noise and lighting. In the third block, the images were uploaded to ArqXP.com – a digital and printed magazine edited by Curcio – with public feedbacks for the sender to understand how they could improve their homes considering thermo-acoustic subjects.

Visual Syntax for image capture

The systematization of the principles of Visual Syntax and Composition for the Visual Project was presented by the author of this project in May 2021

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at the *Congreso Internacional Sobre la Enseñanza y Aplicación de las Matemáticas* at the Universidad Nacional Autónoma de México – UNAM. The full article named **"Geometry, Visual Syntax and Composition for the Visual Project"** recorded the results of the application of Metric Geometry and the principles of Visual Syntax for the structured generation of images in an experimental project conducted with about 50 undergraduate students. "The axes of the visual composition determine the meaning of the image's manifestation and have strong implications for the way the spectator receives information." (DONDIS, 2007). For the author, it is necessary to apply these principles to the generated images in order to have success in emission and reception without deviation of the message of visual communication. Syntax, balance and tension, Gestalt principles, space division and compositional elements are therefore universal for the conscious and structured generation of the image, regardless of the means of diffusion. All those concepts were explored together with the audience of the image workshop in order to provide instruments for people to generate appropriate photos for the thermo-acoustic diagnosis.

Thermo-acoustic performance in favelas.

The themes for the photo shots focused on the thermal and environmental comfort of the dwellings, according to specific subjects such as: heat, wind, noise, lighting and the use of air conditioning equipment.

Looking at all these aspects in an integrated view brought out the importance of understanding and evaluating mutual influences between humans and habitat. The evaluation of the sent images, in some way, awakened the senses to the user's perception of space.

The perception of the interior space's environmental conditions requires:

- Understanding the climatic context in which one is inserted (city; latitude; incident solar radiation);
- Understanding the occupation of the space (number of people) and the activities conducted therein;
- Identifying heat sources that are present and make part of the analyzed spaces (equipment, artificial lighting);
- The identification of constructive materials (external and internal). These items can characterize the building's environmental performance.

E.g.: In a hot and humid climate, present in large part of the Brazilian territory, the joint use of natural ventilation strategies and shadowing of openings can represent an alternative for reduction of artificial conditioning, energy consumption, and also improve the level of thermal comfort (CÂNDIDO et al., 2010).

Natural ventilation in buildings is a strategy that presents, as its main functionalities, the maintenance of internal air quality, which must be ensured in any circumstance (odor removal and interior air quality); and thermal comfort for the users and cooling of the building's structures



(GIVONI, 1976; ALLARD, 2002; SANTAMOURIS; WOUTERS, 2006). Given the current context of the Covid-19 pandemic, natural ventilation can aid in reducing the transmission of pathogenic agents through the air, and is strongly recommended to fight coronavirus (MELIKOV, 2020). This strategy has low costs and, thus, has an important social reach (BITTENCOURT e CÂNDIDO, 2008) and is recommended – for most of the Brazilian territory, specially considering the outskirts of the metropolises – for the passive thermal conditioning during the summer. (ABNT, 2005-3)

Considering the environment of precarious dwellings in Brazil, mainly those located in slums, improving the thermal and acoustic performance of self-built houses can be an effective strategy for healthy spaces and population's well-being (CORBURN, SVERDLIK, 2017; COHEN, 2004). On this topic, Maria Teresa Fedeli (coordinator of the *Programa de Urbanização de Favelas em Paraisópolis* – Sehab) states that the next step – after bringing sanitation up to speed – is to investigate, among the health authority agents, occurrences of diseases related to bad natural ventilation conditions, insolation, thermal and acoustic comfort, so that applicable improvements can be made (apud PIZARRO, 2014, p. 48). It must be understood, then, that the adequation of slums – aiming at an active improvement of the population's health – is the result of a long process, in constant evolution.

Public results, universal and free lessons

The anonymous photos and the result of the diagnosis, which can be replicated to most houses in Brazilian slums, were published on the digital platform ArqXP.com. The suggestions published on the platform remain available to the entire community. Examples and unpublished data from the research will be presented in a possible submission of a full article. To access the visual results of the applied methodology, go to: <https://arqxp.tumblr.com/>

The choice of pictures for analysis was made with the identification of strong and weak points present in the dwellings. These points are constructive characteristics which impact the building's environmental comfort performance, such as:

- **Strong points:** hollow elements in external walls, brick and mortar external walls, plastered ceramic or concrete blocks, plastered external walls, light-colored façades, large windows – tilting type, with shutters for natural ventilation, significant openings for natural ventilation, porches and external spaces, covered terraces, hollow elements in short walls and railings, doors with glass-pane areas (for natural illumination) and/or venting areas, eaves, uncluttered surroundings;
- **Weak points:** metallic roofs, metallic or opaque roof tiling, fiber cement roof tiling, low ceilings, absence of slab, wooden external walls. All of these points were observed in the pictures submitted. Other points could have been listed, but that would have required knowledge of building strategies and elements during the process.

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For each point observed, proposals and recommendations were made for implementation by the users themselves or with small professional interventions.



Figure 3. Example of an image sent by a favela resident for diagnosis during the workshop after researchers analysis (numbers on the subtitles make reference to the photo). Strengths: **1.** Hole element on external walls: this type of lateral closure favors natural ventilation while preventing direct sunlight. **2.** Tilt type window: this type of window favors constant natural ventilation in environments such as bathrooms, without opening/exposing the interior too much and without the need to close the window during the period when the room is not occupied. Technical advice: **3.** Roofing with metallic tiles: the solution is practical from a structural point of view, but increases the risk of overheating as it retains too much of the sun's heat. Suggestion: painting it white will make the roof reflect as much solar radiation as possible. **4.** Metallic and opaque tiles: keep out light and make the space very dark. In addition, if the covered space has a low ceiling (less than 2.5 meters, at least), the tile will harm the thermal comfort of users of the space by radiating heat directly to the human body. Suggestion: intersperse the opaque tiles with some (few) translucent ones in some central positions of the roof. In an ideal situation, the tile should be 2.7 meters from the floor, so as not to impair the thermal comfort of those in the covered space.



Figure 4. Example of an image sent by a favela resident for diagnosis during the workshop after researchers' analysis (numbers on the subtitles make reference to the photo). Strengths: **1.** Generous windows: this type of window favors natural light, dispensing with the use of artificial lighting (lamps) in the rooms during the day. In addition to opening 50% of the total span taken by the window, increasing the ventilation flow. **2.** Significant openings for ventilation: in addition to the "leaves", the smaller upper frames of the tilting type add the opening area for the flow of ventilation in the indoor environment. Weaknesses and suggestions: **3.** External masonry walls (solid brick), hollow ceramic block or concrete block without plaster:: harmful to thermal performance, facilitating the passage of heat from the sun that hits the facades on hot days of the year. Suggestion: plaster the exterior walls of the house, preferably paint with light colors.

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Figure 5. 30 images were sent during the workshop.



Figure 6. Some examples of the analysed photos after diagnosis.

CONCLUSION

Understanding the reality and problems highlighted by the Covid-19 pandemic in Brazilian favelas was fundamental to this experience. The opportunity of the event promoted by the United Nations made it possible to develop an unprecedented and tested methodology for diagnosing the



thermoacoustic performance of self-built houses on the outskirts of the metropolises of São Paulo and Rio de Janeiro.

The experience applied during the workshop, with the stages of discussion between leaders, training for photographs and subsequent analysis of the images by the architects, was a replicable method to help improve the quality of life of Brazilians. Mainly in the face of a context of vulnerability intensified by the disastrous effects of the pandemic in Brazil.

An important issue, triggered by the context of social isolation, was the 100% remote development of this meeting. Following the guidance of the organizers of the UN event, the development of activities took place at a distance. Regardless of the pandemic context, the model created is replicable in any temporal context. The group of researchers in Visual Design and Thermoacoustic Comfort intends to reapply the method developed and tested in other sample spaces, in different Brazilian cities, always considering the context of social vulnerability.

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FROM STANDARDS TO CUSTOMIZED HOUSING IN ARCHITECTURE

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ABSTRACT

With the necessity of urgent resolution of the housing deficit that emerged after the Second World War, the living spaces were standardized and the mass production technique began to be considered at the housing scale. As a result of the interpretation of this production technique by different cultures from their own perspectives, examples of mass-produced housing have been given over the world. In course of time, the problems of mass produced houses such as not being able to adapt to the changing welfare level, not being able to adapt to the lifestyle of the users, being short-lived and de-identification brought about by the monotony have emerged. As a result of these, traditional construction techniques have been continued to be used. Today, traditional construction techniques have been insufficient in the design of flexible spaces, adapting to the lifestyles of different users and the needs and wishes of users that can change over time. With the advancing technology, new production techniques and design forms should be evaluated. In this study, based on the strong features of mass production houses, the mass customization technique which the users play an active role in the design of their living spaces has been examined and a living space proposal has been proposed in this direction.

Keywords: Mass Production; Mass Customization; Housing

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INTRODUCTION

The start of the use of mass-production techniques in housing production has taken place recently, and it emerged in England after the Second World War and spread to Europe. Mass housing production, which was seen as an emergency housing production in a short time in order to revive the destroyed cities after the war, started to be used to provide cheap living space for workers and their families in industrial centers. In parallel, the industrialization of architecture was accepted as a cornerstone for modernism (Ridgway, 1996), and the ideas of famous architects such as Le Corbusier, Gropius, Frank Lloyd Wright began to develop regarding the use of mass production in housing (Herbert, 1984). While initially acting to provide emergency housing to users who were left homeless in situations such as natural disasters, war or forced refugee, the production of mass production units with minimum cost and time, changed their target audience over time.

Afterwards, the rapidly increasing population brought with it the development of existing buildings that ensure the vertical growth of cities, and it was inevitable that the building type turned from detached houses to apartment typology. When examined from these aspects, it can be said that standardization and mass production should have an effective place in housing production. While England pioneered in prefabricated mass-produced units, Scandinavia tried to offer different options to users by adding details to this post-war architecture. Mass production buildings, which emerged with different types in different cultures with technological developments, met the housing needs of their users for a long time. However, while the target audience was changing, the return of the housing typology to identical living spaces as a result of mass production started to have a negative effect on the user. This situation also strengthened the perception that prefabricated mass production living spaces are cheap and post-disaster housing production, and houses produced with old construction techniques continued to occupy a large place. With a common concern, the Metabolism philosophy that emerged in Japan aimed to use mass production technique to produce architectural works rich in individuality and diversity, beyond adhering to technological industrialization, prefabrication and mobility. Therefore, many different cultures have important examples by interpreting mass production techniques in housing from different perspectives.

Despite the advancing technology and different production techniques that are frequently encountered in every part of life today, building production techniques and building materials that remain largely the same are insufficient to adapt to the changing lifestyles, ideas and needs of users. As the expectations and needs of the users change along with the changing environmental factors and opportunities over time, mass-produced units whose value decreases, should be re-evaluated due to their positive returns. This mode of production should be reinterpreted in a sustainable way to keep up with the fast city life, with the advantages of low cost and production in a short time, within the changing housing typology. At this point, it is necessary to consider whether it is possible to transform mass



production into mass customization, which may vary according to user needs.

Standardized Living Spaces

With the increase in industrialization along with technological developments, production had to be accelerated. Accordingly, with the establishment of a mobile assembly line (Britannica, Ford Motor Company, 2021) in 1913, the time it took to produce a car was considerably shortened, and Henry Ford laid the foundation for mass production. Prefabricated housing production became widespread in the late 20th century to quickly resolve the housing shortage during and after the war. Modernist architects saw prefabrication as an opportunity to build homes the way Ford parts were manufactured and assembled. Firstly, in 1919, with Gropius' Bauhaus movement, the use of mass production in architecture was discussed (Hughes, 1984). Afterwards, with the development of the use of mass production in industry, the idea of producing housing units, like car parts, in a fast and easily developable manner, emerged (Corbusier, 1986). This idea can be considered the beginning of mass housing, which is produced to provide housing to people more economically and quickly. While the history of prefabrication, the product of standardization, which is accepted as a must for mass production, goes back much earlier; Great Britain, Scandinavia and Japan developed this practice in the field of housing by putting prefabrication into mass production, while other cultures preferred to use this production method for their urgent housing needs (Smith, 2009).

The first prefabricated housing construction started with the global colonization efforts of England in the West. The British, who did not know the materials of the settlements they colonized, transported the prefabricated housing parts they produced in their countries to all over the world with ships. In 1624, the first examples were found in the fishing village of Cape Anne, now a city in Massachusetts, while prefabricated hospitals, shops and cottages from England were identified in New South Wales and Sydney in the late 1700s and early 1800s. Again in the early 1800s, Richard Walker's export of corrugated iron provided the world's first wood and iron construction system. This building material, which is widely used today, has an important place in prefabricated architecture because it is portable and can be installed elsewhere. It has brought England to a pioneering position (Smith, 2009). Britain's mass production housing production, which has a long history in prefabrication, came to the fore with the urgent need to renovate approximately 750,000 houses damaged in the war after the Second World War. Winston Churchill's government initiated the Temporary Prefabricated Housing Program to manufacture housing parts using factories (McClane, 2019). Although 1400 designs were applied to the competition opened by the Ministry, most of them were rejected because they did not comply with the standards of the ministries. Arcon, Uni-Seco (Fig.1), Tarran and Aluminum types were the most used designs (Vale, 2005). According to the surveys made on the users, the mass production bungalows were accepted by the users because they were designed to meet the demands of the people who were accustomed to the two-storey

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detached houses with a garden before the war, to be cheap and to be easy to use. The fact that they are exactly the same and produced with different building materials and a different construction technique did not affect this satisfaction (Vale, 2005). However, the low-quality and short-lived houses produced in a short period of time could not adapt to the aesthetics of the changing time and the changing life of their users, and the number of prefabricated houses has decreased day by day.



Figure 1. Uni-Seco Prefabricated Houses, London (Historic England Archieve, 1945)

The first Scandinavian mass-produced residential pieces were designed in the mid-1800s with architect and Colonel Fredrik Blom's mobile structures in mind, such as barracks. At the same time, he offered his clients individual building pieces, such as a single wall, a door with a door, or a wall with a window. Although these pieces were handmade, they were industrialized in a short time. The large housing shortage that started in 1917 brought the production of prefabricated housing with mass production technique to the agenda in Sweden and Norway. In 1922, the foundations for mass production began to be laid when the National Social Welfare Board (Sossiaalihalitus) commissioned architects to design different farmhouses and subsequently published "standard drawings for small houses" several times. Alvar Aalto also contributed to standard tiny houses in 1936 with 3 different designs called the AA system (Fig. 2). Then, the use of mass production spread, with Aalto designing Finland's first residential manufacturing plant in 1940 focused on standardization. After the war, Finland not only filled its housing deficit with the new production method, but also paid its war debt to the Soviet Union with prefabricated housing parts (Waern, 2008). Today, the Scandinavian government continues to use prefabrication production in the construction of accessible housing and even public buildings, but 84% of single-family homes in Sweden have prefabricated elements, which saves a great deal of construction cost. It is 15% in Japan and 5% in the USA, UK and Australia (Morley, no date). Scandinavian countries, which use mass production effectively as part production rather than whole housing production, have turned it into a production method that can be partially individualized according to the



needs and wishes of the user. However, as efficiency overtakes flexibility, standards are specific and variations are limited (Widen & Manley, 2019).

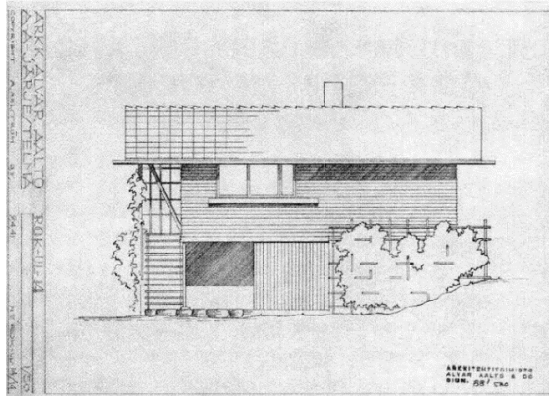


Figure 2. Alvar Aalto, AA-System Houses Type 14, 1939 (Waern, 2008)

In the 1950s, as the West started to use mass production in the housing field with the development of industry, Japan was grappling with similar problems. The housing shortage that emerged as a result of the destruction of almost 40% of industrial facilities and infrastructure after World War II (Lumen Learning, no date), the fear of people losing their national identity with the new democratic system model proposed by the post-war USA, and the state of the economy, It resulted in the Japanese government proposing plans to rebuild cities (Raffaale, 2004). Parallel to these events taking place in the background, the metabolism movement, known for the manifesto they prepared for the World Design Conference held in Tokyo in 1960; under the leadership of a group of architects, city planners, graphic artists and painters, the mass housing system applied in western cultures was reinterpreted with a different understanding, with the use of mass production for housing production. As a product of this movement, which advocates that the building should be in an organic life cycle, the Nakagin Capsule Tower (Fig. 3) is an example of a mass-produced unit designed in Tokyo with discontinuity and mobility in mind. The capsules are designed as light and steel structured boxes with mass production, as simple as possible. Different from the original mass housing units, it is thought that they can be easily separated and replaced from other units when they have completed their estimated life, and they are produced independently with different functions and connected to each other with crossing doors on site (Kurokawa, 1977). Although the Nakagin Capsule Tower is one of the best examples of the adaptation of mass production to modern city life, it could not escape from being out of use due to its inability to adapt to user demands (Lin, 2011) and needs over time and to meet the high cost of its renewal (McGee, 2021).

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Figure 3. Nakagin Capsule Tower, Tokyo (Elhøj, 2020)

The housing shortage and the high rate of population growth, which emerged as a result of the cities destroyed after the war, made it impossible to meet the housing demand with traditional construction methods. Therefore, the necessity of applying a new housing construction technique has emerged in order to meet the housing need quickly. In this direction, the idea of providing spatial equipment of the architect has come to the fore. Looking at its social history, Japan has been culturally predisposed to mass production. Due to the central authority history of the Japanese people, they have been ready for action since ancient times, and even today, they are not dependent on stable housing due to the constant displacement of the population, and as a result of land scarcity, the post-war economic activity's orientation to industrial products using human brain and technology rather than agriculture, demonstrated the necessity of its construction. The population growth rate and the fact that the population is more accustomed to mobility than other cultures, the lack of land, the dependence of the economy on technology may have facilitated Japan's transition to mass production in housing construction. Scandinavia, on the other hand, was more successful in the end product than the others. The intensive use of wood in Scandinavian cultures has a great role in this success, since most of its lands are covered with forests. At the same time, since traditional custom design and detailing are combined with standardization, prefabricated houses, which are the product of this culture, are better than houses built with the traditional method. Users accepted standard mass-produced housing more easily, which expanded the market. Thanks to its desire to expand its field of activity in the 19th century, England used technology more effectively in prefabrication and tried to design more sustainable and more dynamic structures that could serve humanity better. In this respect, although it has produced various standards throughout history, it has not been very interested in individualization in relation to the policy of expansion, but it has had a great influence on the spread of this practice to many cultures. Therefore, in terms of ideology, England, Scandinavian countries as the final product, and Japan in terms of process were more successful than others in mass production housing (Smith, 2009). Although Scandinavian countries have made more significant



progress in developing this production method in terms of design, mass production technique still lags behind traditional methods today.

It is not very interesting that the mass production buildings, which are considered as post-war architecture, cannot adapt to the present. It is an important factor for the user to choose the place where they will live, whether they feel a stronger belonging to a particular place or place where they can find a piece of themselves, feel similar to themselves or feel unique in (Seamon, 2014) and not live in similar living spaces. With this assumption, it can be said that the uniformity of mass production units, excluding the personal belongings of the user and the experiences in them, will have a negative effect on the preferences of the user. Therefore, this mode of production, which fulfills the task of providing fast and low-cost housing as the life quality of people improves by providing the vital opportunity for users to find a place to live, has gradually lost its popularity with the perception of an oppressive system that condemns the user to anonymity through homogenization (Bourdon, 2019). It does not seem possible to overcome the uniformity, which is known as the biggest problem of modernity, with mass production based on producing the same unit in a shorter time.



Figure 4. Post-war Architecture, Levittown Houses, New York (Bettmann, 1954)

The fact that mass housing can only target a certain population, which can be created by providing more affordable settlements, is an open issue, and the fact that they can turn into uncanny settlements can distract a crowd from the thought of living in mass housing (Manzo, 2014). This is one of the benefits of post-war architecture and a problem of priorities. The only approach that can overcome this situation will be to pave the way for custom designing living spaces.

The only problem of today's mass housing is not to force the users into living spaces that meet the same and most basic needs. At the same time, as seen in the examples, mass production houses that allow growth and change to a limited extent will force their users to relocate when they are insufficient to meet the user's needs, or rather, when the production purpose is achieved. Although the modern society is a mobile society open to relocation, the evacuation of the houses that cannot meet the needs creates

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a great housing pollution. Since the remaining living spaces do not allow conversion and individualization, they are either demolished or transferred to the next owner. However, the fact that the housing stock is renewable and adaptable to life in a short time will be considered as a big step in terms of a sustainable society.

At this point, efforts to customize mass-produced buildings gain importance and, together with the efficient combination of developing technology and design process, a low cost, sustainable, time-saving housing typology will be required.

Creating Variations from Uniformity

Throughout history, people have arranged their living spaces according to themselves as mobile and variable creations. The main point when creating a flexible space is changeability. For this reason, every solution offered for a variable purpose of use or a space that will adapt to the user can be possible with changeable space definitions, space elements or location. In modern life, while designing the living space, it is not easy to create spaces that can adapt to the user and transform according to the wishes and needs of the user in structures produced with traditional methods whose common feature is stability. Although at first glance, mass production is seen as a form of production that is the opposite of customization, it is quite possible that it can provide a rapid transformation within the limits of today's technology.

The reason why mass production houses are not very successful in history is not only the process and the technique used, but also the fact that they were produced in order to quickly solve the need for shelter, leaving the economic inadequacy and aesthetics in the time of the war in the background (Dye, 2004). Therefore, after the housing shortage was eliminated after the war, this technique gradually lost its effect. The idea of mass customization became popular after Stanley Davis' book *Future Perfect*. Davis advocated that the user's wishes and needs should be met anytime, anywhere and with maximum value, and suggested mass customization as a solution. Although mass customization as a term contains a paradox in itself, when mass production and customization are looked at separately, what can be done with today's technology includes endless possibilities (Davis, 1987).

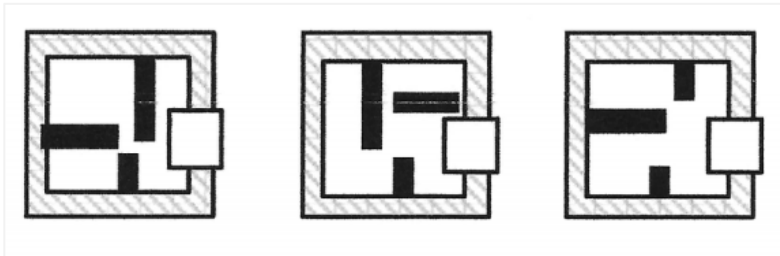


Figure 5. Habraken's Structures and Infill Variations (Habraken, 2002)



The “theory of supports”, which shows how mass customized housing can be, was developed by Dutch architect, educator and theorist John Habraken. Habraken, which distinguishes buildings as supports consisting of infrastructure systems and structures, and fillings, which are living spaces that can be customized according to users and integrated into supports, offered a picture of the use of mass customization by proposing to give users an active role in housing design (Benros & Duarte, 2008). Unlike the metabolism movement, this approach, which proposes to individualize the development and continuity of structures with the participation of the user, gives an idea about the use of mass customization in architecture. The key point in this approach, which is possible in theory, is the necessity of defining a certain information exchange between the user and the designer. For this reason, it should be ensured that the boundaries are determined and presented to the user by the designer, and that the collection and storage of information about user preferences is in a continuous cycle (Frutos & Borenstein, 2003). Today, thanks to technology, computer-aided design and digital information collection systems about users together make mass customization possible.

A Proposal for the Use of Mass Customization in Housing

Mass production houses were considered successful after the Second World War, as they met the housing shortage in a short time in a cost-effective manner in post-war architecture and met the demands of their users efficiently. As the welfare level of the users increases and the traces of the war are erased, it will not be very interesting if these units, which are in urgent need, cannot keep their place. However, considering the rapidly increasing population today, the housing shortage that may occur in the future, the necessity of sustainable architecture due to environmental problems, and individual requests that can change constantly, mass production houses can be considered as a good solution when considering the point where technology has come. In order for history not to repeat itself, mass production housing needs to be developed. Mass-produced units, which can be flexible according to the user, the culture and social structure, environment, needs and wishes, and which can also be transformed or changed when they expire, can be the type of housing of the future. At this point, when we consider together the model that Habraken predicts in theory of support, which includes the user in the filling design, which is considered as a living space, and the changeable structures that form the main idea of the Japanese metabolism movement, it will remain to ask what kind of product will come out and how this dream will be achieved. The type of building to be proposed in this study is considered as a structure that includes modules that can be changed and developed due to the fact that the user plays the leading role in the design around the main structure, which includes fixed infrastructure systems, and therefore can be customized. The most important point is that the user creates the space to live in, and the designers, architects and engineers take part in the support role as assistants and experts, not as the main creator.

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The first step is to identify the user's wants and needs for customization purposes. The design of modules requires the active use of information technology with the changing production model and materials to be used. The necessity of the user to take an active part in the design process has led to question the usability of the advertising and product marketing strategy, which has an important place today, for collecting information about lifestyle, needs and desires. Today, it is not a new advertising strategy to create an algorithm of likes, wishes and needs and make suggestions to the user through internet research, speeches and favorite pages. By using these information collection systems to determine the features that will create a living space that can optimally meet the wishes and needs of the users, which they are aware of or not, the creation of certain standards in design can be realized more efficiently. For instance, the importance of the kitchen module, which is important for one user, may be less for another. Likewise, a user who needs more space because of using the study room as the main living area, and a user who likes to work in the living room or even while eating, will have different needs. While the desires of different users are different, the wants and needs of the same users may change over time. A couple will need an extra nursery when they have children, or another user due to job changing will need a study room instead of a living room. The key is to be aware of the fact that when a person's lifestyle changes, their habits and thus their usage patterns may change.

The second step will be the design process. Information technology will play a major role in evaluating the information obtained by the designers so that they can be implemented and at the same time visualizing and presenting multiple possibilities to users in a short time. Afterwards, mass production will be used in the production of these designed units, and units suitable for the lifestyles and needs of users will be produced in a short time. Since the design of these units is constantly in the background and production can be carried out in a short time, when the unit in hand is insufficient to meet the user's lifestyle, it can be changed as well as changing the phone that is insufficient for the person. The users who orders their meals from outside due to their changed job and start using only the refrigerator in the kitchen will no longer need a kitchen with a large counter. The users, that enjoy gardening due to their new hobbies, will be able to add the small garden module to their home. Changing living spaces, such as changing and life-enhancing applications on phones, will increase the efficiency of the user's home.

The third step that will come after the living space designs which are left to the user is the structure and infrastructure design. First, the structures and infrastructure systems into which portable and combinable modules will be integrated should be designed by architects, engineers and environmental planners, and then the capacities and integration possibilities of these emerging structures should be evaluated. In this direction, the users should be able to connect the living spaces to the multi-storey structures in the city they have just moved to, and to use it independently in their private area with a garden. The important point here will be the areas where the fixed structures will be located. As a result of the portability of the modules, the importance of the locations of the structures will increase, and the users will



choose the location in which they will continue their life. These structures will not consist of the column and beam systems of the structures built with traditional methods before the addition of wall, window and door elements. These fixed elements will assume the bearing of the whole building and will also provide common use to its users by collecting them in sewerage, ventilation, garbage collection, natural gas and similar systems. These common systems separated from the living units will be in a position to be arranged and changed without touching the units in case of any dysfunction. Although they are stable, the second important point will be that they are designed to adapt to living spaces that may change over time. In this section, designers will need to evaluate and constrain the changing possibilities. Therefore, these structures will have modules, minimum and maximum areas in certain standards that they can accept. The capacities and possibilities of these structures, which will be designed to last longer than the units, should differ according to their acceptance of different units in different locations.

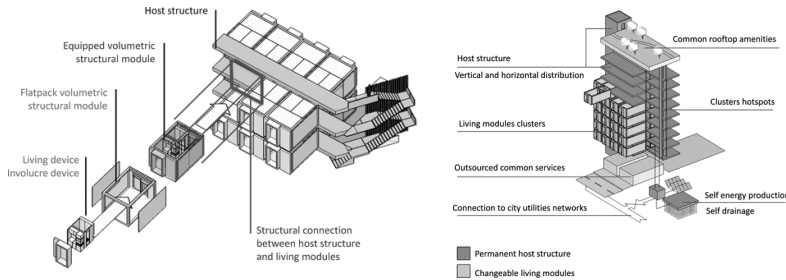


Figure 6. Host Structure and Living Modules Example (Pasquale, Innella, & Bai, 2020)

The proposed fixed structure and the idea of a living space module that is open to change and develop, and will be in constant adaptation to its user can be the product of the future, not only individually but also in terms of city planning, with its low cost and shortened production time arising from the fact that it is constantly in the process of collecting information and adopting mass production as a mode of production.

CONCLUSION

Although traditional construction techniques can meet the housing needs today, it is debatable that these methods will be sufficient in the future. It is necessary to develop housing, which is a consumer product, and turn it into a product that can meet the needs of the user at the same time with less cost and shorter production process. At this point, in order not to stay behind the developing and changing world of architecture, design, building techniques and building materials, it is necessary to take advantage of the ever-advancing technology and create new solutions.

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The first step which advocated in this study to break traditional methods is that architects tend to design spatial elements instead of designing spaces. Users whose ideas, wishes and needs may change over time can only achieve maximum efficiency from their living spaces if they are included in the design process and at the same time, this design process continues continuously. The construction techniques used today are insufficient in this regard, although studies on flexible space are carried out and they have left good examples to the world, solutions are blocked at a certain point. The second step is the rebirth of the mass production technique, which is used in the production of any product today and also gives the most important examples of post-war architecture, and the search for ways to use this technique together with customization. While the mass production technique is in every field by minimizing the construction time and cost of the standardized product, it can have a more effective use in housing production with the right approach. The biggest problem, the problem of de-identification, can be overcome if the possibilities offered by technology feed the idea of mass customization. In this study, a proposal is presented by trying to answer the problems created by the mass production technique used in houses over time with the idea of mass customization.

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AN INVESTIGATION FOR SHELTERING NEEDS OF SEASONAL AGRICULTURAL WORKERS (SAWS)

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ABSTRACT

Seasonal agricultural workers (SAWs) migrate to work in specific periods of the year according to the agricultural production calendar and the characteristics of the provinces where agriculture is made. In this process, SAWs, especially sheltering and settlement conditions, also have social, economic and cultural problems. Studies on the subject in our country mainly cover a housing unit or a single module. However, the problems experienced on the subject are much more comprehensive and related to each other. To solve the current situation, it is necessary to develop a healthy, innovative, participatory and flexible solution proposal for the shelter under unhealthy and challenging conditions. The study aims to carry out fieldwork in a SAW settlement area in Bursa by putting forward a multidisciplinary set of standards, starting with the design of the settlement areas by the local characteristics and the hours they work according to the agricultural production calendar. For this purpose, studies on the accommodation conditions of SAWs in the world in Turkey and Bursa were examined. Then, the primary conditions of the settlement areas of SAWs in Eskisarioba and Ortasarioba in Bursa Karacabey were determined and suggestions were made for solutions.

Key Words: Seasonal Agricultural Workers (SAWs); Housing Standards; Vernacular; Humanitarian Architecture; Participatory Architecture.

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INTRODUCTION

The concept of migration emerged due to people's need to live under better conditions. Social, economic, and political factors experienced throughout history have also caused migration to continue in national and international contexts. Furthermore, especially in recent years, environmental problems have become one of the top reasons people leave their living environments. The effects of global climate change, such as rising sea levels, sudden rains, and periods of prolonged drought, have given rise to life-threatening dangers for people via making their living conditions insufficient. In 2018, 17.2 million people were displaced due to weather conditions, 9.3 million people due to storms and tropical hurricanes, and 5.4 million people due to floods. Between 2008 and 2018, 253.7 million people were forced to migrate due to natural disasters. It should be stressed that this figure is approximately 3 to 10 times the number of people who migrated due to wars around the world (Ayazi & Elsheikh, 2019).

Climate refugees are the most critical group that had to move away from their living places due to their poor environmental conditions. They are mostly not recognized by states and laws. For this reason, they cannot benefit from fundamental rights and freedoms. Their vulnerability is one of the significant reasons for injustice between individuals and societies of the world. Seasonal agricultural workers (SAWs) who make their living through agricultural activities constitute an essential part of these climate refugees who are forced to migrate due to environmental conditions.

Due to the fact that the agriculture sector is of great importance for the world's essential food resources, people working in the agricultural sector are in a continuous movement. Approximately 90 million people are working as SAWs worldwide (Kuhn, Milasi & Yoon, 2018). Although this is a significant population, there have not been any efficient solution proposals developed for their problems experienced in the fields of work, housing, and health. SAW migrations in the European Union and the Asian countries and America have been experiencing similar problems for many years. The situation is also the same in Turkey (Seasonal Labor Migration Network, 2012). A typical SAW in Turkey mostly leaves his home for 7 or 8 months and migrates to various city's agricultural regions. Besides those migrating alone, there are also those migrating together with their family members. For some of them, this migration cycle continues throughout the year without going back home. Thus, they experience many problems. The need for proper accommodation to let them live under healthy and safe environmental conditions forms the basis of these problems. Although the right to shelter and accommodation is defined as a fundamental human right in national and international conventions, SAWs, unfortunately, cannot benefit from this most fundamental right. In addition to the need for shelter, they are also faced with many social, cultural, and economic problems. In addition, it is also foreseen that the unusual regional climatic conditions caused by global climate change will complicate agricultural activities (Kuhn et al., 2018). In this context, it is evident that there is a vital need to improve SAWs' living conditions. There are some standards for housing conditions and residential areas of SAWs applied in different parts of the world.



This study aims to compare the standards applied in different regions of the world regarding the housing conditions of SAWs and to determine the main topics for the establishment of standards to be applied throughout Turkey. The study includes five main sections including an introduction briefly explaining the urgency of the problem and the general situation in the world. The second section explains the contents and standards for housing conditions of SAWs in different parts of the world. The current conditions in Turkey are investigated in the third section, including information about the regional agricultural products, agricultural production calendar and general profiles of SAWs in Turkey and existing accommodation types of units and settlements. The fourth section presents a case study undertaken in Bursa. Using qualitative and quantitative research methods, the living conditions of SAWs around Bursa plain will be investigated. The needs, priorities, and expectations of the workers will be identified via semi-structured interviews. The aim is to determine the existing physical and socio-cultural conditions in detail. This framework will let to evaluate the workers' accommodation conditions and to propose solution alternatives to improve their quality of life.. Also, some proposals for better housing standards will be discussed.

Housing Conditions of Saws in the World

Seasonal agricultural work is sustained by the migration of large numbers of people around the world. While the workforce working in agriculture constituted 40% of the global workforce with 1050 million people in 2000. In 2019, this number decreased to 884 million, accounting for 27% of the total workforce. However, when analyzed in terms of economic value; while the agricultural sector had a share of 1.4 trillion dollars in 2000, this value reached 3.4 trillion dollars in 2018. The latest situation represents an economic growth of 68% (The Food and Agriculture Organization, 2020). While the agricultural areas around the world were about 1.5 billion hectares in 2000, this amount reached approximately 1.6 billion hectares in 2018. 38% of these areas are in Asia, 24% in America, 18% in Africa, 18% in Europe and 4% in Oceania (FAO, 2020). However, in the sectoral employment analyzes made until 2025 it is predicted that while agricultural employment will increase more in developing or underdeveloped countries, it will be much less in developed countries (International Labour Organization, 2017). In addition to this situation, agricultural activities are carried out under challenging conditions in underdeveloped or developing countries. It is thought that it will be built under even more challenging conditions due to changing climatic conditions.

Housing conditions of SAWs around the world may differ according to their regions. In some of the solution proposals, the accommodation areas within the agricultural areas are allocated to SAWs. In some cases, mobile shelters for SAWs are offered as a solution. For this purpose, guides are published by local governments or non-governmental organizations to define the existing conditions and understand the housing conditions (Vermont Housing & Conservation Board, 2021; Helps, 2020; Banker et al, 2018; Housing Assistance Council, 2013; Horgan, 2012; Joyner, Parnell, Schenker & Villarejo, 2010; Sustainable Agriculture Management Branch,

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2009; Washington State Department of Community, 2005; Housing Assistance Council, 2001; Housing Assistance Council, 1997). The primary purpose of these guides is to understand the conditions by defining different accommodation opportunities, if any, for the workers who will work in the relevant field. The procedures, legal regulations and responsible persons to be followed for workers who will stay in temporary or permanent accommodation areas during the working process are defined in the relevant guides. In addition, general standards and conditions for accommodation, sleeping, eating and drinking, cooking, shower-toilet, common areas and social areas are also explained in the guides. When the academic studies on the housing and settlement conditions of SAWs are examined, it is noteworthy that the solution proposals for the issue are handled with multidisciplinary policies. For example; housing conditions for SAWs are covered extensively by regulations and standards across the United States. Two exemplary legal models consider both housing and health conditions in force following current conditions in the United States. These are as follows;

- The Occupational Safety and Health Administration (OSHA): The OSHA standards apply to temporary labor camp housing for workers in any industry, but they are most applied to labor camps intended for farmworkers.
- BASE. Department of Labor (USDOL), Employment and Training Administration (ETA): USDOL ETA standards for farmworker labor camps are applied far less frequently

The Migrant and SAW Protection Act (MSPA) states that ETA and OSHA standards must be met to provide housing conditions. OSHA standards apply to any industry but are primarily used for the agricultural sector. The headings covered within the scope of both standards are expressed in Table 1.



Table 1. Comparison of the headings of OSHA and ETA standards on housing conditions

OSHA Housing Regulations	ETA Housing Regulations 20 CFR 654.400 eCFR
Site	Housing site
Shelter	Water supply
Water supply	Excreta and liquid waste disposal
Toilet facilities	Housing
Sewage disposal facilities	Screening
Laundry, handwashing, and bathing facilities	Heating
Lighting	Electricity and lighting
Refuse disposal	Toilets
Construction and operation of kitchens, dining hall, and feeding facilities	Bathing, laundry and hand washing
Insect and rodent control	Cooking and eating facilities
First aid	Garbage and other refuse
Reporting communicable disease	Insect and rodent control
	Sleeping facilities
	Fire, safety and first aid

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Housing Conditions of SAWs in Turkey

The agricultural sector is among the important sectors in our country as well as in the world. The agricultural sector, which varies according to different months and climatic regions, has a 16.9% share in the sectoral distribution of employment according to the Turkish Statistical Institute (TÜİK) May 2021 data (Turkish Statistical Institute, 2021). The number of SAWs is estimated to approach one million in 2020 due to the high number of unregistered workers in the agricultural sector (Development Workshop, 2020a). Individuals who migrate for seasonal agricultural activities act with families mainly. This situation brings different problems such as health, education and economy with it. Especially, recently, in addition to individuals participating in seasonal agricultural activities from different regions of Turkey, foreign workers of Syrian and Afghan origin also participate in seasonal agricultural activities. The average working time of SAWs working under harsh physical conditions varies between 6 and 15 years (Şimşek, 2012). Seasonal agricultural activities are carried out in approximately 48 provinces in Turkey (Şimşek, 2012). Different climatic zones and agricultural products cause the agricultural production calendar to vary. In addition to the provinces where agricultural activities are conducted for 12 months of the year in our country, there are also provinces where agricultural activities are carried out for one month or less.

The regulation titled as "Improving the Working and Social Lives of Seasonal Migrant Agricultural Workers" was published in 2010 for worker intermediaries determining the working areas and wages of SAWs.



According to the 11th article of this regulation, worker intermediaries are responsible for providing suitable accommodation conditions for SAWs (Legal Gazette, 2010). In addition, the most comprehensive study, which came into force in the same years and deals with the work and accommodation of SAWs in our country, is the "Improving the Working and Living Conditions of Seasonal Migrant Agricultural Workers". It was carried out in 2010 within the scope of the circular titled "Improving the Working and Social Lives of Seasonally Migrant Agricultural Workers-I Project (METIP-I)". The aim of the first implementation period of the project was to identify the problems of SAWs within the scope of the Prime Ministry circular published in 2010, under the titles of accommodation, education, health, safety, relations with the social environment, work and social security (Ministry of Family and Labor, 2010). The project, which was determined between 2010-2013, continued in 2017 with the Prime Ministry Circular. Within the scope of the general headings in the Prime Ministry Circular on SAWs published on April 19, 2017, there are topics and general contents related to the necessary infrastructure and superstructures for the use of educational, social, living and common areas of SAWs (Prime Ministry, 2017). In this context, it was emphasized that the activities to be carried out within the scope of the 36-item circular regarding the problems experienced by SAWs would be performed with the participation of all institutions and organizations including universities, professional associations and non-governmental organizations

Academic studies on the accommodation conditions of SAWs are also critical to understand the conditions and solution proposals in different regions of Turkey. In order to reach the thesis studies on the determination of the housing problems of SAWs and their solution proposals, a search was made with the keywords "seasonal agriculture" and "migration" within the scope of the National Thesis Center and three master's theses under the title of architecture were reached. In studies on the determination of the accommodation conditions of SAWs in different regions of Turkey; Özbekmezci (2003), in his study titled housing problems and living units of SAWs. She met with the SAW families in Çukurova Seyhan Plain and made some determinations, and as a result, she proposed a shelter for SAWs. Egemen (2015) focuses on the physical and social effects of migration by considering migration and temporary shelter through mobility. Problems were identified by conducting interviews and surveys with SAWs living in Gümüldür, İzmir, and possible solutions were expressed in this context. Yılmaz (2020), on the other hand, conducted studies to determine whether the accommodation conditions of SAWs in the Ankara Sarioba campus have eco-design characteristics.

Among the studies conducted in 2015 and later, the accommodation conditions of SAWs were determined. Akalın (2018) conducted in-depth interviews to determine the accommodation conditions of SAWs in Yenice, Tarsus, Silifke and Akdeniz districts in Mersin province. As a result, it was determined that the solution proposals were insufficient while the legal and social regulations had been made since 2018 provided awareness for the determination of the problems experienced by SAWs. The topics that need to be resolved urgently were listed in the conclusion part of the study. In the



study conducted by Kaymaz and Albayrak (2016), the agricultural activities of SAWs in Artvin Yusufeli district, which were carried out by leasing land to continue agricultural activities, were examined. In the study, face-to-face interview method was used. It was emphasized that the existing legal regulations should be improved by revealing similar problems with the previous studies. Many problems of SAWs such as health, unemployment, insecure work, transportation, shelter, social exclusion, and social environment were interrelated and continued. The gaps in the legal regulations should be eliminated and solutions should be developed. In the study of Kaya and Özgülnar (2015) in which the living conditions and health status of SAWs were evaluated, an in-depth interview method was applied. In this study where 26 SAWs in Adana Yüreğir and Mersin Tarsus districts were interviewed, it was determined that there was a direct relationship between housing conditions and health measures (and conditions), the living conditions of SAWs were under severe threat. They cannot benefit from health services appropriately. In the study conducted by Orhan and Akpınar (2018), general inferences were made by compiling existing studies and applications. In this context, it was emphasized that the families working as SAWs and their children should be registered at the heart of the issue. The arrangements to be made should be based on not hypothetical numbers but on actual numbers, because one of the sectors with the highest rate of unregistered work is seasonal agricultural work. In addition, it is concluded that the settlement areas should have a certain quality including temporary characteristics based on the studies which were carried out to improve the living conditions of SAWs.

Studies conducted on seasonal agricultural work in our country are mainly thought to have extensive content and knowledge on current situation determination, analysis and problem definitions. However, it is understood from both the inferences made in the studies and today's conditions that there are problems with implementing solution proposals for the problem determinations and the implementation of legal and administrative practices. For this reason, in the studies to be carried out to improve the living conditions of SAWs, implementation models, practices involving academic and public cooperation for determination of current situation should be secured with improved legislative practices and implementation follow-up should be done.

Fieldwork: Housing Conditions of SAWs in Bursa

Bursa is located in the south-east of the Marmara Region. While the Mediterranean climate effect is observed in the north of the city continental climate is dominant in the south and interior parts (Aşık, Özsoy, Aksoy, Katkat, & Günaydın, 2013). Due to its various climatic conditions, it has different soil types and thus products. So, in and around Bursa, there is a need for SAWs for an average of 6–8 months during the year (Development Workshop, 2020). Agricultural activities are conducted on 355,528 hectares of the city's surface area of 1,088,638 hectares, mainly plains. They are observed in the flat plains of Karacabey, Mustafakemalpaşa and Yenişehir districts (Aşık et al., 2013). The seasonal agricultural period starts in April-

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May and completed in September-October. In addition to SAWs migrating from southeastern provinces, Syrian and Afghan origin workers have recently been working as SAWs throughout the province (Development Workshop, 2020b). SAWs settlements in Bursa are seen in Figure 1.

The most comprehensive studies about settlement and accommodation conditions of SAWs in Bursa are being prepared under the leadership of Bursa Medical Chamber. Observations and reports, which started in 2010, have been continuing at regular intervals until today. Through visits to the residential areas of SAWs, not only the main problems are identified, but some solutions are also presented throughout years. Before the presentation of the field trip made together with some of the members of Bursa Medical Chamber, it will be meaningful to summarize the outcomes of the Chambers previous visits. They had made six visits between 2010-2018 and prepared detailed reports including the outcomes of their on site analysis and solution proposals. It was observed that the accommodation conditions of the SAWs, whose prepared reports were examined, were provided in primitive conditions. There were also severe problems in accessing clean water and providing hygienic conditions. Housing units were set up directly on the ground and there were no adequate infrastructure and drainage systems. There were problems in the collection of garbage and the continuation of spraying activities in settlements. SAWs and their families could not benefit from education and health activities. In addition to all these, they were exposed to social exclusion and were not accepted by the local people. After the Prime Ministry circular published in 2017 also show similar characteristics with the observations made in previous years. Routine follow-up by local governments based on the solution proposals for the identified problems; it was emphasized that cooperation should be made between the private sector, universities and local governments. (Bursa Medical Chamber 2011, 2014, 2016, 2018).



Figure 1. SAWs settlements in Bursa (Karacabey, Mustafakemalpaşa and Yenişehir)

In addition to the SAW field studies and reports carried out in Bursa with the initiatives of the Bursa Medical Chamber since 2010, the Development Workshop (DW) published the current situation report and application



program in 2020 (DW, 2020b). The determinations made by the Development Workshop and Bursa Medical Chamber since 2010 through direct observations and surveys; show that SAWs cannot benefit from housing unit settlements' basic living and sheltering conditions.

Within the scope of this study, SAWs' residential areas in Eskisaribey and Ortasaribey, which are in Karacabey district of Bursa, were visited in June 2021 (Figure 1). Interviews were done with SAWs and intermediaries living in these regions to determine living and residential areas. For both residential areas, the daily wage for men is 110 TL and for women 90 TL. One of the main reasons the workers who come to the region prefer Bursa is stated as the mild climate and the second reason is the daily wage payments being made on the day.

The share of intermediaries who bring them to work in the region is 10%. There are currently seven families (45-48 people) in the SAW's settlement area in Eskisaribey. It is expected that the seasonal migration will continue until August and the settlement area will reach approximately 200 people. The agricultural labor period continues until October. The outcomes of the observations can be summarized as follows;

- SAWs who come to the region bring the tents that make up their living spaces. The tents, of which material is canvas, are surrounded by different materials to take precautions against climatic conditions.
- There is no existing infrastructure. Tents are set up directly on the ground and the electric line is carried openly without any precautions (Figure 2).
- The reservoir in the region is used as a water source. The water to be used for dishwashing and bathing needs is carried to the needed area.



Figure 2. Some example views from Eskisaribey settlement housing exterior

- Tents consist of a single space of 20-25 m². Different actions such as sleeping, sitting and eating are performed in this place (Figure 3).

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Figure 3. A view from Eskisaribey settlement shelter area interior

- Each incoming family sets up its toilet and bathroom area. There is no sewerage infrastructure especially for toilet areas (Figure 4).



Figure 4. Toilet and shower areas built by SAWs in Eskisaribey settlement

- Food and kitchen utensils are kept in tents. Food spoils quickly because the necessary conditions are not met. The cooking area is located outside the tent and is used in common.
- It has been stated that no service can be obtained from the local administrations regarding collecting garbage or spraying in the region
- Local people want SAWs not to be permanent in the region by leaving their garbage and animal waste near the settlement areas. This situation affects SAWs both physically and psychologically. Workers transported to the fields by trailers work between 7.30-18.00. In the working areas, no areas are defined for resting, toilet, eating and drinking needs.
- There are no studies on the provision of school and health services. In case of need, workers reach health institutions through their efforts.
- The intermediary that brings SAWs to Eskisaribey does not live in the region. He declared that he was staying in the Görükle district of Bursa and was dealing with additional works.



“What is the most serious problem affecting your daily living conditions?” was asked to 4 of 45 SAWs staying in the region. In answer to the question, respectively; Inadequate water and electricity supply and sheltering areas were stated. In the residential area in Ortasarıbey; There are about 60 people, including about 40-42 adults. The intermediary has stated that the number of people in the region will remain stable and that no new people will come to work in the coming months. The outcomes of the observations can be summarized as follows;

- There are tents set up by the district governor's office in the region. These tents, fixed for 12 months of the year, have been used for approximately 6-7 years. The tents, which are directly affected by all climatic and environmental conditions, are ready for settlement after the necessary maintenance, repair and cleaning procedures are carried out by the workers who come to the region.
- The settlement area is surrounded by a wire fence. It has been learned that two toilets and three shower containers are in use from 10 toilet and shower containers placed in the region by the District Governor's Office. The remaining container areas are unusable. The majority of the solar panels installed on the containers to meet the hot water need are also unusable (Figure 5).



Figure 5. Shower and toilet areas are located in Ortasarıbey settlement and placed by the district governor's office. Infrastructure problems and the relationship of the power line are also seen.

- There are electrical appliances such as refrigerators and televisions in the tents in the region. The dayıbaşı, agricultural intermediaries are generally called elçi or dayıbaşı in Turkey, provides the electricity connection in the tents in the region. The usage fee is charged on average per tent.
- As Eskisarıbey region, a separate place for the cooking area has been defined and a stove has been set up in Ortasarıbey (Figure 6). However, this causes security problems.

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Figure 6. Ortasaribey settlement common cooking area and areas where kitchen utensils and food are stored in the tent.

- School-age children cannot benefit from educational activities. Children aged 13-14 go to work in the fields. Younger children are left alone in the area.

“What is the most serious problem affecting your daily living conditions?” was asked to 4 of 40 adult SAWs staying in the region. Their common answer was the insufficiency mostly in accessing hot water for getting bath and also physical conditions of accommodation areas.

In Ortasaribey, which is about 1 km away from Eskisaribey, the conditions of SAWs differ. The difference in conditions is also evident from the statements of the workers. E.g; SAWs living in Eskisaribey define the areas they live in as “tents”; SAWs in Ortasaribey describe these areas as “homes”. The living spaces established by the District Governorship 6-7 years ago can be used with the workers' efforts, making the conditions acceptable for the people living in the region and at least as a “question of the state”. However, SAWs in Eskisaribey do not receive any support from local governments, so they bring all their needs. When the conditions are compared, the fundamental problem definitions also differ. While the difficulty of accessing water and electricity, which are among the most basic needs, is expressed in Eskisaribey, the problems experienced in Ortasaribey regarding hot water and bathing are emphasized. There is no interaction with the local people in both settlements.

CONCLUSION

The most important of the inferences about the settlement and living conditions of SAWs, made in Bursa and regularly followed since 2010; SAWs cannot benefit from solutions for their basic shelter needs. Even within the same province and district, living conditions and opportunities may differ. Problems related to housing conditions can be classified under settlement, housing unit, common areas and working areas. Settlement areas represent the locations of general tent camp settlements, their location relative to the center and working areas. Housing units are where SAWs will take shelter for an average of 6-8 months; common areas, on the other hand, define the primary, social and cultural spaces outside the



accommodation areas and that one or more families have to use in common. On the other hand, working areas refer to the areas where SAWs spend most of their days by traveling a distance of 15-30 minutes with motor vehicles, which are mostly far away from the shelter areas.

Settlement ;

- Settlement areas around irrigation and drainage channels pose a risk to living conditions.
- Electricity and lighting deficiencies in residential areas cause security problems.
- The location of residential areas in dangerous areas such as high voltage lines and main roads causes SAWs living in these areas to be exposed to danger.
- Infrastructure deficiencies affect both tents and their surroundings, especially during rainy periods.
- As a result of the insufficiency of storage areas, social areas, children's playgrounds, children and teenagers are affected negatively.
- There are no health and education centers in the regions where SAWs are concentrated.

Housing units;

- The ventilation conditions specified in the standards are insufficient depending on the climatic conditions. This situation has negative effects on quality of life.
- Insufficient personal zones cause security and privacy problems
- Personal hygiene conditions can not be met because of an increase in the number of people per square meter.
- There are no measures in the shelter areas for young children who are not old enough to go to the fields.

Common areas;

- There are problems in water supply for different needs such as eating and drinking, cooking, using, taking a shower, washing goods and food.
- Solutions for wastewater (especially sewage) removal are insufficient.
- Use of toilets by a large number of people cause hygiene and safety problems. Absence of laundries causes personal hygiene problems
- Having nobody trained for first aid causes some losses in urgent situations in the camps.
- The proximity of the living areas to the waste areas makes them suitable for infectious diseases and pests.
- Insufficient food variety and eat one type of food together with foods exposed to high temperatures cause rapid deterioration and poisoning.

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Working areas:

• SAWs, who do not have suitable conditions in settlement, accommodation and common areas, also work under primitive conditions in their working areas. The lack of basic facilities such as resting, eating and drinking, toilet and first aid in the fields where they work causes SAWs to work under dangerous and inadequate conditions.

In Table 2, the relations between the problems of SAWs' settlements, housing units, common areas and working areas, the sub-headings they are related to can be seen under the main headings.

Table 2. Relations between the problems of SAWs' settlement, housing units, common areas and working areas

D E S I G N T I T L E S	Settlement	Infrastructure	Sewage Drainage
		Lighting	
		Security	
		Waste disposal	Solid waster Liquid waste
		Electricity	Alternative energy source
		Water	Drinking water Utility water
		Road	
	Housing units	Enrollment	
		Climatic conditions	
		Sheltering period	
		Disinfection	
	Common areas	Food & Beverage	
		Cooking area	
		Bathroom & Shower	
		Laundry	
		Education	
		Health	
		Social areas	
	Working areas	Basic needs	Bathroom Rest area Food & Beverage
		Transportation	

First of all, it is necessary to determine the standards for providing the solution proposals. These standards will let us to propose adequate solutions and enable SAWs to live and work under better conditions. It is necessary to improve the carrier system properties of the shelter areas (Eg.: insulation details, climatic suitability of materials, maintenance alternatives).

In order to determine the basic solution proposals, firstly, the essential functions related to daily living habits and working conditions should be revealed. Determining the necessary comfort conditions after defining the spatial needs related to the determined functions and defining them as sub-headings should be the starting point. Development of a standardized list of spatial needs and comfort conditions and application of them in the



accommodation areas of SAWs will be the aim of the following studies of the authors.

This study emphasizes the importance of holistic and multi-disciplinary studies to improve and develop the living conditions of SAWs, starting from their housing problems. It is thought that the observations and inferences made for this purpose will light a way for future studies.

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OTHER ART PROMPT: AN EXAMINATION OF THE THEORY OF ABSTRACTION AND EMPATHY IN THE PRIVATE SANCAKLAR MOSQUE

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ABSTRACT

Considering the reasons of volition for art, the content of Aesthetic Science is questioned. The aesthetic phenomenon, by its structure, involves a process between *subject* and object interest. The artist, who is a *subject*, affects and transforms the *object* by taking an aesthetic attitude. This effect reveals the *aesthetic work of art*. In certain periods, aesthetic research was directed at the object, and works of art were studied only in the field of objectivist aesthetics. At the beginning of 18th the century, as a result of the Renaissance, human research led to the importance of *subjectivist aesthetics*. An understanding called a *subjectivist* or *psychological aesthetic* regards an aesthetic object as a screen in which the emotions and thoughts of the subject are reflected. It accepts the analysis of these psychic transmissions of the subject as both an essential and only reasonable way to determine the aesthetic object (Tunali, 2011). From this point of view, it is possible to see every image that forms the essence of the work of art as the embodiment of a style of vision, and every style of vision as a reflection of the trends represented by the subject.

Examining the need for art prompt through subject matter leads to a psychological interpretation of the meaning of art. Views through which a person understands the work of art with an inner sense are encountered in the process from antiquity philosophers to modern time researchers (Tunali, 2011). According to these views, a person has a sense of beauty, which is natural, and the meaning of a work of art is understood only by this feeling. The end of the 19th century and at the beginning of the 20th century, with the dominance of the discipline of psychology, theory of knowledge, logic and morality are desired to be taken back to psychology, as well as aesthetics and philosophy of art are desired to be based on psychological foundations, taking the same path. These opinions indicate that thoughts and intuitions are weighted in explaining works of art. In the understanding of aesthetics, the whole competence is the ability of thought and image, because it is related to the beautiful spiritual universe. Theodor Lipps, a famous representative of this understanding, is described as the founder of modern psychological aesthetics. According to Lipps:

Aesthetics is the science of beauty. "An object is called beautiful because it evokes or can evoke a special feeling in me, that is, a feeling called a 'sense



of beauty'. According to this, 'beauty ' is the ability of an object having a certain effect on me." (Lipps, 1906)

Lipps explains the analysis of this special feeling that the object evokes in the subject with a theory that he calls *empathy(einfühlung)*. That is the feeling leading the person to aesthetic pleasure. According to this, the source of aesthetic pleasure is not the object that it grasps first with sensory and then emotional activity, but its own spiritual activity. The subject experiences this activity in an object that is an entity other than itself. (Lipps, 1906)

Although the theory of empathy may seem to Lipps as the main requirement of artistic creation and aesthetic pleasure, it is not sufficient to explain the desire for art, given the parallel between the history of art of the period and geographies. Looking at the history of art, there are stylistic variations in the arts of many nations and eras. For example, given the differences in the arts of Eastern Civilizations, another condition should be sought instead of empathy. So what is this "other art prompt"?

Can the theory of empathy, which the Modern Western world uses in explaining the psychology of style, be sufficient in explaining the demands of art of other civilizations? Or should another explanation and method be sought? May the empathy, "which means" hearing something from within", be valid in abstract art while it is enough to explain the art styles of societies that establish intimate relations with the world?

Art historian Wilhelm Worringer examines the subject by asking why and how the artist chose different paths in his works, which he has put forward as a review of stylistic psychology. Connecting the distinction between art styles to the inner worlds of artists, Worringer looks for the effectiveness of empathy by looking at concrete examples of art history. As a result of his research, Worringer, who believes that he must look for another point of the handle in processes other than Greek-Roman, Renaissance and Western art, seeks the condition of an art style performed with abstraction (Aydemir, 2015).. He explains the desire for other art with the concept of abstraction, by which he puts against the theory of empathy. According to Worringer, the activity of empathy is a positive interest between man and nature, while the condition of abstract art is a reaction to the negative and insecure nature of the universe. The sense of empathy finds satisfaction in the vitality of natural beauty; the spiritual coexistence with a person, nature and life, while the abstraction found at the opposite pole finds satisfaction in inorganic forms that reject life, achieving abstract, absolute imperatives.

In this study, the theory of abstraction and empathy, which has made important conclusions about stylistic psychology, will be studied through architectural works of art. The Theory, which has found a valuable place in the history of art, will be looked at in the private Sanjak mosque. Searching of the other art request at the opposite pole of the theory of empathy, which Western art especially uses when conveying the naturalist style, is considered compatible with the subject of Livenarch 2021: Other Architect/ure(s). In this context, the conditions that lead to empathy and abstraction of style in architecture will be examined and analyzed within the

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content of the study. By the content reading method, important concepts in Worringer's work of abstraction and empathy will be determined. The concepts detected will again be evaluated based on the physical and qualitative architectural elements passed in the work. In the example of the Sanjak Mosque selected as a sample area, the comparative concepts reached within the content of abstraction and the theory of empathy will be a new and developable step in the sense of studying the style in architecture.

In this context, the study aims to make architectural works questionable and meaningful within the content of abstraction and the theory of empathy.

Key Words: Stylistic Physcology; Wilhelm Worringer; Abstraction and Empathy; Architecture and Physcology; Sancaklar Mosque



INTRODUCTION

When the structure of the science of aesthetics is examined, two important elements are encountered: subject and object interest. The science of aesthetics, which has been interpreted with an objectivist aspect throughout certain dates, turned to the subjectivist, otherwise known as psychological aesthetics, in the 19th century, when the discipline of psychology was dominant. Theodor Lipps, an important name in the subjectivist aesthetic theory, which is a kind of "other interpretation of art", is defined as the founder of modern psychological aesthetics. Lipps says that the whole faculty of understanding the beautiful is the faculty of thought and image. Because, according to him, beauty is related to the spiritual universe (Lipps, 1906: 1). However, Lipps talks about the existence of a special feeling that the object arouses in the subject and explains the analysis of this with a theory he calls *emphaty* (*einfühlung*). *Emphaty* (*einfühlung*), which literally means to live something from within, to feel it from within, is a feeling of pleasure in art literature. Although the phenomenon called emotion is related to situations in which human is the subject, the presence of the object is necessary in the theory of *emphaty*. Because, according to Lipps: "Aesthetic pleasure is the pleasure we experience from ourselves in a (sensible) object. To enjoy aesthetically means to enjoy myself in a sensible object outside of me, to live myself in it."

Lipps accepts this grasping activity as the condition of the process of identifying a desire for an inner activity. Lipps accepts this grasping activity as the condition of the process of identifying a desire for an inner activity. It means, the form of each object is only as much as the subject comprehends. Here, subject perception and emotional orientation are activated. If this activity takes place without any hindrance, a sense of freedom arises in the person. It is this feeling that leads one to aesthetic pleasure. Accordingly, the source of aesthetic pleasure is not the object that he grasps with a sensory and then an emotional activity, but his own spiritual activity. The subject experiences this activity in the object, which is an entity outside himself.

Although the theory of *Emphaty* (*Einfühlung*) seems to be the main requirement of artistic creation and aesthetic pleasure, for Lipps, a theory that looks from the "other" side is also formed simultaneously. Art historian and theorist Wilhelm Worringer argues that *emphaty* is not the only condition of the art will. He looks for the effectiveness of *emphaty* in concrete examples of art history, however states that with this theory, many nations and ages will be helpless against art creations and sees variations in terms of style. For instance, he thinks that he has to look for another handle point in processes other than Greco-Roman, Renaissance and modern Western art.

According to Worringer, *emphaty* activity is related to an emotion established between human and nature. In this interest, human grasps the reality of the organic-living and lives his own life, his own activity in it. So, a "pantheistic sincerity" is formed between human and nature, and art, which was born in such a happy relationship, must have an understanding that loves nature and seeks human happiness in it. According to Worringer, art

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products created concerning to such an understanding of art will be a naturalist product.

However, Worringer, who foresees that there is an artistic will directed differently at its opposite pole, calls the "other art will" as abstraction. Thus, Worringer seeks and questions the conditions of an art style realized with abstraction. According to him, the impulse to abstraction, as opposed to the state of establishing a positive relationship with nature in the empathat process, is explained by a great inner restlessness and transcendental interest in the external world events.

Thus, Worringer gathers this diversity, which art history shows, and which cannot be fully explained by the impulse of empathy, at two points. The first point is naturalism in line with the happy relationship established with nature, as pointed out earlier. The other is abstraction in the direction of alienation from nature.

While the impulse of abstraction finds its satisfaction in reaching abstract and absolute necessities in inorganic forms that reject life, the instinct of empathy, which is at its opposite pole, is satisfied in the vitality of natural beauty; man finds spiritual unity with nature and life.

Worringer's theory seems to be consistent when viewed specifically in Islamic art. In Islamic civilizations, which have identified geometry and mathematics with their art, an art approach similar to that established by Worringer with abstraction is seen. These societies are conscious of seeking beyond the world of appearances and feel the need to eliminate the unrest in the outside world. As a result, they transform objects into abstract forms and use art as a tool to capture the ideal. For these societies, the means of reaching their love is art, and abstract art is a source of reference to overcome the inadequacies in expressing their love (Koç, 2008).

Worringer, who sees all art history as the dialectic of these two stylistic forms, considers art history to be almost equivalent to the history of the sense of the universe and the history of religion. In this context, these two concepts, which are determined as two separate poles, are not a dualism, but two processes of creation that continue one after the other and are interconnected. This process determines a style with the different conceptual orientations brought by the psychology of the artist. In Table 1, the formation process of these two orientations and their relations with each other are presented.



Table 1. Abstraction and Empathy Process (Duman, 2021)



The theory of Worringer, which was discussed within the content of the study, was re-read with Islamic architecture and evaluated on the example of Sancaklar Mosque. The aim of the study is to make a new and improvable research in terms of examining the style in architecture, while presenting this theory, which has made important inferences for the history of art, under the title of "other art prompt" in the context of Livenarch 2021. In this context, the stylistic features of architectural works will be discussed with their different meanings and their place in the theory of abstraction and empathy.

Abstraction and Empathy and Architectural Relevance

Architecture, which has changed with the theory of empathy, which affects art interpretations, has become a discipline defined in psychology and formality. Architecture represents the human-world relationship at the highest level, and therefore architecture is an art that gives meaning to human's tendency towards aesthetics. In his work Aesthetics in Architecture, Masiero says, "The need for an architectural style is a formal need that is psychologically placed against nature and the complex and anxious perceptual world. (Masiero, 1999)".

Art philosopher and theologian Vischer, who sought solutions mostly in psychology, thought that the object came to life as a result of an empathy process, empathy, and said that it was felt in accordance with the forms that produced the "meaning" of objective images (Masiero, 1999). Thus, the foundations of empirical-psychological interpretations of art and architecture were laid.

Fred Fiedler (1922-2017), who accepts that it is consciousness that shapes sensations by reconsidering Kant, says that the history of visual art works is a history of active expression, styles and symbols. One of the most competent names on this subject is Riegel. For Riegel, epochs and styles through visions; it is possible to construct the grammar of the arts and architecture. (Masiero, 1999: 157).

Based on all these, Worringer looked at the history of architecture with his own theory and gave answers to the forms and the reasons that make up their styles. Worringer's theory has been seen as a major influence not only on aesthetics but also on architectural criticism and theory and has been influential in evaluating works of art or styles as a method of scientific-critical reading. (Masiero, 1999: 157)

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After these determinations, Worringer strengthens his theory with examples from the history of art. He first looks at the arts of the primitive peoples and finds here abstract art, as he argues in his theory that it stems from his "spiritual fear of the universe". He then turns to Greek art, a period in which he can exemplify these two successive processes. He argues that in the first examples of Greek art, distant and distant structures were replaced by styles emulating human and nature. Thus, he conveys the effect of abstraction on empathy, through the periods and structures he has chosen from history.

According to Worringer, geographical, intellectual and religious conditions affected art. In this sense, periods with a transcendent aspect in the philosophical context and regions with heavy geographical conditions contain more examples of abstraction in their arts. On the contrary, artistic periods established by empathy have a more positive interest with nature, people and the environment. Art structures also support this theory.

Identifying the Concepts and Evaluation Items of the Theory of Abstraction and Empathy

In this study, it is aimed to re-read and interpret a space with the theory of abstraction and empathy. For this purpose, two main concepts in the book *Abstraction and Empathy* were categorized in order to determine the concepts that the space will be evaluated. Subsequently, concept pairs were obtained by making use of the interpretations and references of the artworks in the book. Concept pairs are listed under the heading of abstraction and empathy. Thereupon, architectural space elements obtained from the source read were determined by the method of content reading. The space elements evaluated for the purpose of examination in architecture were adapted to the sections of the Sancaklar Mosque, which is the sampling area, and interpreted through the selected concept pairs.

The distinction between abstraction and empathy, which are the basic concepts of the research, whose boundaries are determined in accordance with the purpose and content, is clearly explained in Table 3. The sub-concept pairs described by these two concepts, which constitute the main methodology of the research, were determined using references. Within the content of the study, these concepts have been increased depending on the importance and meaning of the subject. Concepts encountered as dualism in theory can be thought of as two terms that form the unity of opposites for Islamic art. In this context, some concepts can be considered as the duality that creates unity for Islamic art. These concepts were generally determined by the content reading method with the references of Worringer.

Table 2. Basic distinctions of Abstraction and Empathy (Duman, 2021)

ABSTRACTION	EMPHATY
Pleasure in separating objects from subjectivity	Pleasure of experiencing subjectivity in the object
Unlimited, independent, complex universe perception	Positive, happy, aesthetic universe perception
Awareness that the world of appearances is not real	Consciousness of objects in the visible world
The need to step outside of oneself	The need for self-activation
Abstraction from the world of objects	Living our inner world in objects
A superhuman attitude, an emphasis on nothingness	An attitude that leads people to their existence and hereness
Emphasis on timelessness and eternity	Dependence on place and time
Human-distance structures	Human-friendly structures
The material reflects its "own" property.	The material is affected by form and function.

After this brief explanation and Table 2, the concept pairs defined below were reviewed and edited by the researchers.

Compulsorily and Order: While order is the participation of the subject in the work, laws are the participation of the external world, natural forces. In this context, the law refers to the impulse of abstraction. Regular forms can be seen in an architectural product, in a columnar arrangement or in a series of decorative patterns. Here, a free character can be obtained by softening the rules. Wölfflin exemplifies this, with the absolute stance of a monumental building and the orderly yet cheerful aura of a country house. (Wölfflin, 2015: 42, 67)

Stability and Flow: Large, strong and dignified structures reject the empathy impulse and stand on their feet with the system within themselves. The building, which does not have any mobility feature, creates a space where people can move independently. Art products, which are constantly in motion and tend to activate their own existence, appeal to the satisfaction of empathy. This design attitude, which appeals to the instinct of empathy, influences and directs the subject.

Superconscious and Conscious: The superconscious attitude creates spaces where there is no direction in architecture. In these buildings, which do not limit the right to act consciously and make decisions, the process of abstraction can be read. A consciousness begins to form where the relationship of intimacy between man and the world arises. This consciousness is free from all kinds of insecurity in the world. The need for empathy is transferred to art with the desire to make oneself happy.

Absence and Existence: Abstraction of satisfaction with the product of instinct, can be said that the attitude of human beings annihilates these values. Feeling the presence in the space and feeling the perception of

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space with a sincere feeling shows that this concept is realized with empathy in design. For a person who has the opportunity to live his own existence in a place, this structure is a structure of being. If the atmosphere of a space makes us feel as if we are leaving our individual existence and making contact with the building and feeling ourselves in a building, we can talk about the product of empathy here.

Eternity and Liberty: The limitation of man, the regular structure of the universe and the limitlessness in nature trigger the instinct of abstraction in the artist. The creative spirit, which creates its own universe by creating obligatory fields for itself, desires eternity within these limits. "Infinity within limitation" can be interpreted as the abstract stylistic selection of man-made products in art. The happy relationship between the universe and man liberates art. In such an interest, art has no boundaries. Forms are free in structures that do not specify obligations and limitations, and the plan and program easily reach the desired form.

Timelessness and The Moment: Abstract style products are timeless. It aims to present a creation beyond time. Moving away from time and place being a certain moment and place; it perpetuates time and space. Masters of abstract art, interested in what lies behind the world they live in, create timeless products. The need for empathy takes a time and place-dependent pleasure from the relationship with nature. This attitude, in which the moment is reflected in art, can be demonstrated in architecture by designing the space with light. The material, technology, etc. of the period. can convey which time structure it is. This interest is found in arts created with a sense of empathy.

Persuasion and Consensus: The war of abstract art to detach people from time and uncertainty requires an effort of persuasion. A work of art, disconnected from time and space, convinces others of its existence and beauty. The empathy instinct reconciles effortlessly with the environment. Unlike abstraction, it does not engage in a war. The attained form includes a renunciation and a compromise.

Monumentality and Humility: The lawfulness of abstraction reveals the majestic and monumental nature of the abstract style. The high, inexpressive law of matter appears as detached structures standing on their own feet with a sense of sublimity. The structures created with this attitude represent sublimity and aim to be immortal.

The harmony established with empathy brings the naturalist product closer to the human. All the feelings of life emerge without any hindrance, and the expression of the work created within such a thought system is modest.

The detected concept pairs are listed in Table 3, respectively. These concepts are then interpreted through the Sancaklar Mosque, which is the sampling area.

Table 3. Sub-concepts reached by the analysis of the concepts of Abstraction and Empathy (Duman, 2021)

Concepts and Sub-Concepts In Worringer	Concepts	
	Abstraction	Empathy
Inferences	Sub-Concepts	
Concept Pairs Inferred Based on Worringer Reading	Compulsorily	Order
	Stability	Flow
	Superconscious	Conscious
	Absence	Existence
	Eternity	Liberty
	Timelessness	The Moment
	Persuasion	Consensus
	Monumentality	Humility

Detection of Architectural Space Elements

As mentioned before, the analyzes made within the content of the study were categorized by taking the architectural expressions in the Abstraction and Empathy book as a reference. Spatial discourses in the narratives have been transformed into concepts by the method of content reading. These titles are presented in tables.

In the explanations, concepts that are thought to be used in architectural space analysis and that are repeated in Worringer's Abstraction and Empathy are stated and these elements find their place in the tables (Table 5) (Duman 2021, simplified). Meanwhile, the researcher aimed to divide the analysis of Sancaklar Cami, which was chosen to be examined in the context of the study, in the light of the theory of abstraction and empathy, and to make it more understandable.

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Laws/ Regulations/
Ethics

Human/ Behavior

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Sustainability

Philosophy/
Theory/ History/
Discourse

Criticism/ Method

Identity/ Culture/
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Table 4. Determination of the elements used in architectural space analysis (Duman, 2021)

Excerpt from The Book	Space Element/ Concept
<p>In terms of <u>atmosphere</u>, the Roman style also emerges as a Northern form if its ancient essential element, to which something external is added, is not to be seen. (Worringer, 2017: 105)</p> <p>The unity of the work of art is here again refined in its crystalline geometrical laws, according to which the <u>atmosphere</u> of the work of art is again an abstract structure. (Worringer, 2017: 92)</p>	ATMOSPHERE
<p>Undoubtedly, individualistic northerners who have a long way to walk to reach the understanding of <u>form</u>... (Worringer, 2017: 39)</p> <p>... that is why it is beyond the absolute will of art, which can only express itself formally. (Worringer, 2017: 110)</p>	FORM
<p>The alternation between <u>light and shadow</u> is used in later stages of art development as a means of composition in an organic sense. (Worringer, 2017: 93)</p> <p>True, the surface undoubtedly gains vitality (with the effect of <u>light and shadow</u>), but this liveliness happens according to abstract rules... This kind of colorism does not appeal to our identification seventies. (Worringer, 2017: 93)</p>	LIGHT / SHADE
<p>More claims must be discovered here; For this will, we have no other handle other than a mute and inanimate material. (ibid: 116)</p> <p>We have to deduce the will underlying it from the ability to be expressed in this material. (ibid: 116)</p>	MATERIAL
<p>What is decisive in architecture is the dimensions, height and width... Therefore, it is very important to determine the expressive value of the proportions. (Wölflinn, 2016; 53)</p> <p>The bulkiness and rigidity of the Doric temple were broken; proportions have approached human or general organic proportions... (Worringer, 2017: 81))</p>	PROPORTIONS
<p>The shade serves as the compositional factor and thus this crystal completes the laws. (Worringer, 2017: 92)</p> <p>The change between light and shadow is used as composition in the organic sense, but in the later stages of art development. (Worringer, 2017: 93)</p>	COMPOSITION
<p>In the era of Theodosius, abstract tendencies are expressed by the <u>geometricalization</u> of ornamentation, especially ancient plant motifs, and the weakening of the sense of form. (Worringer, 2017: 94)</p> <p>This style consists of the decorative schematization of the form, the approximation of the human shape to the surface ornamental character and to the architectonic commitment with it. (Worringer, 2017: 96)</p>	ORNAMENT
<p>In Greek building art, too, we are confronted with a <u>structuralist</u> form. (Worringer, 2017: 107)</p> <p>In the Ionian temple and <u>the structural</u> development that followed, the pure skeleton, based only on the laws of matter, is brought into the friendly and joyful life of the organic. (Worringer, 2017: 107)</p>	STRUCTURE
<p>... color, associations from a building's history and purpose, the oil offered by that building's substance, etc. Undoubtedly, there are many other factors. (Wölflinn, 2015: 25)</p> <p>The warm lines of wood engraving, or the cold lines of metal engraving, etc., are mentioned; this contrast also coincides with the "hard-soft" opposition of the sense of <u>touch</u>. (Wölflinn, 2015: 26)</p>	COLOR / TEXTURE



Analysis of Sancaklar Cami in the Content of Theory

Sancaklar Mosque with the many awards it has received, is located in the Büyükçekmece district of Istanbul. The mosque, which was designed by Architect Emre Arolat and started to be built in 2013, is located on a sloping land. The mosque, which is shaped in the context of its topography, has a capacity of 650 people. In addition to the place of worship, the building also includes a library and a socialization space. The mosque draws attention with its minaret in its location. The area of only the place of worship is 700 square meters. The mosque has two entrances, one of which opens directly to the general area and the other to the gathering place of women.



Figure 1. Sancaklar Mosque Stairs (URL 1)

Sancaklar Mosque, which was designed by leaving aside the discussion of how a contemporary and modern mosque should be; It was designed by trying to see the place, the time, the context and the actors. (Aynalı, 2011: 76). The architect, who aims to find the essence of the place of worship and design a mosque from this point of view, has tried to remove mosque architecture from being an abstract design issue. In this sense, the structure, which was designed by avoiding "form-based" discussions, was examined within the content of the study.

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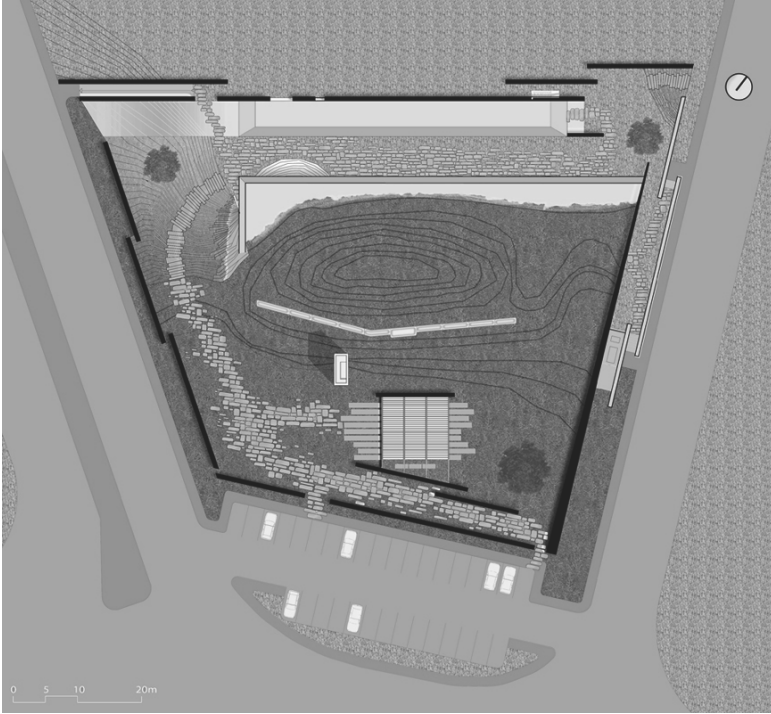


Figure 2. The Site Plan of Sancaklar Mosque (URL 2)

This building, designed by Emre Arolat with the principle of "the essence of the place of worship", differs from other mosques with its interior and exterior appearance. In the environmental context, it has been designed in a rural and peaceful environment, on the side of a road with closed complex type residences and not much use. The building, which was awarded the world first prize in the category of religious buildings at the World Architecture Festival held in Singapore in 2013, was chosen as the sample area within the content of our study. The atmosphere created by the work and the different sense of space were effective in the selection of this place. In this context, it is thought that the structure is suitable for the theory of Abstraction and Empathy, which is the subject of research, in terms of religious structure and stylistic psychology. After the researcher examined the theory in question at the intersection of Islamic Architecture, the location of the Sancaklar Mosque aroused curiosity in the study and it was decided to be chosen as an exemplary building in this context.

Within the content of this thesis, which is an attempt to re-read Sancaklar Cami, which is thought to have emerged in the environment of current debates, ideologies and criticism, with its psychological aspects, through Worringer's theory; The findings of the mosque, which were analyzed with the concepts of Abstraction and Empathy, and summarized under sub-titles, are as follows. While interpreting the tables, a method based on Worringer's



reading is chosen and hypothetical and subjective judgments, which are the original aspect of the theory, are included.

Compulsorily and Order Reading of Sancaklar Mosque in the Context of Worringer Criteria



While Compulsorily is the creation of mandatory and absolute fields in a design, the rules are softened in regular elements. The atmosphere of the Sancaklar Mosque, as it is designed for worship, gathering and sharing, creates a sense of orderliness. This regularity can be seen from the monochrome effect created by the materials and the sequence in the fall of the light beams. In this context, an empathy tendency can be mentioned within the content of theory.

Sancaklar Mosque does not specify a necessity in terms of its form; it does not have a necessary form, on the contrary, it has found a form according to the topography it is in. The form it has, has been created according to a structure that can only be unique to this place. The proportions of the elements of the mosque are in organically designed regular dimensions. The colors and textures of the materials used attract attention as they are suitable and compatible with the region. Here, the stone stands as stone, but as in this classical mosque structure, it appears as materials that adapt to the environment rather than impose itself. In this context, Sancaklar Mosque can be expressed with the principle of regularity in the context of form.

Stability and Flow Reading of Sancaklar Mosque in the Context of Worringer Criteria



From the moment entering the part of the building that separates the outside with a low wall, we find ourselves in a flow. This flow continues in the place of worship. This place is like saying "Come and pray". In this respect, it is possible to talk about an empathy. When we look at the site plan, although closure and introversion are read, the integrity of the building and the parts of this whole show a fluidity. The variability of the effect of light and shadow during the day depending on time turns this place into a kind of empathy

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space with the effect of flow. The color and texture effect seen in the building is in harmony with nature and with each other in a flow effect. All the color and texture effect felt inside and outside the space is a part of this situation. They do not contrast with each other and their immediate surroundings, on the contrary, they are in harmony.

In the context of immutability and flow, the result of the empathy impulse is read in the structure. The orientation felt after the movements of a living organism, almost like a living creature, exceed its own limits in the structure read, confirms this determination. There is continuity and immersion in the elements. Mobility is found in all architectural elements in a structure that is far from expressionless.

Superconscious and Conscious Reading of Sancaklar Mosque in the Context of Worringer Criteria



The mosque was shaped by the Islamic consciousness's view of the world, nature and living things. Settlement in the topography, light-shadow elements and some orientation elements were created with this stream of consciousness. Here, an empathy can be mentioned in the context of the closeness relationship established with the world. The form of the building was created with the interest and consciousness of nature. Conscious attitude of movement elements, entrances and exits and directions opens this place to evaluation with the concept of empathy. On the other hand, the mosque, which is an Islamic place of worship with its functional essence, does not restrict the right to act consciously and make individual decisions, and in this context, it offers a free environment. Therefore, when evaluating Cami with the concepts of superconsciousness and consciousness, it can be thought that it should be included in the category of abstraction.

Consciousness creates spaces in architecture where there are elements of orientation. It can be said that the mosque, which is a product of empathy in terms of directing the movement in light-shadow and circulation elements, on the one hand, was formed at the end of the abstraction process of the mosque, which, on the other hand, does not restrict the behavior of the users because it is an Islamic place of worship, and creates an environment for conscious decision-making and worship. In this context, Cami has chosen a different and unique process in design.



Absence and Existence Reading of Sancaklar Mosque in the Context of Worringer Criteria



In the design, which is evaluated in terms of absence and existence, it is evaluated that both abstraction and empathy processes are seen together. There is a stylistic feature that can change situationally and sometimes includes both concepts. The structure of Islamic thought that constitutes the unity of the two poles manifests itself in this couple of concepts; The existence of God is conveyed to man through emptiness and the feeling of absence, on the other hand, the mosque is a living being. The interpretation, which tends towards the abstract, and therefore the concept of absence, in terms of its interior features and being an Islamic place of worship, creates a sense of existence of its own accord within the originality of the design. In this respect, the couple of concepts that create a duality take Sancaklar Cami to another area that cannot be interpreted alone in terms of abstraction and empathy theory.

Infinity and Liberty Reading of Sancaklar Mosque in the Context of Worringer Criteria



The design, which tries to comply with certain limits and to be shaped with the possibilities at hand, creates a perception of infinity within itself. This perception seeks infinity within the boundaries. On the other hand, forms, atmosphere and composition are free in design that does not include patterns and obligations. Therefore, when the bipolar structure of Islam is read through these concepts, it has created its own field by not being included in certain categories.

Timelessness and Moment Reading of Sancaklar Mosque in the Context of Worringer Criteria



When evaluated in terms of timelessness and moment, it is thought that both concepts are reflected in the process. Space is timeless in terms of the

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concept of “essence” reflecting the style of abstraction; In other words, it belongs to all times. There is no definite separation in terms of Abstraction and Empathy in the mosque, which makes you feel a kind of duality both by not reflecting a period and a certain time and by keeping it alive in the moment.

Persuasion and Consensus Reading of Sancaklar Mosque in the Context of Worringer Criteria



Sancaklar Mosque is a building designed as a resting and gathering place in the context of the atmosphere it creates. Beyond that, it is perceived as a place to sit when one wants to rest, a hill to climb when one wants to look around, and a place to leave everything behind and find peace. This state of reconciliation, which can be associated with topography, is felt in the interior of the Mosque. In the context of the relationship with the topography, the structure that gives the feeling of being accepted to the place where it is located is as if it has always been here. It effortlessly reconciles with the land to which it clings. It protects the environment of peace with its building elements and materials. The structure that identifies with nature is in peace and tranquility, just like other meanings of Islam.

Monumentality and Humility Reading of Sancaklar Mosque in the Context of Worringer Criteria



It has been mentioned before that building designs that are established with an Empathy make you feel humble with their closeness to the human. The expression given in this place, which does not brag about itself, is far from exaggeration, and is exhibited as it is, carries the design to the dimension of empathy. The evaluated space item titles are limited to the most appropriate ones in terms of expressing these concepts.

Buildings, in which a building is designed with the combination of two impulses, have a style that creates their own artistic will, as explained earlier. Located between these two impulses, the design is given a special name for Worringer: extraordinarily happy balancing. In this context, artworks that develop their own artistic style and are in the intermediate stage can contain a reactivity or a preliminary step. This style, which can



contain messages that need to be thought and approached differently, can also carry references for the next ones.

CONCLUSION

Thoughts, ideologies, worldviews and psychology brought by the conditions of the time find their counterparts in the design of a building in architecture. This causal relationship may lead to the emergence of some architectural styles. Worringer "What constitutes an art style is closely related to the religion/worldview and psychology of the time." says. Thus, it is possible to say that a structure is built together with philosophy and discourse.

Abstraction and Empathy theory, which has made important inferences on the psychology of style, is a study based on Worringer's analysis of art history. The main reason why this work has a place in the history of art; the fact that it does not look at art creations from a unipolar way, it contains the "other art will". What is wanted to be examined with this theory is the psychological sub-reasons that direct the art of a nation or period. In this context, the theory, which reaches accepted results in the field of art, has been examined within the content of the study.

The reason mosques researched for content of the study, which are the most dominant examples of Islamic art, is that the rich and deep aspects of Islamic art are wanted to be investigated within the content of the thesis. In the theory that art, religion and worldview are considered as different expressions of the same psychic forces, it is suggested that there are two separate orientations (Duman, 2021). Although the opinion that societies that adopt a transcendent view in the context of religion generally create abstraction art products is predominant, it has been concluded that Islamic art is an art that contains the need for empathy in its essence.

When it comes to mosque design, although a typology that has become a formal burden in Turkey comes to mind, the mosque structure does not have formal constants determined by any source. On the contrary, it is possible to say that mosques, which have diversified in different cultures and periodical influences throughout history, have adopted different approaches when designing. (Duman, 2021)

At this point, it is important to draw attention to the traditional patterns of Islamic places of worship. Although architectural elements that formed a compositional whole with the psychology, religion/worldview, materials and technologies of their time in the past, reinforced their meaning with repetitions, unfortunately, today, with the change of knowledge and technology, they cannot go beyond imitation. In this sense, the idea that "mosques should have a similar style and form" should be prevented from being a correct and definitive judgment. In this sense, the dynamics of the religion of Islam indicate that the structure/design should be free. In addition, it would not be correct to interpret the works of art produced under such a necessity and expectation as products of abstraction. Like every work of art, mosques can show the psychological and ideological returns of the time through their styles. In the theory, which claims that art styles are formed

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through the perception of the world and the psychology of time, Islamic art is also influenced by new moves. Considering the readings made and the sample examined; Sancaklar Mosque exhibited a style that dealt with an inherent art demand in the other way. In this mosque example, tradition has been questioned and reinterpreted, thus adopting a style that turns to more empathy. However, the transcendental thought required by the religion of Islam did not come to an end, and in this context, an art demand created by abstraction in architecture found its place. The mosque, whose place in the evolutionary process of the mosque is examined and a clear form is chosen, is interpreted in the field of abstraction within the content of the thesis. When the way of using light, its metaphors, materials, topography and its relationship with the environment is interpreted, it can be characterized under the title of empathy. The coexistence of the two concepts makes it possible to infer that the structure creates its own artistic will as a reactive expression (Duman, 2021).

Although the style of Sancaklar Mosque does not change the tendency towards the traditional mosque typology in Turkey, it reveals the differences in thought and perception. Within the content of this example and considering today's periodical conditions and technologies, it is thought that design works that are compatible with the psychology of the time and that do not repeat themselves should come to the fore.

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PERUSAL OF RICHARD ROGERS ARCHITECTURE VIA THE ZIP-UP HOUSE

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ABSTRACT

*"I can't understand why people are frightened of new ideas.
I'm frightened of the old ones."
(Rogers, 2017)*

As in all disciplines, discussions, manifestos, and discourses on theoretical, scientific, and social platforms in the discipline of architecture are pertinent to practice. The structures, which serve as manifestos of these theoretical inquiries, attract attention and loom large in the architectural environment. Nevertheless, "other" projects that reflect the professional discourse of architects and remain in the form of architectural representation that cannot be built and therefore cannot take their necessary place in the literature are also worth discussing.

For this purpose, it is aimed to explicate the professional discourse of Richard Rogers, the architect who received the RIBA Gold Medal in 1985, the Riverside Lord title in 1996, and the Pritzker award in 2007 for his contributions to the architectural profession, and nominated for many other awards besides these, in the context of "other works" through the Zip-Up House, which could not be turned into practice although it was awarded in the architectural project competition.

In this study, a conceptual analysis process was conducted on the Zip-Up house and the content analysis is used as a method. The texts and transcripts of Richard Rogers pertinent to the Zip-Up house have summarized the concepts and categories by following a certain process. The impacts of obtained concepts and categories on large-scale buildings loomed large in Roger's narratives and had a large place in the world of architecture such as the Georges Pompidou Center, the Millennium Dome, and Lloyd's Building are discussed as a result of this analysis. As a result, the Zip-Up House discourse, which is Rogers' innovative experimental work, is similar to his general architectural attitude. In this sense, we can say that the designer synthesized his own personality and architectural approach with conceptual codes such as "Technology", "Flexibility", "Energy", "Economy", and "Society".

Key Words: Richard Rogers; Zip-Up House; Content Analysis; Discourse; Other.

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INTRODUCTION

*"The history of architecture should be seen as a history of social and technical invention and not of styles and forms."
(Rogers, 1991, p.1)*

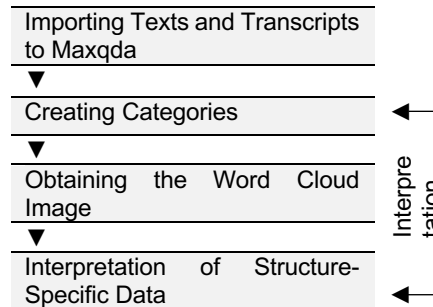
In addition to academic studies, discussions, or architectural practices in the field of architecture, architectural discourses are also effective in the formation of architectural culture and design theory. From this point of view, experimental concept projects, in which the designer expresses his discourses freely and effectively, are very important.

Today all pioneering architects develop approaches that can create alternative perspectives through their own architectural language as well as the act of building. Bilgin (2014, s.vii) has stated that all discourses, regardless of their kind, require interpretation and inference, to the extent that they are the product of symbolic construction. In this context, the architectural approach of Richard Rogers, one of today's architects who generates ideas on society, politics, technology and considers the livable environment, was analyzed through the discourses related to the Zip-Up House, which is his concept project, and the conclusions obtained afterward were discussed within the framework of the current context and architectural products. The Zip-Up House, which was designed for innovation in local architecture in the first stage, is considered to be a preliminary test of ideas in large-scale industrial and urban projects that were implemented later, although it remained in the idea stage.

MATERIAL AND METHOD

Qualitative data in the focus of Richard Rogers and Zip-Up House. In this context, audio/visual items such as interviews, phrases, words, transcripts, observations, and documents are the main materials of the study. In this experimental theory study, as a method, a typical and flexible research framework was created by using two specific approaches such as content analysis and case study (Table 1). MAXQDA (Qualitative Data Analyse), a computer-aided program, was used for the analysis.

Table 1. Analysis and Interpretation of Discourses with Maxqda Software (Authors)



Based on the readings;

- It is aimed to determine Richard Rogers' professional approach through the concepts extracted from the architectural discourses,
- and to discuss its impact on the subsequent projects through an innovative and discursive project that has not been implemented.

Content Analysis

Content Analysis is defined by Robert and Bouillaget (1995) as *"A technique that allows methodical, systematic, objective and, if possible, quantitative examination of the content of various texts in order to classify and interpret the basic elements that do not directly give themselves to a naive reading"*.

In other words, content analysis is the quantitative and qualitative analysis of these concepts and categories by revealing the meanings hidden in the texts or transcripts or the messages intended to be given there in the form of concepts and categories by following a certain systematic (Güler, A., Halıcıoğlu, M. B., Taşgın, S., 2015, p.331).

The main purpose of content analysis is to summarize and make a broad description of a phenomenon with concepts and categories. The purpose of these concepts and categories is generally to form a model, a conceptual system, a conceptual map, or conceptual categories (i.e. classification).

In this sense, objective readings associated with the Zip-Up House were made in order to reach the concepts that defined the architectural philosophy of Richard Rogers. The development stages of objective reading are constructed in five steps in the context of the content analysis process:

1. Determination of the sample group to be examined,
2. Transcribing the dialogues in Rogers' books, televisions, or conversations related to the structures in the sample group and transferring them to the Maxqda program,

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3. Determination of concepts (meaningful sections of the data such as a word, a sentence, a paragraph) through transcripts and creation of word clouds (visualizations based on frequency analysis to determine which concepts are frequently used in the texts),
4. Obtaining the categories by coding the concepts (naming the specified concepts in accordance with the content and integrity of the research),
5. Interpretation of the obtained data.

Richard Rogers, His Architecture and Discourses

"Architecture is not just about building, it is about spaces and places."
(Richard Rogers, 2020)

British architect Richard Rogers was born in Florence in 1933 to a father who studied architecture and engineering and a mother who was a fan of modern art. He completed his architectural education at the London Architectural Association School of Architecture in 1959 and received a master's degree from Yale University in 1962. He was not a very successful student in his education life because he had dyslexia, which was noticed long after the academic years and is a kind of reading difficulty. Rogers first established an architectural firm called "Team 4" with his friends at Yale University, including Norman Foster. He even designed a factory, which can be defined as the first modern British high-tech building, with this team (Figure 1). In 1970, he continued his architectural career with the partnership he established with Renzo Piano (Rogers, 2017).

The architect, who received the title of Lord of Riverside for his contributions to the architectural profession, was also awarded the Pritzker Prize in 2007. In 2020, Rogers announced his retirement from the "Rogers Stirk Harbour + Partners" studio after 43 years.

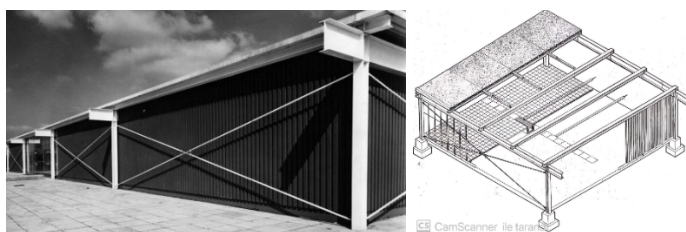


Figure 1. Electronics Factory, Swindon, Wiltshire, 1967 (Powell, 2000, p.51-52)

The British architect Richard Rogers put forward many actions and discourses on the *Livable Environment and Architecture*; and produced literature related to urban, economic, social, and ecological issues along with architectural projects that support them. For this purpose, he discussed social and ecological problems under the headlines of population, raw materials, and environment, which he defined as three main variables of human life. He regarded these three variables as the main study topics in



architectural structuring and explicated the built environment in that respect. According to him, the environmental equilibrium of human life depends on not losing or re-establishment of the balance in these variables; he is of the opinion that the imbalances in the three variables he mentions are the main cause of environmental problems in modern cities (Rogers & Power, 2000).

Rogers, who perceived architecture as a “problem-solving”, associated the concern of reducing carbon dioxide emissions to the environment with being human beyond being an architect (Madsen, 2019, p.23). Rogers, who interpreted his buildings not as an “advanced technology” architecture but as an “appropriate technology” architecture (Burdett, 1996, p.9-22), also emphasized that social and ecological problems should have been tried to be solved with “Inside-Out Building” style structures that reflect functional and all mechanical parts.

Upon considering the applied structures of Rogers, one can claim that they were formed in the light of all these discourses. Nonetheless, it would be possible to distinguish the Zip-Up House, which was a preliminary experiment of Richard Rogers’ technology-centered sustainable architecture approach and it was never been implemented or could not be implemented, and in this context, has gained the distinction of being the “other” work of the architect.

Zip-Up House

The Zip-Up House is a residential project designed by Rogers together with Su Rogers for a competition. The main purpose of this competition, which was organized under the title of “The House of Today” by DuPont Chemical Company that adopted the principle of producing sustainable and innovative solutions in 1968, was “Revealing Creative Ideas within the Context of Innovation in Local Architecture”. The award of this competition, in which Rogers participated with his Zip-Up House, was the implementation of the selected project.

The Zip-Up House, described by Rogers as a “transparent and flexible tube” (Kidd, 2013, p.724), was found successful by the jury of the competition, but it was considered as a design “far ahead of its time”, and was awarded the second prize for the project and therefore could not be implemented. Nonetheless, this work of Rogers is quite crucial in terms of being the first theoretical research he has conducted on the extent to which a modern house can be independent of the constraints of traditional construction methods. Even though the structure could not be put into practice, it was the first project of Rogers’ discourse (Figure 2).

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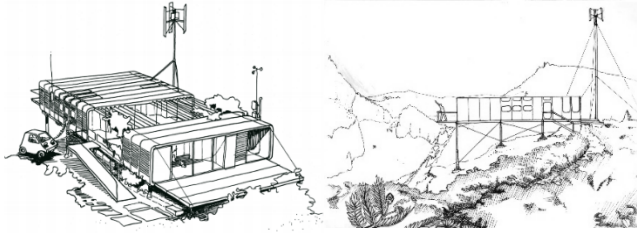


Figure 2. Zip-Up House Concept Sketches, Richard & Su Rogers, 1968

Regardless of being a building that could not be built, the Zip-Up House underwent a process that continues to be exhibited and awarded: It was exhibited at the “Ideal Home Exhibition” in London in 1969 and was nominated to the RIBA Research Award in 1970.

The term ‘Zip-up’ for the residence is derived from the selection of a panel system that can be assembled quickly using neoprene ‘zippers’, mass-produced in ‘rings’ for the roof and walls (Rogers Stirk Harbor & Partner, 2021). The shell-shaped panels, which allow for a maximum net structural opening of nine meters, are articulated horizontally with the Neoprene¹ Zipper system, allowing the structure to expand on a single axis. For these panels, American refrigerated trucks with cold air equipment were utilized in terms of high thermal insulation values and structural integrity. The panel windows were made of standard bus windows, which were easily available at that time, whereas the interior partitions were made of aluminum and insulated panels (Figure 3).

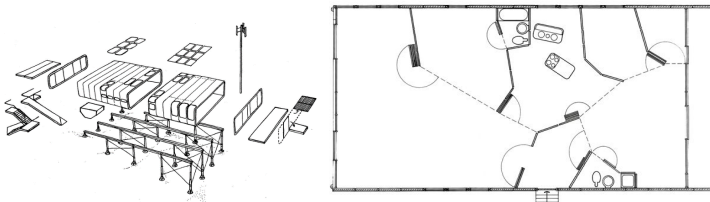


Figure 3. Volumetric Components and Floor Plan of Zip-Up House

This house, which is a visionary model in terms of testing the potential of prefabricated materials, is designed with load-bearing footings that connect with the floor in an adjustable manner rather than the conventional basic comprehension. Thus, it was foreseen to be mounted anywhere or easily moved to a new area, regardless of the conditions of the topography. In the formation of the plan, “flexibility” was entirely prioritized, and all areas, including the wet area, were organized in a way that could be rearranged by the user upon request. Therefore, the system offered the user more than one space configuration.

¹ It is a synthetic type of rubber produced by the American DuPont company. It has high resistance to climatic conditions and water.



Table 2. Zip-Up House Content Analysis Data

Richard Rogers, Zip-Up House, 1968, Concept Design	
	
Transcripts (Analyzed texts)	<p>Richard Rogers Inside Out. Architecture Art Documentary. (2016, Jan 5). Retrieved from https://www.youtube.com/watch?v=VN0BibkuCbw</p> <p>Rogers Stirk Harbour & Partners. Zip-Up House, Various locations. (2014). Retrieved from https://www.rsh-p.com/assets/uploads/0037_ZipUpHouse_JS_en.pdf</p> <p>Rogers Stirk Harbour & Partners, Zip-Up House, Overview. (2014). Retrieved from https://www.rsh-p.com/projects/zipup-house/</p>
Word Cloud (Frequency Analysis)	
Categories	<ul style="list-style-type: none"> • Change (Construction Technology / Material) • Flexibility (spatial, functional, user-oriented, contextual) • Low Cost • Energy
Interpretation	<p>In the context of this structure, the innovative attitude of the architect in terms of "construction technology" and "material" comes to the fore in the discourse of the architect. In a spatial sense, the maximum level of "flexibility" depending on the user's request was tried.</p>

Politics/ Policies/
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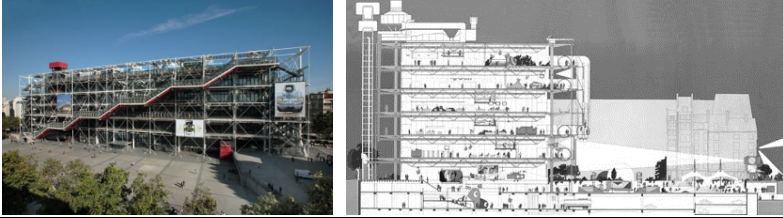

Arts/ Aesthetics

Richard Rogers' Architectural Productions

Within the scope of the case study, it was aimed to apply the method used on 3 different projects, which are the manifesto of Richard Rogers' discourses on urban, economic, social, and ecological issues, and to discuss the results. For this purpose, qualitative readings were made for the "Center Pompidou", "Millennium Dome" and "Llyod's Building" projects, which are included and discussed the most in the literature (Table 2, Table 3, Table 4).



Table 2. The Center Georges Pompidou Content Analysis Data

Renzo Piano & Richard Rogers, Center Georges Pompidou, 1977, Paris	
	
Transcripts (Analyzed texts)	<p>-Richard Rogers interview. The Pompidou captures the revolutionary spirit of 1968. (2013, July 26). Retrieved from https://www.dezeen.com/2013/07/26/richard-rogers-centre-pompidou-revolution-1968/</p> <p>-Jeffrey Brown's interview. Ricahard Rogers Mimarlıktaki en prestijli ödülü aldı. (2007, June 11). Retrieved from http://mimdap.org/2007/06/richard-rogers-mimarlyktaki-en-prestijli-odulu-aldy/</p> <p>-Renzo Piano&Richard Rogers in conservation with Enrique Walker, AA Files, No. 70(2015), Architectural Association School of Architecture, pp. 53-59.</p>
Word Cloud (Frequency Analysis)	
Categories	<ul style="list-style-type: none"> • Conceptual basis / Idea • Change (Construction Technology / Structural -Inside-out building-/ Material) • Benefit / Functionality • Flexibility (spatial, functional) • Society / Social integration • Environment / Daylight / permeability • Policy • Energy
Interpretation	<p>"Structure, material and technology" were used as tools over the "social/utilitarian idea" developed in the design. The "inside-out building" approach was developed, which took the flexibility and ecological concerns of the Zip-Up House further.</p>

Rogers Stick Harbour + Partners, Lloyds Building, 1986, London

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Human/ Behavior

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Sustainability

Philosophy/
Theory/ History/
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Criticism/ Method

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Tradition

Urban/ City/
Landscape/ Rural

Design

Interior Design




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Re-use

Education

Arts/ Aesthetics



Table 4. The Millennium Dome Content Analysis Data

Rogers Stick Harbour & Partners, Millennium Dome, 1999, Londra	
 	
Transcripts (Analyzed texts)	<p>Richard Rogers Presents Millennium Dome Plans, 1996 Londra. Kinolibrary Archive Footage. (2014, Mar 17). Retrieved from https://www.youtube.com/watch?v=eZ53FqQteJs</p> <p>Richard Rogers interview, Society, Art, and Design, (1999, July 12). Retrieved from https://charlierose.com/videos/6761</p>
Word Cloud (Frequency Analysis)	
Categories	<ul style="list-style-type: none"> • Benefit / Functionality • Environment / permeability • Change (Construction Technology / Structural / Material) • Economy (low cost) • Society / Social integration • Conceptual basis / Idea • Flexibility (spatial, functional) • Modernity • Aesthetic
Interpretation	<p>In Rogers' narratives, the "function" of the building and its "relationship with the environment" are mainly discussed. "Structural building", "fast production" and "low cost" stands out.</p>



EVALUATION AND CONCLUSION

Examining the constantly moving architectural formations through the theoretical expansions of language will also bring to light the contents of the relationship between architecture and language.

In this study in which a conceptual analysis process was carried out for the follow-up and evaluation of current discourses, Richard Rogers, who was on the agenda with his actions and discourses related to the livable environment and technology, was deemed worthy of examination. Considering Rogers' professional mission, it is remarkable that he underlines not only its benefits in the field of architecture but also the impact of architecture on society and the environment.

At the heart of the projects designed by Rogers, it is possible to find traces of the Zip-Up House, which was not implemented but questioned the social and ecological problems of its period. According to this approach, the design concept of the Zip-Up House is based on;

- Innovative in terms of construction technique and materials to adapt to changing times,
- Spatial flexibility to be provided in relation to the function, user requirements, or the area in which it is positioned (principle of continuity in the horizontal plane, articulation structure),
- Both fast construction process and ecological sensitivity with ready-made insulated material,
- Both low cost and energy-saving with easy-to-supply material,
- Environmental sensitivity with its light touch on the topography.

Reinterpreting the fragmentary approach of the modernist movement, Rogers' best-known projects -the Pompidou Center, the Millennium Dome, and Llyod's Building- were found to include many concepts and categories which followed the footsteps of the Zip-Up House.

The first of these is its structural relationship with *"technology"*. Using technology as a tool, it strives to try different configurations with *"innovative materials"* and *"construction techniques"* for *"conformity with its age"*. The second is that it considers *"spatial and structural flexibility"* depending on the functional, contextual, or user's *"change"* category. Another is *"low cost"* and *"energy efficiency"*.

The projects examined in the footsteps of the Zip-Up House are similar in terms of formal, space, and the resulting spatial experience environment. Despite these discursive similarities, the Zip-Up House, which could not be built and therefore remained in the background, was evaluated as *"others."*

As a result, in the qualitative readings of different building groups belonging to Richard Rogers; it has been observed that the concepts that emerge depending on the program, idea, and functions of the structures -the word cloud- can change, but the upper categories are similar. In other words, we can say that the architect's discourses in the Zip-Up House are integrated with the philosophy of architecture and manifests themselves in all design approaches.

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Criticism/ Method

Identity/ Culture/
Tradition

Urban/ City/
Landscape/ Rural

Design

Interior Design

Conservation/
Transformation/
Re-use

Education

Arts/ Aesthetics



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**GEN Z HOUSING: THRESHOLD HOUSING**Tuğba EKİZ¹, Sevinç ERTÜRK²

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ABSTRACT

With Gen Z, the world has begun to digitalize and the need for physical spaces has begun to change. This change heralds a new era, it is an indication that the physical environment will be reorganized in line with the renewed social needs and expectations. The starting point of the study is how the updated world will affect the house and how the users will transform the house. The aim of the study is to determine the housing use of Gen Z and to make inferences about the future of housing. For this purpose, generations, changes, expectations, historical evolution of the house and the concept of threshold are examined. The threshold is the area where the inside and the outside, the private and the public, the permeable and the solid, the rigid and the flexible come together and at the same time diverge, in contact and in communication with the otherness. The fact that Gen Z is in contact with otherness in the virtual world paves the way for the emergence of another housing concept. The residence of Gen Z has been named as "Threshold Housing" because it is the border and transition between digital and physical. The sources examined, after the evaluations made as a result of the survey carried out, Gen Z housing has been concluded that it will be Threshold Housing, which gathers interior-exterior, closed-open, private-public, the me- the we, digital-physical contrasts within itself.

Key Words: Gen Z; Future; Housing; Threshold; Sharing

*Politics/ Policies/
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INTRODUCTION

Humanity, which is constantly changing, has begun to transform faster than ever before in history, with the effect of information and communication technologies. The speed in the updating of technology also causes the gap between generations to widen. It is seen that in each of the four basic stages in history, hunter-gatherer, agriculture, industry and information ages, social thresholds have been passed and the living culture has changed, and this change is reflected in the spaces. Cities and people are constantly interacting and transforming each other.

McLuhan used the term global village to explain that electronic communication technologies have transformed the world into a place to communicate as easily as a village, and he believed that a new field of historical experience would emerge in this global village (McLuhan, 1962). The internet, which connects the world to otherness, provided the term global village, allowed communication independent of time and space and estranged the world by moving physical into the virtual and the virtual into the physical.

Born into a hyper-connected world between 1995 and 2000, Gen Z (McCrindle, Wolfinger, 2009) is the first generation to experience virtual connectedness, the global village, since birth. The increase in the level of attachment brings social interaction to the virtual platform. This new experience heralds spatial changes by causing the boundaries of private and public spaces to become blurred and intertwined. Globalizing culture is affecting people and places.

This period, in which the local loses its meaning, local cultures are dispersed, the sense of belonging to the place is lost, the geographical boundaries are becoming increasingly meaningless, and the break in the relationship between time and space is getting deeper (Harvey, 2014), will affect architecture as the global dominates the local and creates its own synthesis culture. The digital world, which is connected at any time and everywhere, blurs the physical boundaries, causing the spaces to lose their present meaning and the physical environment to change. Gür has gathered the factors affecting the housing styles under four main headings. She stated that environmental, cultural, social and individual factors correspond to the space (Gür, 2011). As a result of the virtualization of the inputs Gür stated, unprecedented in history, Gen Z and future generations will create their own cultural patterns on local or global scale.

Stavrides states that thresholds, as gateways in time and space, provide a basis for relations with otherness; that they can be constructed both intangibly and concretely in the field of existence; states that they are conciliatory regions located in between (Stavrides, 2016, Stavrides, 2018). Nowadays, which is a threshold time between digital and physical, global and local, loneliness and sharing, past and future, changing society and developing technology force the dwelling to otherness. The house, which turns into a virtual communication space with the other, turns into a threshold and takes an other form. At the end of the research, it is aimed to

make inferences about how this new house, which remains at the virtual level and has no physical counterpart, will be shaped.

AIM AND METHOD

The aim of the study, which started with the assumption that the digital world, which causes functional and spatial changes, will also create a break in terms of housing use, is to get to know the X, Y and Z Generations in general, it is to determine the points where Gen Z differs from other generations and the changing perception of housing. In order to understand the changes in the housing field together with Gen Z, the framework developed by Altman and Chemers for the relationship between culture and environment was used (Altman and Chemers 1980). Within the scope of this interactionist model, which shows that the changes in each input gathered under five headings: natural environment, environmental orientation, environmental behaviors, environmental cognition and environmental outputs affect the others, environmental orientation, environmental behaviors, changing with Gen Z, environmental cognition and environmental outputs were reached by literature review, generations, changes, technological transformations, historical evolution of housing, current examples in the housing sector, future change expectations and the concept of threshold were examined, possible reflections in the field of environmental outputs were tried to be understood.

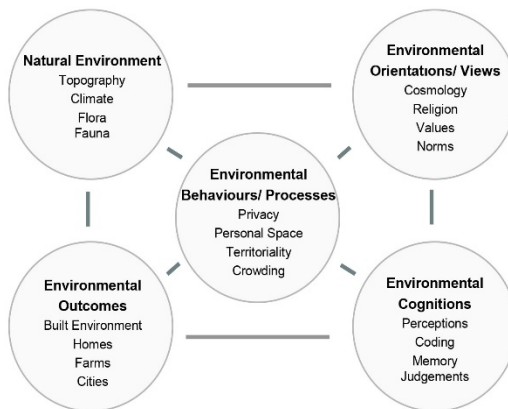


Figure 1. Culture and Environment Relationship Framework (Altman, Chemers, 1980).

After the conceptual framework was created, a structured questionnaire prepared with a 5-point Likert, ranking and multiple-answer multiple-choice scale, was determined by snowball sampling method due to pandemic limitations, middle, upper-middle class, 15 men and women from Gen X, Y and Z. It was applied to a total of 90 participants. As a result of the increase in the time spent in “homes that have become the nodal point of the hyper-connected, public, accessible world – the outer world – the endless series of relations” (Martella, Alcocer, 2020) during the pandemic process, due to

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the increase in the home experiences of the users, 10 boys and girls from Gen Z, who participated in previous survey, open-ended, five-question survey was added.

Identification and Classification of Generations

Historical events such as wars, revolution, depression and technological factors, shared common places, images and experiences events that affect everyone at the same time, are the characteristics of generations defined as individuals who share the same birth year, common habits and cultures have a common position in the historical dimension of the social process. Due to decisive events, each generation develops a unique perspective. After World War II, the gap between generations is getting wider. After this date, the importance of the concept of generation has increased and names have been given to each generation. Since the definition of the generations with different date ranges and names in the sources, 6 different generations have been defined, respectively; They are named as "Silent Generation, Baby Boomer Generation, Gen X, Gen Y, Gen Z and Gen Alpha" (Bolland, Lopes, 2014; Mannheim, 1927; Seemiller, Grace, 2019).

Gen X (1965-1979); Gen X, born between 1965 and 1979, preferred to devote their time to their family instead of work and convinced their employers to strike a balance between work and private life. Despite the importance they show to their private lives, divorce rates have increased significantly and even if they have not experienced it, they have witnessed the divorce of those around them. During this period, the number of working women increased and women became an indispensable part of business life. Gen X, who was introduced to technological tools in their childhood, learned to use computers in their later years and witnessed the widespread use of the internet when they entered business life, can adapt to technology. The generation is the first generation to use personal computers and desktop computers were mostly used in this period (McCrindle, Wolfinger, 2009; Seemiller, Grace, 2016; Seemiller, Grace, 2019).

Gen Y (1980-1994); The generation born between 1980-1994 is called Gen Y. Gen Y, who has been raised to believe that they are unique, constantly expects feedback and needs validation. Millennials, who are indebted to business life due to their higher education loans, experiencing economic recession, working with low salaries, have postponed the age of marriage, having children and buying a house. Due to financial difficulties, shared systems such as Uber and Airbnb, rental homes have gained popularity. Growing up in an interactive environment where digital technology, the internet and personal computers spread around the world, Gen Y is used to being connected all the time. In this period when broadcasting became interactive, it became both a consumer and producer of interactive media. It thinks and processes information in a fundamentally different way from previous generations. With the Gen Y, who can communicate with anyone, anytime, anywhere, via the internet and social media, the understanding of time and space has changed in an unprecedented way (Grubb, 2017; McCrindle, Wolfinger, 2009; Seemiller, Grace, 2016).



Gen Z (1995-2010); Those born between 1995 and 2000 are called Gen Z. The generation shaped by the internet has gotten rid of papers, hard disks, music players and video game devices by accessing everything they need with their mobile phones. Technology, the way of self-expression of Gen Z, has allowed them to move freely in both the online and offline world. Gen Z is the first globally connected group to communicate instantaneously from the moment they were born. Gen Z is technology literate. They were born into a hyper-connected world where any information is just a few clicks away. The speed of accessing information has improved the multitasking awareness of Gen Z. It can quickly move from one task to another. Socializing through technology. The attention span of Gen Z, which communicates with visual characters, symbols and emojis, is quite short (Grubb, 2017; McCrindle, Wolfinger, 2009; Seemiller, Grace, 2016). For the first time in history, screens are raising children today.

Gen Z and Otherness

The Other Society: Society 5.0; It defines the society that will be formed as a result of the inclusion of innovations such as the Internet of Things (IoT), big data, artificial intelligence, robots and the sharing economy in the fourth industrial revolution and the smart cities. Currently, virtual walls have been applied to crosswalks, and it has been shown that traffic signs and road signs can be added as a digital layer to cities with augmented reality. In the future, a virtual replica of the scanned world will be produced with to 3-D scanning technology, and the traveling will be carried to the virtual world. These changes and expectations point to the alienation of cities (Hobson, 2018; Gök, 2018).



Figure 2. Digital Layered City; Virtual Crosswalk (Hobson, 2018; Gök, 2018).

Other Education and Belonging; In the future, students will be able to earn credits or diplomas without stepping into a physical classroom, thanks to online technology. Increasingly widespread online education will lead to a radical change in school structures in the near future. The former MIT dean predicts that in new universities, majors, classes, classroom lectures will be replaced by online accessed information, centralized interdisciplinary laboratories, and project-based training (Yu, Hu, 2018; OSC, 2018). Gen Z, which does not separate physical and online activities from each other, and even witnesses the transition of online companies to the physical environment, and a world that turns into a Netflix planet, may experience some problems with belonging. However, the generation that adopts the practice of defining themselves through labels on social media, can satisfy their sense of belonging with derivative tags such as #SectOfMiniatures,

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#XGroupsLiteraryConversations, #HistoryOfArchitectureWithX, in the future.

Other Shopping; Digital platforms the basis of the purchasing process of Gen Z. Those who prefer to shop in physical environments correspond to 44% of the generation. 84% of the generation who do product research on Google sees shopping as a social activity. Continuing its existence in physical environments as well as virtual environments, Gen Z wants digital and physical spaces to coexist. Gen Z, accustomed to adapting their entertainment with computers, phones and tablets, feels the need for "personalization". The fact that 54% of Gen Z prefer tools such as the "magic mirror" that allows them to try on clothes without physically wearing them, is a harbinger of the transformation of shopping centers that have risen with Gen Y (Salesfloor, 2018; Stillman, Stillman, 2018).

Other Business and Office; Business methods and environments are transforming with concepts such as digital pages and freelancers, and this change also affects office environments. In response to today's needs, a virtual office solution that provides legal address, communication and secretarial services to those who do not have a physical office, freelancers or home office workers, those who live outside the city or abroad, examples such as the shared office space concept, which gathers companies from different disciplines under the same roof, in different office spaces, in accordance with the coworking approach, which is an independent but collaborative working model, provide clues about future workplaces. Laser curtains, digital walls, virtual keyboards, interactive screens, simulated spaces, implant technologies, and holograms will also transform spaces, replacing today's mechanical systems, and differentiating the offices of the future (KHM, 2018; Swiss, 2018; Yapi, 2018).

A Brief Historical Evolution of Housing

With the historical developments affecting the architecture, the concept of housing has undergone changes as a concept that reflects every innovation. The house, whose existence is based on human existence and reflects everything related to human beings, has passed through four basic phases in history: Hunter-Gatherer Age, Agricultural Age, Industrial Age and Information Age. In each of them, it is seen that social thresholds have been crossed and the living culture has changed, this change is reflected in the spaces, and social, historical, economic, cultural, political and environmental elements transform each other in interaction. In this context, people gathered around the fire in the hunter-gatherer age, gathered around the stove and food in the agricultural age, food and television in the industrial age, scattered with wi-fi in the information age, and became individualized. In the first of the ages, natural possibilities were used, the space was not produced, in the second, the production and living space were resolved within the same space, in the third, the production and living spaces were disconnected to be connected by roads, the metro-work-metro-bed experience emerged, has given birth to the new human type: the *flâneur* and has become home-office incorporated in the last age, the partnership



of housing, reproduction and life (Çotuksöken, 2011; Gür, 2011; Laborit, 1990; Roth, 2006; (Vitruvius, 2017) While spaces were open to different functions in the hunter-gatherer age, the common area used with different functions in the agricultural age was surrounded by specialized areas, in the industrial age, rooms that were specialized for different functions were attached to the backbone of the house - the corridor. It is expected that each room will become flexible areas where different functions can be performed.

The Other Man in the Industrial Age: *The Flâneur*

In the industrial age, with the increase in the working class, there was also the rise of the middle class. The emergence of the concept of leisure has transformed public spaces into living human showcases. Concepts transformed by human hands gave birth to the new human being: the *flâneur*. The *flâneur* is a passionate observer, urban traveler who exists in crowds, feels at home away from home, stays away from the world while observing the world, and inhabits the movement. The interior of the *flâneur*, who feels at home while in the passages, is the bazaar (Benjamin, 2017; Gül, 2020). While the *flâneur* expresses the person who enjoys watching and being watched, today's people continue their actions of watching and being watched in virtual platforms.

Threshold Anadolu Residence: *Türk Evi*

Despite its privacy prioritizing structure, the *Türk Evi* is a construction that can set an example for today's house, which is set up with threshold areas that allow communication with otherness, showing the contact possibilities of the house. The plan setup of the *Türk Evi* consists of the arrangement of rooms and sofas. The sofa (life), which is the main element of the *Türk Evi*, surrounded by rooms and located in the center of the house, is the place where the households gather, the semi-open living and circulation area that is used jointly by the people living in the house. The sofa has been enriched by the fact that the sections outside the usage areas have gained function and transformed into elements such as *eyvan*, *sekillik* and *köşk* (Eldem, 1968). Courtyard is another shared space used by the extended family. In the traditional *Türk Evi*, the courtyard, which integrates the household and plays the role of a transition area to the residence, is the semi-private or neutral space between the street and the house, the inside and the outside, the public and the private, connecting the public space to the private space (Bozkurt, Altınçekiç, 2013). Rooms, on the other hand, are compact units that are organized to meet household needs, form a whole on their own, and respond to every need of the nuclear family (Bektaş, 2018; Eldem, 1968).

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Other Architecture, Architect and Housing

The difference between the home, which expresses the personality of the resident and the traces of his unique life, from the house, which is the whole of the spatial hierarchies, movements, structure, light and color designed by the architect, is the emotional values we attribute to the building (Pallasmaa, 1995). A worldwide online survey by IKEA has shown that despite changing needs and expectations and the new meanings attached to the home, the house retains its emotional value.

For 48% of respondents, home is where the most important relationships are built. However, only 37% of Millennials feel at home when they are at home. Gen Y can feel at home in the gym, cafe or friend's house. While the boundaries of private and public spaces are becoming increasingly blurred, houses are turning into online public spaces, public spaces are designed by imitating the feeling of home, as in the example of Starbucks (IKEA, 2019).

Personal space is the most important factor that ensures happiness at home. People need more personal space in their homes, sometimes small shelters, which can be gardens, sometimes basements, and sometimes even toilets, rather than more social spaces. The way to make a house feel like a real home is to provide equal opportunities for privacy and social life. Too much personality at home causes loneliness and spending time with others often causes burnout (IKEA, 2019).

The act of cooking (63%) is the most common activity that creates a sense of home. The acts of eating and cooking are not only seen as a social activity, but also as ways to obtain privacy and personal time (me-time). Personal spaces in the home are created through the actions of cooking, ordering food, washing dishes, long showers and repairing broken items (IKEA, 2019).

Thanks to social media, the concept of being alone has changed, and the possibility of online engagement has emerged despite physical loneliness. Digital shares are transforming individuals into multi-connected residents. 23% of the participants prefer wi-fi instead of physical space while socializing. "For some, the internet is the living room" (IKEA, 2019).

In the future, it is predicted that a consultancy-based and network-based understanding of architecture will dominate, and architecture will turn to consultancy. AIA (American Institute of Architects) has created a data-based exchange system called 2030 Data Exchange. These developments will transform architecture into something else entirely (AIA, 2018; İmamoğlu, 2018). Housing for Gen Z and future generations can be produced by designing with software, or even by 3D printing the most suitable modules proposed or designed by the artificial intelligence algorithm. These possibilities herald that the role of the architect will fade in the future.



Contact with the Other: Threshold Concept

Dictionary meaning, “Beginning, time to start; The word threshold, which is transition place, entrance place, entrance border, its immediate vicinity” (Kubbealti, 2018), Stavrides says, “The spatiality of the threshold, that is, a transition spatiality that connects while separating and separates while connecting, characterizes the space produced through and in the common. As in a doorway, thresholds may appear as borders separating the inside from the outside, but this separation is also and always a process of connecting. Thresholds create conditions for entry and exit; they perpetuate, direct and give meaning to a transitional act” (Stavrides, 2018).

Stavrides attributes the condition of approaching otherness to standing on the threshold. It is possible to build bridges when distances are felt in this transition zone, the field of otherness, which does not belong to any region. Mediator zones, other areas, conceptual or physical thresholds between inside-outside, entrance-exit, private-public, open-closed, where contradictory phenomena can coexist without conflict. Thresholds are not just abstract entities; they have a physical counterpart as in the door example. In their concrete existence, thresholds are not zones that form boundaries and divide different realities, but are areas of contact that bind and hold them together. “Thresholds are constructions that have both mental and material existence. This is why thresholds not only make the act of transition possible, but also serve as representations of this act” (Stavrides, 2016; Stavrides, 2018).

While Stavrides thinks about the thresholds, which he defines as a contact area, at the city level, focusing on Foucault’s concept of heterotopia, starting from the separations; discusses over heterotopias, which are spaces of exclusion and isolation. Foucault first defined heterotopia in the literary sense of heterotopia, as heterotopia, which secretly destroys language, breaks up common names and entwines them. Although Foucault defines heterotopias as spaces of otherness, he also defines heterotopias as spaces that bring together and overlap differences, and refers to places that are excluded from the urban space, where the excluded come together (Foucault, 1984; Foucault, 1994).

Stavrides also accepts heterotopias as spaces of otherness, but also refers to their potential to be spaces where different relationships can be established. “Heterotopias can be understood as spaces where different identities can meet and become aware of each other, that is, as places of transition and encounter.” Although he refers to heterotopias as the meeting place of otherness on their own, Stavrides defines thresholds between common spaces and isolated spaces where the two can meet, where differences will merge and conflict will turn into contact. “We can call thresholds the mechanisms that regulate the relations of heterotopias with the spaces of normality around them” (Stavrides, 2018).

Stavrides calls the fusion zones at the intersection of heterotopia, space of reality, and utopia, space of unreality, as threshold. When we consider unreality, otherness and normality as two different extremes, black and white, cities surrounded by gray areas where they meet, intersect, come into

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contact and communicate are cities of thresholds. Thresholds are transition spaces and interfaces where sociocultural, spatial and economic differences fade. They are places between open and closed, private and public.

Sociologist Hetherington analyzes heterotopias, which he considers as “alternative arrangements”, with the emergence of the factory as a modern heterotopia at a time when different forms of space-time order were superimposed within this system (Stavrides, 2016). Contrasts such as work and home functions, extended family and solitude will overlap in future residences, and thresholds will be needed to create new heterotopias and hold the contrasts together. If the unity of differences is called a functional flexibility, it can be said that the houses of the future will be produced with functional flexibility. The right to the city for everyone will be possible thanks to thresholds.

Thresholds of Gens X and Y

In recent history, some threshold moments have been passed. These are respectively, before the housing was shaped as a threshold, the dominance of mass production and standardization brought by the industrial age was destroyed by demassification, individuality turned into the prevailing norm and the consumer turned into a prosumer, especially by participating in the design phase and producing highly personalized products; individualized in the public space with walkmans; the act of playing with arcades and internet cafes leaps from the street to the screen, the public space is transferred to the screen, the space transfers its collectivity to the internet, the space becomes permeable with the possibility of individuality in the public space and sociability on personal screens; standing at the intersection of home, cafe, library and workplace, addressing all the themes of individual and private, private and public, loneliness and togetherness, third space Starbucks and its derivative cafes are experienced, historical thresholds have been passed, these breaks in different areas, future thresholds are also experienced (Özata, 2019; Rizwan, Qin, 2008).

Gen Z Threshold Space: Residence

These historical breaks that herald spatial changes and geographical boundaries that have lost their meaning in the globalizing world have made the residence possible for otherness. With the computer and internet technologies that provide digital information flow, the daily and social life of users has changed; outdoor activities such as working from home and home theater have been moved to the 21st century house (Filiz, 2010; King, 2006), domestic activities have increased, the way of doing business has turned into freelacer, houses have started to serve as home-offices, production and living areas have started to gather in a common area again. Alternative households have started to replace the nuclear family, the need for personalization has become a determining factor, unlimited wi-fi and



personal screens have replaced the act of gathering by dissolving the time-space dependency.

With all these historical breaks, today's people who are outside when inside, inside when outside, who socialize with wi-fi, who can stand out from the crowd and share their loneliness, who feel the need for communication and individuality at the same time, open up to the outside, become public, but turn more inward precisely because of this general validity. The concept of "threshold housing" is derived from Stavrides' definition of threshold, which is today's residence, which is privatized, reopened as it becomes privatized, and seeks its physical existence by establishing a relationship with otherness in the virtual environment. "Thresholds mediate the relationship with otherness by pointing to passages in time and space" (Stavrides, 2016). Urban thresholds that allow communication with the other and individual freedom correspond to communicating virtually, despite the increasing need for individuality and personalization at the housing scale. The person is individual in mediator spaces, but in virtual communication with the other, he can avoid interference in his private space while touching everything in some way. Although today's housing needs are insufficient in terms of today's privacy needs, it evokes the *Türk Evi*, which provides a sense of home, built with mediator spaces, where gradual transitions between open-closed, private-public spaces are provided, allowing the me and the we areas with the understanding of its age.

Gen Y Housing Problem and Other Proposal: Cohousing

Along with Gen Y, the need for social housing, increase in housing prices, decrease in salaries, urbanization, economic contraction, population growth, loneliness, increase in young people living with their parents are solutions to the problems; Sharing economy, digitalization, Airbnb, Uber, suggestions, shared living at the housing scale, mixed use, dorms for grown ups, cohousing, *mehrgenerationenhäuser* suggestions were presented, and the search for shared and common life was started. Cohousing is the residences that are solved with the unity of public-private, providing the same degree of privacy while allowing for common activities. "21. cohouses, which are a holistic response to the social, economic and environmental challenges of the 20th century; It can/is thought to be a solution for people who value privacy but do not want to live alone and want to live with different people (CCN, 2019; IKEA, 2019; Oltermann, 2019). Couhouses, which have become widespread as a solution to the problems of Gen Y are structures that enable communication with the other. The physical response to the sharing need of the Gen Y indicates that the threshold spaces that allow communication with the other will increase for the Gen Z and beyond.

Housing Perception among Users After the Pandemic and Quarantine

The increase in the time spent at home with the pandemic and quarantine process has made users feel their expectations from home, communication with the other and other housing needs. With the pandemic, "The house

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loses its private character by being completely opened to the public space. The closed micro-world, the home, is replaced by a hyper-connected, public, accessible, visible world – the outside world – as the nodal point in an endless array of global relations" (Martella, Alcocer, 2020). During the quarantine period, balconies, terraces were used as public spaces where songs were sung and protests were held, and public actions and outdoor activities including virtual museums, theatres, online classes, concerts, performances were moved to the house. The kitchen has once again been transformed into the glue that unites the family, and the house has become a space used together with production, as in the pre-industrial era. When all the households were stuck in their houses, the lack of housing opportunities emerged, and the vertical neighborhood and functional terrace discussions came to the agenda again.

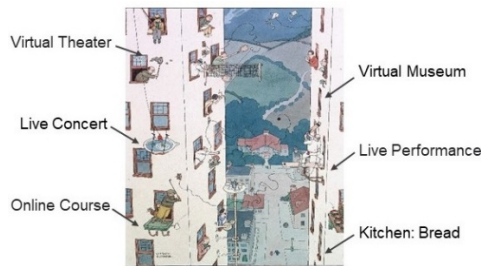


Figure 3. Public Housing (Martella, Alcocer, 2020).

Although the persistence of quarantine trends is not clear, it is possible that the epidemic caused post-traumatic stress disorder and some of its changes were permanent. Indeed, in the 14th century, the plague, which wiped out at least one-third of the population of Europe, led to the radical urban developments of the Renaissance; epidemics of yellow fever in the 18th century and cholera and smallpox in the 19th, the advancement of the city's infrastructure systems, tuberculosis, typhoid fever, polio and Spanish flu in the 20th century; It paved the way for the city to be divided into zones and sterilization. The search for formal simplicity by architects such as Le Corbusier also stemmed from a kind of architectural hygiene (Lubell, 2020; Stinson, 2020).

Survey Results and Evaluation

One of the most striking differences among the survey results is that Gen Y and Z individuals use tablet-phones in many places. 10% of Gen Z performs screen watching in every area of the house. Television leaves its aggregative nature to the individuality of the tablet-phone. 16.66% of Gen Y does not have a TV at home, and Gen Z will not need TV when they leave their families and move to their own house. While the tablet-phone was the first of the 5 indispensable accessories for 86.66% of the Z Gen, it could not enter the first five of the X (30%) and Y (56.66%) generations. Individualized monitoring for Gen Y and Z has spread to every corner of the house with the use of tablets and phones.



Between generations, the biggest difference in residential use has emerged in the bedrooms. Generations Y and Z use their bedrooms for multiple actions and carry the actions that Gen X does not do inside the house to their rooms. While the bedroom is the private space of Gen X, Gens Y and Z can even use it for socialization. The increase in the value of bedrooms, which even meet the need for socialization, in today's increasing virtual communication may result in the transformation of bedrooms into rooms equipped as a house - specialist rooms - meeting all personal needs in the future.

Table 1. Bedroom Value Change

	Gen X	Gen Y	Gen Z
1. Sitting/ Chatting	-	% 20	% 23,33
2. Hosting	-	% 6,66	-
3. Cooking/Preparing/Cooking	-	-	-
4. Eating/ Drinking	-	% 20	% 20
5. Lying Down	% 100	% 93,33	% 100
6. Nap/ Rest/ Lie	% 20	% 53,33	% 76,66
7. Working/ Studying	% 10	% 43,33	% 93,33
8. Screen Watching (TV- Computer-Phone)	-	% 43,33	% 63,33
9. Gaming (Computer- Other)	% 3,33	% 33,33	% 73,33
10. Personal Care	% 3,33	% 23,33	% 36,66
11. Doing Sports	% 3,33	% 30	% 63,33
12. Hobbies	-	% 23,33	% 70
13. Hanging/ Drying Laundry	-	% 10	-

CONCLUSION

To the extent that Gen Z is withdrawn and individualized, they open up and communicate with the other. Thanks to virtual communication, the generation that socializes in their home carries the public space to the bedroom. Renewing itself as a place to meet with the other in the virtual environment, the need for sharing as well as individualization was felt more clearly with the pandemic. Bringing the public actions to the house, opening the house to the public in the virtual environment transforms the house into a contact space that opens to otherness. This process reminded that threshold spaces should be created between open, closed and private and public spaces, so that the contact captured in the virtual should also be applied in the physical environment.

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The sharing economy model, which is offered against problems such as recession, shrinking economies and unemployment, finds its place in the construction sector with concepts such as coworking and co-housing. This mandatory sharing requirement necessitated the design of buildings with contact areas and intermediate spaces. For Gen Z, who thinks that contact is also possible in the virtual environment and even allows them to draw their personal boundaries more easily, areas where individuality is prioritized but also allow sharing can be solved with threshold spaces. The supportive role of these intermediate contact spaces should be taken into account against psychological difficulties such as hikikomori and loneliness, which have increased in recent years.

In the industrial age, the emergence of the concept of leisure has influenced people and gave birth to the *flâneur*. Along with capitalism, the relative depreciation of housing has occurred due to reasons such as the increase in out-of-home activities and the time spent on the roads. However, today, housing has become a service to the whole of life again with concepts such as freelancer, home-office, online publicity. The generations following the Gen Z, who grew up with screens, will be able to live without stepping out of their homes with the opportunities offered by technology. These predictions, which can be both an opportunity and a threat, show the necessity of the gradual transition from the individual to the public, the spaces where these levels are provided - the thresholds.

The multi-purpose, private, indoor room in the Traditional *Türk Evi*; the sofa, which is a socializing area and provides semi-private, semi-open interior-exterior unity; the courtyard, which is a semi-private, semi-open socialization area, is the residence that contains the elements that can be a solution to the current, global quests created with the balance of the me and the we, within the scope of creating personal time-space that Gen Z cares about. Gen Z and future housing; Contact spaces that communicate with the other should be designed together with spaces that provide individuality and personalization, and should be designed and implemented with the combination of open, semi-open, closed and private, semi-private and public spaces.

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FURRY, HAIRY AND CLOUDY: ARCHITECTURE(S) OF THE SYNTHETIC ENVIRONMENT

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ABSTRACT

Interested in the exploratory and generative ways of using natural formations -such as flow, hair, and cloud formations- in the design process, this study claims that the computational tools and algorithmic agency supports designers by changing perception or aiding to explore the complexities of these natural forces and formations that are not directly intelligible to the human mind. The paper is concerned with the synthetic fields in which the designers who research on and practice extensively with algorithmic procedures and write specific and custom codes for their design to speculate, improvise and intervene in the automated procedures of computation. Within such a synthetic environment, human and nonhuman assemblages as distributed and impure models can be observed where design intentionality is generated, exchanged, and hybridized in the process of continuous feedback both from human and nonhuman agencies. Selected architectural cases instantiate the ways this synthetic environment offers for architecture: a possibility space where non-systemic, intuitive, speculative design decisions can develop by engaging with the potentials of computational procedures.

Key Words: Design Intentionality; Natural Formations; Field; Algorithmic Agency



INTRODUCTION

Nature is a perpetual source for many design-related research areas and becomes a prolific resource for bio-inspired innovation and technologies. Architecture's relation with it has become a specific focus for the last few decades as architects and designers try to understand and learn from nature through mimicking its: forms and geometries; rules and behaviors; and materialities. Borrowing computational methods to understand and incorporate the underlying organization and structure of some natural phenomena, it becomes possible to recreate the complexity that natural formations embody.

The access to the underlying organization and structure of some biological and natural phenomena through the vision of philosophy of mind and cognitive science -using the developments in technology in general and computer science in specific- have deeply affected –even inverted– some neglected accounts in design, namely; organicism, intricacy, complexity, growth, randomness, etc., which were previously regarded as irrational, subjectivist, intuitionist; therefore unreliable. According to Zeynep Mennan, the Modernist mechanic-organic debate promoted mechanic normativity, charging the organic with a “negative anchorage” within the modern tradition, whose reasoning and justification is associated with “individualistic, subjectivist, intuitionist processes that escape systematic analysis and rationalization.” [1] Mennan claims that the non-standard reforms this epistemic duality and reconciles organic and mechanic by translating once intuitive forms into computational languages. [1]

A re-introduction of these concepts in design research and practice has become possible through inquiries into the increased capacity of machine computation, creating as well an intellectual reversal the effects of which can be observed in the altered concerns, methodologies and tendencies. This has led to an expansion of architecture's disciplinary reach and incorporations, and the emergence of new fields of research: These areas include but are not limited to computational design, algorithmic design, parametric design, material computation, virtual reality, responsiveness, machine learning, artificial intelligence, etc. With the developments in technology and the expansion of architecture's disciplinary boundaries, design tools, and methodologies have changed shape and altered the intellectual landscape of designers.

Changing Roles in Design Process: Human-Nonhuman Agencies

Considering the effects of the increased capacity of machine computation onto the designer's intellectual landscape, the resonation of this intellectual development in the field of architectural design research occurs especially with the stimulation of the emergent properties of computational tools. The conventional account of a design trajectory between its *problem space* and its *possibility space* is altered with the change in the nature of design tools and expanded with the introduction of emergent properties of computational methods into the field of architecture and design. The implication of the emergent qualities of computational tools in the design process refreshes

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design thinking by subverting the conventional determinacy associated with the concept of (human) intentionality into the indeterminate and unpredictable nature of these intellectual tools.

The introduction of the generative and emergent properties of algorithms in the design process requires an inclusive account of intentionality so that design intentionality can be distributed not only among human agencies but also nonhuman agencies that possess different degrees and intensities of intentionality, whose sources of logic and organization originate from natural phenomena, therefore creating an ambiguity along the natural-artificial divide. Such a conception of intentionality decenters the human from the ontological center of design intentionality and blurs existing borders by offering hybrid constellations, the hybridity of which is sustained within the design process through correlative learning and distributed intentionality.

From Field Conditions to Fur Fields

Superseding the earlier understanding of space and composition, the concept of 'field' enters the world of architecture with Stanford Kwinter's adoption of the term from the mathematical field theory of thermodynamics and electrodynamics. [2] In the late 90s, without opting for any direct physical correspondence between natural flows and their actualization in architecture, Stan Allen proposed 'field conditions' as "non-figural responses to context" [3] counter to the "conventional Modernist modes of composition" that, for him, evidently fails to reciprocate and manage "the complexities" of architecture and urban context. [3] Through field diagrams, he suggests to drop conventional top-down approach to design and explore the possibility space provided by the dynamism and indeterminacy of flow formations, crowd behaviors, etc. [3]



Figure 1. Fur field drawings of Pia Ednie-Brown [4]

In “The Aesthetics of Emergence: Processual Architecture and an Ethico-Aesthetics of Composition,” Pia Ednie-Brown includes her drawings of ‘fur fields’ as postcards for her friends. (Figure 1) She deduces from her process of drawing that it is not possible to pre-plan the whole from the beginning since “the flow seemed to have its own ‘push’ or its own ‘will’ through the local relations of the lines.” [4] Not much adding to Stan Allen’s definition of the field but experiencing the multitude of individual forces that drive her to act out, Ednie-Brown confirms:

“They are fields of similar units in flow formations. The flow is a collective activity: a multitude of units that form a differentiated continuity. A mass of individual units is connected through common internal relations and laws of

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interrelation. Collective movements offer a sense of the tendencies of relations therein.” [4]

Inferring from the definitions and discussions on the concept of field, the act of repetition is an essential condition to establish “the multiplicity of relations that constitute any larger, more general relationship formations.” [4]

Algorithmic Agency

For a general definition, an algorithm is a well-defined computational procedure comprising a series of steps that are followed in order to solve a problem. [6] In the formation of design processes, algorithms can be applied in codes that allow for feedback, recursive decision processes, optimization of organization, search-and-selection, evolution, etc. For instance, genetic algorithms provide mathematical models mimicking relations, phenomena, and behaviors found in nature, such as evolution, mutation, fitness, and reproduction. Within the last two decades, algorithms have found excessive use and occupied a major place in architectural design research. In search for novel architectural forms and geometries, especially generative algorithms such as cellular automata, swarm behavior, and agent-based computing are utilized in the field of design.

Pia Ednie-Brown and Alisa Andrasek, in their article “CONTINUUM A Self-Engineering Creature-Culture” inform about the necessity of repetition in the computational design process to achieve intelligence in computational tools that only accumulates through practicing, to cultivate “a sense of what works algorithmically.” [5] They define algorithmic agency as “a procedure for computing a defined set of relations, usually involving the repetition of an operation,” where every particular has its “own behavioral refrain; it assesses the ‘ifs’ and ‘elses’, and then acts, over and over.” [5]

They state that intelligence is a process in which things are related and connected; the outcome of the process loops back into that “field of connection wherein possibilities and potentials are intensified.” [5] Through such practice involving repetitions, designers gain intelligence, first to transform the process so that a “kind of rhythmic merger with the variable particularities of an act” occurs, and secondly; for an adaptation between designer and design tool. [5] The recursive relationship between the human and algorithmic agency that Ednie-Brown and Andrasek bring into discussion leads to a hybrid form of design intentionality that dwells onto a high level of human experience with the nonhuman algorithmic agency. Developing through a recursive and trial-and-error approach in the design process, their account of intelligence is “a loopy process that is somewhat like a very deep algorithmic sequencing.” [5]

Co-Operative Fields of the Synthetic Environment

Interested in the exploration of the algorithms whose underlying logic is defined through natural phenomena (such as self-organization, swarm behavior, etc.), Roland Snooks claims that what offers significant generative



potential for architecture are the emergent capacities of complex systems that are going back and forward between order and chaos. [7] By altering the predictable order, complex systems are effective with the generative properties and a capacity for catastrophic change by maneuvering on the borderline between order and chaos. [7] Despite the very difficulties, Snooks encourages designers to engage with the speculative potential of computational procedures instead of privileging certainty over open-ended processes and argues for complex systems of formation that operate through the volatile interaction of algorithmic behaviors (such as, generative, self-organized, and emergent behaviors). [7] Generating complexity within computational design through exploring the unknown set of architectural hierarchies and definitions, he promotes employing generative algorithms with major roles in architectural design. [7] On this volatile strategy which brings the logic of swarm intelligence into design space operating through the self-organization of multi-agent systems, Snooks states that:

"These methodologies operate by encoding simple, local architectural decisions within a distributed system of autonomous computational agents. It is the interaction of these local decisions that self-organizes design intention, giving rise to a form of collective intelligence and emergent behavior at the global scale. Such behavioral formation represents a shift from 'form being imposed upon matter' to 'form emerging from the interaction of localized entities within a complex system.'" [8]

Snooks' proposal, what he calls 'behavioral formation', is a nonlinear algorithmic design methodology in which he declares to inscribe the exact architectural intent within the local interfaces of multi-agent systems. [7] Within such formation, he aims to disallow the equilibrium that algorithmic procedures entail by negotiating with the resistance of algorithmic mechanisms (such as swarm behavior's resistance to work on a surface) through employing two modes of operation: the first mode is what he names as 'messy computation,' which is an uncertain feedback mechanism negotiating between the micro-scale –the local rules of algorithmic systems– and the macro-scale –designer's explicit architectural design decisions–; and the second strategy is that of the 'strange feedback' which provides space for intuitive decisions in computational procedures, i.e., ascribing such feedback mechanism with a non-systemic intuitional/heuristic role. [7] This means that by delegating some micro-level design decisions to the algorithmic agency, Snooks both actualizes his top-down design intent and achieves the complexity and indeterminacy that algorithmic tools facilitate. The resultant condition can be claimed to be a new form of design intentionality: an intersubjective field, a hybrid constellation, in which a negotiation occurs between both human and nonhuman design agencies who implicitly or reflectively share a common goal or responsibility.

Snooks notes that generative algorithms are basically "templates" or "abstract formal generators" that are "oblivious" to design intentionality, which means that a subjective design sensibility is not operable by the algorithms at the micro-level of agency; therefore, their applicability is

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conditional to the skills of the designer to translate architectural intent within the operation of the algorithm. [7] In 'messy computation', the designer literally and explicitly interferes in the flow of algorithmic procedures that are capable of generating highly emergent outcomes to draw the resultant configuration towards design intention through the employment of recursive feedback loops until an intelligible behavior and set of organizational and formal characteristics occur. [7] For Snooks, what happens at the borderline between the computational logic of algorithmic procedures and the designer's intuitive modeling –as a reflection of subjective evaluation and direct design decisions– is a synthesis, a hybridization of the potential of each mode of design. [7] He argues:

"Algorithms need to be manipulated until they break then re-designed and broken again in a continuous loop. They are not essentialist or pure but simply one of the many tools of the architect." [9]

The resultant configuration of such negotiation between the designer's intuitive feedback and the generative capacity of algorithms can still be claimed to be emergent, but iteratively, it is refined to respond to design intentions so that it becomes 'impure', 'strange' and unique. [9] Here, the interpretive capacity of the designer is indispensable in communicating through a synthetic vocabulary that is unique to the specific architectural problem and algorithmic mediation towards a resolution. With a "fundamental concern for the importance of subjectivity and the nature of risk within design," Snooks argues for volatility in design research, which he claims is more than a theoretical concern, since it has a potent in extending the architectural possibility space by providing new synthetic forms of order, generating strange behaviors and encoding design intention on the character rather than on the form of the algorithm. [7]

To investigate the "strange specificity of objects that emerges from behavioral processes of formation," the work of Studio Roland Snooks produces projects that are defined by "complex fibrous assemblages" and proposing "weird and wonderful atmospheric affects" whose "characteristics are intrinsically tied to the nature and behavior of the computational and material processes through which they are designed and fabricated." [10] Snooks informs that the intensity, resolution, and complex order of such affects resist explicit visualization as these are "emergent properties of the volatile self-organizing interaction of populations of fibrous bodies." [10] He argues:

"Form, gesture and silhouette are external to the ontology of the algorithms that generate these intricate masses, while sensitivity to initial conditions within the algorithmic process resists design intention at this macro scale. Instead, the nature of the topology, the thickness of the swirling mass and its compression to manifold surfaces are emergent outcomes of iteratively refined design intentions encoded within the behavior of the algorithms. This represents a shift from designing form to designing the accretion of mass imbued with atmospheric spatial affects from which the strange characteristics of the objects emerge." [10]



In their proposal for the National Art Museum of China (2011), Roland Snooks and Robert-Stuart Smith converge two design strategies, turbulent algorithm and explicit modeling of cloud-like forms, into a feedback relationship in which an outcome of one strategy becomes the input for the other, providing that they become an inseparable whole. [9] (Figure 2)

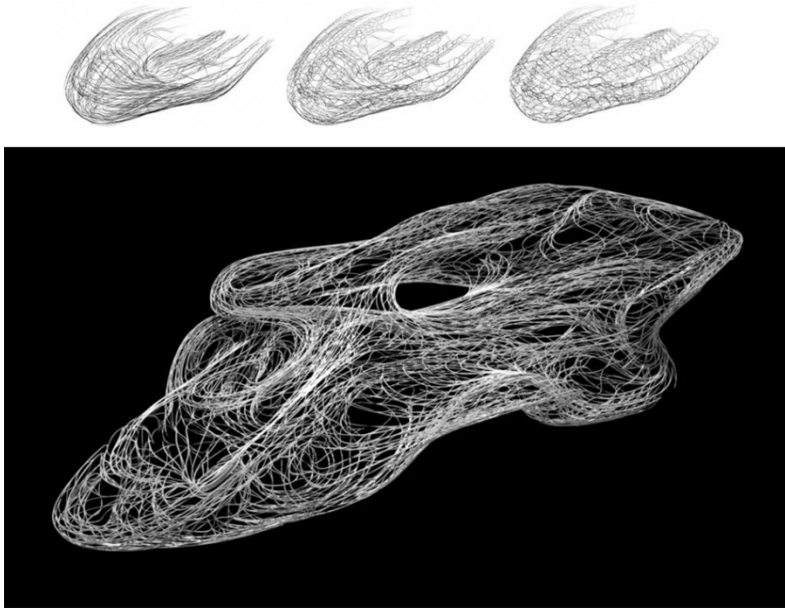


Figure 2. Proposal for National Art Museum of China, 2011. Design directors Roland Snooks and Robert-Stuart Smith. [9]

The project which Snooks and his team designed as a national symbol for Kazakhstan for an invited design competition in 2013 continued the same approach. [9] (Figure 3) Both for the National Art Museum of China and the Kazakhstan Symbol, the designers fostered the emergent capacity of turbulent behavior algorithm, whose initial vectors are predefined by the designers, as a form generator to negotiate in strange feedback. [9] Again, the negotiation is established between an intuitive natural metaphor and the organizational complexity of algorithmic computation by articulating a cloud-like formed direct surface modeling with patterns of turbulent fluids. [9]

These two similar projects are differentiated in their scale and intricacy of ornaments on their surface modeling: The National Art Museum of China is a larger scale project and the intricacy of fibrous components are less apparent, on the other hand, the Kazakhstan Symbol is smaller in scale and more expressive and messier in the articulation of the “hair” elements. [9] For the resulting assembly, Snooks interprets that “the generation of the form, the design of the pattern of hairs, and the flow of air over these are caught in a feedback loop - a negotiation that is less about optimizing performance and more about creating a compelling relationship between

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form, pattern and wind.” [9] Snooks claims that the resulting formal language for both projects -a language composed of “hairy”, “fibrous” and “blurred” elements is “a highly personal formal language” which is based on his research and experimental practice arising not only from the direct outcomes of agent-based processes but also from his ability to transcribe his subjective and intuitive design decisions into the emergent algorithmic process through his methods of strange feedback and messy computation. [9]

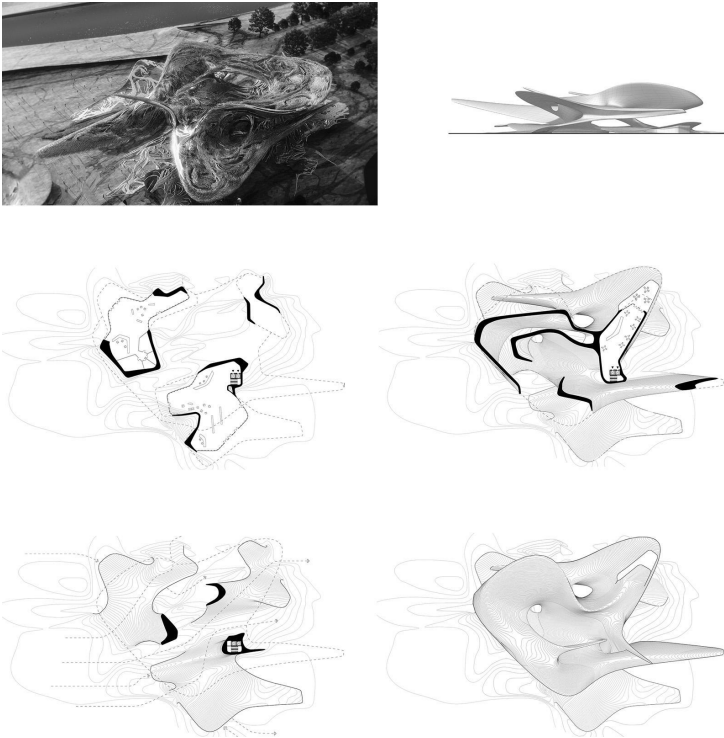


Figure 3. Kazakhstan Symbol, 2013. Project Team: Roland Snooks (Design Director), Michael Ferreyra, Armin Senoner, Zak Kljakovic, Marc Gibson, James Pazzi. [11]

In Alisa Andrasek’s approach to algorithmic computation, architecture is a synthetic field in which the complexity of many negotiating agencies is mediated, therefore rendering the notion of contingency inevitable. [12] Two projects by Andrasek, with a difference in scale and resolution, will be discussed to illustrate and reflect on her approach to algorithmic agency.

The first project, Cloud Osaka, is an outcome of a complex synthesis at the scale of a master plan, in which Andrasek aims to create an “alien approach to the aesthetics of strange and unseen.” [13] (Figure 4) As in Roland



Snooks' approach, we observe a challenge to go beyond a deterministic account of architectural design through reconciling intuition with the algorithmic agency. In this specific case, the source of inspiration is the "river of people" and the algorithmic agency is defined as a custom computational toolset imposed upon a voxel cloud generated with fluid dynamics. [13]

Inspired by cloud formations and weather events, Cloud Pergola is a 3D lattice structure designed to be exhibited at the 2018 Venice Biennale. (Figure 5) An algorithm of multi-agent systems is used in the design of the pavilion, in which these agents are regarded as "active discrete elements whose behavior is determined by a collection of rules, often based on stimulus-response logic." [13] The overall form results from the emergent effects of the algorithmic agency whose micro-components are designed to behave collectively to create complexity. [13]

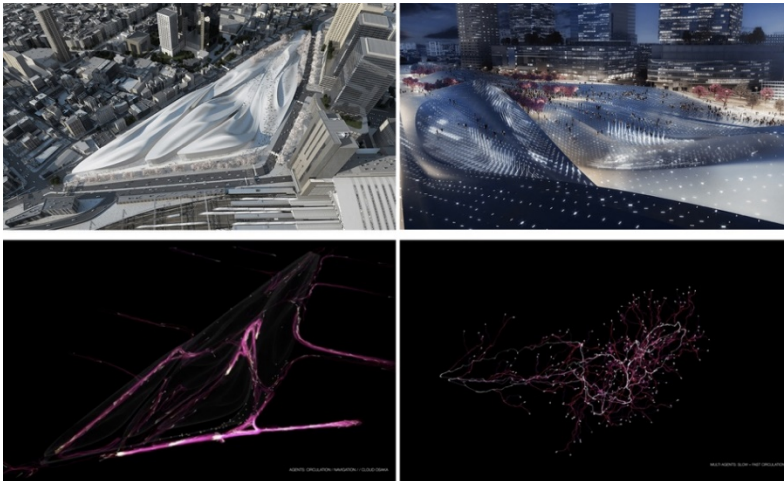


Figure 4. (Top) Complex synthesis at the scale of a master plan, the Cloud Osaka project, 2014. (Bottom) Screenshots from the video that simulates the multi-agent algorithms used in Cloud Osaka project for circulation and navigation in the site. [13]

In her work, Andrasek attributes design with a 'catalytic agency' that expands the existing environments and synthesizes new ones. [12] She asserts:

"In mining the resources of computational "otherness," architecture can open up novel spaces of synthesis and go beyond any deterministic design intent on predisposed knowledge derived from its sites. Invisible strata of reality could be unveiled to synthetically alter this fabric. Recognizing the active participation of nonhuman forces in events and understanding that the agency spawns beyond just the human provides a ground for alternative ways of addressing design ecology. In a context where all agencies are intricately interlaced with one another, the possibility of open synthesis reveals a resilient new fabric of architecture." [12]

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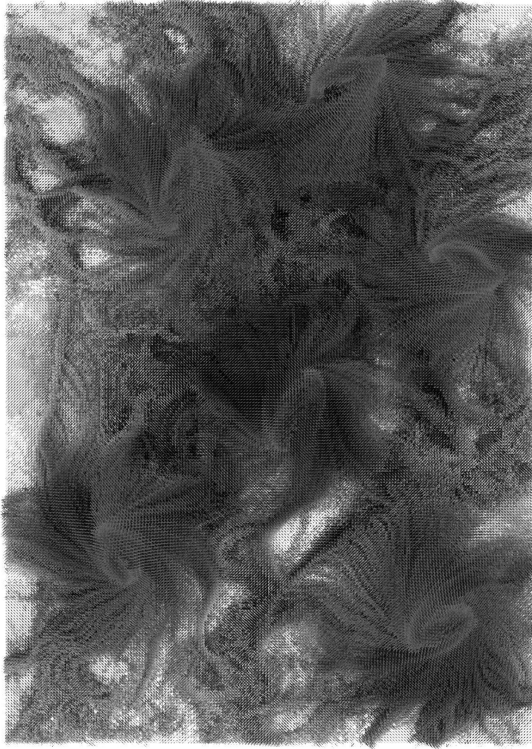


Figure 5. 3D lattice diagram of Cloud Pergola, Croatian Pavilion in 2018 Venice Biennale, design-led by Alisa Andrasek. [14]

These design strategies and methodologies show that architecture's capacity to synthesize the complexity of many negotiating agencies becomes possible by the experimental accounts centered in between technology and the human in general and between coding practices and the creative sphere of architects in particular. Both Snooks' and Andrasek's studios reveal innovative approaches in computational architecture by recognizing the contributions of algorithmic agencies and reclaiming the subjective and intuitive design faculties. With an inclusive approach to the mediation of nonhuman forces, an alternative account of design intentionality, which can escape from the deterministic qualities of top-down design intent, becomes therefore possible.

Instead of exploitation and direct application of computational procedures to ground the already determined set of architectural ideas or forms through the pseudo-objectivity of computational reason, such exploratory approaches to algorithmic agency promote more experimentation with the conflict that emerges in the interaction between intuitive top-down architectural intent and emergent bottom-up operations so that creative moments of encounters occur and lead to new and novel ways of thinking.



CONCLUSION

As a critical approach to the dominant anthropocentric view in the design realm, in which intentions and actions are associated exclusively with human mastery, we may reposition our perception moving away from that of restricted notion towards new kinds of anthropologies including all beings and materialities. At this point, the concept of 'agency' is introduced into the world of architecture and design; a concept that reminds us that "the human being is both immersed in a world of nonhuman forces and inseparable from affective relations with nonhuman" things. [15] In this respect, without fully flattening and symmetrizing the human-nonhuman relationship, we may shift our focus to the contributions of nonhuman agencies (including flora-fauna and natural phenomena), the visible and invisible forces and relations that interfold in the form of flow formations, such as; swarm behavior, hair formations, fur fields, cloud formations, turbulent fluids, etc. This shift demands new strategies in the way we design, reason, and order hierarchies by acknowledging the cognitive and social complexity of our environment.

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OTHER SPACES OVER PLASTICITY²

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ABSTRACT

The concept of plasticity is used in architecture as in other disciplines, although it is not yet fully agreed upon its distinct definition. Thus, it is used to refer different situations in architecture. These are generally on quality of form or quality of formation.

Today, as in the history, architecture is in search of ideal spaces that meet the needs and tastes of the day. Thanks to computer technology, today there is the opportunity to see many possibilities in a short time. One of the avant garde styles Parametric design, allow us to have lot of alternatives of a design, depending on several parameters. Therefore, parametrisizm carries an unpredictable potential for plasticity of spaces.

The aims of the study are to present a methodological approach to the relationship between space and plasticity; explaining the conditions and concepts that constitute plasticity and the relationships between these concepts in the context of space plasticity. So Patrik Schumacher's concepts of "parametricism" and -related to it- "autopoiesis", which shape current discourses and design, and the potential of the sub-concepts associated with them in creating space plasticity is discussed here.

Key Words: Space; Architectural Space; Other Space; Plasticity; Patrik Schumacher.

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² The paper has been written from Zeynep SADIKLAR's ongoing doctoral dissertation research under the supervision of Asu BEŞGEN at Karadeniz Technical University, Department of Architecture.



INTRODUCTION

Architecture is a formable phenomenon that contains the power of plastic creation in its essence. The concept of plasticity, which indicates the qualification or state of “being plastic of something plastic”, can be used for many situations in architecture.

Space, which is attributed to being the second skin of human, has a special meaning in architecture. Thus, the concept of plasticity has a special role in space. Despite its so-called existence and the ambiguity of the scope in the context of architectural space, it is the fact there is no clear definition for the concept of plasticity in architectural space discussions, and this case turns the space plasticity into an implied expression.

Considering the terms in architecture, it is seen that there are a few statements about the concept of “plasticity” but those statements refer to a few certain meanings such as “the qualification of form”, “the ability to be processed”, “the ability to be aesthetically pleasing such as molded or carved”. Nevertheless, the concept of plasticity continues to be used in architectural texts and discourses.

In this context, the study acknowledges the phenomenon of plasticity as an integral part of architectural space. The study aims to draw the phenomenon of space plasticity to the centre of space discussions. Thus, it adopts as a principle to reveal the definitions of “other space” by revealing the main elements that bring into existence the space through plasticity.

The aims of the study are to present a methodological approach to the relationship between space and plasticity; explaining the conditions and concepts that constitute plasticity and the relationships between these concepts in the context of space plasticity.

In this context, architect Patrik Schumacher who creates an expression of “other space with space plasticity” in his theory-discourse-practice, constitutes the sample area. Design concepts “parametricism” and “autopoiesis”, that shape the current discourses and designs of Patrik Schumacher and the features of the concepts in creating space plasticity will be discussed. Specific to Patrik Schumacher, the definition of space plasticity and the expressions of an “other space” will be detailed.

METHOD AND MATERIAL

The study uses the literary research method. In the first step, the dictionary definitions of the concept of plasticity and the meanings used in architecture were determined. Secondly, Schumacher's theory of architectural autopoiesis was examined. This is achieved by reading his book: *The Autopoiesis of Architecture*. Afterwards, Schumacher's parametricism manifesto and related concepts were read from his work, *Parametricism 2.0*. Finally, the connection between Schumacher's concepts and plasticity of “other spaces” is discussed and concluded.



Concept of Plastic and Plasticity of Interior Spaces

In art and architecture, plastic is an adjective used for the processed, dimensional and animated quality of form. This quality, which is more defined as 'plastic form' or 'plasticity', defines the depth, the three-dimensional formation in space, or the diversity given to the mass such as the volumes, fullness and three-dimensionality of the forms, as in sculpture (Erzen, 1997).

The meaning of the term plastic is shown in the Table 1. The concept of plasticity is the quality or state of being plastic (Merriam-Webster, 2021). Accordingly, it can be said that plasticity will be related to the quality of the states in the Table 1.

Table 1. Definitions of plastic.

Definition	Synonyms Of The Term Plastic
susceptible of being modified in form or nature (Merriam-Webster, 2021)	pliable/pliant, ductile, malleable, adaptable
suggests something easily bent, folded, twisted, or manipulated (Merriam-Webster, 2021)	pliable
may stress flexibility and sometimes connote springiness (Merriam-Webster, 2021)	flexible, pliant
applies to what can be drawn out or extended with ease (Merriam-Webster, 2021)	ductile
applies to what may be pressed or beaten into shape (Merriam-Webster, 2021)	malleable
capable of adapting to varying conditions (Merriam-Webster, 2021)	adaptable, pliable
capable of being easily molded or modeled (Merriam-Webster, 2021)	malleable, moldable, shapable/shapeable, waxy
lacking in natural or spontaneous quality (Merriam-Webster, 2021)	affected, artificial, assumed, bogus, contrived, factitious, fake, false, feigned, forced, mechanical, mock, phony/phoney, pretended, pseudo, put-on, sham, simulated, spurious, strained, unnatural

Gerwing states that plasticity, as used by architects, is a term which is used to define the prosperous, three-dimensional, or sculptural appearance of a building. According to Gerwing, when the form of a building presents a sculptural appearance, it can be stated that it has plasticity even if it is made with flat lines and boxes (Gerwing, 2011).

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Due to Le Corbusier scene, architecture is a plastic phenomenon affecting the senses and meeting completely with the visual requests. What makes it occur is the “plastic elements”, namely “shapes clearly seen by the eyes and measured by the mind”. These elements are basic geometric shapes and/or forms or their combinations, easily processed or unprocessed such as cubes, spheres, and cylinders (Le Corbusier, 2010).

Le Corbusier also makes the following statement while explaining the form which the house must have as; “part of the house plan, its volume and surfaces are determined by the functional data of the problem, and partly by the ability to imagine, namely a plastic creation” (Le Corbusier, 2010: 230). In this context, it is important to focus on the ability to imagine, and the plastic creation.

Regarding Mies van der Rohe’s Barcelona Pavilion, Şengül Öymen Gür mentions that Rohe is “a proponent of skeletal effective structures” while Le Corbusier, on the other hand, “advocates the plasticity of meaningful space” (Gür, 1996: 64).

Theo Van Doesburg declares that “the new architecture is elementary, that is, the building develops based on its plastic elements”. According to Van Doesburg, these plastic elements are “function, mass, surface, time, space, light, colour, and material” (Van Doesburg, 2019: 64).

Considering expressionist-oriented architecture that Juhani Pallasmaa is about to start with Erich Mendelsohn and Hans Scharoun, Pallasmaa makes the following comment: “this movement brings muscular and tactile plasticity to the fore as a result of the elimination of the dominance of the ocular perspective” (Pallasmaa, 2019: 85).

Pallasmaa reiterates throughout the book named “The Eyes of the Skin” that the experience and knowledge provided only by the eyes also lead to the loss of plastic sensitivity and plastic spatial emotion. Pallasmaa states that the loss of plastic and spatial experience transforms buildings into images detached from depth and sincerity (Pallasmaa, 2019). Parallel to this, Stephen Houlgate mentions that George Berkeley and G. W. Friedrich Hegel both agree that the sense of touch outweighs the eyes in feeling the spatial depth (Houlgate, 1993: 86). Thus, it can be asserted that plasticity, in a sense, is a way to connect and communicate with human with various dynamics of space. Plasticity can also be considered as a loss if this bond if it is not constituted.

At this stage, regarding the summarized information obtained from the literature in here, different concepts such as function, mass, time, space, colour, and material are sometimes qualified as plastic, related with architectural space plasticity. However, it can also be said that the dynamics such as surface, light, texture are also the important factors for the architectural space plasticity. Plasticity emerges as a natural component of architecture, hence architectural space.

By looking at the space proposed by Schumacher’s architectural autopoiesis theory and parametricism manifesto, then it will be possible to talk about the plasticity of ‘other’ spaces.



The Concept of Autopoiesis and Its Place in Architecture

Before speak upon the concept of autopoiesis, the concept of poiesis is seen that it is closely related to art. Greek *poiesis* (from *poieo*) means making, forming, actualization, completing, bringing forth, production, creating etc. So, poiesis is a descriptive concept in artistic creation. As an example, according to Platon, poetry is a creating, a poiesis (Soykan, 2020).

The concept of autopoiesis was first introduced within biology by the evolutionary biologists Humberto Maturana and Francisco Varela in their book, 'Autopoiesis and Cognition: The Realization of the Living' in 1972 (URL-1, 2021).

They define the concept as follows: 'an autopoietic machine continuously generates and specifies its own organization through its operation as a system of production of its own components' (Maturana and Varela, 1980; Schumacher, 2011).

One of its lexical meaning of autopoiesis is "self creation or self organization" (URL-1, 2021). Another meaning in Merriam-Webster online dictionary is "The property of a living system (such as a bacterial cell or a multicellular organism) that allows it to maintain and renew itself by regulating its composition and conserving its boundaries." (URL-2, 2021). Briefly in biology, the autopoietic system is one that produces itself (URL-1, 2021).

It was Patrik Schumacher who brought the concept of autopoiesis into architecture.

According to Schumacher (2011), the concept of autopoiesis refers to the overall discursive self-making of architecture. This is a continuous historical process and, to remain effective, it continues to require new theoretical efforts at each stage of its ongoing evolution (Schumacher, 2011).

In 2011, he published his thesis in his book titled "The Autopoiesis of Architecture". The book offers a comprehensive discourse analysis of the discipline by analyzing the main distinctions, concepts, values, styles, methods and media of architecture. His main thesis is that the phenomenon of architecture can be best comprehended when analyzed as an autonomous communication network (autopoietic system) (Schumacher, 2016).

While the theory of architectural autopoiesis theorizes buildings and the spaces within and around them as a crucial type of architectural communication (Schumacher, 2011), it also creates its own vocabulary. Today, as can be expected from autopoietic architecture, the words are very fluid and interchangeable:

"New key concepts are major innovations in the development of the discipline. They re-order the discourse and refocus the practice of the discipline. Key concepts of this kind are important discursive structures. They define the essential goal of the discourse and practice for all participants, and therefore give a particular perspective and drift to all communications." (Schumacher, 2011:411)

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Schumacher gives concept of space as an example for one of these alterations:

“The concept of space was the conceptual mainspring of Modernism. It is now being superseded by the concept of field as one of the conceptual mainsprings of Parametricism.” (Schumacher, 2011:411)

While space is conceived as empty and isotropic, fields are full, as if filled with a fluid medium (Figure 1). Liquids can be thinkable as radiating waves, laminal flows and spiralling eddies in motion (Schumacher, 2011:421). Liquidity and motion are controlled and computed by computers. With the help of computers, numerous options are obtained.

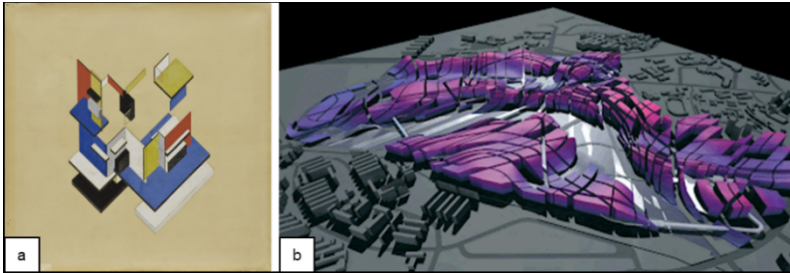


Figure 1. a. Theo van Doesburg and Cornelis van Eesteren, Contra-Construction Project (Axonometric) 1923 (URL-3, 2021). b. Fabric and network, Zaha Hadid Architects 2001-2003 (URL-4, 2021).

The concept of field offers alternative form of organization and orientation. A swarm of birds or a shoal of fish are helpful analogies to make sense of the dynamic and fluid field concept (Figure 2). If the flock is considered as a whole single body consisting of many parts, the form of the body will depend on the parts. Also the shape of the body is non-isotropic and performs unpredictable eddy motions.

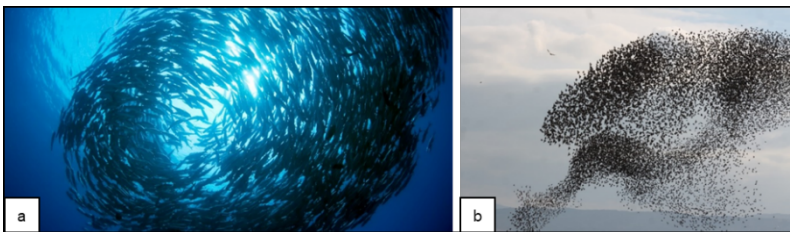


Figure 2. a. Motion of shoal of fish (URL-5, 2021), b. Motion of swarm of birds (URL-6, 2021)

According to Schumacher (2011) ‘from parts to particles’ which has been one of the key slogans of the mid-1990s, is one of the key characteristics of working with fields. However, this is difficult that one has to handle so many elements and pay attention to all elements. In fact, beyond its difficulty it is unfeasible:



"To single out and concentrate on individual elements would be utterly meaningless. Every quality is produced by many elements acting together. In contrast, in modern compositions and the spaces that they shape every individual element matters, is noticed, and carefully placed into the overall balance. With fields only the global and regional field qualities matter. Elements become effective only as they amass, coalesce and accumulate to create emergent field effects: biases, drifts, gradients, and perhaps conspicuous singularities such as radiating centers. But any such feature is a result of a rule-based accumulation of much smaller features and therefore always subject to gradual emergence and disappearance. There are no discrete entities with sharp outlines. Here figures and domains do not sustain Platonic simplicity. Their deformation no longer spells the breakdown of order but the lawful inscription of information. Figures/domains do not have to remain neatly separated because there are lawful rules of mutual inflection, and lawful rules of gradual transformation." (Schumacher, 2011:423)



Figure 3. a. Berlin Central Station, Railway station (URL-7, 2021), b. MyZiel, Shopping Centre, (URL-8, 2021)

Dense crowds of people moving around create temporary architectural fields (Figure 3). This creation is sudden, variable and flexible. Interior spaces such as airports, offices, exhibition halls, which are exposed to high population density, have many other sub-parameters apart from the human factor. Controlling the whole from the parts introduces parametricism.

Parametricism

Parametricism means that all elements of architecture can be formed depending on the variable.

According to Schumacher (2011), parametricism is also an autopoiesis. By the means of parameters, the system is not just controlled, but also changed, transformed, organized, from the smallest part to the whole. Depending on the parameters, it contains infinite forms and allows innovations.

Through parametric design, complex forms and processes became uncomplicated. Curved, folded, differentiated, pliant, crooked, malleable, pliable, adaptive forms are produced.

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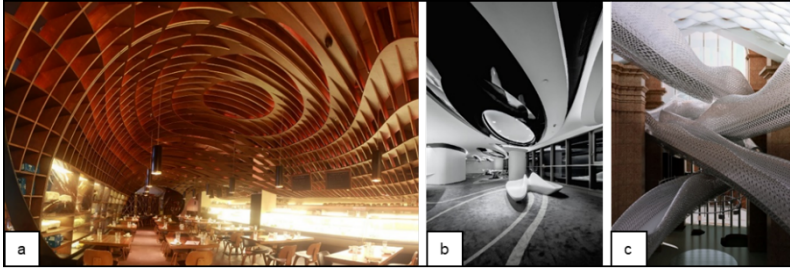


Figure 4. a. Indigo Deli, Sameep Padora and Associates (URL-9, 2021), b. Sky SOHO Leasing Showroom, GAP Architects (URL-10, 2021), c. The Baldacchino of Chiesa Durita Woven, DeD Studio (URL-11, 2021).

Schumacher presented his Parametricism Manifesto at the 2008 Venice Biennale. In his article 'Parametricism: A New Global Style for Architecture and Urban Design' published in 2009, Schumacher states that the global convergence in avant-garde architecture supports that Parametricism will be the style that will break new ground in the 21st century. He believes that parametricity is architecture's answer to the important technological and socioeconomic transformation of the world society brought about by the information age (Schumacher, 2016).

Parametricism performs high relationality. Artificial relationship networks are established in detail. Network and its parts are produced by codes.

"Contemporary, Parametricist design harnesses digital simulation and form-finding tools that are inherently open to artificial modulation. Not only can parameters be shifted out of natural ranges but wholly new, artificial forces and their defining laws and logics might be defined. Any parameter (property or relation) of any object (geometric, positional, colour, transparency value etc) might be associated with any parameter (property or relation) of any other object (or group of objects). An artificial, second nature can be conjured via scripted, quasi-natural laws, rich in internal resonances, as well as inter-articulations with external contexts." (Schumacher, 2011)

Parametricism is a unique tool in constructing the internal and external components of space and producing numerous and optimal qualities.

Parametricism does not cause to uniformization, on the contrary, it leads to the emergence of distinctive forms.

According to Schumacher (2011) parametricism, with its core value of adaptivity, includes adaptation to regional specificities: *"This implies that its global reach does not –as International Modernism did– spell global homogenisation. In fact, Parametricism offers the promise of a respeciation of regional identities."* (Schumacher, 2011:). This means that unique spaces can be built with materials specific to the region and at the most optimal level for that region.



FINDINGS AND CONCLUSION

By reading Schumacher's theory and manifesto, his view and treatment of space is better understood. The new understanding of the age necessitated new concepts. The concept of space has recently lost its former importance. It is no longer discussed over the elements that limit it (such as wall, floor, ceiling, window) as before. The concept of space has lost its former significance recently. It is no longer discussed on the elements which limit it, as it used to be.

The concept of space has been replaced by the concept of field, so the parameters of 'space' have also changed. Motion is an important parameter in field. It creates, defines, expands and changes the field. To summarize briefly:

- Other spaces are now called as fields.
- Other spaces have a plastic design and production process.
- Other spaces consist of parameters from the part to the whole. Also they are numerous options formed by various parameters. The changes in space can be achieved easily and rapidly through parameters. In this manner, it can be said that other space is adaptable, flexible and malleable.
- Other spaces are complex and computational structures which makes them also adaptable again.
- Other spaces are fluid and non-isotropic, and depends on the motion of crowds. Which means they are shapable with movement. To achieve space plasticity, people are significant parameters.
- Other spaces are artificial autopoietic systems which creates and controls itself.

Finally, it can be stated that the frozen stereotyped plastic structure in the context of architecture and architectural space of the last century evolved into another kind of "plasticization" in 21st century philosophy and practice. It is conceivable that this process can be the beginning of an era in which we can meet "other plastic spaces" in another senses.

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THE OTHER VIEW OF SUSTAINABILITY: VELE SCHOOL IN THE CONTEXT OF SUSTAINABLE BEHAVIOR

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ABSTRACT

In addition to evaluating the concept of sustainability in environmental, social and economic dimensions in building designs, user behavior should also be considered as other dimension of sustainability. Questioning if a building is sustainable is like questioning whether the body is sustainable.

The designs of sustainable architectures also need to be realized gradually, both for the sustainability of the building and for the user to adopt sustainable behavior. Sustainable goals will be achieved by defining the user profile, by obtaining information about the location and by interconnecting the user to the stages in the design process. In this direction, Vele School's design process was examined through the concepts of motivation, learning, personality and social behavior. By matching these behavioral concepts with the actions of architects, sustainable behavior was emphasized in the combination of the material-theory-design process.

This paper, which looks at sustainability studies from a "other" perspective, claims that the user can adapt a sustainable behavior by the inclusion of behavioral theory in the architectural design process and accordingly, the realization of actions such as map and photography workshops, meeting with community leaders, issuance of construction bulletins, site tours during construction, participation of local people in construction activities and the use of sustainable systems. East Coast architectural office has realized a design that succeeds in making life sustainable with its observations, dialogue with the public and design criteria it has set. As a result, this paper suggests that sustainable buildings can have a significant impact on environmentally responsible behavior through involvement in the design, construction and operation processes.

Key Words: Sustainable Behavior; Architecture; Design of Other; Vele School.



INTRODUCTION

Living spaces do not directly affect the behavior of the individual. Every place has an area in which some facilities are located. In living spaces, there is a situation such as acquiring and arranging the space itself, adapting the behaviors according to the cultural-spatial situation (Aydın, 2018). According to Barker, various spatial architectures are defined within the framework of the activities that dominate the interior. The space integrates with the individuals in the space and the social roles of the individuals (Senemoğlu, 2007; Aydın, 2018).

As space is shaped by the behavior of the individual, the behavior of the individual is also shaped by the space. Accordingly, there is a communication between the user and the space. The designer should be able to reach the user and express himself/herself while transforming the space he/she has created and designed in her memory into a concrete product. In order to do this, the designer should evaluate and form his/her own experiences by selecting meaningful spatial elements corresponding to the concepts he/she uses in the design, from the culture, expectations and tradition of the society. Thus, it is easily ensured that the user perceives and reads the space. According to Rapoport (1990), spatial meanings can be conveyed more easily when they are clear and strong. The goal here is to be comprehensible. According to Gür (2000), space consists of indicators prepared for the activities and behaviors of the individual depending on the user. Like spoken languages, architecture is an indicator that conveys information (Günel and Esin, 2010).

Behavioral sciences have a fundamental relationship with the built environment. To create habitable buildings and environments, it is necessary to examine how people live, work and move. Researchers argue that the sustainable credentials of a building or a site can only truly be answered when the behavior of individuals in the building or site changes (Holden and Norland, 2005; Williams et al., 2010). It is important to understand that a systemic change in the behavior and habits of the individual is needed in order to achieve sustainable development goals, reduce climate change, protect biodiversity and the ecosystems which we live in (Klaniecki et al., 2019).

Environment-psychology-behavior are factors that affect each other. The environment provides a variety of behaviors for any active organism. Psychology has to deal with the "individual", but ecology is "the relationship between the organism and its environment". Ecological environment describes the natural environment in which the individual lives his/her daily life. In ecological psychology, the environment is interpreted multidimensionally, and the focus of analysis has often been on the interrelationships between humans and their socio-physical environments (Stokols, 1978; Mumcu et al., 2013) At its root, ecological psychology aimed to offer an innovative perspective for understanding perception and perceptual learning that overcomes traditional psychological dualities such as perception/action, organism/environment, subjective/objective, and mind/body (Lobo et al., 2018). Perception of ecological information means direct perception of possibilities. Perception is the first way of knowing, and

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perception is formed by approaching the surrounding objects meaningfully. Thus, dealing with the environment is analogous to the organism's action-perception cycle in ecological psychology. This gives rise to the idea of the body schema, a central concept in Merleau-Ponty's *Phenomenology*. The preconscious system emerges when the bodily capacities of the agent and the complementary aspects of the environment come together (Toadvine, 2016; Lobo et al., 2018). When an individual is persuaded by reasons produced by cognitive factors, the desired behavior will occur (Wai and Bojei, 2015).

Ecological psychologists have focused on the functional meaning of spaces for individuals. In the directly experiential and phenomenological world, our mostly functionally meaningful perception of the environment is a fundamental principle of ecological psychology (Kaaronen and Strelkovskii, 2020). Gibson argues that perceiving possibilities is perceiving ecological meaning. Perceiving possibilities, the organism recognizes its environment (Lobo et al., 2018). The environment directs and constrains behavior through signs. And these signs are created by the active capacities of the organism. Thus, the combination of action and environmental factors leads to the emergence of ecological knowledge and possibilities.

Behaviors lead to individual learning and adaptation as well as to social learning and transfer (Kaaronen and Strelkovskii, 2020). Therefore, ecological psychology emphasizes that individuals are affected by the environment and that the environment has an effect on the behavior of the individual. The interaction between the built environment and society is important in the internalization of sustainable behavior. Accordingly, there is a relationship between ecological psychology and sustainable behavior.

Sustainability is a broad and vague term with many meanings – there is no single accepted image of how to specify it exactly (Neuman, 2005). The biggest obstacle to achieve a sustainable future through architecture is the gap between environmental knowledge and environmental behavior (Clarke and Pretlove, 2010). Sustainable behavior is generally defined as environmental responsibility behavior in all aspects of an individual's daily activities. The individual is responsible for the environment in all his/her actions (Wai and Bojei, 2015). However, the sustainability of the building can be questioned since these three dimensions, environmental, social and economic, are handled within a single paradigm. In addition to evaluating the concept of sustainability in environmental, social and economic dimensions in building designs, user behavior should also be considered as other dimension of sustainability. According to Neuman (2005: 23): "buildings by themselves cannot be measured in terms of sustainability. Questioning if a building is sustainable is like questioning whether the body is sustainable. The proper question is not if the body is sustainable, but rather, does the being that inhabits the body live sustainably?".

There are processes and efforts that are not easily seen in the architectural design process or in buildings. In this case, looking at other architecture requires foresight and effort (Liebing, 2011). Issues that are not considered or under-considered in the context of architecture can be defined as other architecture. The task of other architecture is to bring a different perspective



to the ongoing works of architecture. This paper aims to look at sustainability studies in architecture from another perspective. In the context of architecture; when we look at certified sustainable buildings and the projects that won sustainability competition, actually the sustainability of the building itself is in question. Unfortunately, the concept of 'sustainable behavior' is not mentioned in sustainable building designs. However, sustainable buildings can lead to enabling user behavior sustainable. User-space interaction is important in internalizing sustainable behavior. Therefore, the concept of 'sustainable behavior' can be considered as other dimension of sustainability in the relationship between the architect-space-user. Behavior change is central to the pursuit of a sustainable future (McMenzie-Mohr and Schultz, 2014). Appropriate behaviors for users' behavior change should be identified and analyzed, appropriate intervention tools selected and implemented, and the effectiveness of the program should be evaluated, too (McKenzie-Mohr, 2011; Steg and Vlek, 2009).

Focusing on the other neglected aspect of the concept of sustainability, namely behavior, this paper seeks the answer for the question "To what extent do sustainable buildings encourage sustainable behavior?" while exemplifying the issue of sustainability as a behavior beyond being economic, social and environmental through Vele School, which was redesigned by East Coast Architecture in 2009. Instead of creating an awareness of the effects of buildings on the natural environment; the paper emphasizes that buildings can enable individuals to change their behavior in a positive way in terms of economic, environmental and social sustainability in their built environment. At this point, what is defined as other architecture is to embed sustainability in user behavior in architecture. Sustainable behavior can be gained as a result of the user's experience in the building design process under the architect's management. The Vele School instance is a remarkable example of examining the potential of users and local people to encourage sustainable behavior through building designs and exploring the role that user-centered design can play in sustainable building designs.

SUSTAINABLE BEHAVIOR

Buildings and user behavior are inextricably linked to environmental issues such as global warming and climate change, local environmental problems such as energy consumption, water, soil and air pollution, flooding, high water consumption and habitat destruction (Clarke and Pretlove, 2010). Even the best efforts to develop an effective sustainable building fall short if sustainable features are not understood or clearly stated in building design, construction and use (Clarke and Pretlove, 2010).

According to Mumford, anything worth considering has to be ecological. Human nature needs to change (İncedayı, 2004). According to this idea, ecology should be perceived as a way of thinking. Man's attitude towards nature and the relationship he develops with it is a dynamic process. From this point of view, it can be said that the process has changed its quality in

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parallel with the social development and cultural processes and developed as a part of the whole of the conditions and social ecology (İncedayı, 2004).

M. Bookchin mentions the environmental destruction that develops as a result of the relations of capitalist society (Keleş, 2003). He addresses the hierarchical structure in social organization as the source of the problems and argues that this structure should be questioned and changed before turning to the solution of the problems. Developing the concept of "social ecology" based on this view, Bookchin stands against x-centered perspectives and accepts the relations of production and consumption as the basis of the problems. In the words of Bookchin, "The real pollution is the pollution of consciousness, mind and conscience that grows with the pollution in nature" (Çalgüner, 2003: 108).

Sustainable behavior is generally defined as environmental responsibility behavior in all aspects of an individual's daily activities. The individual is responsible for the environment in all his/her actions (Wai and Bojei, 2015). Sustainable behaviors significantly reduce environmental stress through individual behaviors that are renewed at each stage (Gram-Hanssen, 2012; Evans, 2011). The involvement of sustainable behaviors or the adoption of green lifestyles is important; because sustainable behavior choices of consumers can lead to the awareness of the perceived values related to sustainable behavior. Values associated with sustainable behavior are multifaceted. Paavola (2001) argues that under conditions of value pluralism; the more values associated, the higher an individual's propensity to participate in extra-environmental activities (Wai and Bojei, 2015).

Attitude-behavior gap slows down efforts to adopt sustainable behavior and this gap is attributed to cognitive dissonance (Davies, Lee and Ahonkhai, 2012; Papaoikonomou et al., 2012; Phipps et al., 2013). The gap between attitude-behavior is known by behavioral psychologists as the "value-action" or "intention-behavior" gap. The causes of this gap are a highly complex set of human responses in relation to the perception of environmental, social and economic problems (Clarke and Pretlove, 2010). Attitude is a widely studied variable in the literature on sustainable behavior. Numerous studies have proven that attitude is an important determinant and predictor of non-environmental behavior (Zhao et al., 2013; Cho et al., 2012; Zhang and Lei, 2012; Carrington et al., 2010; Cornelissen et al., 2008). Attitude is a state of emotion towards a target subject and ultimately directs individual behavior. Behavior depends on attitude. It is important to know the importance of attitude in influencing the behavior of the individual and to explain the attitude-behavior dilemma. It is necessary to define the relationship between attitude and sustainable behaviors and to provide appropriate support to instill sustainable behaviors (Wai and Bojei, 2015).

The interaction between the built environment and society is important in the internalization of sustainable behavior. The form of urban areas and buildings in these urban areas does not determine sustainable behavior; but they can provide the right environment for it. Major shifts in the culture of planning and construction practice can be suggested for sustainable initiatives. Environment-behaviour researchers should participate in design decisions as part of the design team (Zeisel, 1984). According to



MacNaghten (2001) the more individuals are directly involved in the construction and preservation of their homes, the more they care about the planet they live in and the more likely they are to value it. Pallack et al. (1980) shows that attitudes formed from direct behavioral experience tend to be stronger than passive or abstract attitudes and are more predictive of subsequent behavior change. Therefore, the more buildings are used as an experiential teaching and learning resource, it is more likely that pro-environmental behaviors are to occur which will lead to contribute to resource efficiency, waste minimization, increased health and well-being, improved biodiversity, low-impact transportation, etc. (Clarke and Pretlove, 2010). Therefore, more emphasis should be placed on building users, their impact on building performance, and the impact on users' (pro-environmental) attitudes and behaviors (Zeisel, 1984).

Scientists have developed various theories to understand changes in behavior (Klaniecki et al., 2019). Kurt Lewin, one of the important names of social psychology, introduced the concept of Field Theory. Lewin, by transferring the concept of the physical field (magnetic field, gravitational field, etc.) to psychology, developed the concept of the psychological field, which expresses the whole of psychic processes that are interdependent and form a dynamic system. Lewin's work is Gestalt-oriented, focusing on needs, personality, and social factors. Lewin's field theory states that individuals' perceptions that determine their behavior are formed in the dynamic relationship they establish with their environment. Behavior consists of actions, thoughts, and values. Human behavior has been seen as a product of internal and external structures and the interaction that mediates the individual perception of these structures. These structures consist of a power matrix that explains the stability and variability of individuals in their social structures (Nicotera, 2009:154).

Lewin used the concept of "living space" for the environment that shapes the perceptions of individuals while they act. Behavior, on the other hand, is a combination of actions, thoughts, and values. In Kurt Lewin's theory, the emphasis on the communication between the individual and his/her environment and the behavior of this relationship necessarily grounded Lewin's research with the empirical approach. The basic assumption of Lewin's field theory is that an individual's behavior should be understood as a function of the interaction between an individual and his/her psychological understanding of the physical and social environment. Kurt Lewin (1935) expresses the behavior formula in classical field theory as following: behavior (B) is the result of the interaction between the person (P) and environment (E), $B=f(PE)$ (Demir Yıldız and Dönmez, 2017). According to the B-F equation developed by Lewin, behavior is defined as a continuous interaction function of the individual and the environment (Figure 1).

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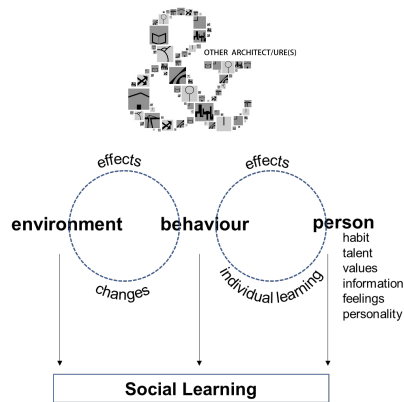


Figure 1. The relationship between environment-behavior-individual

The behavior of the individual is related to the living space (Lewin, 1997). The focus of Lewin's work is to understand the effects on structure and habitat. Lewin's theory is built around habits defined as resistance to change associated with behavior in groups. More permanent individual change and new habits emerge first if the entire social field adapts. Behavior is a function that emerges as a result of the interaction of the individual with the environment: personality includes psychological and physical systems; environment, on the other hand, includes close social groups/environments, family, work environment and other groups that affect the individual. Lewin developed a theory in which motivation, learning, personality and social behavior could all be discussed.

As a result, it can be said that Lewin's field theory makes great contributions to understanding an individual's behavior. Considering that the behavior of individuals is an important issue in the development of sustainable architecture, building design and applications, this paper focuses on sustainable behavior. Adopting Lewin's field theory, this paper assumes a positive relationship between attitudes and sustainable behaviors.

VELE SCHOOL AS AN EXAMPLE OF SUSTAINABLE BEHAVIOR

In order to understand the behavior of individuals, it is necessary to consider the environment in which they live as a part of the context. The environment influences an individual's actions, beliefs, and choices (Rengasamy, 2010). According to this perspective, the individual is both a cause and a consequence of his/her situation. Since the individual is in a dynamic state, every behavior and change he/she makes causes a change to occur again in a wider system (Germain, 1991; Demir Yıldız and Dönmez, 2017).

Correctly constructed spatial indicators will affect the user's perception and lead them to positive behavioral reactions. Therefore, attitudes and behaviors can be affected by the interaction of the user with the space. Vele School, which is the subject of this paper has been chosen because it was designed and built with a user-centered approach, received the Locus 2016 'Sustainable Architecture' Global Award, due to the fact that the project turned into a leading community resource for the South African community, and enabled local people living a sustainable life in terms of school and surrounding as well as social, cultural, economical and behavior. The Vele school is located in the Province of Limpopo in South Africa and was built

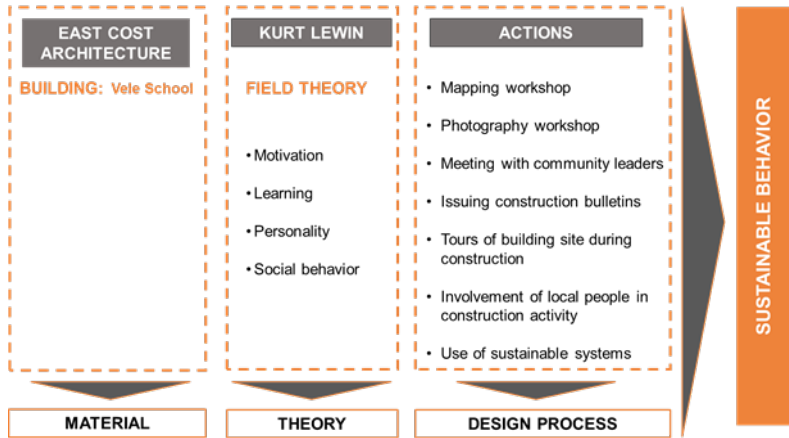
in 1960 (URL-1). Redesigned by East Coast Architecture in 2009, the school and its surroundings have made the lives of local people sustainable in terms of social, cultural, economic and behavioral aspects (Figure 2). It is a project transformed from a dilapidated rural learning facility to a South African community resource which teaches us to embrace both its environmental and cultural heritage (URL-1).



Figure 2. The initial and final version of Vele School

Using field theory, Lewin studies the operation of a dynamic system developed by Gestalt theorists, where each part influences the others. Since the habitat is a system and a Gestalt, any change can have unintended consequences if it does not understand how that change will affect other forces in the living space (Lewin, 1936; Lewin, 1942). Therefore, the process of building a living space is not a linear, but a gradual approach procedure (Lewin, 1936: 17). The designs of sustainable architectures also need to be realized gradually, both for the sustainability of the building and for the user to adopt sustainable behavior. The desired sustainable goals will be achieved by interconnecting the stages in the design process. In this direction, Vele School's design process was examined through the concepts of motivation, learning, personality and social behavior. (Table 1). By matching these behavioral concepts with the actions of architects, sustainable behavior was emphasized in the collaboration of the material-theory-design process.

Table 1. Sustainable Behavior Model in the Collaboration of Material-Theory-Design Process



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Tradition

Urban/ City/
Landscape/ Rural

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Lewin explains motivation, that is, his views on the driving forces of the individual, through the relationship of balance and tension. There is a state of balance between the individual and his/her environment, and when this situation is damaged, tension occurs. He states that the organism takes action in order to go from tension to balance. A number of personal factors such as age, intelligence, gender, special abilities, and environmental factors such as family, friends, and living environment affect behavior. When Vele School's design process is examined in the context of the concept of motivation, the map workshop, photography workshop, meeting with community leaders, issuing construction bulletins, site tours during construction, local people's involvement in construction activities, and the use of sustainable systems are matched to the concept of motivation. These actions are all such actions that motivate the user and local people to sustainable behavior. In the map workshop, the concepts related to the maps of the area and satellite images were introduced to the students at the school. All students were given satellite images of the school and its surrounding areas, and they were asked to draw their routes to the school and their special places with colored pencils. The architects, who turned the map workshop into a fun activity, interacted with the students. Making it fun to acquire route information to and from Vele School is an action that increases the motivation of both students and architects. The map workshop enabled to discover the difficulties which the students face while traveling to and from school.

In addition, in the photography workshop, the architects gave the students a camera and asked them to photograph their surroundings. Photographs taken by students were displayed. Considering the economic situation of the local people, giving a camera to the students and exhibiting the photos taken is an activity that increases the motivation of the users. Photo exhibitions and meetings with community leaders are a sign that architects value the users. Actions such as site tours during construction, local people's involvement in construction activities and the use of sustainable systems enabled users and local people to receive training on sustainability on-site. Seeing the practices in place has been a source of motivation for the adoption of the systems in the school (Figure 3).



Figure 3. Architect and student in the map workshop; Giving a camera to the students; An image of the photography exhibition (from left to right)



Lewin's theory views learning as a relative process in which a student develops new insights or replaces old ones. According to the theory, learning is not a mechanical process that connects stimuli and responses within a biological organism. Field psychology explains the development of insight as a change in the cognitive structure of the living space (URL-3). When the design process of Vele School is examined in the context of the concept of learning, the map workshop, photography workshop, site tours during construction and the local people's involvement in the construction activity match the concept of learning. In the map workshop, the architects learned about the physical, cultural and social assets of the place, whereas the students and the local people learned by experiencing the building construction-production process during the construction site tours and the local people taking part in the construction activities (Figure 4). These actions enabled the students and local people to learn material knowledge, use of materials, and construction of sustainable systems. Experiencing and observing the stages in the construction process personally led to the development of the users' insights. In the photography workshop, the architects had the opportunity to learn the skills and local materials of the local people.



Figure 4. The student who draws his own route in the map workshop; Site tours during construction with students; Local residents and students engaged in construction activity (left to right).

Personality and environment are in constant communication and exchange. As a result of these exchanges, the individual relieves the tension in the parts of his/her personality and maintains his/her balance. Thus, the most important element of the living space that affects the personality of the individual is the environment and the interactions with it. When Vele School's design process is examined in the context of the concept of personality, the photography workshop and meeting with community leaders match the concept of personality. In the photography workshop, users took photos of the daily lives of the local people in the surrounding area (Figure 5). With these photographs, the architects have defined user characteristics such as local people's culture, personal specialties etc. At meetings with community leaders, architects gained the trust of the local community and these meetings allowed architects to get to know the characteristics of the community.

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Arts/ Aesthetics



Figure 5. Photographs of the daily lives of local people in the photography workshop

When the design process of Vele School is examined in the context of the concept of social behavior, the actions of using sustainable systems and issuing construction bulletins match the concept of social behavior. The project includes rainwater collection and storage, solar power for computers, electrical submetering and display for energy management and education, green roofs, dry compost toilets, biogas diggers for cooking, passive low energy design for natural lighting and ventilation (URL-2). All of these features are clearly present in the school design. For example, the student who washes his/her hands in the system made in the toilet clearly sees that the water goes to the irrigation system outside through the canal on the ground. Sustainable systems have enabled local people to acquire knowledge and skills in the economic use and recycling of their limited resources. The visible presence of these systems in the building has brought environmental awareness to the society. With the issuance of the construction bulletins, the local people's adoption of Vele School was ensured (Figure 6).



Figure 6. Sustainable systems and published construction bulletin at Vele School

When the design process of Vele School was examined, East Coast architects planned some actions to define the user profile, know the environment and improve their designs. When these actions are evaluated in terms of motivation, learning, personality and social behavior, it is observed that some actions match more than one concept. For example, the photography workshop matched with the concepts of motivation, learning, and personality. The photography workshop has been a versatile source of information for architects about users. Matching all actions with the concept of motivation shows that actions that affect user behavior are motivation-driven.



INSTEAD OF CONCLUSION

It is still debated that sustainable buildings linked to sustainable education can have a significant impact on environmentally responsible behavior through integrated technical and pedagogical interventions in the design, construction and operation processes (Clarke and Pretlove, 2010). By involving users in the design process, it is possible to embed sustainable features in behavior.

Examined in the context of motivation, learning, personality and social behavior concepts in Lewin's field theory, Vele School was designed by East Coast architects taking into account the individual's behavior and user profile. East Coast architects have ensured that the built environment is sustainable through their actions for local residents and students. Thus, it has increased the potential of behaviors to achieve sustainable goals.

Vele School; with its design, education, sustainable and inclusive approach to continuous learning, the importance it attaches to property, and its economic, cultural and recreational connectivity, has become a model applicable to a wider community. On-site practical training was provided to the local population and the community was involved in the construction activity outside of the design process. Thus, the public was directly acquainted with sustainable systems. In this project, which uses the possibilities at the maximum level, a campus layout has been created that makes sustainable behavior possible for both students and local people.

This paper, which looks at sustainability studies from a "other" perspective, claims that the user can adapt a sustainable behavior by the inclusion of behavioral theory in the architectural design process and accordingly, the realization of actions such as map and photography workshops, meeting with community leaders, issuance of construction bulletins, site tours during construction, participation of local people in construction activities and the use of sustainable systems. The actions taken during the design process of the buildings were evaluated in the context of behavioral theory. Therefore, the perspective of other architecture has been brought to sustainability.

East Coast architectural office has realized a design that succeeds in making life sustainable with its observations, dialogue with the public and design criteria it has set. As a result, this paper suggests that sustainable buildings can have a significant impact on environmentally responsible behavior through involvement in the design, construction and operation processes.

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Figure 3. <https://docplayer.net/42380082-Vele-secondary-school-limpopo-context.html> (Accessed: 2020, May 20).

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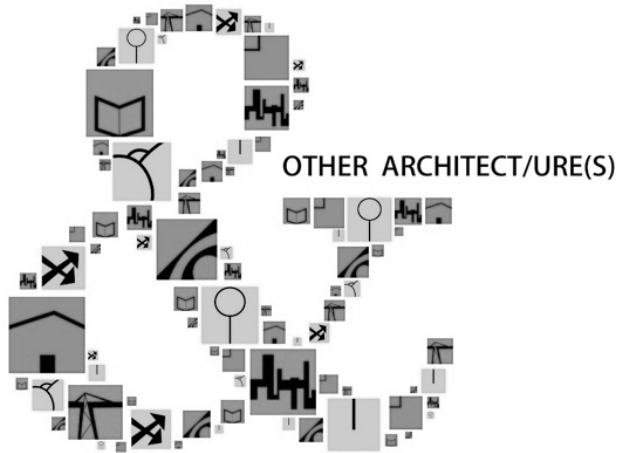




PART IX

INTERIOR DESIGN

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ANALYSIS OF INTERIOR SPACES " BACK TO THE FUTURE " FILM SERIES

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ABSTRACT

Cinema is a brunch of art that touches the viewers point of view and opens different horizons in the imagination of the audience as regard the structure of its fiction and innovations. This structure is related to many branches of art and science. Especially space fiction is closely related to interior architecture. A film is a series of features related to the period he wants to describe with the interior design. Considering these characteristics of the films, the film series of back to the future has been studied in the scope of the study.

Many time periods have been processed in this series of films. Some of the spaces used in the processed time zones remain the same as functions. Some places are shaped according to the popular culture of the year. In the past time periods, interior space conditions were determined in the study. The year covered in the future cycle is 2015. The ideas for 2015 were considered as an innovative concept. Today, the status of the innovations envisaged in the 2015 time frame has been revealed. It has been determined whether or not these ideas have been realized. It is explained which technological developments are covered by the innovations envisaged within the scope of interior space.

Key Words: Back to the Future; Interior Architecture; Technology and Interior.

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INTRODUCTION

Today, many technological and scientific developments have gained speed. For this reason, in the light of technological and scientific developments, the search for innovative ideas plays an important role in almost every field. However, different ideas envisaged in some sectors where imagination is at the forefront can be processed even though they are not implemented. The cinema industry is one of them and has the ability to reach a very large audience. Both the writer and the director, with the imagination of a film taken today can tell 100 years ago, as well as transfer the future. With the existing developments, the anticipated innovations are processed in a space layout and conveyed to the people. There are films that can be seen as building blocks in the cinema sector that can touch people's perspectives and open different horizons.

The back to the future is a series of films that have been filmed with the concern of innovation and have mentioned a lot of names in the eighties and are still in effect today. In the past, present, and future cycles, the film focuses on three years in which characters travel through time. It represents the past, 1955 and 1985, now, 1985, the future, 2015. It is an important factor in the selection of this series, especially in the context of the study, that 2015 takes place in the concept of films. Because the technological developments of 2015 were projected in the series, the interior designs are in the scope of the developments that have occurred today and are in the recent past. Another important factor is the technological developments experienced between the years selected in the series, which affect the organization of residential interiors. In this context, the aim is to show how internal spaces are examined, how technological developments are reflected, and how much 2015 technology is captured in the Past-Present-Future cycle in the films.

In the general fiction of the study, the interaction between cinema and interior design was first mentioned. In the next section, general fiction was introduced in order to introduce the future films. In addition to the brief descriptions of the films, the presentation of the spaces will be discussed. In addition, the effects of the film series from the time they entered the screening to the present day were mentioned. In the third part, the layout of the house was mentioned. Developments in housing interiors; the years taken into consideration in the film series were transferred. Comparative analysis of the interior design in the films are presented in the tables. Various determinations were made in these tables. The final part of our study included the results of the analyses.

Interaction Between Cinema And Architecture

Cinema is a branch of Art where stories that have been edited are transferred to the audience in cooperation with different disciplines. Many architectural elements are used in the transfer of stories to the audience. Because, Interior Architecture and architectural disciplines create spaces that will exist with human beings, create and transform spaces designed



with human existence and life. The spaces designed in cinema are already experienced in the scenario [1].

The area defined by the film frame, even if it does not contain architectural elements, is a perception of space conveyed to the audience and at the moment this frame is made, at least the plan boundaries of an area are drawn. All films are made up of a series of plans and are separated into a series of plans [2].

Each image created for a movie story is the realization of the reality contained in the fiction. For this reason, each film re-produces its own spaces, establishes relations with architecture by creating images, takes advantage of the space and the architecture that created it, corrupts it, interprets it or installs new meanings [3]. As a space in real life varies from individual to individual, film venues are different depending on events and individuals. In this context, the art branches of cooperation are Cinema and architecture. While architecture creates these with real elements, cinema aims to create a real sense [2]. Architecture and cinema combine in the concern of creating space. There is a relationship between them in this sense.

The relationship between the two branches of art can also be explained as follows. With its technical development, cinema plays an important role in creating spaces by displaying all the elements and objects within the space within the frames it creates. The fact that the concept of space lies on the basis of architecture makes it interested in cinema. As the relationship between architecture and the art of image develops, new concepts of space are born [3]. In cinema art, a lot of images are used in the space created on any stage. By associating these images with architecture, it is aimed to convey the desired feelings and thoughts to the audience.

While spatial images are created, all our senses play a role in the formation of spatial images and spatial images are used in cinema to create meaning through symbols. For example, concepts such as House, Street, city, staircase, door, contain spatial image symbols and they reach the audience's perception through cinema. Architectural images create the basic dramatic and choreographic rhythm of all films. Architecture, other artistic and cultural activities; it is a complex network in the context of creating spaces for these actions, in the context of methodological partnerships and intersections, as well as in the context of being a source of inspiration for each other. Especially because cinema creates visual images transmitted in the mind of the subject, it comprehends the experiential dimension of space very strongly [4].

This relationship between cinema and architecture ensures that both disciplines are affected by each other. The desire to create set designs more realistic or more surreal pushes designers and directors closer to their co-operation. The ability of the film to create an environment in order to convey the understanding of architecture of time, to provide visualization of a certain architectural idea, to convey different experiences in the space visually, keeps the relationship between architecture and cinema alive [5].

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Architecture, interior architecture disciplines and cinema interaction, in the light of all the conveyors, have emerged in order to make space processing more useful in films and have improved day by day. Especially in "back to the future" film series, which are discussed within the scope of the study, the innovative ideas for 2015 were discussed within the scope of the interior and transferred to the audience.

Presentation of Back to the Future Film Series

Back to the Future is a series of films that have been mentioned much in the 80s and are still in effect today. The first film of the series, consisting of three films, was produced in 1985, the second film, 1989 and the third film in 1990. Directed by Robert Zemeckis, co-scriptwriter Bob Gale and executive producer Steven Spielberg. The film series, which is considered as part of science fiction, adventure and comedy genres, is the American production. Michael J. Fox in The Lead Role. Fox (Marty McFly), Christopher Lloyd (Emmet Brown), Crispin Glover, Lea Thompson and Thomas F. Wilson is located. The first film of the series, 39. Best Supporting Actress in a Motion Picture-Comedy Or Musical: "Black Swan" "The Fighter" "Inception" "The Kids Are All Right" "The King's Speech" "The Social Network" "Toy Story 3" "True Grit" "Winter's bone" "Winter's bone" At the Golden Globe Awards Best Film (Musical or Comedy), Best Original Song has been nominated in the category Best Feature Film [6].

In the past, present, and future cycles, the film focuses on three years in which characters travel through time. It represents the past; 1955 and 1885, now; 1985, the future; 2015.

A young man with a sense of emptiness and a sense of emptiness tries to save his life from a mysterious supernatural curse. In the first film of the series, Back to the Future, Marty, a high school student, is a scientist. With the time machine invented by Emmet, it is processed to go back to 1955 as a result of accident. During this journey, Marty's actions will affect the present future and the events that took place to correct it have been discussed. The second film is about Marty's going to the future to prevent his family from going to the future. In the last film, the time machine was destroyed during the trip in 1855 as a result of being stranded.



Figure 1. Banners and DVD covers for "Back to the Future" series [5].

In the first film; past, in the second film future and in the third film the journey from the past to the present has been told. Although they describe time travel in the series with such factors as fashion, change of food understanding, especially with the help of places emphasized. They conveyed the reflections of the new habits of people entering into their lives in the change of time with the creation of the same building in different periods of time with different functions. Some places, however, are kept constant, and the changes over time have been conveyed by keeping pace with technological developments. However, in the course of 1885, 1955 and 1985, they used the technological developments known and experienced, while they predicted the technological developments of 2015. This Fiction opened the door to the idea of an innovative space fiction for the audience at the time of filming.

3. Back to The Future Film Series Interior Design

When examining interior design in the future film series, the time zones that are first discussed in the series are classified. Four time zones were determined. These are 1885, 1955, 1985 and 2015. After this determination, the layout of the site was examined. At this stage, the places which remained fixed in time zones and which were described in the process and which were left completely fixed were determined. Following these classifications, tables were created in accordance with the data and the findings are given in the explanation section. Materials used at this point, functions, spatial organization, technological developments in accordance with the criteria were determined. Table 1 shows the general layout. City fiction, the living area of the site and signs and banners were examined.

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Table 1. Examination of General Space Editing

	1885	1955	1985	2015
General View				
	There is not much structure. Scattered settlements are available. The building boundaries are not clear.	The space limits have become more pronounced..	City view has been reached.	Site housing type is foreseen. Protected housing type example is processed.
Lyon Estate				
	It's not available.	It is planned that Lyon estate, as an example of the settlements built with the site system, will be built in a large plot on this date and the introduction of the site has started.	Life began in the settlement. It addresses middle-income families of the period.	The settlement continues to serve with residences that have adapted to the technologies of the period.
Sign - Banner				
	Although the settlement seems primitive, it displays a clear view on the signs.	It is emphasized that the consumption community started with colorful advertising banners.	Advertisement, the announcement is not stationary points, used in vehicles.	There are signs that can stand in the air. A more complex panel has been created.







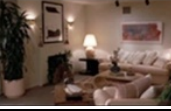





Urban fiction has been developed and addressed. In 1885, the settlement began to take shape and continued its development until 2015. In 1885, the residences were built alone, unprotected and distance from each other. However, when they came to 1955, it was stated that the work of the site had started, and it was shown that life had started in 1985. In 2015, the existing site was made more protected and adapted to the projected technology.

Table 2 shows the interior design. Housing entrance, living room, dining area is considered as housing sections. In addition, the layout of the house belonging to the character of the doctor was examined under a title. Because in this fiction, the spaces are intertwined and the laboratory



function has been added to the House. For this reason, a title was created with this layout.

Table 2. Examination Interior Design

	1885	1955	1985	2015
Door-Entry				
	There is no entrance hall. The door opens to the living room.	There is no entrance hall. The door opens to the living room.	There is no entrance hall. The door opens to the living room.	There is no entrance hall. The door opens to the living room. The door lock system is designed as a mechanism that opens with finger print.
Living Room				
	Spatial organization is based on fireplace. Materials are left intact.	There is use of wallpaper. The curtains were used in two parts. The throw pillows on the seat a few pieces were used.	Soft colors have been used. The seat was used as a team. Has increased the number of throw pillows that are used on the seat.	Soft colors are used. He used wallpaper. Color perception in the space is provided with a reinforcement. The seating elements were chosen independently from each other.
Dining Room				
	There is no spatial distinction in the housing. The dining area is determined by a table.	A portion of the room is reserved for the dining area. The allocated section is highlighted with specific limited elements. Round table is used.	The dining area is shaped by the position of the television. There is no space solution associated with the kitchen. The section reserved for food is highlighted by boundary elements.	The dining area is solved in the kitchen. It is foreseen that an artificial fruit tree on the table is activated by means of sound sensors and that it is served by landing on the table.

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Doctor's House				It's not available.
	It has been solved as an office and a residence. There is no specific limit. It was resolved by the equipments of the period and a dim environment was exhausted. Wood material is felt as dense.	It has been solved as an office and a residence. There is no specific limit. Although lighting equipment has been used frequently, it is designed as a dim environment.	It has been solved as an office and a residence. When taken according to the period, equipments that could be called classical were used.	

The technological developments in Table 2, which are collected in four headings as door-entry, living room, dining area and Doctor's residence, are examined, spatial arrangements shaped in accordance with these developments, equipment used. Different locations in different years were processed using the doctor's residence. In general, it is considered as a dispersed space where functions are nested. In particular, the reflection of technological developments in the door entrance and dining area has been clearly reflected. In addition, in the field of spatial organization, television has been introduced. In 1955, when television was used for the first time in the dining area, orientation at the table was towards television. In 2015, a separate space was set up for television and telephone communication on a single screen. This building was built with a large screen and one single-seater seating equipment. In Figure 2 there are images of the space allocated for communication.











Figure 1. 2015 Housing Communication Room

In Table 3 there are other places that are processed in the film series. A so-called Cafe, the school and the gym within the school is discussed.



Table 3 Examination of Other Space Editing

	1885	1955	1985	2015
Cafe				
	Designed as a bar used only by men. A dim place was created, lighting elements were not placed too much.	It is built as a cafe. Although ground illumination is used, there is a muffled air throughout the place. There are also seating elements in the café which can be used today.	It was created as a reserved place for gymnastics, the popular sport of the period.	It was created as a nostalgic venue in 2015. A place called the '80s café was created in many period items. The seating elements were left the same as they were used in 1955.
School	It's not available.			It's not available.
	School fiction has not changed.			
Gym	It's not available.			It's not available.
	Although no changes have been made to the gym layout, it has been resolved as a flexible venue. In different years, it has been designed to meet the needs of different concepts.			

The place used as a café was left fixed in the film series. However, the function has been changed in time zones according to popular culture. In 1885, the place was designed as a meeting place for male users only. Today, it is possible to match this place with the bar, cafe culture. In 1955, it was considered as a café that targeted high school students. In 1985, this venue was worked as a separate gym for gymnastics, which was prominent in the sports of the period. In 2015, the venue was transformed into a nostalgic café. The school was staged only in 1955 and 1985, and there was no noticeable change. The gym has been used as a flexible venue. Sometimes it is considered as an area of choice, and sometimes it is considered as a venue where the ball is held.

CONCLUSION

Back to the future film series has become a very popular film in the years when it enters the screening. Today, the film series remains popular. Opening a fantastic perspective to the future has been an element that increases the popularity of the series. In the context of the study, it is important to have 2015 in the recent past. In addition to this, the situation of the spaces that respond to the same function in different years has been taken into consideration and the subjects of the operation of the same place

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in series with the change of function. In recent years, the interiors of the films were examined in the sense of Interior Architecture, envisioned future space designs, with past space designs were examined and revealed. The survey was conducted in three headings as general layout, interior layout and other layout.

General layout of the city, Llyonnate and signboards are grouped as. At the end of the review, it was determined. These findings are as follows;

- The way of life has been transformed into a self-contained and protected order by moving away from the society that spends time together and works together.
- Technology manifests itself at every point and there are examples of signs hanging in the air.

Interior designs were taken as door-entry, living room, dining area and doctor's residence and the following results were obtained.

- The lock system opened with finger print is foreseen and this is a system with application today.

* There is orientation in the seating areas and it is shaped by developing technology. In 1885, the orientation was towards the fireplace and television in the years when television entered the houses.

- Wallpaper usage is always available in the zone. However, in 2015, there are places built with minimalist designs.

* Equipment has increasingly reached a minimal line.

- The use of color in the space has become clear as it approaches the present day.

• There have been changes in the food area over time. However, a special analysis has always been done for this field. In 2015, artificial nature was created and associated with this dining area.

- The doctor's residence has been handled more uniquely. More than the technological developments experienced, the character's own production systems are included in the space. The equipment used has adapted to the time.

In the title, which is considered as other space fiction, cafe, school and gym were studied. As a result of the examination, the following results were obtained:

* In the first years, wooden-material-weighted equipments were used in the café space, which was kept constant in the film series.

- Fixed accessories were used in the building with cafe function between 1955 and 2015.

• There is no change in the school and gym. However, flexible space is available.



As a result of the examinations carried out in the tables, specific results have been obtained. As a result of these results, more general judgments have been obtained. These judgments are listed as follows;

- People need more protected living spaces over time.
- Technological developments have taken up a lot of space within the housing. Over time, it has been created as a necessity rather than a luxury. Today, this judgment has been realized.
- Food areas are of the nature of the gathering areas and are resolved at important points within the housing.
- * In 1885 spatial organization in the housing is more limited. This is because housing is small and needs are minimised. Spatial organization has evolved over time.
- * One of the factors affecting spatial organization is technology • In today's houses, dining areas, seating areas continue to be used for television.
- * The interior style is increasingly simplified. A minimal space was built in 2015.
- Most of the projected technological developments are available today. The locking system, which is opened with finger print, is implemented within the scope of smart home technologies such as voice sensor and command.

As a result of the analysis of the film series, which works for a hundred years, the people observed in residential type today prefer minimal interior spaces, which are more sheltered, more complex than in the past, and which are shaped by technological advancements.

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THE FREEDOM OF THE INTERIOR ARCHITECTURE IN EDUCATION: ABSTRACT THINKING, LEARNING BY DOING AND THE DIGITAL AGE

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ABSTRACT

The essence of teaching; In the physical and mental education model with the student, the material and experimental process has now disappeared, although there are more resources and possibilities. It has been replaced by digital platforms that are frequently used by the z generation we are in. Today most of the design studios have an applied (practical) education model underlying from the Ecole des Beaux-Arts and Bauhaus art and design schools. These schools, which are pioneers in vocational education are based on an education model that aims to increase the level of awareness, understanding and ability of students with the principle of learning by doing.

Studio classes could be more prone in order to the perception of the z generation, it can be supported with technology. Although we live in the information age; by the help of technology access to information is maintained quickly but cannot be used sufficiently this turns in a vicious circle. The help of technology by its self is not enough in education; a mixed model can be prepared in which we can also integrate the contributions of sensory learning. This mixed learning would be able to support students with abstract thinking, learning by doing and the possibilities of the digital age era.

The main reason for doing this study is that the same chains of thought that have shaped the West in the development-oriented approaches that have been formed since the Renaissance were broken at some point with the approach in these dynamic schools, but for some reason, apart from our so-called practices, we actually moved away from this education.

Key Words: Studio; Education; Bauhaus; Z Generation; Art & Architecture.

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INTRODUCTION

What makes architectural education special and privileged is that it focuses on learning by doing and experiencing (Schön, 1985: 89). Therefore, studios form the structure of architectural education for learning design through self-experience and design classes. The main purpose of studio training is to develop the creative potential, creative thinking and attitudes of designer candidates. Unlike the classical classroom settings in the education environment; design disciplines have studios for interactive learning. Studios which could be considered as the heart of design education, is significantly different from traditional education spaces in terms of the types of problems it deals with, the teaching methods and the communication styles it requires. In the interactive teachings of studio classes different methods are/could be applied. Some of these methods basically aim to develop the creative thoughts of the students while some of them aim to develop 3-dimensional thinking and form creating skills. In this experimental teaching process, the student should acquire structural and sensory information, material, texture and detail at the same time and be able to produce the most appropriate solution to the studio problem given using all of the collected information from the learned material.

We can identify the key concepts of the design studio as criticism and communication. The first phase in this research, the transformation of studio culture and criticism in design education from École des Beaux-Arts to Bauhaus will be examined; before the concept of criticism in design education which we will read through participants, environment and learning. The disconnections of the student-teacher or master-apprentice relationship in studio education will be considered. Today's education is going to be questioned because it forms a gap in multi-dimensional teaching (material, detail, structure, design, 2 and 3 dimensional perception) by the digital channels.

Today most of the design studios have an applied (practical) education model underlying from the Ecole des Beaux-Arts and Bauhaus art and design schools. These schools, which are pioneers in vocational education are based on an education model that aims to increase the level of awareness, understanding and ability of students with the principle of learning by doing. The vocational education model, which started with the Ecole des Beaux arts and continued as a master-apprentice relationship, continued with the Bauhaus after the industrial revolution with different additions. These kind of schools with multi-education systems has shed light on the future education. Being an innovative and pioneering education model in history, during the 20th and 21st centuries. The effects of these school's teachings which form the basis of art and architecture schools, continue to be felt in the background today, in Turkey and in many parts of the world.

Looking at design education as a big puzzle, there are many pieces that complete this whole. Some of these courses like basic art education, design studios, aesthetics are parts that aim to develop students visual perception, mental, sensory, critical and aesthetical features. These classes also aim to manifest the artistic and aesthetic parts of design teaching. Some



parts consist of courses such as design knowledge, theory and concepts that support the theoretical infrastructure of design. In the same way, the technical knowledge and the language of expression of design, such as structure knowledge, technical drawing, and expression techniques are other parts of this whole. The changes which are required by the time zone should be applied by the studios which are the centers where the design language is taught. This inevitable need for change and renewal; constantly questions the need and design methods therefore it keeps the design studios alive. Design studios have undergone many changes in the historical process until they reached today's understanding of education.

Evaluating the transformations of design studios in the historical process, which started with the master-apprentice relationship in design education. The first period is a period in which there is no architecture school and therefore no design studio in the design education process under the influence of master-apprentice. This period is defined as a period in which the architect is at the forefront with his craftsman identity and the candidate architects are brought up in a master-apprentice relationship (Uluoğlu, 1990: 2-3). Ciravoğlu (2003: 43-47). The teaching process in this era takes place by the master working and the apprentice watching and helping him, this era also emphasizes that the master has absolute superiority over the learner.

The second era; begins with the establishment of the French Royal Academy, the first independent architectural school. This period is considered as a turning point in the discipline of architecture, as it forms the basis of the architectural education's break with the traditional educational practice. Although this model broke new ground in architectural education, it also preserved the master-apprentice relationship of craft education. In this period, when institutional education started to be given in the academy, the student, besides theoretical education, the student also carries out design studies in the office of an academican (master) outside the school (Schön, 1985: 89; Uluoğlu, 1990: 31-34).

The third era is the period when the Ecole des Beaux-Arts education and practice are integrated with the school and the studio is institutionalized with architectural education. "Académie des Beaux-Arts" founded in 1648, is known as having two departments Painting and Sculpture. Architecture in Ecole Des Beaux-Art dates back to 1671. Ecole des Beaux-Arts is the first well-established architecture school that provides the closest education to the method applied in today's design studios and plays an important role in the development of architectural design education.

Ecole des Beaux-Arts education is also important period to be the first studio system with the jury evaluation (Kuhn, 2001: 349-352; Doidge et al., 2000: 25). In the Ecole des Beaux-Arts education, it was believed that the end product should describe the process. Educational importance is directed towards the product itself rather than the process of producing the product (Uraz, 1993). Ecole des Beaux-Arts, which has been dominating architectural education for a long time, weakened with the spread of the modernist movement, the German curriculum from the Bauhaus was

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influenced by the first half of the 20th century, and educational models replaced the academic tradition.

In terms of architectural education, the First World War represents an important age in time due to the traumatic environment and pressures (racial pressures, political pressures, war effects, etc.). During the time being when the war started until the Second World War; the migration process of scientists from all disciplines and designers-architects-academics to America continued. The school of Bauhaus which was established; is a school based on the basic idea of unity in architectural education. Embracing all areas of architectural creativity under the supervision of the master. Educational programs include experimental studies to introduce students to the main principles of creative actions underlying the visual arts.

Student-teacher interaction and teaching methods with this interaction have gained importance with the education system of Bauhaus. Founded in Germany at 1919 by the German architect Walter Gropius; Bauhaus, was an institution that radically influenced art education. The Bauhaus understanding; aimed to create an environment suitable for the mutual interaction of both fields of interest by removing the wall between applied arts and fine arts. The education-teaching principle applied at the Bauhaus was built on the workshop system that would develop skills. However the aim was never to train artisans. Workshops were used as research laboratories; the modules required by the industry were prepared in these workshops. For the first time in Bauhaus, designs were prepared in order to meet the requirements of the industry, and prototypes were made in textile, glass and ceramic workshops; production was developed in factories. The society had the opportunity to use designs brought to life by artists for the first time.

Education and training were gathered in three main branches of art, architecture, painting and sculpture. There was no distinction between liberal arts and applied arts in education. Seeing the common roots of fine arts and design arts, Gropius aimed to re-establish the ties between artists, architects, craftsmen and industry, thus this would be uniting art and industry. This way the Bauhaus school became an education center formed by the idea of the industrial age. As a result of the need for design in the field of industry, a new architectural form emerged, in which instead of the ostentatious decorations, natural and simple forms became more reconised. The elegance in sipmle design solutions and plain arrangements took the role of the mass. This new form taught the society to use new material as well. An interdisciplinary understanding of art such as painting and sculpture was being integrated under one roof. Painting and sculpture were coming out of the museums and were serving the arts by taking their place in a building designed with brand new materials. As a result, a new understanding developed with the contribution of all visual arts to the integrity of the building.



In the Bauhaus system, a new aesthetic understanding emerged with the art and design works. The artist, who was in the act of creating, learned to use different techniques simultaneously and to develop a rich expression style without damaging their independent character. According to Bauhaus principles, art was held above all methods. Art could not be taught, however craft could. For this reason, workshops were established. In Bauhaus there was no teacher-student but instead a master-apprentice relationship. A strong bond school and life, art world and industry was established. Bauhaus had become a school to raise the type of artist to respond to the needs of the society and also have Social responsibility. In education, the boundaries between fine arts and applied arts disappeared, and an education system aiming to bring art into a close relationship with life through design was implemented. This attitude of Bauhaus made a great contribution to social change and cultural revival. The basis of today's design studies, the basis of basic arts education, developed within this Bauhaus understanding. This period allows the student to develop freely, to learn by doing and get rid of stereotypes. In this period, educational methods that could motivate students began to be sought. In the studio education at Bauhaus, emphasis on creativity and free and active participation of students in the work of masters were considered to be the heart of teaching. The studio platform, is a place where the master-apprentice relationship is considered to be more integrated (Uluoğlu, 1990: 36-38; Arıdağ, 2005).

After the Bauhaus was closed by the Nazis in 1933, the principles and design methods of the Bauhaus studios somehow kept alive in all design and architecture-based schools. This was maintained throughout the leadership of refugee intellectuals, who immigrated all over the world especially to America at the times. This process marks the beginning of the "criticism phenomenon" for the architectural schools. This medium of authenticity adds a symbolic value that creates status for these schools. The 1930's can be considered as an important transition period for the reason of, the transformation of the studio culture as of processes, contexts and channels of criticism.

Although there is no clear definition in the literature regarding the early practices of the criticism system and juries in design education, it has its origins in the École des Beaux-Arts in 19th century France (Carlhian 1979 & 1980; Chafee 1977; Egbert 1980; Kostof 1977; Middleton 1982). There is general consensus on the issue. Ecole des Beaux Arts; serves the understanding of "classicism" based on classical Greek, Roman and Renaissance architecture, and reveals its structure that does not allow critical inquiries and new perspectives.

Although 'Ecole Des Beaux-Arts' exhibits a structure where competition is important, educational aspects such as the direct importance of the product itself rather than the development process of the product. It has been criticized over time with its aspects to be negative. Because of the assumption that the design can be developed and taught with intuitive methods and that it is predominantly based on existing talent. Also the studios provided to be a one-sided flow of information from the master to the students. 1920s were the years when the Bauhaus emerged by

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proposing a new scheme of teaching and learning. Bauhaus aims to highlight creativity, imagination and individual expression possibilities. The idea that aims to free the student (apprentice) from the dominant influence of the academician/teacher (master) and from the conditioning is important for the transformation of design education.

In this period, where modern architecture, mass production and technology dominated by the "machine" phenomenon has become the new tool of design; with the influence of the German approach the Bauhaus School rapidly affects all design disciplines, from industrial design to graphics, all over the world. However, the school also has similarities with the Ecole Des Beaux-Arts. Today most of the design studios have an applied (practical) education model underlying from the Ecole des Beaux-Arts and Bauhaus art and design schools. These schools, which are pioneers in vocational education are based on an education model that aims to increase the level of awareness, understanding and ability of students with the principle of learning by doing.

Today's design studio should be defined as a place that continues this principle and not only informs the student, but also accustoms them to find the way of behavior and gives the habit of thinking with this purpose. However, in parallel with the economic, social, cultural, environmental and technological changes in the world, there is a transformation in design education as well. This change is design in studio education, which should have a dynamic structure, the teachings should be verbal and sensory (physical); In order to be more prone to the perception of the z generation, it can be supported with technology. Now there are more resources and possibilities. But somehow the essence of teaching; In the model of physical and mental education with the student, using material and the experimental process seems to be lost. This experience is replaced by the digital platforms which the z generation uses frequently. Although there are outputs (by-products) that support the product work more, but however the transfer of knowledge weakened. As a result of the rapid transitions in the information age and the lack of ties in education; There have been disconnections in the mental bond/communication between the master and the apprentice, the purpose of knowledge transfer and professional orientation has been lost and its effect has decreased. As a result, it also caused a decline in the professional knowledge of the master (academician).

Although we live in the information age; by the help of technology access to information is maintained quickly but cannot be used sufficiently this turns in a vicious circle. The help of technology by its self is not enough in education; a mixed model can be prepared in which we can also integrate the contributions of sensory learning. In this process, together with the knowledge and experience of the master (academician); there may be a mutual work with the students due to the undoubtedly fast adaptation of the z generation to technology. In this new educational model, more free interior architecture education can be maintained away from the prototype standardized learning. This free learning would be able to support students with abstract thinking, learning by doing and the possibilities of the digital age era. After all these discourses, the studios can organize the innovations



in the education curriculum that will keep up with time. The point we want to draw attention to is; while the effects of Ecole des Beaux-Arts and Bauhaus schools continue in the background learning of art and architecture-based schools; we also lost.

In today's understanding, it is not enough just to have a good design product at the output of the design activity in the studio. The important thing is not only to design, but to gain a way of behavior about how the design is done. In this sense, the questions of "what is design education, how it is given and how it should be given" are gaining more and more importance in today's design schools (Arıdağ, 2005).

The dynamic and mutual education system of the studios, has transformed itself into a more uniform and more theoretical structure over time. One of the biggest reasons of this is the disadvantages digitalism brings forth. This brings the inability to make sketches and therefore to design seems to loose its values. The fact that students do not have a good command of the digital programmes they use in the drawings drawing their projects/designing gives them a handicap. At this point the design programme commands the design with as far as the user has ability to use it. Students, who receive support from ready-made templates and libraries in digital programmes, have difficulty gradually moving away from the spirit of originality in designing. Following the critics/critisims to determine the path of design given by the master/academician gets difficult. Projects that cannot be kept within the criticism given by the academician falls in the failure of uniformization and standardization. Looking from the student's point of view, while it is their most natural right to want to use the technology at their disposal, allowing this in the first years actually prevents and dulls the yawning for design and learning in their brains. Manual hand drawing, which is seen as simple, actually helps the student to reveal the creation in their brain directly without using any other tool. The development of this skill reveals that the student actually adapts to the profession. An individual who has a profession does not need any auxiliary apparatus (any other tool) to design. This will be a point a summary of their sufficient knowledge and experience. It can be a method to remember the dynamic and mutual education in the studios and the design principles underlying the Bauhaus and to adapt and use the successes of the education model given there.

CONCLUSION

As a result; The question of "How can we teach better" has led us to be questioned as "How do people learn" today. In this context, learning with multiple methods; Can be applied in studios. Our proposal is focused on the development of new strategies and tactics in order to support the rapid information acquisition of the z generation and to keep the knowledge of the academicians fresh. It is to ensure that they are aware of the transitions between learning and knowing, and to improve their interpretation and understanding skills. The master/apprentice relationship dynamics at the Bauhaus can be adapted to the present. Adapting the technology and use of new materials to the era of today's education. By adding additional-

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functions to the studios, it can be supported by practical application within the scope of studio lessons. Multifunctional learning can also be achieved by integrating the internships available in interior architecture schools into the courses. Taking the example as in the Ecole des Beaux-Arts; The studios can be divided. By that the studio classes could be divided some part of it conducted in the studio with the interaction of academicians and students and also outside the studio, with an interior architect. This innovation can facilitate the adaptation of generation z. While the student continues a part of the studio lessons in the classroom environment with the academician, they can learn while working actively in a place in the continuation of the course. While this plural learning method offers the student the opportunity to be more active and familiar with the market, it will always keep new details and material knowledge active. In the parallel relationship between learning and teaching, when the student shares his/her new knowledge with the teacher/academic, this mutual communication will cause the academician to refresh their knowledge as well.

As academics, we find it important to benefit from innovations while keeping up with the times. However, we have learned by living in the last two years that only digital learning is not possible. Especially during the pandemic process caused by the Covid-19 virus experienced all over the world, the education model in schools has turned into an online form to prevent contamination. Disruptions in learning in the new order, which we have all experienced in this process, and the inability of the live studios of design and architecture schools to be online, caused problems. Digital classrooms, where academicians only provided verbal support, have greatly made learning and teaching difficult. However, another important problem that exists and emerged during the pandemic process has grown too much! This can be expressed as students refusing to learn and making projects by cheating. This problem, which was possible at all times, has unfortunately grown bigger now. The reason for this is that at the end of the day, the studio where the student and the academician can meet has disappeared. In the online courses, the student was able to use all the excuses and unfortunately this could not be prevented. In this highly permissive process, the fact that the student does not draw by hand does not allow us to understand whether the digital work is their's or not.

Hand drawing or manual work is important because it has the quality of a fingerprint, it is like a person's signature. Of course, there are many conveniences that they can benefit from in the age we live in; which academicians are not against. Before digital channels provide the final product quicker. This situation breaks the academician's trust against the learnings of the student. Thus in order to overcome this problem; it will be important that the students who work digitally have their works with plenty of criticism and that the project stages go in the direction of the academicians leadings. Projects are works carried out and developed together, and in order to achieve this, it is necessary to proceed and resolve step by step. In design studios, a uniform method of criticism is generally not applied, since the purpose of criticism is to open the design for discussion on a multi-dimensional ground with its multi-input networks, with all its process and objective data. Criticism should take place in an



environment of intense interaction with reciprocity and continuity, not with one-off individual criticisms. In some cases, it may be necessary to take a step back and re-evaluate. At this point, the possibility of plural education can be as follows; It makes it easy for the student to eliminate any tricks or illusions that only work in a digital way. At the same time, they have more information flow and can gain a greater perspective. What we want to support is the survival of the teachings of the Ecole des Beaux-Arts and Bauhaus schools, which underlie today's schools. It is aimed not to move away from the master/apprentice relationship logic of these schools, but to also integrate and continue today's digital opportunities in live studios.

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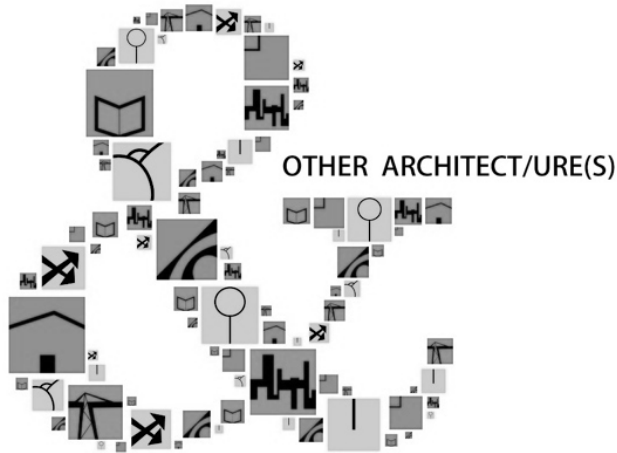
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PART X

CONSERVATION TRANSFORMATION / RE-USE

LIVENARCH VII
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HOUSE AS MUSEUM OF THE OTHER MUSEUM AS HOUSE OF THE OTHER

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ABSTRACT

The gathering together of meaningful objects, organised and arranged in specific sequences in a special space, produced a 'script' to be 'read' (Hooper Greenhill, 1992:126). Through these scripts, museums have been classified as archaeology, ethnography, geology, military, etc. Therefore, objects could be seen as driving the museums. On the other hand, there exists a place that is at the centre of everybody's everyday life, but outside of the object typology of the museum, and which can mean more than the coming together of a collection. The ideas of a house as a museum of the other or a museum as a house of the other will be investigated in this paper by looking the position of House Museum in museum and heritage professions, and research areas.

To achieve this, over 150 house museums in the UK are investigated through organisation understanding and scholars' categories. Visiting spaces, archival visits, mapping and online visits of the museums are used as primary research methods, and critical literature review about house museums is the secondary research method.

Key Words: Museum Research; Typology; House Museum; Object Relationship; Home

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INTRODUCTION

Museum as House of Objects

Museums aren't simply full of artefacts from the past: they are also full of ideas, inspirations, and memories from the past (Spalding, 2002, p.13); they are the place of communication between past and present, they are the "treasure-houses of the human race" (Ambrose & Paine, 2006, p.6). As long as this treasure continues to exist and grow, museums will take an interest; but this evolution, unpredictable growth and invisible change is today's challenge for museum (Spalding, 2002, p.7-11). Therefore, to respond to the challenge, museum organisations explain their function and purpose differently, based on their history and culture. There are two mains, and slightly different, definitions.

According to the International Council of Museums (ICOM) Statutes, adopted by the 22nd General Assembly in Vienna, Austria, on 24 August 2007, the current definition is as follows:

"A museum is a non-profit, permanent institution in the service of society and its development, open to the public, which acquires, conserves, researches, communicates and exhibits the tangible and intangible heritage of humanity and its environment for the purposes of education, study and enjoyment."

However, as mentioned above, ICOM accepts the changeable dynamic of museums. Therefore, the Museum definition which s the backbone of museums was discussed in the 25th ICOM General Conference held in Kyoto in 2019, and they aim to propose the new definition to vote on the next ICOM conference in 2022.¹

In the same year, The Museum Association (MA) in the United Kingdom organised a conference in Brighton and one of the inspirational questions was "What is a museum?" The MA has not changed the definition, but the discussion was around the growth of the meaning of museums. Heal (2019) offered the last definition of museum in the keynote presentation to the Museums Association:

"Museums enable people to explore collections for inspiration, learning and enjoyment. They are institutions that collect, safeguard, and make accessible artefacts and specimens, which they hold in trust for society."

When we look at these two main definitions, the main difference is that while ICOM mostly is focused on the transmission from one to another, MA mentions collection and accessibility.

¹ To learn more about the conference; https://icom.museum/wp-content/uploads/2019/08/ICOM_Kyoto_2019_En_LD.pdf



These different defined paths of museums draw a parallel with the birth of museums. According to a community of scholars, the Great Library of Alexandria is the first example of today's museums (Erskine, 1995, p.38-48). The library was the place for thoughts rather than a collection of objects. However, in English culture 'Museum' has a stronger connection to objects (the cabinet of curiosity). "The first use of term 'museum' in English was in 1682 by Elias Ashmole to the University of Oxford" (Ambrose & Paine, 2006, p.6). Though this movement, the private collection of objects became public. Today's museum, meaning as a 'cabinet of curiosity' was no longer only intended for the well-to-do. This could be also read as a first act of becoming public. It was the arena for representation, entertainment and informing visitors; it brought semi-public windows upon institutional activities (Arnold, 2002, p.29).

The cabinet of curiosities, usually found in houses, which is the direct ancestor of modern museums (Hooper Greenhill, 1992, p.104) was a way of seeing life through the eyes of the collector. The gathering together of meaningful objects, organised and arranged in specific sequences in a special space, produced a "script" to be "read" (Hooper Greenhill, 1992, p.126). Indeed, this gathering together was relating more meaningful things than just objects. However, in the early days of museum development, this message was not well enough understood. Collections were brought together to exhibit based on the similarities, decorative, schema, broad type, and so on in the late seventeenth and eighteenth centuries. Later, in the 1920s and 1930s, discussion about architecture and its object relation in a museum context was started. Space started to be important as much as objects. Art and artefacts also changed through time and sometimes paintings were treated as a three-dimensional object. Performance arts started to be exhibited in museums.

House Being a Museum

House museums, often referred to as Historic Houses in the UK, are places where people find individual and social memory. Sometimes these memories come from famous people or aristocratic families but sometimes the house has also been important from a typological, architectural, or artistic point of view. There are various terms to describe this particular memory experience in the house: 'stepping back in time' (Claisse, Petrelli, Dulake, Marshall & Ciolfi, 2019), 'wearing someone else's shoes' (Claisse et al., 2019), 'time travel' (Mårdh, 2015), 'lifestyle' house (Cannon-Brookes & Allen, 2000), 'frozen moment' (Lewi, 2013) and 'walking through photography'. These explanations are a way of looking by experience. On the other hand, historic houses/museums bring two meanings in one: 'content' and 'collection' (Naumova, 2015 and Pavoni, 2001). In other words, these heritage sites are a cornerstone where public history and domesticity meet. It would not be wrong to say that this type of museum has two main parts: to describe 'the place' and 'the place's experience'. Looking through a similar lens, Walker Guban (2013) draws a theoretical framework of

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historic house museums through memorial function. She uses the essay of *One-Way Street* written by Walter Benjamin (1920). Walker Guban (2013) explains that the mediation of historic house directions is 'embedded memories in the house museum' and 'the personal memory that the visitor creates'. One of the complications of historic house museums is this dilemma. How will audiences gain the experience of the everyday practices of the past? Even a reading of the past and the present in the same sentence seems complicated enough. Therefore, creating a memory (Naumova, 2015), a narrative of the house museums (Cannon-Brookes & Allen, 2000) and imagining a house (Lopez, 2015) are common research topics in the profession.

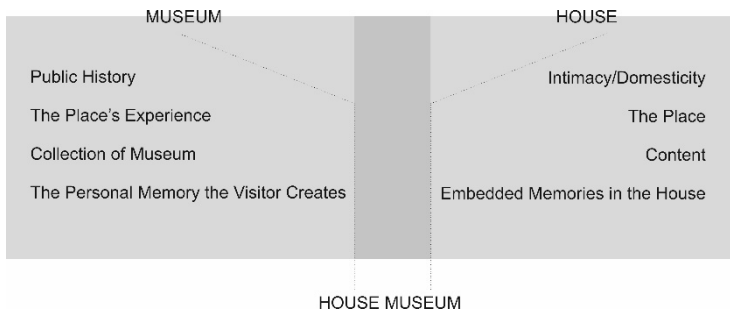


Figure 1. The Place of House Museum

CATEGORISING HOUSE-MUSEUMS

Historic/House Museum terminology is not clear in the professional and research area. The curator of the Stoneywell Cottage run by the National Trust, Simon Chester Thompson said that the house absolutely is not a museum! (National Trust Youtube Channel, 2015). Therefore, question have been raised about what makes a house a museum? Young (2017) gives an answer in her book: if the house is open to the public for regular hours and periods of the year, she sees the houses as museums. However, this is not a sufficient explanation. Why does Thompson not name the house in the same way as Young?

Hundreds of historic/house museums in the UK are owned, managed and funded by different organisations and trustees (Figure 2). More than 500 houses and properties are under the aegis of the National Trust and 250 of them are open to the public (Lithgow, Boden, Hill, Lithgow & Measures, 2012). Under the Historic House Association, there are more than 1600 independently owned historic houses; however, only about 320 houses can be visited regularly by the public ("Support every home. Share every story.", n.d.). Also, about 150 houses, forts and palaces from over 400 historic places are controlled by English Heritage ("Places to Visit", n.d.). Therefore, it is hard to provide a figure for the exact number of the historic/house museums in the UK. Many independent houses are called museums themselves, and most of the places run by the National Trust and English Heritage are not called house museums.

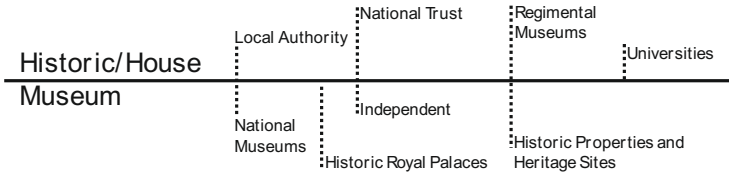


Figure 2. Diagram of the owners of Historic/House Museums



Figure 3. Accessible House Museums in the UK

One of the main researchers to study historic houses and their path to becoming museums is Linda Young. According to Young (2012) and her research (2017), about six hundred examples of house museums from English-speaking countries (the United Kingdom, the United States, and Australia), can be categorised under six main titles: Country, Artwork (Design), Historic Process, Heroes' Houses, Collector Houses and Sentimental (of no great historic interest) (Figure 4). However, the most crowded category is Heroes' House Museums from these English-speaking countries. In addition, there are a considerable number of country houses in the UK. However, there are some problematic explanations and points which are not fully covered about becoming historic house museums in her research (Morris, 2019).

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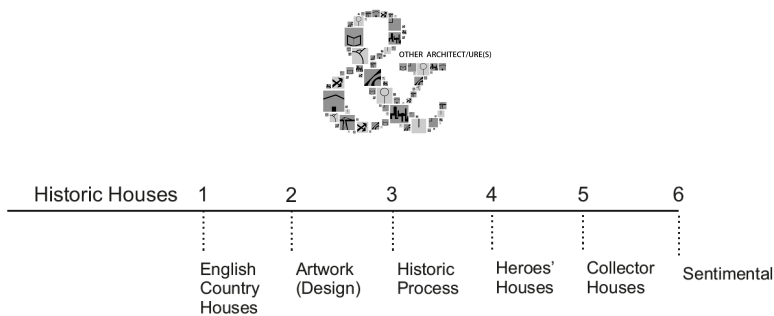


Figure 4. Diagram of the categorising historic houses according to Young's research.

The categorising of historic houses by Young shows that there are places that are hard to identify. The category of 'Sentimental' includes places that do not belong to the other categories, while 'Heroes' Houses' could be listed in more than one place. Heroes' Houses are associated with someone important in the fields of art or politics, or with a mythical figure of national importance who once lived or visited (even once) the house (Young, 2007, p.63). She counts almost 50 Heroes' Houses and argues that the majority of them are associated with writers. There are some grey areas about Young's listing of the houses (Table1). In the Heroes' Houses, walking through the building allows for celebration of public identity and national culture. In this way, the visitor can become acquainted with the national hero, his/her character and achievements. Based on Young's researches, Heroes' Houses need to be further understood and researched. Heroes' Houses could equally well be categorised under Collector Houses, as in the case of Sir John Soane Houses. She mentions in 2007 that the Soane House Museum was the first house museum in the UK; however, in her later research from 2019, she refers to the house as the second British house museum. Considering Newstead Abbey, Nottinghamshire, there are some unclear explanations about whether Lord Byron is a heroic figure, or whether the building should be classified as a generic stately home museum (Young, 2007, p.65).

Table 1. The table of the sample of Heroic Houses mentioned by Young.

	Location	Runs by	Notes
Abbotsford The Home Of Sir Walter Scott	Roxburghshire	The Abbotsford Trust Independent	The first Heroes' House museum in the UK (Young, 2012:3)
Shakespeare's Birthplace	Warwickshire	Shakespeare's Birthplace Trust	The second British Heroes' House was Shakespeare's Birthplace in Stratford (Young, 2012:3)
Sir John Soane	London	Private Trustee	Earliest British House Museum. Young (2007) mentioned that the Soane Museum is the first house museum in the UK; however, she also refers to it in her recently published work in 2019 as the second British House museum.
Washington Old Hall	Washington Durham	National Trust	Ancestor heroic figure (Young, 2007:65)
Newstead Abbey	Nottinghamshire	Nottingham City Council	Lord Byron could be categorised as a heroic figure but the Abbey could also be a generic stately home museum (Young, 2007:65)

Houses run as museums pose a problem: they are not always using 'museum' in the title, and scholars are not able to categorise or define these places. In order to clarify the categories and produce a definitive list of



historic houses, publicly accessible houses in the UK were surveyed via online searches and travel guidebooks as a start point, then ten museums from different types were visited. The tabulated survey of Historic Houses in the UK shows examples of the 150 properties surveyed from different funders of the UK (in this paper small part of the general survey table is shared, see Table 2). The surveyed houses were investigated from the viewpoint of owners/funders. Study of the survey of the historic houses in the UK shows that different titles are given to houses open to the public. While professional organisations/trustees use the term 'house museums', the National Trust categorise their properties as Historic Houses. None of the National Trust dwellings is referred to as a museum.

Table 2. Tabulated survey of the House Museum visits by the researcher.

Website	Location	Who lived there?	Keywords	National Trust	Independent Or Others	Visual Artist	Architect & Architectural Significance House	Visual Artist	Artist Birthplace	Artist Home	Artist Studio-Home	Artist Gallery
Main Case Study - Leighton House Museum	https://www.leightonhousemuseum.org/	London	Sculptor & Painter Artist	Artist owner	Council (The Royal Borough of Kensington and Chelsea)							
Hogarth's House	https://hogarthshouse.org/	London	Painter 'Father of British Painting'	Artist owner	Council (London Borough of Hounslow)							
Turner's House	https://turnerhouse.org/	London	St Margarets (now Turner Original Design)	Artist House	Independent Turner's House Trust							
Doric House Museum	https://www.dorichousemuseum.org.uk/	London	Dorich House is the former studio home of the sculptor Dora Gordine and her husband the Hon.	Artist Studio Home	Kingston University London							
Red House	https://www.nationaltrust.org.uk/red-house?camp=craftsites_nct_1&With_Deal=1304&mc=12045157382499&_ga=2.167488932.438960068.2022743605.016	London	Textile Artist Morris & Co	Artist owner	NT							
Henry Moore	https://www.henrymoore.org/visit/henry-moore-studios-gardens	London	The artist's former home, studios and sculpture gardens.		Henry Moore Foundation							
The Hardman's' House	https://www.nationaltrust.org.uk/hardmans-house	Liverpool	Presented as it was in the 1950s during the height of their business, the house and all of the Hardman's' original possessions perfectly preserve what life was like for this talented couple. From < https://www.nationaltrust.org.uk/hardmans-house/features/things-to-see-and-do-at-the-hardmans-house	Artist owner	NT							
Barbara Hepworth Museum and Sculpture Garden	https://barbarahepworth.org.uk/	Plymouth	o Artist in residence o Guided Tours o Family Activity trails		Owned and run by Jettie.							
Hill Top	https://www.nationaltrust.org.uk/hill-top	Cumbria	Beatrix Potter studio house	Writer house Beatrix Potter Time capsule of her life	NT							

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Table 3. Tabulated survey of the House Museum visits by the researcher.

House Museum	Location		TripAdvisor Keyword	Keywords by self-observation
Handel and Hendrix Museum	London	Independent The Handel House Trust	His Life Great Man House Museum	Combination Museum Musician Life Two in One
Hogarth's House	London	Trust the London Borough of Hounslow	Soane Museum Paintings Exhibition	Interactive House like home
The Hill House	Helensburgh	National Trust for Scotland	Beautiful House Rennie Mackintosh Architectural Gem	Artwork Significant House like home in a museum box
Leighton House Museum	London	The Royal Borough of Kensington and Chelsea	Artwork Beautiful House Domesticity	Artwork / Studio Artist Life Significant beauty
D.H. Lawrence Birthplace museum	Nottinghamshire	Broxtowe Borough Council	His Life Fascinating insight Guided Tour	Time travel House like home Back in stage Combination Museum
Dennis Severs House	London	Private	Silk Weavers Folgate Street Unique Experience	Time travel House like home Back in stage
Turner's House	London	Independent Turner's House Trust	St Margaret's Jmwr Turner Original Design	Artist House City Escape
18 Stafford Terrace- Sambourne House	London	The Royal Borough of Kensington and Chelsea	Introductory Video Victorian Life Excellent Guided Tour	Time Travel Behind the stage House like home
The Georgian House	Edinburgh	National Trust of Scotland	Get the scene Volunteer Guides Old Town	Time Travel Behind the stage House like home
Wollaton Hall: Home	Nottingham	Nottingham City Council	Stuffed animals Wayne Manor Beautiful Building	Hall like museum Broken relationship

As part of the same research, to understand how the community refers to a house museum, the 'TripAdvisor' travel website was used. This website shows the three most commonly used keywords on the first page (added and coloured green in the tabulated survey). In addition, other keywords in a light blue box were generated by the researcher through online self-observation methods (Table 3). The findings through keyword research on the tabulated survey show that there are different understandings of the houses. One of them is the story of who lived there; therefore, the app creates the keyword 'His Life'. The second discovery is that visitors are calling the house a 'proper National Trust experience'. It shows that the National Trust properties have their own language to serve historic places. The third keyword is 'step back in time'. It is like stepping onto a stage. These three main findings shaped by visitor experiences inform the research area. Through these three explanations it can be deduced that historic/house museums could be investigated through object-driven research. Then question then arises: what is the object of the museum? Is it the house itself, the story of the house, or the experience of the house created?

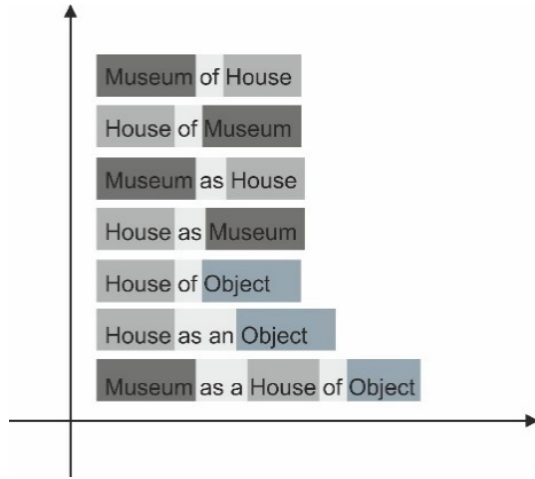


Figure 5. Diagram of the logomachy of the house museum

CONCLUSION – SUMMARY

Houses which are available to visit as museums are 'the other' in the museum world and are also not being fully run as heritage places. Most of these places are not home to live in for someone any more; but they are also not a place that as intended to be a museum itself. The value of the story, objects, life, people, and memories within a dwelling means that it becomes publicly important.

In summary, there are large numbers of historic house museums in the UK, and single-category listings will not help visitors and researchers to understand the story of the place and its attraction as a museum. Young's research opens up new directions for researchers and museum professionals; but as she herself mentions in her book *Historic House Museums in the United States and the United Kingdom*, the topic is a large one which requires further in-depth analysis.

As a result, one typology for house museums is insufficient to explain these places. Some houses could be read as a museum experience, a house-like-museum; others are museums-like houses. In order to design and curate these special places, the most important element, which affects the whole visitor experience, is this decision of what to reflect: a museum, a house, or something between the two.

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INFORMATION AND COMMUNICATION TECHNOLOGIES IN ARCHITECTURAL CONSERVATION: PRACTICE AND POTENTIALS IN THE POST-PANDEMIC WORLD

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ABSTRACT

The COVID-19 Pandemic was a global crisis and has changed many aspects of daily norms. Conventional working habits and order are also affected by this sudden crisis. Digitalization of the process and the new working order define “other” norms for this new paradigm. The paradigm shift due to the restrictions of the Pandemic can be the appropriate medium shift and an opportunity to transform the whole system in an “other” kind of public service with all the necessary infrastructure has already been used for almost couple of decades now in different industries.

Conventional operations in architectural conservation field are still being handled in conventional, printed mediums and kept in physical archives although most of the process of any operation has already been digitalized. As a result of this digitalization, two different problems occur; first one of them is digital mediums are not used as efficiently as the technology allows and the second problem is about knowledge management and archiving of the documents.

ICT is the key to solve these problems in different scales and depths. Many alternative approaches have been tried and many others will be according to the definition of the future problems in architectural conservation field. Especially health related factors will reshape the conventional working formats in the near future. The new norms will be the key of the transformation from the “normal” practices to the “other” alternatives for the Post-Pandemic world.

Key Words: ICT; Architectural Conservation; Pandemic; Virtual Heritage; Artificial Intelligence



INTRODUCTION

Today people work, socialize and deal with daily errands via mobile phones and computers. People got used to this new “normal” so quick that, when the COVID-19 Pandemic started to become a global crisis a year ago, the transformation process of the analog to digital working order was almost smooth, compared to the similar paradigm shifts. This has two main reasons, one of them is that the working methods have already been enhanced with Information and Communication Technologies (ICT) for the last couple of decades and the other reason is the Pandemic broke out when the emerging technologies were announced or were about to be. As a result of this situation, quick actions can be taken against the Pandemic by adapting the new studies and emerging technologies.

On the other hand, most of the governmental operations in terms of architectural conservation are still being handled in conventional, printed mediums and kept in physical archives although most of the process of any operation has already been digitalized. There are many reasons for this situation; the staff that uses these technological devices may not be capable of adapting this change, the infrastructure can be insufficient for an efficient medium usage, or the documents can be in a printed format and the digitalization process could take more than what has been roughly estimated. As a result of these alternative causes, two different problems occur; first one of them is digital mediums are not used as efficiently as the technology allows and the second problem is about knowledge management and archiving of the documents.

Thus the paradigm shift due to the restrictions of the Pandemic can be the appropriate medium shift and an opportunity to transform the whole system in an “other” kind of public service with all the necessary infrastructure has already been used for almost couple of decades now in different industries. The new norms will be the key of the transformation from the “normal” to the “other” so this paper aims to review the use of ICT in architectural conservation field and discuss their potentials and further developments in a post-Pandemic world.

Method

In the scope of this paper useful technological advancements for data gathering and knowledge management areas were examined in order to discuss how to adapt them innovatively in architectural conservation field to define the borders of the “other”. In the selection of the examples, existing framework for architectural conservation and its intersection with the ICT is explained. Technologies being used and their potential uses in this field especially in the new approach of working methodologies in continuing architectural conservation practices were tried to be mentioned. In the conclusion part a post-Pandemic scenario is tried to be pictured in order to discuss what possible alternatives there might be in the foreseeable future.

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Definition of the problem

There are many theories about the interrelation between data, information and knowledge. Constructional know-how is a form of information that passes from the master to the apprentice in the beginning and it becomes knowledge when the apprentice has enough experience to make that information useful. When the professionals construct a building, that knowledge is recorded in the form of a building itself. Later an experienced observer or professional can get the necessary knowledge from that data and use it for their purposes. This can explain the relation between data, information and knowledge in architecture [1]. The possessed data is not written or told but the subject of the conversation; the buildings or the sites, which can be gathered under the term “Cultural Heritage” (CH), are the source themselves. By interpreting the data from the document itself, which is the built outcome, gives us the knowledge about the building techniques, materials, socio-cultural or socio-economic status of the users, et cetera. Hence the CH that are subjected to conservation are not only important because of their physical entities but also with the data embedded in them. This actually means that these cultural properties should be conserved due to their importance as a form of document they are either. As the cultural properties are also defined as the document, data recorded as the building, the intersection of these two topics, ICT and architectural conservation, offers a lot in common and a great potential.

There are two important points about data; one is how it is gathered and the second part is how it is stored. The collected data becomes knowledge when it is understood. Gathering the data from the building and then eliminating the false or unnecessary ones is only possible when the operators are experienced in their professional fields. ICT enhance the operators during the process. The interpretation of this data is based on experience and this means, both in analog and digital worlds, repeating the similar processes so many times that it becomes easier to understand or practice in the long run. This whole methodology is pretty much the same in architectural conservation as well with few differences.

Gathering the data

As mentioned above dealing with the data is on two main points. For the first part, it is about how to gather the data for architectural conservation. Architectural surveying is the main method for the gathering data (Figure 1). To explain the process quickly, surveying is the exact opposite way of project design. In the conventional project design process, professionals draw, design and explain the project on a representable medium, which is mostly paper, and then the project is realized and the idea on paper is become a solid object. For the surveying, a solid object, either built or realized, is measured and then drawn on a representable medium, which is mostly a computer program, and then the representation of a solid, three dimensional object is transferred on a drawing.



1. Surveying	1.1. Sketching	1.1.1. Horizontal plane sketching 1.1.2. Vertical plane sketching
	1.2. Measuring	1.2.1. Manual measurement
		1.2.2. Digital measurement
	1.3. Photographic Recording	1.3.1. Photographing interiors
		1.3.2. Photographing exteriors
		1.3.3. Photographing details
	1.4. Scaled Drawings	1.4.1. 1/500 & 1/200 Site plans
		1.4.2. 1/200 Street elevation
		1.4.3. 1/50 Floor plans
		1.4.4. 1/50 Ceiling plans
		1.4.5. 1/50 Roof plan
		1.4.6. 1/50 Elevations
		1.4.7. 1/50 Sections
	1.5. Detail Drawings	1.5.1. 1/20 System details
		1.5.2. 1/10, 1/5 & 1/1 Detail drawings
	1.6. Material Analysis	1.6.1. Structural elements
		1.6.2. Decorative elements
	1.7. Deterioration Analysis	1.7.1. Structural elements
		1.7.2. Decorative elements
	1.8. Period Analysis	1.8.1. Existing elements
		1.8.2. Vanished elements
	1.9. Survey Report	1.9.1. Printed copy
		1.9.2. Digital copy
2. Restitution	2.1. Archive Research	The completed drawings from the Surveying phase is used as a base for this step and these titles are processed on the surveying documents
	2.2. Period Analysis	
	2.3. Typology Analysis	
	2.4. Restitution Project	
	2.5. Restitution Report	
3. Restoration	3.1. Data Analysis and Intervention Decisions	The completed drawings from the Surveying phase is used as a base for this step and the intervention decisions are made regarding to the restitution project
	3.2. Restoration Project	
	3.3. Restoration Report	

Figure 1. Restoration project preparation steps for the minimum document requirements according to the resolution no. 660 of Council of Monuments

Storing the data

After gathering all the necessary data, the following part is about how they are stored (Table 1). Based on the data interpretation, a multi layered knowledge becomes the output of this process. This means the output is a complex combination of different data input brought together by experienced professionals. The possible cause of the related problems is the insufficiency of representation and archiving medium for this data. Existing archives consist mostly printed materials or manuscripts from the first hand. This situation is limiting the accessibility of these documents. Digitalization of these documents is possible by scanning these documents but that process causes segregation among the documents. Written

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documents can be digitalized with this method but is the same method also is not that useful for the drawings or other visual materials. When the visual document is scanned and represented in a flat, single layered format, no matter whether a printed drawing or a photo of that drawing, transferable data gets limited due to the restrictions of the medium. In these cases additional information becomes a necessity rather than a preference. So the need for different mediums or methods of data storage becomes evident under these circumstances.

Table 1. Gathering and digitalization of different levels of data for architectural conservation

Gathering Metadata	State archives (National Level)	Regional Councils' Archives (Regional Level)	Municipality Archives (District Level)	Family Archives (Individual Level)	Professional Contribution (Protocol Analysis)
Digitalization of Data	Legislation, Regulations, Standards, etc.	Resolutions, Court decisions, Special provisions, etc.	Zoning status, Town council decisions, building bylaws, etc.	Pictures, Memoirs, User experience, etc.	Professional opinions, approaches, intervention decisions, etc.

Studies and practices about the intersection of ICT and architectural conservation fields

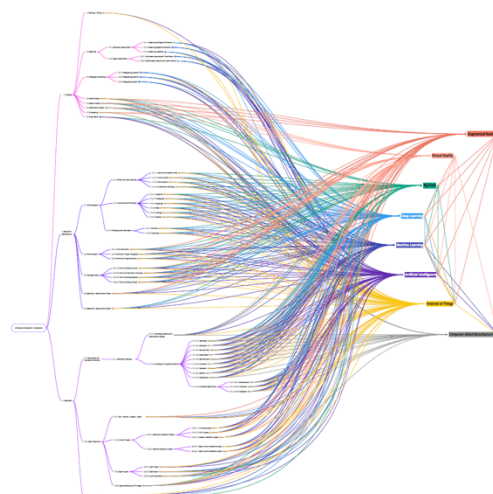


Figure 2. Correlation graph between ICT and architectural conservation project preparation steps according to the chart in Figure 1.



Architectural conservation is a complex and multi-layered field. Its relation with ICT is often focused on certain topics according to the studies that have been done and these fields can be named as; Augmented Reality (AR), Virtual Reality (VR), Big Data, Deep Learning, Machine Learning, Artificial Intelligence, Internet of Things and Computer Aided Manufacturing (Figure 2). These titles are not detailed enough to express every single relation between ICT and architectural conservation but they can be elaborated by examples or by their relations with similar fields and their usage potentials.

Several fields of ICT has examined for this paper both in practical and potential ways. Some of these fields are already in use and some are infrastructurally ready to be used. These fields can be named as; Augmented Reality, Virtual Reality, Mixed Reality, Big Data, Artificial Intelligence, Building Information Modeling and Decision Support Systems. All these titles are used more or less either in ICT or architectural conservation areas. In addition to these titles, sustainability and efficiency are also other important points and their importance is understood better during the Pandemic. According to the studies and reports of World Economic Forum and some other different organizations, individualism is supported in order to protect employees' health but this also leads companies and organizations to become more transparent about data sharing and encourage employees to work from home and digitalize their daily assignments as much as possible.

This is also shifting the working paradigm and setting new norms. The potentials of these technologies can also provide unlimited possibilities of solutions for the problems that are not yet detected but can be foreseen by educated guessing. So in order to keep the existing level or increasing the efficiency, transferring right amount of useful data to the employees is crucial. Decision Support Systems (DSS) are the most appropriate medium for this transformation as it provides wide range of solutions for people whether work together in specific office or individually away from each other [2].

One of the early studies in the beginning of 2000's was about overlapping different information layers collected in different mediums and representing this sum of information by using Virtual Reality (VR), Augmented Reality (AR) or Mixed Reality (MR) techniques. According to the study, in order to have an efficient data and information exchange, a specialized platform should be designed [3].

Surveying all the crucial data about the cultural properties and digitalizing them by using the right mediums naturally highlights a term; Virtual Heritage (VH). A digital and multi layered copy of the CH can also be used and enhanced under the guidance of different professionals from different fields and help professionals with semi-structured problems [4].

Overlapping the information gathered from the buildings or sites can easily be embedded on their virtual copies. This situation gives an advantage to the people, who are working on the conservation of that cultural property.

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The advantage is that in the built outcome, the data is embedded in the form, structure, material and other distinctive elements but on a digital platform every single data bundle can be shown or hidden according to the needs of the observer. Although other possible uses like position/orientation tracking, rendering/animation, or registration is also possible, this feature is mostly practiced under the reconstruction concept [5].

In terms of VH, digital modeling can unfold several different approaches like education, exhibition, exploration, reconstruction and virtual museums (Figure 3). Almost every approach is for examining different data layers interactively and in an interrelated way [6], which is for the restitution phase and rather be used for educational or research purposes. In some cases, both restitution and restoration phases can be studied and observed on the same virtual model. This data overlapping is possible if the project is reconstructed or digitally modeled in an appropriate medium [7],[8] and even possible to be stored in that format if the data entry method to the database is compatible with the medium. Also every case should be treated according to its specific needs and environmental limitations or sometimes environmental opportunities.

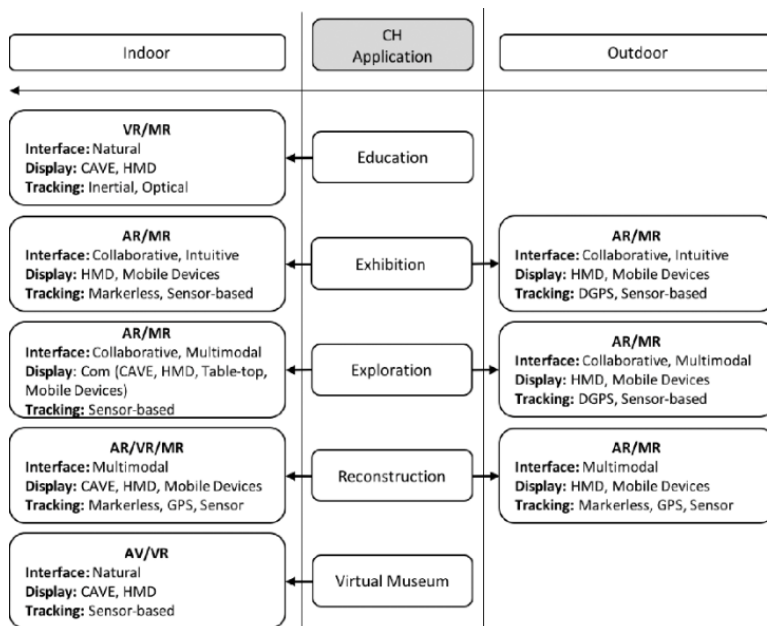


Figure 3. Technical requirements of augmented, virtual, and mixed-reality systems in indoor and outdoor settings for CH applications [9]

All these data gathering and storing methods, followed by some experimental practices within architectural conservation field. One of the studies was made in order to test these systems and find out whether ICT can help professionals to tackle restoration restrictions [10]. Another study is made for creating ontology based models of traditional architecture and



bringing together different domain knowledge from different professions. This approach is to create different levels of data for the professionals so that they can get the knowledge out of those models according to their levels and professions [11]. On one hand people try to find solutions for similar concerns or questions about this topic, and on the other hand developments in artificial intelligence (AI) studies leaped so forward that even domain knowledge or professional experience can be reconsidered or discussed in the near future.

In 2020 OpenAI released Generative Pre-trained Transformer 3 (GPT-3), which is a language model that is using deep learning to produce human-written like texts. This seems unrelated with the topic at first, but it was a giant leap in AI field and it was the messenger of further developments that will follow its footsteps. At the beginning of this year, In 2021, OpenAI released another program, which is called "Dall-e" [12]. Dall-e is an artificial intelligence program that creates images out textual descriptions. The interesting part is, Dall-e understands the natural language prompts and generates images more successfully than any other AI based programs could ever done [13]. This can also be the future of the data – information – knowledge relation and can affect the way of approaching to the topic or share the knowledge among experienced professionals or by the means of storing data. By using machine learning, the hard labor of data gathering and knowledge management of that data can be taught to AI based Decision Support Systems and a higher standard for workflow can be obtained.

Another problem for digital mediums can be handled by Non-Fungible Tokens (NFT). One of the major problems in digital platforms is countless number of copies can be produced from a file and tracking the original file was a problem. NFT provides a solution for this problem. By using the block chain technology, it is now possible to track the ownership of a digital document [14]. This is also important for archiving and managing the digital data that has been used in architectural conservation field.

CONCLUSION

The new paradigm shift for the last two years can lead to a drastic change in the way we perceive conservation. The way we have been approaching buildings, by the nature of convenient data collection, is reactive. In order to gather information about a building, there should be a problem that we need to intervene according to the solutions which have been tried before and noted as successful on other conservation cases.

The potentials of ICT can change this method and may lead intervention decisions to be made proactively according to the models and simulations to be made with sufficient amount of provided data. Getting familiar with the VH concept can open a vast, undiscovered area that can change the means or ways of conventional architectural conservation practices. Although

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these concepts and studies are made for more than couple of decades now, a general, user friendly method have not been in use for the end-users yet.

The new norms, born with the Pandemic can lead or maybe force researchers to develop user friendly solutions in the ways that people work, gather or store data and interact with each other professionally. CH will be standing and the data will still be embedded in them but the way professionals can get that data and use it in terms of knowledge and make intervention decisions will be enhances and even supported by AI in less than a decade assumably.

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OTHERIZING THE PLACE THROUGH BUILDINGS MOVED TO MUSEUMS

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ABSTRACT

Historical buildings that have lifetimes spanning long centuries faced different interventions according to the periods in which different approaches in the conservation issue. In the historical development process of conservation thought, it is possible to see examples in the world where the value of historical buildings is not sufficiently understood by the society and the government and cultural heritage elements are detached from the context of place as a result of the unconsciousness in this matter. Pieces/buildings belonging to rich civilizations such as Anatolia, the Middle East and Egypt were transported to different countries, sometimes illegally and sometimes by legal practices and they started to be exhibited in museums of these countries. Detaching these buildings from their original context and exhibiting them in a completely different environment is an application that ignores the notion of "spirit of the place" and is against the understanding of scientific conservation. Within the extent of the study, examples of historical buildings that have been moved from one country to another country and taken from the context of the place and exhibited in the museum environment will be examined through the notion of "the other". The investigated buildings have turned into objects exhibited in museums in London, New York and Berlin. This study, remind these buildings that have taken place in the cultural memory in their original space, will bring a criticism to the intercultural change that occurs as a result of the fairly legal exhibition of the buildings in the examined museums.

Key Words: Architectural Conservation; Intercultural Exchange; Moving; Otherizing; Spirit of the Place



INTRODUCTION

Historical buildings have witnessed different periods throughout their existence. Since the lifetimes of buildings are longer compared to human and state lifetimes, they have been exposed to different conservation practices. For this reason, the state's understanding of conservation and general attitudes and practices towards cultural heritage elements constitute the key point. The importance of historical artifacts, which increased with the French Revolution, led to the emergence of the tendency of powerful states to exhibit historical artifacts by collecting them. With the developing of museology, the possibility of transporting historical artifacts of states rich in cultural heritage has emerged. At the same time, the science of archeology, which emerged in this period, accelerated the interest in historical artifacts. The purpose of the use of monumental buildings is shaped in line with the needs of the period in which they were built and constitutes important representations in terms of architecture. In general terms, the monumental buildings in the city function in an integrated manner with the space in the memory of the city. Every monumental building that illuminates the history establishes a relationship with the place where it is located, and this spirit is reflected in the people of the city in an abstract sense. At this point, the concept of the spirit of the place (*genius loci*) is closely related to the concept of memory. The existence of the unique semantic depth of the historical building and the perceptibility/sensibility/assimilability of this depth by living people can only be clarified with the concept of the spirit of the place, which dates back to ancient times (Bali, 2019).

With the new period that started at the end of the 19th century, some historical buildings that were detached from the context of the place were moved to other countries to be exhibited in museums. While small-scale historical artifacts were generally stolen and moved, large-scale buildings and historical artifacts were moved either by force of diplomacy or by giving these artifacts to each other by countries as a result of an understanding far from conservation awareness. The states that are politically and economically strong form the first front, and they have seized the historical buildings of the states that are rich in cultural heritage but have insufficient means in every sense. The main reasons for this situation are that the conservation awareness in the mentioned period was not fully established and the conservation policies did not develop according to certain principles. At the same time, the confusion in the internal affairs of the countries prepared the ground for relocation. Although the transfer of buildings to museums generally started after the 19th century, there are some examples that were carried out after the middle of the 20th century and were moved from countries that were insufficient to conserve the historical building.

Within the scope of the research, attention will be drawn to some buildings that exhibited in museums by detaching them from the context of the place. The common feature of the investigated buildings; before they moved, they were included in the urban memory and then they were left to be forgotten in their original places. It is aimed to draw attention to the exchange between

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the states of England, Germany, USA and England, which are on the politically strong front, and the Ottoman, Egypt and Middle East countries, which have a rich history in terms of cultural heritage. The original location of the buildings, their meaning for the region, their detachment from the context of the place and their degree of adaptation to their new spaces have been questioned through the spirit of the place and the marginalization of the place. The results were obtained by discussing the effects of the transport action on the buildings, the original place and the point where it was moved. The spirit of place and othering concepts, which are considered important within the scope of the research, constitute the theoretical basis of the research. The importance of these concepts for the building and its environment has been emphasized by researching and interpreting the contents of these concepts. The buildings exhibited in museums around the world were identified and historical data was used to emphasize the past expressions and importance of the buildings through their location and environment. In this way, it has been possible to determine the place of the buildings in memory from the moment they were built. In addition, in order to examine the places where they are exhibited today, the data about the museums they are exhibited are also important.

Conservation approaches of the period in which the buildings were moved

As a result of the Renaissance in Italy and the French Revolution in France, the perspective on ancient works has changed and interest has increased. The negative impact of the revolutionaries' damaging and plundering historical artifacts during the French Revolution was effective in the formation of this situation. With the increasing interest in history in this period, the act of transporting historical artifacts to other countries began in the 17th century. With the increase in the value given to historical artifacts, small-scale historical artifacts were transported between countries legally or illegally (Erder, 1975). In some cases, it is seen that works are given as gifts within the scope of political relations, as can be seen in the examples of illegal ways to other countries. After the transfer of historical artifacts was accepted as normal for a period, it changed its size and turned into an act of allowing the relocation of historical buildings. There are also examples where historical building elements that are easy to transport such as inscriptions and doors were stolen. However, the relocation of the buildings is included in the category of state information due to its large scale. While understanding the importance to be given to historical artifacts in Europe; The fact that the conservation awareness in the civilizations in the Middle East is not fully established has made it possible to move the buildings. Since archeology is a new science in the Middle East, many archaeologists have conducted studies in these countries for excavation purposes. It is known that archaeologists who came to the lands of the Middle East for the purpose of official excavations carried from small-sized historical artifacts to building elements to their countries for alleged reasons or secretly (Bilsel, 2003).



In the museums within the scope of the study, in the important cities of great political powers such as London, New York and Berlin, monumental relocated buildings/building sections appear as a power indicator. Asian examples of these buildings are rare; Eastern civilization artifacts with Egyptian, Ottoman, Greek and Roman architectures can be seen. With the museology trend that started in Europe in the 18th century, an increase in moving transactions started. The idea of conserving, documenting and conserving old documents in the Ottoman period began in the second half of the 19th century. In the beginning process, a conservation approach has developed on the protection of historical artifacts within the borders of the empire. In this period, which started during the reign of Sultan Abdülmecid, ancient artifacts were collected through circulars sent to various provinces. With the promulgation of the Turkish Antiquities Law of 1907, the transportation of historical artifacts was prohibited by law and a sanction was imposed on the situation (Günaydin, n.d.). However, the fact that the Ottoman state, which was late compared to Europe, could not develop in the field of protection caused some unfortunate buildings to be moved to museums. As a result of the increasing interest in art, architecture and archeology with the Renaissance, developments in the field of museology began. The understanding of collecting was continued in the first museums in Europe. Since the middle of the 18th century, museology began to be considered important in Europe and museums took their places in cities (İhtiyar, 2013). In the mentioned period, private collections were presented to the public with a social function (Madran, 2009; İhtiyar, 2013). The museology trend, which reached serious dimensions with the 19th century, pushed European countries to show/exhibit historical artifacts. The era of city museums started around this time (Savaş, 2009). The effects of museology activities, which started in Europe and spread to other continents a century later. This situation gave the powerful states in Europe the opportunity to take the lead in exhibiting historical artifacts by incorporating them.

The importance of place in the criteria of originality and the concept of the spirit of the place

Authenticity in architecture emerges as a phenomenon that includes the original and unique features of a building. The state of being original is the basic criterion that reflects a fiction that changes in every building such as "spatial setup, form, material-technology and site-specificity" in an architectural work. Authenticity is the whole of abstract and concrete ideas that form the underlying idea by getting rid of the formal features of the building (Özorhon, 2008). While the concept of originality in architectural conservation includes the traces of the work's experience in the historical process, "true, real, sincere, original" meanings; It is described as the holistic perception of the historical self and essence of the building, along with its material, form, workmanship, function and location qualities (Jokilehto, 1985; Bülbül, 2016). When we look at the development process

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of the protection theory, which started with Italy and France and continued with England, and then evolved into regulations, principles and laws, it is seen that the concept of authenticity has been mentioned since the beginning. In the concept of originality, which is defined as the features specific to the building, the concept of place is one of the important building blocks that define the building. (Özorhon, 2008). The view on the concept of authenticity emerged as the protection of monumental works in their original form as of the 15th century and spread in Europe in the 17th century. In the period that started in Europe in the 19th and 20th centuries, it is aimed to explain the methods and principles of conservation principles and to define them with certain rules. (Erder, 1975). In the Venice Charter adopted in 1964, there is an expression that the building should remain in its traditional environment (Avşın, 2020). In the Implementation Guide for the Enforcement of the UNESCO World Heritage Convention of 1983, it was emphasized that the rupture of the work's relationship with the architectural or urban environment in endangered works is a problem that would risk its authenticity (UNESCO, 1983). The importance of the place is emphasized once again in the section of the originality criteria for the definition of outstanding universal value of the Implementation Guide for the Implementation of the UNESCO World Heritage Convention in 2005. The criteria of place, location, environment, spirit and emotion felt by the building reveal the relationship between the concept of spirit of place and originality (UNESCO, 2005). The fact that the building forms a whole with the spatial context shows that it causes a serious loss of originality in historical buildings that are moved to museums.

Since the second half of the 20th century, architects have begun to deepen and discuss the concept of place. Focusing on concepts such as place, spirit of place, sense of place, and sense of place in his works, When the concept of "spirit of the place" is examined, the old concept of "genius loci" is encountered. Schulz stated in his studies that the spirit of the place (genius loci) transforms the structural, psychological and perceptual relations of the human with the place into existential space. Human beings develop these types of relationships with their environment through the act of settlement (Schulz, 1971; Usta, 2020). Place; rather than being a shallow opening like location; living is a phenomenon that can be felt and participated in human life (Heidegger, 2018; Usta, 2020). People attach meanings to places by connecting to the context of place. (Usta, 2020). The sense of place and the spirit of place should be considered together with the regional characteristics of the area where the building is located, together with historical and cultural relations. The spirit of the place is an abstract concept that reflects the feelings it creates in the user and the urban architecture. Monumental buildings are included in the building groups with high spiritual potential, as they leave an impression on people with their architectural qualities. For centuries, the monumental buildings in the city have established an identity, relational and historical link between the individual and the building. The stronger the strength of the ties mentioned, the higher the concept of the spirit of the place (Özcan, 2019). When it comes to the marginalization of the place, there are two opposite sides as the original place in the settlement of the building and the place where it was moved. The bond that the building establishes with the place it is in is broken with



the relocation of the building and the marginalization of the place begins. The historical building establishes a cultural relationship with the place where it is located and this relationship takes its place in the cultural memory. Moving the historical building damages the cultural memory and results in cultural degeneration over time. The practices of carrying the historical building around the world are carried out if the potential situations that may occur in the original location of the building will damage the building. This is valid for compulsory situations, but it still damages the original state of the building and the spirit of the place. In general, it is possible to talk about the existence of marginalization, although the transfer is made to another location in the same city.

Evaluation of the buildings moved to museums in other countries in the world over the context of place

Xanthos ancient city Merehi Sarcophagus, Payava Sarcophagus, Harpy Sarcophagus and Nereid Monument

The original location of the Merehi sarcophagus, Harpy sarcophagus, Payava sarcophagus and Nereid monument exhibited in the British museum today is the ancient city of Xanthos, Antalya city of Turkey (Figure 1). When we look at the political history of the ancient city of Xanthos, its occupation many times shows that it was an important center. The ruins found in the city take the excavation scientists back to the 8th century BC. The city consists of two hills separated by the Xanthos river. (Acar, 2012). The practice of positioning churches and tomb buildings at the high points of settlements causes them to take place in the silhouette and contributes to the symbolism of monumental buildings.



Figure 1. Harpy sarcophagus, Merehi sarcophagus, Payava sarcophagus and Nereid monument (The British Museum, 2021)

While the Merehi sarcophagus, Payava sarcophagus and Nereid Monument, which are among the 4 historical buildings moved to the British Museum, were dated to the 4th century BC; The harpy sarcophagus is dated to the 5th century BC. Intense reliefs were engraved on all 4 works; they contain mixed Greek and Persian influences. In the Nereid monument, the traces of Roman monumental architecture are intensely observed. While the pedestals of the sarcophagi remained in their original places, the sarcophagi were removed from their original places. Marble material was used in the Harpy sarcophagus, which is the oldest among the moved

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buildings, as in the Nereid monument. The tomb, which has a rectangular section in terms of plan, was located on the Lycian tomb tower in its original place. The Payava sarcophagus shows a similar form to the Merehi monument in its original form, but a part of the pedestal in addition to the roof has been moved to the museum. In this context, it is exhibited in a visually closer to the grave form in the museum. (The British Museum, 2021).

The Nereid monument, dated to the 4th century BC, defines a tomb entrance with marble columns and pediments. (Tanyeri, 1999). With its columned, high and impressive façade, it is described as the largest building that has been moved to the British museum (Cahill 1988; Harmanşah, 2011).

The acropolis area of Xanthos lost its importance after Byzantium and it lost its original users. It is located within the Ottoman lands in the 19th century and was preserved during the Ottoman period due to its lack of settlement. The ruins outside the city at that time; it is connected to Kınık village (Acar, 2012). In this context; The area is located in a rural area. The city in the area remained under the ground over time and took the form of a higher hill. At the same time, the ancient city of Xanthos has succeeded in its relationship with the ground by adapting to the sloping texture of the topography. Between 1838 and 1848, excavations were carried out by Charles Fellows in the ancient city, and some remains and burial buildings were discovered in the area. The finds remained under the ground over time and were unearthed as a result of excavations. (The British Museum, 2021) The finds were moved to the British Museum in London by Charles Fellows in 1848, without allowing the city of Xanthos to contact the local users at the time they were discovered (Acar, 2012). The transportation process was carried out with the knowledge of the state, and permission was obtained from the Ottoman authorities (The British Museum, 2021). It is noteworthy that the transported sections are the sections with the most impressive architecture on the pedestal in the tomb architecture. The transported buildings are exhibited in the exhibition rooms of the British Museum, which is located in the city center of London. The city of Xanthos, on the other hand, despite its losses; It was included in the UNESCO heritage list in 1988 because it reflects the architectural texture unique to Lycia and has become known in the city as a cultural heritage (Acar, 2012). The pedestals of the tomb buildings removed from the area are located in the area.

Egyptian Dendur Temple

The original location of the temple of Dendur, which is currently exhibited at the Metropolitan Museum of Art in New York, is located in the Nubia region along the Nile River in southern Egypt. The Nubia region is the region of temples that functioned as a buffer zone between Rome and Egypt in the 1st century BC. The Roman emperor Augustus aimed to benefit from the geopolitical importance of the Nile river by creating a transition zone between Egypt and his own borders (Bianchi, 1978). There are temple buildings in the region along the river that reflect the cultural richness of



Egypt. Dendur temple is located 50 miles south of Aswan city and is located above the river level. Temple buildings are positioned on the linear line of the river as a single building. Nubia region has been away from touristic areas due to its distance from the urban area over time. A small population lives in the surrounding rural area. As it lost its importance over time, some buildings remained under the ground. The area attracted the attention of archaeologists in the 19th century and exploration work began in the area. The Dendur temple was among the temples that were not buried under the ground at that time, thanks to its proximity to the river. Despite being abandoned, it survived and took its place in the Nile (Aldred, 1978). Like other temples in the region, the Nile river is an important parameter in terms of the design of the Dendur temple. The two temple spaces oriented to the Nile river and the cult terrace between them constitute the general setup of the building. There are sculptural reliefs on every stone that forms the facades of the Dendur temple which an Egyptian temple built in the 1st century BC. (Schork, 2011). Dendur temple rises monumentally from the topography and establishes a relationship with the sloping area. It takes place in urban memory with its symbolic quality in the silhouette of the Nile river.

The Aswan dam, which is located in the city of Aswan today, is the largest dam on the Nile river. With the works started in 1898, the level of the Nile River was raised until 1933. Rising water levels have posed a threat to cultural heritage buildings, many of them submerged. The Dendur temple was also flooded and some parts of it were destroyed. In order to save the temple from destruction, the water was drained and the temple was placed on a platform. The future of all buildings in this region has been threatened in the 35-year period as a result of the construction of the dam. Monument strengthening has been initiated by the Egyptian artifacts service (Aldred, 1978). At the same time, the dam project has turned into a complex problem such as the migration of people living in the region, the loss of natural landscape areas, and the creation of new housing projects. Large budgets were required to move the buildings and install them in their new locations. In 1960, international efforts were initiated to save the Nubian monuments, which were included in the UNESCO heritage list (Gissen, 2009). Despite the rescue efforts that started in 1933 and continued for about 30 years, most parts of the dendur temple was submerged in 1961-1962. As all these problems remained unresolved, the President of the United States of America Lyndon B. Johnson was given as a gift from Egypt to the United States of America and started to be exhibited in the New York metropolitan museum on April 28, 1967. As part of the transportation operations, the building blocks were photographed, numbered and recorded; It was then disassembled, packaged and transported by ship (Schork, 2011). It has been a matter of debate in which museum the temple, which was moved to America, will be exhibited. It is aimed to make the right moves as a result of the deep qualities of the building and the development of the contemporary museum understanding. It was decided to move it to the New York Metropolitan Museum of Art, one of the most prestigious museums in America, located in the central park in the city center of New York. While

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exhibiting the large-scale monumental condition of the Dendur temple, it was aimed to use a glass mass so that it could be combined with the city. In this context, the glass mass for the dendur temple was added to the museum (Gissen, 2009).

Jordan Mshatta Palace

The original location of the Mshatta façade, which is currently exhibited in the Berlin Pergamon museum, is in the Jordanian desert, located in the desert region 30 km south of Amman, Jordan (Grabar, 1987). The area where the building is located is one of the more than thirty desert palaces stretching across Iraq and Saudi Arabia. The construction of the palace started during the Umayyad period, but the palace was abandoned in 744 due to the war between the Umayyads and the Abbasids (Lammens, 1915). It is thought to have been damaged by the earthquake that deeply affected the region in 749 (Cramer, 2013). The palace shows the feature of being a building that has not been fully completed due to its misfortunes. (Lammens, 1915). The city of Amman was the center for Syria between the 7th and 14th centuries, but lost its importance afterwards. The façade section moved to the museum is a part of the south façade wall of the palace complex. The monument was discovered by archaeologists in 1840 and was unknown to the locals until then. Since the lands of Amman, which joined the Ottoman Empire in 1878, were abandoned, Circassians were settled in the region. Amman, which used to be a village during the Ottoman period, later became a town, but retained its character as a rural region (Dumper, 2007). In Figure 2, the photograph of the period when the building was discovered and the part that was moved can be seen. Moved façade section; It is a large part of the entrance (south) facade of the palace building, which is a large complex dating back to the 8th century. (Grabar, 1987). It has a special meaning as it is one of the first palaces of early Islamic architecture. The facade walls, which surround these buildings like a castle wall, also attract attention with their thickness and strength. The transported façade is a part of the border façade and is decorated with ornaments. Due to the large scale of the palace building, the facade walls are also quite long. The diagonal moldings used on the walls have divided the façade and added a characteristic feature to the façade (Kröger, 2021). With its architectural features, the building reflects the combination of the characteristic motifs of Syrian and Sassanid architecture, and the traditions of the Ancient East (Cramer, 2013). In 1903, the facade of the palace, which is still on Ottoman territory, was gifted to the German Emperor Wilhelm II by Abdulhamid II. The building, which was first moved to the Bode Museum in Germany, has been exhibited in the Pergamon museum since 1932. The moved façade section of the palace forms a very large linear line with a length of 33 meters and a height of 5 meters, and it was deemed appropriate by the German authorities to move it to the Pergamon Museum, the most prestigious museum in Germany. It is located in the Pergamon museum as the most striking exhibition item in the Islamic works section called "*Museum für Islamische Kunst*" (Grabar, 1987). The large exhibition areas of the Pergamon museum match the size of the façade.



Figure 2. Mshatta Palace at 19th century and Mshatta palace south facade section in the museum (Cramer, 2013)

Located in Amman, the palace is located in an urban spot today and there is Amman airport very close to it. The building has suffered serious damage due to air pollution and the wearing effect of time. The part of the south façade, which was not moved to the museum, was partially demolished by time. The Jordanian Department of Artifacts and German authorities are working together to document and restore parts of it that are in situ (Cramer, 2013). At the same time, the palace complex was turned into a museum and brought to the city.

Miletus ancient city agora gate

The original location of the Agora gate, which is exhibited in the Berlin Pergamon museum today, is the ancient port city of Miletus in the village of Balat, Didim district of Aydın. The history of the city dates back to the Neolithic period and was inhabited until the Ottoman period. Its rich cultural heritage has been brought to the city by using it as a historical site together with the Republic of Turkey. The South Agora Gate was built during the reign of Emperor Hadrian, who had important touches on the city during the Roman rule. It reflects the Roman period architecture in terms of building proportions, architectural characteristics and construction technique (Gülbay, 2009). The façade section moved to the Berlin Pergamon Museum; It is the southern agora, dated to the 1st century BC Roman period and used as an entrance monument. The building was moved to the Pergamon Museum in Berlin between 1907-1908 after the excavations and surveys carried out. It is possible to understand from the Ottoman traces that the ancient city of Miletus, which was located in the Ottoman lands at that time, was also inhabited during the Ottoman period. Although the original user has changed over time, each user living in the city has diversified the architectural texture by adding different touches to the city. It is noteworthy that all the monumental buildings in the city are designed in harmony with the sloping topography. The southern agora gate, on the other hand, has an important place in the memory of the user in the area, as it symbolizes/describes the beginning of the southern region. With this feature, it shows the feature of being one of the basic building blocks that make up the city.

During the Miletus excavations and surveys carried out by the Germans in 1903, the Agora gate was one of the monuments that attracted attention. Abdulhamid II presented the monument to the German Emperor Kaiser. The

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dimensions of the facade are 16.68 x 28.92 meters and it weighs 750 tons. The building, which was brought to the museum in parts by ship in 1907-1908, was reconstructed in the museum (Yüksel, 2017). Over time, the damage it suffered has been intervened and repaired. The building is located in the "antiquities collection" section of the museum. The building leans to the high walls of the museum and the unique doorway provides the passage between the exhibition rooms (Pergamon Museum, 2021). At the same time, the port monument, which contains Classical Greek mythological characters belonging to the ancient city of Miletus and consists of three concave surfaces, is also exhibited (Yüksel, 2017).

Pergamon Ancient City Pergamon Traianus Temple, Zeus altar, Athena temple propylon entrance

The original location of the Pergamon Traianus Temple, Zeus altar and Athena temple propylon exhibited in the Pergamon museum today is the ancient city of Pergamon in Izmir (Figure 3). Bergama multi-layered cultural landscape area, which contains layers belonging to the Hellenistic, Roman, Byzantine and Ottoman Periods, was a small acropolis area at the beginning; Over time, it has developed with its environment and stratification has continued for centuries. (Akyol, 2019). In the lower parts of the city, which came under Ottoman rule since the 14th century, they continued their lives by inhabiting the Hellenistic and Roman grid city order (Ulusoy, 2005). The city of Pergamon has lost its original user, but; The pergamon-oriented development of the city and the place of monumental buildings in the memory of the user have an undeniable importance.



Figure 3. Traianus Temple, Zeus Altar and Athena temple propylon entrance (Pergamon Muesum, 2021)

Bergama (Pergamon) Acropolis is located on a sloping topography. While the zoning activities in the upper part of the city started in the 4th century BC, the buildings in the lower parts are those built from the 2nd century BC (Ulusoy, 2005). There are palaces, sanctuaries with temples, library, theatre, altar, bath, gynasium, agora and residences in the city. The three buildings moved to the Pergamon museum are located in the central part of the city at the upper point. The entrance facade of the Trainus temple, which dates back to the 2nd century BC, is the entrance to the Roman temple designed in Corinthian style. The terrace, created by raising the middle section in order to watch the city from above, is the highest viewing terrace of the city. The 6 Roman columns that define the terrace are 10 meters high. The large-scale dimensions of the façade, up to 32x20 meters, support the monumentality (Gülbay, 2009). The altar of Zeus, dated to the 2nd century BC, is a building that reflects Hellenic and Roman architecture (Özet, 2003).



The building, which takes its place in the museum spatially on a three-dimensional plane, draws attention as one of the largest buildings in the museum. In the general setup of the building, there is a monumental staircase opening to the middle city and two branches surrounding the staircase leading to the city. The altar section surrounds the staircase in a 'u' shape. The façade is read horizontally in two parts. In the upper part, the rhythmic order of the Roman columns is observed. In the lower part, there are friezes, which are widely used in Roman architecture, surrounding the façade. The scenes on the friezes refer to the Roman and Hellenistic periods. It is estimated that the temple of Athena, which was built in the 4th century BC, is one of the first buildings of the acropolis. The Hellenistic period building was built in the Doric order (Üreten, 2004). The propylon entrance façade, which is an important component of the monumental building, is exhibited in the Pergamon museum. There is a symmetrical setup consisting of four columns on the façade, which consists of two floors. The pediment detail on the roof of the building is an important architectural element that reflects the architecture of the period, as well as reinforcing the monumentality. As in the archaeological cities that develop on sloping areas, the buildings in the Pergamon Acropolis attract attention with their monumentality as well as their volumes compatible with the topography. At the same time, all three buildings have an important place in urban memory for centuries because they were built when the city was first settled.

The surface and excavation works on the Pergamon acropolis were started in 1870. The artifacts transported to the Pergamon museum remained under the ground during this period and were discovered by Carl Humann. Benefiting from the weakening of the Ottoman government, Humann started to move the buildings to Germany in 1885, with the permission of the state. The Ottoman government gave the historical artifact in exchange for money. Humann dismantled and packaged the Zeus altar in an organized manner and provided its transportation to Germany by ship (Atar, 2018). Other buildings moved to the museum were also transported to Germany by ship in the near future (Pergamon museum, 2021). Museum; It is called Pergamon (Bergama) because of the value of the buildings, and Pergamon buildings are among the most prominent works of the museum. The Altar of Zeus and the Temple of Trajan, which are among the buildings of the city of Pergamon, exhibited on the high walls of the Pergamon museum, show a spatial existence due to their voluminous location. While the spaces of the buildings are open to experience by the museum users, the Temple of Athena Propylon is located adjacent to the façade and is an exhibited façade. At the same time, the spaces at the entrance of the Zeus Altar and the Propylon provide the transition between the spaces in the museum.

With the cultural diversity and holistic stratification of Bergama over the centuries, it was included in the UNESCO heritage list in 2014. There are parts such as pedestal column fragments in the original places of the buildings that were moved to the museum.

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CONCLUSION

Due to the fact that historical buildings have a long history, they are coded by the user with the place they are in, thus establishing various relations with the environment. Considering the idea of design in monumental buildings from time immemorial creates an environment for it to take a place in the memory of the user. It is impossible to consider the power in memory independent of the context of the building's relationship with the environment. The design power of the building, the whole of the relations it establishes with its environment, and every fact that it makes the user feel, brings the context of place to the fore in the concept of originality, while creating the spirit of the place. Within the scope of the research, it is not compatible with today's conservation awareness to remove historical buildings that integrate with the context of the place by witnessing many user profiles that extend for centuries. It is an accepted understanding today that the transportation process is preferred in some cases that may damage the building. However, in periods when the awareness of conservation was not fully established, some buildings were moved to museums of other countries and were imprisoned in closed spaces. When the historical building is separated from the "place" data, which has an undeniable place in the criterion of originality, it is subject to othering. In addition to losing their original function and being dragged into dysfunction, these buildings, which are alienated by detaching from the context of the place, begin to consist of a large exhibition object. It is observed that all of the buildings that have been moved to some museums around the world, examined within the scope of the research, have monumental architecture. The buildings have started to appeal only to museum users, leaving the publicity underlying their construction purposes, and they are located in the most prestigious museums of the countries they moved to.

The act of taking the buildings out of their context and moving them from the country they are located to another country remains as negative high-level examples of the marginalization of the place compared to today's transport examples. The building has been separated from the spirit of the place and started to take place in a different place. In such a case, the building, which has lost the spirit of the place, becomes unable to establish a relationship with its environment. It is seen that these buildings, which offer a wide architectural / cultural / artistic potential, are included in museum designs in order to be adapted to their new places, and in some examples, they are used as transitional elements as well as spatial use. It is not possible to talk about adaptations because the conditions of the buildings contradict the spirit of their original places. The monumental buildings located at the benchmark points of the city contain richness in terms of architectural, cultural and artistic performance. While there is publicity on the basis of the construction of the buildings; today, the buildings exhibited in museums appear in a closed space and as copies that can only be communicated from the outside. When we look at the issue from the other side of the coin, in the context of the place where the historical buildings were torn off, the building is only referred to as a lost memory in the cultural memory, and it appears as another negative side of being marginalized.



It is seen that the historical buildings moved to the museums are located at important historical points in their original places and have an important place in the urban/rural identity in terms of reflecting a certain architectural period. The spirit of the place has been strengthened exponentially, as the symbolic buildings such as the Anatolian ancient cities of Miletus, Xanthos, Bergama, the Egyptian Nubian monuments region and the Jordan palace complex, escaped from the singularity and coexist with its surroundings. In this way, they have become unthinkable independently of their surroundings. The fact that some parts of the samples carried in the samples of Anatolian ancient cities and Jordanian palace complexes remain in their original places reminds the user every day that they become buildings waiting to be completed. The original spaces of the relocated buildings are used as open-air museums today and they deserve to be re-existed in their original places.

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"(NOT) PROTECTING THE OTHER": PROBLEMS OF CONSERVATION AND DISCRIMINATION OF PERIOD ATTACHMENTS IN RESTORATION APPLICATIONS

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ABSTRACT

The restoration and reuse of historical buildings dates back to the beginning of the art of construction. Thanks to this approach, many buildings have survived to the present day by layering with different interventions, repairs and additions throughout the ages. These buildings, which are reflections of the concrete and intangible values of the culture they belong to, have ensured the continuity of the experiences and traditions accumulated throughout history. These period annexes, which were added to buildings in different periods, led to discussions on different platforms with the widespread understanding of scientific conservation.

Which of the period suffixes should be preserved in restoration applications is a decision that should be made by experts with an interdisciplinary study. With this study, which is prepared within the framework of what is prioritized to protect, which is accepted as "us" and which is "the other", it is aimed to examine the methods and principles of distinguishing affixes belonging to different periods in cultural heritage preservation studies through examples.

In the study methodology, first of all, the concepts of "period attachment" and "other" are discussed theoretically, and changes and additions reflecting the layers of different periods in historical buildings; It will be examined through examples and its effects on buildings as perceptual, physical, aesthetic and historical will be discussed. In the conclusion section, these parameters will be evaluated together with variables such as building type/period/region, and suggestions will be developed on the issues to be considered.

Key Words: Addition; Architectural Conservation; Liberation; Period Attachments; Restoration.



INTRODUCTION

Societies need other communities and people other than themselves in order to define their own culture. And this identity can be reached by determining the different features and boundaries between them and those who are not themselves. "The other is the other, human societies are diverse. This difference is inevitably interpreted in the context of being below. In valuing the Other, the 'I' uses the criteria of 'my' culture and confuses it with culture in general. In this case, the other cannot be anything other than the incomplete version of himself." (Schnapper, 2005, p.26). The other "deprives the characteristics of the subject, but at the same time poses a threat to the stable world of the subject due to its radical difference" (Yeğinoğlu, 2003, p.15). When societies encounter a society that is very different from their own, the values they identify with themselves, see it as superior and reject the different one. While adopting the values of her own society, they deny this new one when they encounter a society with different values, believing that only their own society has a history (Lévi-Strauss, 2010, p.72). In this way, opposing societies are involved in a development process based on othering.

Determining who is included and who is not is the determining factor in the formation of social identities. Those classified as other are perceived as threats and need to be identified. With the concept of modernism, the differences that were held responsible for the destruction caused by the First World War were tried to be completely destroyed and a universal language and an international style were aimed to be created. Modernist thought, which is an example of "othering", aims to assimilate by defining the other and to purify itself from otherness (İlter, 2006). In order to create a single language, it ignores every thought other than "Western Modernism". This view aims to stick to a single style in order to create unity and excludes local differences. However, in the late 1930s and 1940s, nationalist movements began to dominate all over the world. The postmodernist concept formed with this view, while accepting the differences of the "other", places itself in a privileged position above the "other" (Ensarioğlu, 2020). In the 1960s, we were faced with a situation of imposition beyond understanding the "other", "noticing the differences" that emerged with movements such as Existentialism and Structuralism. In our country, it is told through the other, including social sciences and daily literary uses. Different circles regarding the term "other" have also started to produce new meanings (Ayдын, 2002).

While the architectural space defines itself, it makes its position through the "other". In historical preservation projects, the marginalization process is related to what the available resources will be used to protect, which one is accepted as "us" and which one is "the other" (Tanyeli, 2002). Cultural heritage buildings are generally protected by the state, and different protection criteria emerge from time to time. Architectural styles that have been destroyed and neglected can also vary according to these criteria and approaches. Developing by feeding on the past, architecture breaks the bonds of belonging to a style by making it "other" and erases it from the

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memory of the society. Today, the Western World is discovering new "others" and the number of "othering" groups is increasing (Ensarioğlu, 2020).

In the time-value correlation, neither the "new" nor the "old" are idealized, exalted, or sanctified, but simply becoming conscious of the normality of change. Architectures of all ages form a complex whole on the scale of the city and specific to each building. The traces of periods from the Middle Ages to the present are emphasized on the surface of some buildings. An unseen residence from the 19th century features lower windows with traces of 13th-14th century Gothic, and upper floors with late 16th-century Renaissance jamb details. For example, Castelvechio Castle, whose history dates back to the 13th century, has been restored as a mixture of periods, details, techniques, styles and places, none of which is given special importance to disregard the next. In the museum, which was re-functioned as a museum after being restored with all its equipment, all temporalities are lived together in the same space (Tanyeli, 2020).



Figure 1. Castelvechio Castle (Tanyeli, 2020)

Problem of Period Supplement in Protection

Cultural heritage is the artifacts that have been transferred from past generations to the present and are a universal value for all people. Historical buildings, which are the economic, social and cultural accumulations of societies, are documents and symbols that reflect the urban and architectural style of the period in which they were built. Historical buildings, tangible and intangible values; In addition to its physical features such as its spatial setup, decorations and technical details, its intangible values such as identity, document, memory, continuity and economic are also effective in the preservation of the historical building (Eldek, 2017, p.78). Societies should be able to preserve these cultural values and transfer the cultural accumulation of past civilizations to future generations in order to sustain their identities. In this context, in the study, the 19th century, which provides a chronological discussion of the term suffix concept. Conservation practices in a historical process starting from its reconstructions to the present day will be compared by considering the parameters of "period attachment", "replaced attachment", "liberation" and "other". When the concept of "protection" is examined in the historical process, it is seen that it has undergone a great change over time and has become a multidimensional concept. With the awareness of conservation, the



foundations of which were laid after the French Revolution in 1789, the buildings that were destroyed during the revolution began to be repaired after 1830. However, the repairs were made randomly according to the personal opinions of the architects. Viollet le Duc (1814-1879), on the other hand, attempted to make repairs take place in a certain order. He prepared a book in which he included his views and thoughts on the restoration of medieval monuments and where the word restoration was used for the first time (Ahunbay, 1996). Viollet le Duc; With his 10-volume work "The Rational Encyclopedia of Architecture", he aimed to develop a system against protection practices based on personal decisions. He focused on concepts such as inventory, construction period, later period supplements and originality. According to Viollet le Duc; The preservation of the monument is not its reconstruction, but its completion in accordance with the period in which it was built (Erder, 1975). Prosper Mérimée, who has another view, describes unconscious restorations as "destruction in the name of repair" and thought that it would be better not to touch the buildings at all. He is of the opinion that restoration works carried out in medieval buildings should be contented with consolidation and that interventions in the form of integration will reduce the historical value of the buildings (Ersen, 2013). He supported the preservation of the period annexes in historical buildings, but the integrations that are not based on real and solid evidence by emphasizing the analogy method. The "analogy method" aimed to borrow the characteristics of buildings of similar style and aesthetics built in the same century, in the same country and region, and use them for integration; this method laid the groundwork for the understanding of "uniformity of style". "Increasingly applied by Viollet Le Duc in France and by Sir Gilbert Scott in England in conservation interventions in historic buildings. Scott, the representative of the "style unity" understanding in England, whose cathedral was restored, said that "...churches are not buildings to be preserved only for cultural purposes, but because they are living and used buildings, they must be restored and kept alive..." (Ersen, 2010).

For example, in the restoration works initiated in the Church of Saint-Denis, wrong practices to erase the traces of vandalism in the building continued from 1805 until the middle of this century. The reason for this was that the construction techniques of the Gothic period were not known enough during the repairs of the medieval buildings, especially the churches, and there were no masters who would apply the interventions correctly (Ersen, 2013). Although the architects of the period and Viollet Le Duc expressed this fact in their theories, in practice they defended the stylistic unity with the aim of cleaning the period suffixes in multi-period historical buildings and integrating them with the style of the first period. As can be seen in the restoration works, this view that develops with the concept of the other is to bless a period of history and the art and architecture created at that time, while despising the others.

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Figure 2. Saint-Denis Basilica, Paris (Ersen, 2013)

In his other restorations, he was largely renovating and mainly applying new techniques. For example, he realized his project for La Madeleine Basilica and the adjacent monastery in 1840, within the framework of stylistic integrity. The vaults at the eastern end of the naos were rebuilt in the Romanesque style, as they were repaired in the early Gothic period and spoiled the style of the building. In the work proceeding according to the drawings of Viollet Le Duc, the structural elements and reliefs on the western façade of the church were completely renewed. Due to the personal designs and replica products used during the repairs, the church has moved away from its original state with the destruction of the historical building as a "historical document". Instead of preserving the original elements of the building, it has chosen to make it stronger, redesign and produce a non-existent building or decoration element (Ersen, 2013).

Notre-Dame Cathedral has seen many periodic interventions until its restoration in the 18th century. For example, the west façade was repaired in the style of the 18th century, and the statues on the façade were dismantled. Lassus and Viollet-Le-Duc prepared a technical report for the restoration of this building. In the report, they defined its periodical features analytically and it is stated that the historicity of the building should not be destroyed, all period additions should be respected, it should be repaired with its original style and no integrations should be made. However, despite the aim of preserving the historicity of the building, Viollet Le Duc redesigned the 28 king statues on the narthex façade of the building and the entire façade was transformed into Gothic style. The 17th century architecture has been preserved but other elements have been sacrificed. Deaf windows on the narthex façade were opened, and the west façade was redesigned. The bell towers and king statues of the church have been largely reproduced from the found fragments. Forms and decoration elements that never existed in practice were also added to the building (Ersen, 2013).

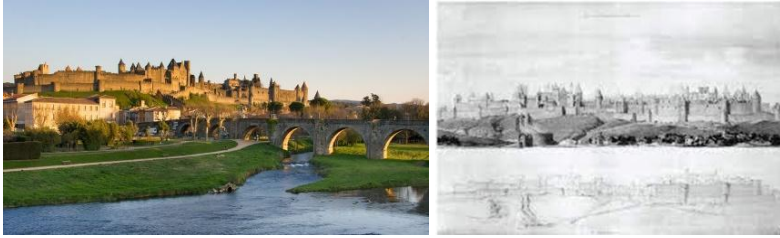


Figure 3. Carcassonne Walls (Ersen, 2013)

The Carcassonne Walls, built during the Roman period, are a historical building that was used for military purposes until the French Revolution. The walls, which had undergone periodic interventions in the 18th century, were later abandoned. The tower roofs and the travel paths of the main walls were destroyed, the destruction of the building increased, and its stones were plundered. Viollet Le Duc undertook the restoration of the Narbonne gate of the city walls in 1846. Later on, he was commissioned with the restoration of all the walls and towers. After the documentation and projecting process of the Carcassonne Walls, the works started. Viollet-Le-Duc would rebuild the lost parts of the Carcassonne Walls as they were at the end of the 19th century, leaving the original parts intact. However, he still drew restitutions of tower roofs from different periods. He also redesigned the details of the wooden building components of the walls with medieval forms. After Viollet Le Duc's death, Paul Boeswillwald (1844–1931) used detailed drawings of Viollet-Le-Duc in the reconstructions. With the interventions made in the applications completed in 1910, the building lost its originality with the additions and the removal of the term suffixes (Jokilehto, 1999).

While applying these protection methods, some works of art were damaged and a new movement, Romantic View, emerged against this movement. Ruskin (1819-1900) and William Morris, who are the pioneers of this view, opposed the understanding of stylistic unity accepted in repairs. They argued that the originality of the building was preserved by not making any intervention, rather than making it look as it was at the time it was built (Erder, 1975). He categorized Ruskin's cultural heritage consisting of traditional buildings as living buildings and ruins. He argued that the interventions in the ruins should be in the form of structural consolidation. He argued that living buildings, which are other cultural heritage buildings, should be restored by preserving their original materials (Ersen, 2010). In his work titled "The Seven Lamps of Architecture", he focuses on the values, qualities and the concept of historicity in architecture. As the "seven lights" on which Ruskin stands; He spoke of sacrifice, truth, power, beauty, life, memories and collective memory and commitment to authority. He mentioned that the copies that will be made in the restorations, even if they are made in original forms, are the remakes of the original forms with new material. He actually suggested regular and periodic preventive maintenance behind the idea of anti-restoration. He emphasized that the

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buildings that are regularly maintained would not require an intervention at the restoration level (Ruskin, 1925). Adolphe Napoléon Didron (1806-1867) on the other hand, his views on restoration principles; He stated that "consolidation should be done instead of repair, repair should be done instead of restoration, restoration should be done instead of reconstruction, a serious reconstruction should be preferred instead of constructing imaginary and hypothetical buildings, nothing new should be added to historical buildings, nor parts of them should be removed". Within the framework of these views, the preservation of a building is interpreted as keeping the building as it is, while the continuity of the building was taken as a basis, on the condition that it is protected by various commissions and bylaws established after the 19th century (Kılıç, 2015).

Regarding the restoration of historical buildings, Italian architect Gustavo Giovannoni (1873-1947) advocated the preservation of monuments that have lost their original function by making a difference, but that need to be preserved together with their surroundings and original parts, giving new functions that respect their aesthetic and historical identity (Ahunbay, 1996; Erder, 2007). This view became legal in the Athens Statute signed in Athens in 1931 and in the Carta del Restauro in Italy in the same year. In the Venice Charter prepared in 1964, the idea of using the monuments to be protected as a historical document was suggested (Ahunbay, 1996). The concept of "change of function" was also included in the European Convention for the Protection of the Architectural Heritage of 1985 and the Icomos Traditional Architectural Heritage Regulation of 1999 (Gazi and Boduroğlu 2015, p.59). While giving new functions to historical buildings, it is important to use the building for a useful purpose in terms of its preservation. However, for this reason, the plan or decorations of the building should not be changed and it should not lose its originality while making it suitable for the new function. The location of the building, its spatial formation, whether it is suitable for the new function, whether it will prevent the building with aesthetic, cultural and historical value should be taken into consideration (Altınoluk, 1998). It should not be forgotten that the building is a part of the environment in which it is located by taking care of its surroundings. Before a change in function is made, the boundaries of the intervention should be determined precisely, in the intervention decisions to be made; Irreversible applications that will affect and change the architectural and aesthetic characteristics of the building should be avoided. While preserving the historical values, the buildings should be repaired by respecting the additions of different periods, and originality should be kept in the foreground while the missing parts of the building are completed (Erder, 2007). The Charter for the Protection of Quebec Cultural Heritage states that the contribution of each historical period should be respected in the preservation of national heritage and its transmission to future generations. However, in some special cases, such as the architectural features they have, the special decoration techniques applied in the building, the state of being the first and original in the construction technique, the annexes, which are considered as "enjoyable additions", can be removed if the importance of the destroyed material is low. Because the changes and additions that have been added to the building in recent times are incompatible with the spirit and original physical features of the building. Periodic annexes, which have acquired the



characteristics of historical artifacts with different features such as witnessing a historical event, need to be maintained and protective measures should be taken in order to carry them to future generations. The removal of period suffixes can only be excused in cases such as closing or destroying another element. As emphasized in the Venice Charter, the important element in architecture is the transfer of history, memory and culture. Care should be taken to protect these elements in all processes to be applied to the building.

One of the basic principles of contemporary restoration theory is that the changes and additions made in the building in different periods are as valuable and important as the building it was built in the first period. When the protection samples examined in Turkey and in the world, especially cathedrals / churches, mosques, castles such as additional problematic period in monumental buildings of continuing to use the same function in different periods; It emerges as methods applied in the detection, protection and display of attachments. The changes made in the buildings in different periods can be determined by the architectural traces observed in the construction techniques as well as the old information and documents. Although there are no ethical and aesthetic doubts about the removal of these annexes, which are described as "the other" by conservation experts, in some cases there is a risk of damage to the cultural heritage. Again, in the period annexes, there are examples in which different methods are applied at the point of choice or display in case of overlapping of more than one period attachment in some buildings.

The first legal regulation in our country for the protection of cultural assets is the Asar-ı Atika Regulation, which came into force on February 13, 1869. In the first years of the Republic, various regulations were made on conservation and museology, and the Law on Foundations was enacted in 1936. However, it is seen that there is no law on antiquities. For example, in the Municipal Building and Roads Law, which came into force on 21 June 1933; 10 m. of the perimeter of the monumental buildings. opening, demolition of buildings and walls that cannot be repaired by the decision of the Municipal Committee. In the circular dated January 31, 1934, the buildings included in the cultural heritage were evaluated in two groups: those belonging to foreign civilizations and high monuments of Turkishness. With this approach, more attention was paid to Seljuk and Ottoman buildings. However, the preservation of Byzantine artifacts is more for the display and comparison of ancient civilizations in the conquered lands, rather than protection. This situation is mostly for political purposes and to prove the superiority of Turkish architecture. In addition to this view, it was argued that conservation efforts were unnecessary, with the idea that conservation was an obstacle to development and that nothing could stand in the way of modernization (Ersen, 2014). In the circulars on the protection of antiquities published in 1936, only important monuments were accepted as antiquities.

In their repairs, unsuitable repair materials and techniques were used. There are repairs incompatible with traditional materials and construction

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techniques, such as braiding with Portland cement, scalloped faux stone plaster, rebuilding of domes in reinforced concrete, and so on. In the following years, it was discussed whether it was necessary to preserve the Spice Bazaar in Eminönü, for example, due to budgetary problems. Thoughts such as the continuation of traditional life in historical buildings were thrown into the background, and the criterion of preservation was aimed at concepts such as Turkishness and monumental building. Or, it was carried out in the form of neglecting the Ottoman buildings and giving importance to the excavations belonging to the Byzantine period, which were under the buildings. Another attitude was to remove the traces of the Ottoman period, as in the Kariye and Fethiye mosques, and to turn these buildings into museums by connecting them to the Hagia Sophia Museum. In the restorations, the applications made due to the lack of budget were limited. In addition, the abandonment of traditional materials and construction techniques has led to serious loss of historical documents and data in such repairs. In 1951, the High Council of Monuments was established under the Ministry of National Education for the principles and practices to be followed in the protection of architectural and historical monuments. After the laws deemed insufficient were repealed, it was enacted on April 25, 1973 with the Law on Antiquities No. 1710, which has a building that reflects contemporary developments. The Law on Antiquities, which remained in force for ten years, was abolished on July 21, 1983, and replaced by the Law No. 2863 on the Protection of Cultural and Natural Assets (Ahunbay, 2017; Madran and Özgönül, 2005). Later, international principles and methods such as Carta Del Restaure (1932), Venice Charter (1964), Amsterdam Declaration (1975), Unesco (1976-Nairobi) were adopted by our country. Committees such as Unesco, Icom, Icomos and institutions such as Çekül, Kudeb, Kor-Der, with which the member states are in international cooperation, are also located in our country (Ahunbay 1996; Kuban, 2000).

The Other Problem in The Transformation of Worship Buildings

The most important reason for the alienation in religious buildings is to ignore the holistic relationship and to preserve the architectural elements that should be temporary. In societies that think that all originalities and differences should be rasped, all kinds of interventions turn into a cleaning work. As a result of this cleaning process while trying to reach the original, all the differences that may arise in a culture are destroyed. This situation, which is seen as another way of marginalization, needs to adopt the differences of other cultures and their own differences. Trying to produce this state of being different is to otherize the other and reproduce it under the name of "other". The only thing to do is to accept the normality of difference (Tanyeli, 2020). According to Bülent Tanju, the problem in discussions of "other architecture" is concepts such as "sustainability", "development", "identity" (Şoher, 2007).

"Sustainability" requires the use of existing resources without compromising the ability of future generations to meet their own needs. It is not to protect some of them, but to convey the diversity of resources to future generations



without diminishing. As in every field, the concept of sustainability, which has become one of the important issues of the building sector, is also encountered in conservation practices. It is important not only to defend the necessity of protecting the buildings with cultural value, but also to determine the features that will be highlighted in the protection of the building. With today's measuring, documenting and projecting techniques, it is possible to understand the original, period supplement, renovated and restored parts by experts who do scientific research. However, in our country, even the interventions on very important mosques have not been documented or these documents cannot be accessed due to irregular archives. It is expected that the historical building will convey the message it carries with its originality and historicity in the most honest way. Preventive maintenance, stabilization of the current situation and contentment with the least/most effective intervention for consolidation have generally been the basic principles of architectural preservation.

Architectural buildings built to serve certain functions undergo different transformations over time and are used for different functions. Such transformations are handled differently in architectural preservation, especially for religious buildings. In case religious buildings are used for different functions; It requires a detailed analysis of the religious, symbolic and social values of the building rather than its physical adaptation. Religious buildings were accepted as symbols of the societies they belonged to, and they were protected or destroyed by societies that conquered the geography they belonged to and were members of different faiths. After each conquest in the period from the establishment of the Ottoman Empire to the conquest of Istanbul, the attitudes towards the artifacts left behind by the previous nation are common in the point of turning a church into a mosque as a symbol of conquest (Kuban, 2007). For example, Hagia Sophia, which was examined in the study and converted from a church to a mosque, allows us to observe every intervention in the cultural heritage in the building and its immediate surroundings. Hagia Sophia, which has survived with various additions and repairs from 537 to the 21st century, helps us to feel the architectural adventure of the city (Diker, 2016).

The Hagia Sophia Mosque: Hagia Sophia, located in Istanbul, was used as a basilica, mosque and museum and is a building where various period additions can be seen. It is a basilica-planned patriarchal cathedral built by the Byzantine Emperor Justinian I between 532-537 in the old city center of Istanbul's historical peninsula. When it was converted into a mosque by Mehmed the Conqueror in 1453, its first minaret was built of brick. "While Hagia Sophia stands alone in an exceptional spot on the peninsula, with its internal contradictions and the massive expression of its large walls outside, it is shaped by the retaining walls added by Ottoman architects. It gained a new meaning with its diversity and the special dimensions of the minarets built by Sinan, its loneliness was ended by being surrounded by four minarets and it was elevated to the level of an ornament of the city." Additions to the mausoleum right next to Hagia Sophia are the continuation

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of the similar attitude: "Sinan's attitude in Hagia Sophia was influenced by Sultan II. Selim and later Sultan III. Murad and III. It was continued with the decision to build the tombs of Mehmed next to Hagia Sophia. Hagia Sophia was both preserved with the additions they made, as proof that the Ottomans approached a culture and Christian artifacts before them with respect, and these additions were made more valuable with their complementary, uplifting and embellishing beauty and reached the present day" (Cansever, 2005).



Figure 4. Entrance, Middle nave, Apse, Minbar (Ertürk, 2019)

In addition, after being converted into a mosque, the mosaics containing human figures were only covered with a thin plaster and were not destroyed. The mosaics of Hagia Sophia were later removed by Thomas Whittemore from the Dumbarton Oaks Center for Byzantine Studies. In 1932, rasp work started to reveal the mosaics with human figures in Hagia Sophia, and the building was transformed into a museum in 1934 by changing its function again. And with the removal of the carpets on the marble floor, the flooring was exposed. On the other hand, there were some who thought that Hagia Sophia should be cleaned from the Ottoman influences around it (Ersen, 2014). The fact that Hagia Sophia, which was used as a mosque for a long time after 1453, became a museum has led to serious discussions in the press and among the public. Hagia Sophia, which was turned into a museum with the decision of the Council of Ministers on November 24, 1934, was turned into a mosque on July 10, 2020, with the Presidential Decision. Restoration works are carried out meticulously by experts to preserve the 1500-year history of the building and its cultural heritage.

Molla Gürani Mosque: It is located at the corner of Tirendaz Street, in the Fatih District of Istanbul, in the Süleymaniye district. The building, also known as the Vefa Church Mosque or St. Theodoros Church, was built between the 10th and 11th centuries. It is in the form of an Eastern Orthodox church built in the century and was built according to the Greek cross plan. In 1484, it was converted into a mosque by the teacher of Fatih Sultan Mehmed, the scholar Molla Gürani. The church has a fluted brick minaret with unique features added in accordance with its building. In a fire in 1883, the wooden parts were burned and the mosque was destroyed. During the restoration of the building in 1937, its mosaics were rediscovered and cleaned. The restoration work of the building, which was restored in 2018, was completed in 2021.



Figure 5. Molla Gürani Mosque Restoration (Ertürk, 2019)

At the beginning of the restoration in the Molla Gürani Mosque, first of all, the added annexes were removed. These are similar types of incompatible buildings such as the fountain, which is a recent addition, and the room for the mosque teacher. After the non-original fountain was removed, a small fountain was added to the south façade of the building. The bullets on the top of the mosque, the insulation underneath and the damaged joints on the exterior of the mosque were renewed with Khorasan mortar. Stone and brick were changed at the necessary points of the building, and the honeycomb part of the minaret was renewed. For reinforcement purposes, injection to the walls and stainless steel bracing to the statically problematic columns were made. In addition, with the removal of the cement plasters on the inner walls of the main space and narthex of the mosque, hand-drawn decorations belonging to the Late Ottoman period, which were made after the fire of 1833, emerged. The missing parts of the decorations were completed with scanning and punctuation technique. In order to understand the original wall system in the interior, some parts were not plastered (Sav, 2021).

Fethiye Mosque: Located in Fatih District of Istanbul, the building was built as the Pammakaristos Church in the 12th century and was used as a mosque after the 16th century. The apse part of the northern church of the building, which was converted into a mosque under the name of Fethiye, was removed; A section with a mihrab and a dome facing the qibla was added and the building underwent a spatial change. It is also seen that a minaret was added to the buildings. After 1963, the building was divided into two with a wooden construction. While the north church was used as a mosque, the south church was used as a museum (Esmer and Ulaş, 2020). During the restoration of the building, historical databases should be examined to determine the period in which the surviving parts were built and restored. With the help of resources such as drawings, maps, photographs and travel guides, research should be done about the changes that the building has undergone, which parts and meanings have survived and which ones have been deleted. Such researches ensure that a monument is protected as a cultural heritage and that the approaches and understandings of restoration are learned periodically. They contribute to

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the understanding of the materials used in the repair or functional changes of the building and the nature of the repairs needed. Thus, a more detailed light can be shed on the repairs of the building and the changes in its physical appearance. Differences, such as the different application of hand-carved decorations in two different repairs belonging to the Ottoman Period, are proof that the perspective on the other has changed in the annexes of the period. In the last restoration, the essential additions such as the lead imitation roof covering with cement mortar and the tile coverings on the altar wall were removed. According to the sources obtained from the old photographs, the original details of the wooden elements such as the muezzin mahfilii were rebuilt, and the wooden covers seen in the windows were planned to be rebuilt. The mosaic surfaces covered with plaster were opened and repaired.



Figure 6. Fethiye Mosque Restoration (Ertürk, 2019)

Zeyrek Mosque: It is the Pantokrator Church, which was converted into a mosque and madrasah during the reign of Mehmet the Conqueror. The construction of the Church of Christ Pantokrator, the first church of the monastery, dates back to the 12th century. Zeyrek Mosque is a Byzantine building that was neglected after the restoration works carried out in the 1960s. The southeastern pillar of the North Section of the Zeyrek Mosque was surrounded by metal circles in the 1990s. The existing system has been removed and a new system has been put in place that covers the southeast pillar more effectively.



Figure 7. Zeyrek Mosque Photos (Ertürk, 2019)



Within the scope of the repair works carried out in Zeyrek Mosque in 2004-2005, the weak parts of the bonding mortar between the bricks in the masonry were cleaned and the joints in these areas were filled with suitable materials. These applications, which are renewed today, were made after the repairs and stages of the building were understood very well. In such repairs, it should be taken into account that the old joint building and historical traces on the wall can be destroyed. Cement-based materials have been replaced by lime-based materials with the increase in awareness about the materials used in the repair of historical buildings. As a result of the use of cement-based mortar, especially on walls with historical plaster and frescoes, the mortar containing water-soluble salts causes blooms on the wall surface. In addition, attention should be paid to the selection of materials injected into the wall and plaster (Almaç, 2011).

CONCLUSION

Historical buildings should be preserved as concrete data showing the living conditions, cultures, economic structures and technological developments of the society in which they were produced. Structural interventions required by restoration in historical buildings should be investigated in detail and superficial repairs are important in terms of maintaining the structural existence of the artifacts. Every intervention to be made in the buildings should be evaluated with sensitivity and meticulousness by experts in different disciplines. The "unity of style" understanding, which started in France in the 19th century in the protection of cultural heritage and was accepted in many countries around the world, caused the destruction of period attachments in many buildings and the development of designs based on interpretation, with the approach of cleaning period attachments in historical buildings and integrating them with the style of the first period. This approach, which was reacted by John Ruskin and other advocates of "conservation theory" in England, has caused controversy in many countries. As a result of these discussions, the understanding of scientific restoration has been shaped and the necessity of preserving period annexes has been clarified with the by-laws and conventions prepared by international institutions and organizations.

Within the scope of the study, the restoration of religious buildings and period annexes were examined, and the preservation of period annexes was tried to be examined in the context of the other. When we look at the physical interventions made in the process of transforming churches into mosques, it is seen that the mass perception of buildings is prevented in the examples in Istanbul. For each of these buildings, there are different preservation problems specific to the building, which should be discussed in terms of their material and carrier integrity, as well as their relationship with the context and both historical and current values. The churches that have been converted into mosques in Istanbul have been maintained since they were used and have survived to the present day without any structural deterioration. As can be seen in the samples examined in general, the

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repairs are superficial and show that the independent repairs repeat each other. The pre-restoration state of many buildings, such as Hagia Sophia, is almost unrecognizable. As seen in Zeyrek Mosque, functionally inappropriate plan schemes emerge as a result of the conversion of Byzantine churches into mosques. Most Byzantine churches served for small congregations and private worship. Therefore, they enriched their plans with side chapels and narthexes. With the changes made by the Ottomans, with the buildings being used as mosques, walls and columns were removed in order to unite the space for the collective worship of the community. Complexity and contradiction are experienced as the focus point facing east has to be shifted towards Mecca. The change made in Fethiye Mosque (Theotokos Pammakaristos Monastery) in Istanbul made it difficult for researchers to decipher the construction date of the building. Such changes greatly damage the originality of the buildings. Other interventions, called period annexes, are the addition of a minaret to the outside, a mihrab and other necessary elements to the inside. In many converted buildings, most of the original interior decorations were left intact. It should be kept in mind that each buildings examined has its own unique form of damage and the causes of damage must be accurately determined in order to make effective intervention decisions in repairs. As much as possible, the interventions should respect the original material and technique of the structural system and the changes that the building has undergone over time. From this point of view, damaged elements should be repaired rather than replaced. As deformation and changes are traces of the past, they should be preserved if the safety conditions are not compromised.

As in all cultural properties that have lost their function today, the differentiation of the user and the protector of the examined buildings over time affects the content and priority of the repairs of the buildings' carrier system and decoration programs. The effect of the removed and other period supplements on the building should be questioned more, their benefits to the building should be discussed, and their reconstruction should be suggested. However, unqualified additions arising from unauthorized and unconscious use in the interior and garden of the buildings should be removed. The original style of the building should be revealed by ensuring the spatial integrity of the buildings by removing the annexes that damage its historical value and repairing the damages.

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INVESTIGATION OF OTHER ARCHITECTURAL PRACTICES FOR THE FUNCTIONAL SUSTAINABILITY OF EXISTING BUILDINGS

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ABSTRACT

Today, rapid changes in social, cultural, technological and many other areas cause the adaptability of structures to be kept on the agenda. However, most of the buildings in the existing building stock and are still being built, are far from adaptable, and the building components and sub-installation systems are in complex relationships that do not allow for change. This unfavorable situation increases structural waste generation and resource consumption, especially in required adaptation processes of existing buildings such as refurbishment and renovations. Considering that these adaptation activities constitute almost half of all construction activities today, it is important to make the existing building stock compatible with the changes and sustainable in terms of functionality and environment, especially in the process of meeting the increasing requirements in Covid-19. In this context, in this study, it is aimed to reveal the reasons for the changes/adaptations made in line with the needs of the users for the functional sustainability of the existing buildings, and what other architectural applications for adaptations are, through literature research. As a result of this study, in which the current adaptation methods obtained were compared with the traditional approaches, it was concluded that the use of prefabricated building elements and infill system applications were effective in ensuring the functional sustainability of existing buildings and increasing their adaptability.

Key Words: Environmental Sustainability; Functional Sustainability; Adaptability in Existing Buildings; Changeability of Building Elements; Other Architectural Practices.

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INTRODUCTION

Change in contemporary architecture is an important architectural feature for buildings and building users, with the effect of the rapid and continuous development of technology. Social, cultural, economic, technological, environmental changes; constitute the main source of functional, physical, technological, and economic problems and needs that arise at the structural level (Ekinci, 2014). Today, it is important to adapt the buildings to the new conditions and requirements that arise with the changes, to ensure a more comfortable life for the users and for the functional sustainability of the buildings. In addition, the fact that these changes applied to the buildings support environmental sustainability by preventing resource consumption and waste generation brings the concept of adaptability in the architecture to the forefront. Adaptability is the fact that functional, spatial, and structural changes can be carried out economically, quickly, and easily in the building use phase in order to sustain the utility value of the building in terms of structural, functional, and economic aspects (Ekinci, 2014).

Looking at the traditional Turkish architecture, it is seen that the buildings can be adapted to these changes in a sustainable way. Architect Cengiz Bektaş discussed this adaptability feature of buildings on the concept of flexibility and stated that flexibility is one of the most important principles of the traditional Turkish house (Bektaş, 2013). Architect Turgut Cansever who emphasized change, explained the adaptability feature of the traditional architecture with the house of being able to get additions on it, to remove parts from it and to be used for various family sizes in the ever-changing world, and the environment where everything is changing (Ayvazoğlu, 2012).

When today's living conditions are considered, it is seen that human lives are changing more and more rapidly than in the past. Designing and producing adaptable structures against this rapid change makes it essential to benefit from the developing technology. However, when we look at the construction sector around the world, it is seen that the majority of the buildings are built to be structural life longer than their functional life and with non-replaceable building components. In addition to this, these components are designed as complex and incompatible in their relations with the space organization, other building elements, and building subsystems, in a way that does not allow for independent changes. Due to such unsustainable practices, in the renovations required in the building use process, the component to be replaced damages the other component it is in contact with, creates waste, additional expense, labor demand and noise. However, with the effect of the lack of specific adaptation methods applied in Turkey, again it is seen that permanent building materials and building components are used in adaptations. This situation may cause waste generation in the later adaptations that will be needed or at the end of the building's life. Considering that the building use phase is one of the main responsible for resource consumption and waste generation, it becomes clear that it is of great importance to make these structural and spatial changes in existing buildings sustainable. In this context, in the study it is aimed is to reveal the reasons for the changes/adaptations made in line with

the needs of the users for the functional sustainability of the existing buildings and other architectural practices for these adaptations.

ADAPTATIONS IN EXISTING BUILDINGS

"Adaptation" is used in the dictionary in the sense of making it compatible with each other in any respect, changing it to suit (TDK, 1992). In the context of architecture, adaptation of buildings is the process of adjusting and changing a building and/or its environment to fit or adapt to new conditions (Chudley, 1983); It is defined as all kinds of interventions made about to change the capacity, function, and performance of within the building in order to adapt to new conditions and requirements (Douglas, 2006).

Douglas who considers the adaptation and its provision as "performance management", includes in the scope of adaptation all interventions such as refurbishment, rehabilitation, renovation, etc. which are applied to regulate the performance, capacity, and function of the building under changing conditions, except from the basic maintenance and repairs for the maintenance of the building performance (Figure 1) (Douglas, 2006).

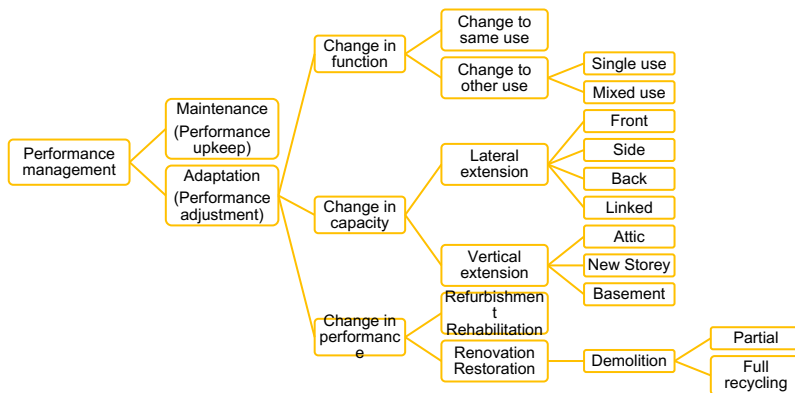


Figure 1. The two factors of performance management (Douglas, 2006)

In this context, adaptation studies according to the purpose and scope of the proposed change in the building have a wide range of applications, from basic preservation with the least intervention level to demolition with the highest intervention level (Figure 2). There are conservation, refurbishment, rehabilitation, renovation, remodeling, and restoration types of adaptation, in this area, in order of increase (Douglas, 2006). Today, these concepts and most of the other similar concepts are used synonymously or in similar definitions (Wilkinson et al., 2014).

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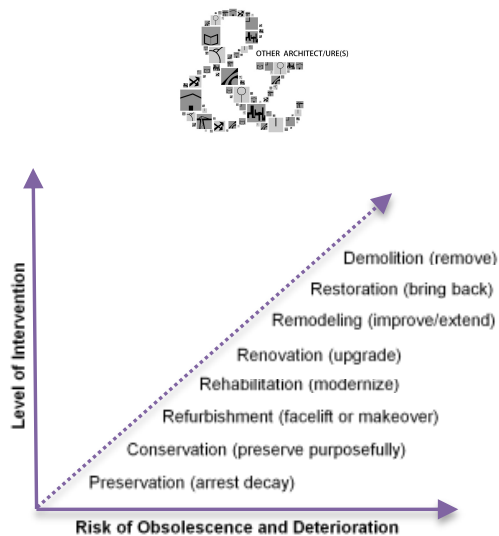


Figure 2. The range of adaptation interventions (Douglas, 2006)

If we look at the adaptation types in more detail, preservation and conservation are the basic adaptation works that include simple maintenances for the purpose of protecting the building or building component. Refurbishment is bringing existing buildings to current acceptable functional conditions with the modernization or overhaul of them (Watt, 1999). Rehabilitation is the provision of functional sustainability through repairs, alterations, and additions while preserving parts or features of a building that have historical, cultural, or architectural values (Weeks and Grimmer, 1995). Renovation is to raise and repair the existing building to an acceptable state of performance, which may include conversion work. Remodeling is repairing or arranging a building or building components according to their previous or different use. Restoration is to restore one or more parts of the existing structure to its original appearance or condition (Douglas, 2006). As a result of the researches, interventions between refurbishment and remodeling, other than simple repairs and repairs, are considered within the scope of the definition of the adaptation in the study.

Adaptations made in order to eliminate the problems and requirements encountered during the use process in existing structures depend on different factors and requirements. These are;

- Dynamic change factors created by social, cultural, economic, urban, legal, political, technological, environmental and climatic issues
(such as socioeconomic/sociocultural change, technological developments, change in building and architectural policies, climatic diversity)
 - Factors related to the natural and built environment
(such as the effect of building physics and biology, corrosion)
 - The basic requirements of the users-structures-regulations/specifications
(such as the biological/psychological/functional comfort requirements of the user, the static and durability requirements of the structure)
- (Ekinçi, 2014)



These factors and requirements constitute the main source of the following problems in existing structures;

- Functional Problems (*User uncertainty, incompatibility of user request with the existing building, insufficient functional capacity and performance of the building*)
- Physical Problems (*Structural stability and strength problems, building physic and biology problems, fire safety problems, etc.*)
- Technological Problems (*The oldness, inadequacy, and abandonment of the existing technologies*)
- Economic Problems (*Problems caused by the operation and maintenance costs of the building*)
- Architectural Value Problems (*Problems of preserving the architectural effect/document quality/oldness value of the building*) (Ekinci, 2014)

In order to ensure functional sustainability in existing structures by eliminating these problems, adaptation methods are preferred according to the above-mentioned levels of intervention. Adaptations are more economical than the demolition of the existing structure as well as more ecological due to they generate less waste and consume less energy. In addition, the adaptation of buildings whose functional life is longer than their technical life increases the strength them so extends their lifes and increases their economic values. Thanks to the adaptation of buildings whose technical life is longer than their functional life, functional sustainability can be ensured without demolition.

In addition to all these positive aspects of adaptations, it is a negative feature that permanent, unchangeable building elements and traditional construction methods are preferred in adaptations without considering the remaining life of the existing building and without considering that the users, users lives, and requirements may change. Because with the change, additional costs, labor demand, structural waste, time, and natural resource use may occur in order to meet the new adaptation needed. Thus, the environmental impact of the building use phase, which is largely responsible for waste generation and resource use, increases further. Therefore, sustainable adaptations should have the characteristics of being adaptable/flexible, using ecological materials, and providing economic gain (Douglas, 2006).

Existing Building Stock and Adaptation Data in Europe and Turkey

The existing built environment constitutes a significant part of the total waste generated and makes the most intensive use of natural resources (Casas Arredondo, 2021). Expenditures made on adaptation works of existing buildings, which are in constant use of resources, constitute almost half of the expenditures in the construction sector (Yedekçi Arslan, 2010). Almost half of the existing housing stock in most European countries was built before the widespread adoption of energy efficiency measures – before

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1970 (European Commission, 2014). In recent years the trend that has been accepted in Europe in meeting the new requirements of this stock is to adopt an adaptation approach instead of demolition-reconstruction, in line with the concept of sustainability, when technically possible even if it is not economical (İMSAD, 2020). As a result of this, while adaptations accounted for 53% of all construction activities in Europe in 2015, new construction activities accounted for 47%.

Other reasons for this increase in adaptations to new construction activities are as follows;

- Changing demographic structure,
- Aging building stock,
- New health policies,
- Increasing mobility with the development of technology and communication,
- EU's next ten-year strategy on climate change (Euroconstruct, 2010).
- Increasing requirements and changes with the Covid-19 pandemic (Pajakkala & Riihimäki, 2021)

It is seen that the adaptations, which constituted 50% of all housing construction activities in Europe in 2004, increased to 65% in 2015. In non-residential construction activities, the existing building adaptations, which were 42% in 2004, increased to 46.2% in 2013 (Figure 3) (Euroconstruct, 2010) (İMSAD, 2020).

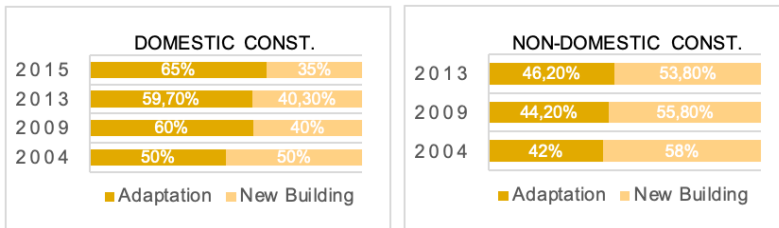


Figure 3. Rates of adaptation and new building activity in Europe (Euroconstruct, 2010; İMSAD, 2020).

All these adaptation data in Europe also show that the age and quality of existing stock affect the amount and extent of adaptation undertaken (Wilkinson, 2014). In this context, in the building census in 2001, it was determined that 39% of the existing building stock with an average age of 21 in Turkey was not within acceptable living standards (TÜİK, 2001). In this direction, 39% of the construction activities between the years 2004-2009 consisted of building adaptation processes such as refurbishment, renovation, and floor addition (Ekinci, 2014). In the period between 2012-2020, urban transformation, housing loan system works, and other initiatives in the construction sector have led to an increase in the number and sales of new buildings.

According to the İMSAD Turkish Construction Industry 2020 Report, in which the adaptations are handled with the concept of 'renovation market',



these developments were effective in keeping the actual renovation share in the construction materials market around 30% between 2010-2019. In 2020, the renovation market has shown a significant development due to the Covid-19 outbreak. With long-term curfews, the time spent at home has increased, and houses have become centers where many functions such as education, work, and sports are met. Parallel to these developments, important adaptation needs such as renovation and improvement have emerged in the buildings. The actual renewal share increased to 50% in 2020 with the adaptations mainly consisting of heating/electricity/water/ventilation/security installation systems renovations, energy improvements such as facade insulation, interior paint, door/window/cabinet changes, and other reinforcement applications (IMSAD, 2021). Considering that many conditions created by the Covid-19 epidemic will become permanent, it is thought that the renovation market, which is formed by the adaptations in Turkey, will grow more rapidly in 2021 and in the following years. For this reason, adaptation activities required to new conditions will continue.

The need to change functions in many buildings caused by the effects of the epidemic constitutes an important area of these adaptation activities. Particularly, shopping malls, offices and part of hotels are thought to change their functions in the new lifestyle. The fact that the 'work from home' process during the epidemic period greatly raised the need for home-offices has also increased the transformation requirements of existing residences. In addition, the fact that the average age of the existing stock in Turkey has exceeded 15 years creates a need for economic and technical adaptation in existing buildings beyond functional change. In terms of the construction sector and the construction materials industry, this need for adaptation creates an important potential (IMSAD, 2021).

In most of these existing buildings that need adaptations in Europe and Turkey, preference of building components that cannot be adapted in the face of changing conditions increases waste generation and resource use in adaptation processes. In addition, the complex and incompatible design of building components in their relations with the spatial organization, other building elements and building subsystems, in a way that does not allow for independent changes, adversely affects the environmental, economic and social sustainability of adaptation activities (Figure 4). Due to these unsustainable practices, in the renovations required in the building use process, the component to be replaced damages the other component it is in contact with, creating waste, additional expense, labor demand and noise.

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(a)

(b)

(c)

confusion at the spatial scale confusion at structural scale confusion in building renovations

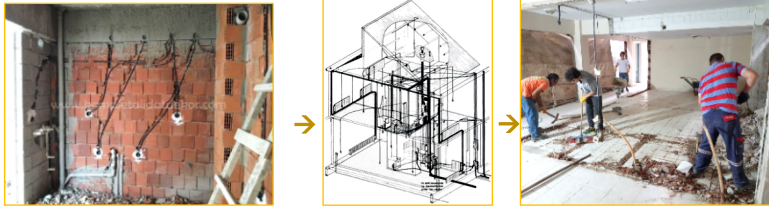


Figure 4. At the spatial scale (a) (URL 1), structural scale (b) (Habracken, 2000), and building adaptation process (c) (URL 2), confusions between building components-subsystems.

In addition to all these, it is seen that permanent building materials and building components are used in adaptations due to the lack of specific adaptation methods used in Turkey. This situation may cause waste generation or the application of new uneconomical solutions in the later adaptations that will be needed or at the end of the building's life. In this context, it is important both to determine more sustainable methods to meet the increasing need for adaptation as well as with the increasing the adaptability of existing buildings to ensure their functional sustainability, in terms of reducing the environmental and economic impact of the building sector.

Other Architectural Practices for the Functional Sustainability of Existing Buildings

Today, life is changing much faster than in the past. Being able to adapt the buildings to these changes in a sustainable way makes it necessary to benefit from advanced technology during the initial design and/or use phase of the building. In this context, the buildings in which industrialized construction systems are integrated affect the economy, environment and social relations positively. In addition to all these, when the adaptations in Turkey are examined, it is observed that there are no specific adaptation methods in use. Adaptations are made;

- With the traditional, customary method and non-changeable materials applied while constructing the existing structure, or
- By the companies' own methods developed in line with their experiences (Yedekçi Arslan, 2010).

Due to the fact that the irregular adaptation activities in the traditional methods applied increases resource consumption and waste generation in the building sector because of not having a specific systematic approach and not providing an organizational relationship between the building components and subsystems. For this reason, among the methods applied for the functional sustainability of existing buildings in the face of changing



needs, other architectural practices that minimize the environmental impact gain importance.

As a result of the literature research, two different architectural applications have been identified that are used/can be used in the existing building adaptations by making use of advanced technology;

- The first is the use of prefabricated structural elements such as frames, panels, cells, which are generally used in the first design phase of the building, in adaptations of existing buildings.
- The second is the use of infill system applications which in the open building approach, in existing building adaptations.

In the study, these determined applications were examined, and by comparing them with the traditional adaptation method, the positive or negative aspects of other architectural practices were tried to be revealed.

Use of Prefabricated Building Elements

With the introduction of mechanization, rationalization, and prefabrication to construction brought about by industrialization, adaptable building solutions can be created faster, higher quality, and more economical than traditional methods. Prefabricated load-bearing systems, flooring systems, and dividing walls, which are preferred to ensure adaptability, can be adapted to new uses by adapting to different spatial formations, without demolishing the building completely or partially.

It has been observed that most of the studies examined deal with the use of prefabricated elements within the structure in the adaptations of the structures designed with prefabricated systems. In the construction sector, when the adaptations of existing building stock built mostly with permanent building components are examined, it has been determined that prefabricated frames, panels, and cell elements are used. These prefabricated elements, which can be produced from many materials such as metal, wood, PVC, and composite, can be used in adaptations to form many building components such as walls, floors, windows, doors, and balconies (Table 1). Combining these components with easily removable connection methods such as screws, bolts, and inserts increases the adaptability of existing buildings. Thus, with the use of these prefabricated elements, which are mostly preferred in adaptation types of refurbishment, renovation, rehabilitation, and remodeling, waste generation is reduced while saving in terms of time, economy, and resource consumption in adaptations.

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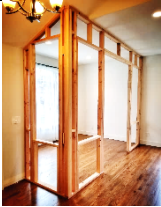


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Table 1. Use of prefabricated building elements in adaptations

	MATERIAL	COVER FEATURE	CONST. COMPONENT	ADAPTATION EXAMPLE
FRAME SYSTEM	Metal Wooden PVC	Wooden Plaster PVC Glass Composite Metal	Wall Floor Roof Window Door Balcony Stair Shaft	 (URL 3)
PANEL SYSTEM	Wooden Metal Concrete PVC Glass Composite	Constant Sliding Folding Interlaced	Wall Floor Roof Window Door Balcony Stair Shaft	 (URL 4)
CELL SYSTEM	<u>CONSTRUCTION COMPONENT</u> Balcony Room Unit Housing Unit			 (Stiab et al., 2008)

As a result of the scientific studies in the literature and the examination of the applications in the sector, there have not been encountered a systematic relationship and application method established between the prefabricated elements used in the adaptations and available structural components and sub-systems of the existing building. It is seen that the adaptation applications are differentiated and limited by the prefabricated building elements basis developed by the manufacturers. For this reason, it is thought that the use of prefabricated elements is more sustainable in simple and small-scale adaptation works that have minimal contact with the sub-systems of the building such as installation. In the use of prefabricated elements in the larger scale, comprehensive and complex adaptations, the systematic organization of building components and building subsystems with each other and among themselves may not be fully achieved (Figure 5). This can reduce the adaptability of the existing building and increase waste, resource consumption and cost in subsequent adaptations and/or building demolition.



Figure 5. Use of prefabricated elements in comprehensive/complex interior adaptations (Left Pic. URL 5) (Righ Pic. URL 6)

Infill System Applications

The infill system is one of the basic principles of the open building approach, which is a design and construction approach that aims for sustainability and adaptability in the built environment (Deniz, 2011). In order to meet the changeability-adaptability demands of the users, an infill system can be obtained by determining the levels of change between the components that make up the structure and establishing a systematic and hierarchical relationship between these levels (Figure 6) (Kendall and Teicher, 2000). Accordingly, other components that are independent of the bearing components that make up the support system, needed to create a continuously livable space are included in the infill system (Ekinci, 2014).



Figure 6. Layers of change (Brand, 1994).

The infill system, which has user control over its position in the building and can be changed independently of the support without affecting another structure, is the key element in achieving the adaptability intended in the open building approach. It consists of partitions, mechanical installation and equipment, doors, fixtures, cabinets, coverings, and other elements necessary to create a fully habitable space within the support system (Kendall and Teicher, 2000). The infill system creates an organizational relationship between building components and sub-installation systems,

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allowing these components and systems to change independently from each other. In this way, the desired unit can be converted and renovated more easily and quickly without damaging other related components. Thus, by reducing the use of resources and waste generation, solutions are offered to the problems in today's construction sector (Deniz, 2011).

Infill system technology with its building components and installation systems, has a much more complex and modular structure, unlike the prefabricated building elements described in the previous chapter. In this context, Matura's industrialized infill system, which consists of wall, floor, installation components, and their interfaces, which are highly compatible with each other, is among the well-known examples (Figure 7). All components of this system are compatible with each other, can be changed, rearranged, and can adapt to different situations as much as possible (Kendall, 2006). Installation systems and partition walls can be placed flexibly, thanks to the grooves left in the upper and lower parts of the load-resistant polyurethane floor-filling called Matrixtile. In the dividing walls, partitions were created that allow the passage of vertical installation systems.

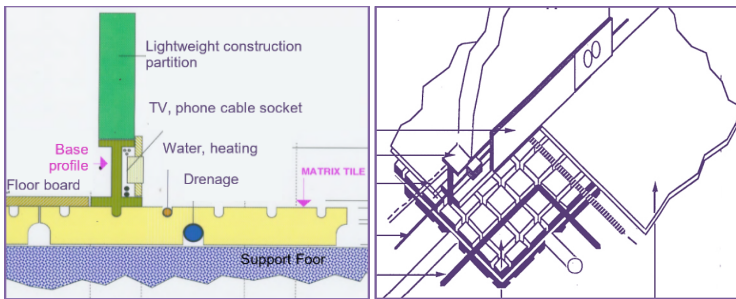


Figure 7. Matura infill system detail (Kendall, 2015)

In 1990, the Matura industrialized infill system was used in a residential adaptation in Voorburg, The Netherlands. The interior plan of the residential units, with only the support bearing system and vertical installation shafts preserved, was reconstructed with the industrialized infill system (Figure 8). Thanks to the organization established between the interior components of the building and the sub-installation systems, the adaptability has been increased and three different plan typologies are offered for the users.

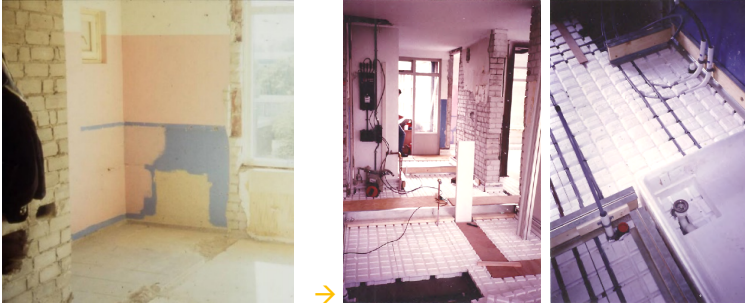


Figure 8. Voorburg yenileme projesi dolgu sistem uygulaması (Ekinci, 2021) (Kendall, 2015)

Since a common installation space is needed in the existing building to carry out the infill system application, this application is mostly used in adaptations of refurbishment, renovation, rehabilitation, remodeling required at the scale of the housing unit and/or the whole building. In this context, today, Infill Systems US company designs by independent housing units basis for new and existing buildings and transports the infill system products to the place where they will be assembled in packages (Figure 9). Then, in the infill package, the assembly of the modular wall, flooring, and plumbing components, which consists of two separate parts as a lower and upper system, is carried out in a planned manner. In this way, the incompatibility, miscommunication, and loss of time between the contractor companies that carry out the installation and other construction work independently of each other in the traditional method are eliminated in the infill system application.

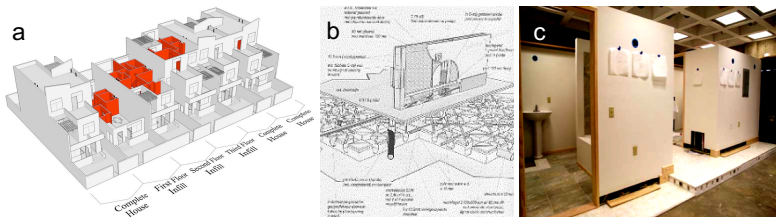


Figure 9. Housing unit infill packages (a) (URL 5), Upper and lower system details (b) (Kendall, 2011), Application on place (c) (URL 7)

CONCLUSIONS AND SUGGESTIONS

Due to the average age of the existing building stock and the effects of the covid-19 process, it is thought that adaptation activities for technical and functional sustainability in existing buildings will increase in the future. However, existing buildings cannot be easily adapted to rapid changes due to the permanent materials used and the irregular/complex building

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components placed. In addition, there are no specific adaptation methods used in our country, adaptations are made either by the companies' own methods developed according to their experiences or by conventional traditional methods. In these traditional methods, there are no organizational relationships and no systematic adaptation approach with the building components and subsystems. In addition, the preference for non-replaceable building materials and components in this method increases resource consumption, cost, and waste generation in subsequent adaptations and/or building demolition. For this reason, it is thought that traditional methods will be more sustainable in long-term use, in small-scale adaptations by building element basis that has the least relationship with the building subsystem and its components.

The use of prefabricated building elements and infill system applications in adaptations as other architectural applications that allow change for the functional sustainability of existing buildings in the face of changing requirements and increase adaptability are examined. With the use of prefabricated elements, a partial organizational relationship can be established between other building components and installation systems, mostly due to the application method determined by the manufacturing companies by the prefabricated building component basis they produce. It is thought that this will lead to more sustainable results in small/medium scale adaptations by building components and rooms basis. The infill system application, which establishes the full organization between the building components and the installation systems, allows the architectural infrastructure to be sustainable and allows the housing units to adapt to changing user preferences, new technical systems, and changing demographic characteristics. For this reason, it has been observed that infill system applications will be more efficient in terms of economy and environment in medium/large scale adaptations by housing unit and the whole building basis. However, it is thought that the infill system may be more economically inefficient compared to the other two methods described for buildings that will not need to be changed again after adaptation. It has been understood that the infill system is more effective than the use of prefabricated elements in terms of environment, economy and time management in comprehensive adaptations, with its feature of allowing the maximum organization of material supply companies and contractor companies.

As a result, it has been understood that the use of prefabricated building elements and the infill system applications in adaptations of different scales and scopes are more productive in ensuring the functional sustainability and increasing adaptability of existing buildings compared to traditional methods. On the other hand, knowing the costs of such applications is seen as a determining factor in the selection of methods to be used in adapting existing buildings. In this sense, it is thought that it would be beneficial to establish the relationship between the use of such other architectural practices with the cost in future studies.



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INVESTIGATION OF THE RESTORATION TECHNIQUES APPLIED IN THE CONTEXT OF DAMAGES DETERMINED IN CLOSED COURTYARD MADRASAH TOMBS IN ANATOLIAN SELJUK EMPIRE PERIOD

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ABSTRACT

Architectural conservation evolved into a concept with a scientific and theoretical background by the 18th century. The emergence of the theoretical framework of the concept of architectural conservation and concern for preserving original values in the global order have led to an increase in architectural conservation practices. Increasing applications have enabled new methods and techniques to be produced with the effect of developing scientific and technological activities. Although new methods and techniques positively affect the architectural conservation process, it has also raised the question of when, where and how to use which technique. Choosing the right technique, which is as important as determining the damage type, is of vital importance in the context of the sustainability of historical buildings whose original integrity is to be preserved. Although the damages in historical buildings are determined correctly, the technique to be applied cannot be selected correctly or not applied due to the problems encountered in the process, causing these types of damage to repeat or to create other damages. In this context, considering that each maintenance and repair work in conservation practices is an intervention to the original integrity of the historical building, the types of damage and restoration techniques should be determined correctly in order to the building to survive with the least change.

In this context, the subject of the study has been determined as "Investigation of The Restoration Techniques Applied in The Context of Damages Determined in Closed Courtyard Madrasah Tombs in Anatolian Seljuk Empire Period". The aim of the study is to examine the extent to which the restoration techniques chosen in the recent restoration implementations of the structures in the study area have eliminated or did not remove the types of damage identified in the survey studies and what are the causes of this situation. The examinations made for this purpose were made over the tombs of the madrasahs with a closed courtyard in the Anatolian Seljuk Period that has a relationship in both semantic and architectural terms. The selected building group has been chosen as a field of study because it allows observing different types of damage, as they contain different building materials, construction systems, and building

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elements. In addition, although the tombs have an important place in the spatial organizations of madrasas, which are one of the important structures of the period, the fact that they are not widely studied in the literature has led to the selection of these structures. In this context, 5 buildings from the Closed Courtyards Madrasah Tombs in Anatolian Seljuk Period which were recently restored, were determined as study fields.

The study basically consists of 3 main sections. In the first part of the study, there is an introduction where the problem, purpose and scope and method are explained. In addition, the types of damage and restoration techniques described in thematic tables, the history and architectural features of the tombs of the Anatolian Seljuk Period are mentioned in the introduction. In the second part, the damages determined in the survey drawings and reports obtained from the relevant institutions and organizations regarding the recent restoration implementations of the buildings are expressed in the thematic plan and facade drawings of the buildings with the help of the damage types of legends. In the light of the restoration drawings and reports obtained in this section, the restoration techniques applied in the building are transferred to the thematic plan and facade drawings of the buildings through the legend of the restoration techniques created. In addition to these, in the second part, the damages detected in the field studies conducted in 2017 are processed on the thematic plan and facade drawings of the buildings with the help of the damage types of legends created. In the third part, there is the evaluation and conclusion part where 3 different tables created for each structure are compared with the help of overlapping analysis. As a result of the comparisons made in this section, a common evaluation table has been created for each structure, which includes inquiries. In the common evaluation, the table created, it was concluded that the restoration techniques applied in the buildings in the study area were insufficient to eliminate the damage detected before the restoration. In line with the results, suggestions were made for architectural conservation practices and restoration works.).

Key Words: Conservation; Repair; Restoration Techniques; Types of Damage; Closed Courtyard Madrasah Tombs in Anatolian Seljuk Empire Period.



INTRODUCTION

With the Renaissance movement in the 15th century, the human-centered perception of the universe began to change, leading to the questioning of the central admissions (Vural, 2005). As a result of the inquiries carried out with the intellectual background, the other(s) concepts that define and legalizing the center have emerged. Although the other(s) are concepts that stand against the central admission, they have sometimes replaced the central admission, depending on the nature of the inquiries carried out. Inquiries involving other(s) concepts and central admissions have also found a place in the field of architecture, which is directly related to human beings. Depending on the changing central admission, the built environment in the focus of the microcosm also changes both in theory and in practice. The built environment, which is the product of the central admission of one period, can become the other of the next period with the changing central admission. This may cause the marginalized architectural product(s) and its surroundings to lose their active function, to be abandoned, to be briefly damaged.

Along with the changing central admission, the marginalization of architectural values that reflect the unique architectural features of a period has revealed the risk of losing these important values. The combination of this risk encountered in the built environment and the desire to maintain what is in human nature led to the formation of the first architectural conservation theories and practices (Croci, 1998). Architectural conservation practices, which started with unplanned and simple maintenance and repair works, have evolved into a concept with a scientific and theoretical background with what the modern world shaped after the Age of Enlightenment brought (Tutkun, 2009). The beginning of the formation of the theoretical framework of the concept of architectural conservation and the concern of conserving original values in the global order have led to an increase in architectural conservation practices. Increasing implementations have enabled the production of new methods and techniques with the effect of developing scientific and technological activities (Ahunbay, 1996). While the new methods and techniques affect the architectural conservation process positively, they have also brought with them the problem of which technique will be used when, where, and how. In addition, the increase in the opportunities in the field of architectural conservation with the developing science and technology has also led to an increase in the workload. In the shadow of the increasing workload, the determination of the damage type and the selection of an effective restoration technique plays a vital role in the context of ensuring the sustainability of the historical buildings whose original integrity is desired to be conserved. In conservation practices, choosing the wrong restoration technique for the correctly detected damage as well as the wrong determination of the existing damage can directly or indirectly damage the historical built environment. Such wrong determinations and practices cause the types of damage in the building to either recur or cause other damage. This situation prevents the sustainability of the original integrity of

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the historical building and its surroundings. In this context, considering that each maintenance and repair work in conservation practices is an intervention to the original integrity of the historical building, damage types and restoration techniques should be determined correctly in order for the building to survive with minimal change.

Although each building and its restoration have unique characteristics in architectural conservation implementations, the problems encountered in the process show similar characteristics. In order to preserve the original integrity of the historical built environment as much as possible, it is necessary to examine the past practices, to identify the problems encountered in the process, to question the underlying causes and to suggest remedial suggestions. It is thought that each past implementation examined will shed light on solving the problems to be encountered in architectural conservation implementations in the future and reduce errors.

In this context, the aim of the study is to examine to what extent the restoration techniques selected in the final restoration implementations carried out in the buildings in the study area eliminate or do not remove the types of damage detected in the surveying studies, and what are the reasons that cause this situation. For this purpose, the examinations and evaluations were made on the tomb structures of the madrasahs, which are related to the Anatolian Seljuk Period Closed Courtyard Madrasa structures, both in terms of meaning and architecture. The selected building group has been chosen as the study area because it allows the observation of different types of damage, as they contain different building materials, construction systems, and building elements. In addition, there are missing points in the literature about Anatolian Seljuk Period tomb structures, which are overshadowed by madrasah structures, although they occupy an important place in the spatial organization of the madrasahs, which are considered to be one of the most important structures of the central admission of the period. In short, the Anatolian Seljuk Period Closed Courtyard Madrasa Tombs have been determined as a study area due to their unique qualities and their features that serve the purpose of the study.

In this context, it is necessary to briefly talk about the damage types and restoration techniques, and then the history and architectural features of the tombs of the Anatolian Seljuk Period, in order to make the examinations and evaluations healthier in the study.

Damage Types in Historic Masonry Buildings

In architectural conservation implementations, damage types must be determined correctly before restoration applications in order to conserve the original integrity of the historical built environment. Accurate determination of damage types enables the selection of correct and effective restoration techniques to be applied in the building. In this context, the types of damage seen in the masonry structures within the study area are mentioned (Yurttaş, 2018; Mathews, 1998; Orbaşlı, 2008; Yıldız, 2012; Vatan Kaptan, 2010).



Table 1. Damage Types

collapse			insect infestation /mold	
slippage			vegetation / moss	
buckling/ bending			soiling/ discoloration	
crushing/ swelling			salt efflorescen	
torsion			cracks	
fracturing/ crumbling			losing function	
erosion/ mortar missing			unqualified additions	
corrosion			Table 1. Damage Types (URL-1, 2020; URL-2, 2020; Çelik & Birdal, 2017; Croci, 1998; URL-3, 2018; Yurttaş Arşivi, 2017; URL-4, 2018; URL-5, 2018; URL-6, 2018; Zakar, 2013)	

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Restoration Techniques Applied in Historic Masonry Buildings

Selection of restoration techniques that are effective and eliminate the damage type in restoration implementations carried out in the historical built environment is at least as important as the correct determination of damage types. Failure to choose the appropriate technique for the damage type detected causes the damage on the structure to recur and even new damage types to occur. This situation can bring along large and deep interventions in conservation practices where the least intervention to the historical structure is at the forefront. Therefore, in this part of the study, restoration techniques will be expressed on a schematic table so that the correct and effective technique can be selected (Yurttaş, 2018; Mathews, 1998; Orbaşlı, 2008; Zakar, 2013).



Table 2. Restoration Techniques

cleaning	mechanical cleaning		consolidation / reinforcement	relocation	
	chemical-biological cleaning			buttress	
	water washing			hooping	
	cleaning of vegetation and insects			tie rod/ tie bar	
	cleaning of unqualified additions			tie beam/ tie plate	
	rehabilitation			surface enlargement	
	renovation			stitching /cramp	
	reintegration			injection	
	reconstruction			jet grout system	
	contemporary addition			micro pile application	
	reuse		<p>Table 2. Restoration Techniques (URL-7, 2018; Zakar, 2013; URL-8, 2020; URL-9, 2018; URL-10, 2020; Dalkılıç & Halifeoğlu, 2007; URL-11, 2020; Yurttaş Arşivi, 2017; URL-12, 2020; URL-13, 2020; URL-14, 2018; URL-15, 2020; Çebi, 2010; URL-16, 2020).</p>		



Anatolian Seljuk Period Tomb Architecture

There are different classifications of tomb structures built during the Anatolian Seljuk Period. In a classification, tombs are divided into two, according to their location, as those built within a structure or independent of the structure (Şaman Doğan, 2019). In a second classification, they are examined in two groups in terms of formal configuration. The first of these are the tombs, which have a wide, cylindrical base, and a low, almost flat dome. The second is the tombs, which are shaped by the outer cone-shaped, internally dome-shaped top cover fitting into a polygonal body with the help of Turkish triangles. In the second tomb structures, the polygonal body usually rests on a square planned base (Rice, 2015). In both types of classification, the tomb structures of the Anatolian Seljuk Period appear with their single-space arrangements. The buildings are generally constructed as two floors. On the lower floor of the building, there is mostly a burial chamber/mummy place where the body of the builder is found. On the upper floor of the tomb, there is the prayer room/ tomb cist section where the mihrab, the representative sarcophagus are located and the worship is performed. Access from the tomb chamber to the masjid is usually provided by stairs formed outside the building (Gündüz, 2010; Arık, 1967). In the tombs built within a building, examples can be encountered in which the staircase arrangement is not included, since access can also be provided from within the building. Since the buildings are generally built with the masonry construction system, the top cover is carried by full and thick walls. As building materials, materials such as stone, brick and wood, which are found in the Anatolian geography and show local differences, were preferred. In the tombs of the Anatolian Seljuk Period, there is usually a massive and relatively simple organization, except for the entrance façade, just like in other building groups. On the entrance façade, there is a monumental entrance overflowing from the wall surface, decorated, columnar, rosette and muqarnas. Although there are differences on door and window arrangements, rectangular or arched openings are mostly encountered. In some window arrangements, embrasure windows are also used. Tile or carved motifs are observed in tomb structures, cornices and moldings at the transitions from the body to the upper cover, on the coffin in the burial chamber, on the cornices in the masjid, inscriptions and domes. The motifs used are of geometric and vegetal nature and have a semantic infrastructure. In addition, an alternating pattern is encountered in stone or brickwork on the exteriors of some tombs (Gündüz, 2010; Arık, 1967; Rice, 2015).

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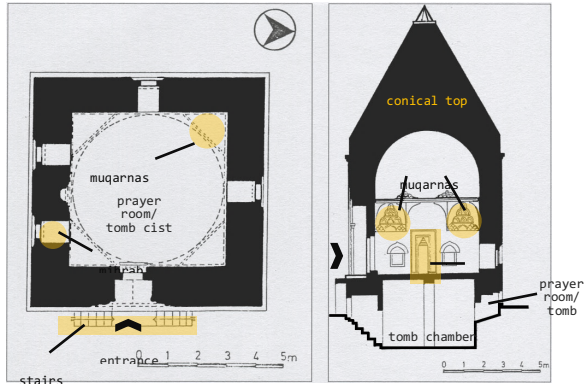


Figure 1. Eskişehir-Sivrihisar Alemşah Tomb plan and section, Anatolian Seljuk Period tomb space organization (URL-17, 2021).

ANALYSIS STUDIES ON CLOSED COURTYARD MADRASAH TOMBS IN THE ANATOLIAN SELJUK EMPIRE PERIOD

Scope and Method

In the study, first of all, in order to limit the study area, structures that are original and functional for the study, from the Anatolian Seljuk Period Closed Courtyard Madrasa Tombs, whose original integrity has been preserved to a great extent, have been identified. This first limitation stage is important in order to compare the condition of the structure before and after restoration within the study. Among these structures that were identified later, those that have recently undergone restoration and whose data can be accessed have been identified. This stage was carried out in order to enable the analysis of the positive or negative effects of the selected techniques on the elimination of damage types. In this context, within the scope of the study, the structures that will be examined and evaluated are listed as follows.

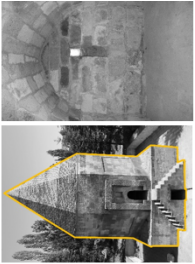

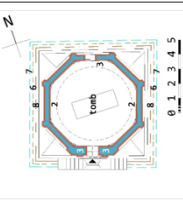
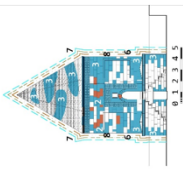
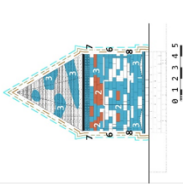
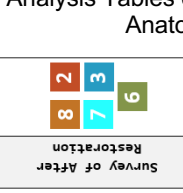
- Afyon Sinanpaşa Boyalıköy Madrasa Tomb
- Erzurum Yakutiye Madrasa Tomb
- Isparta Atabey Ertokuş Madrasa Tomb
- Kırşehir Cacabey Madrasa Mausoleum
- Konya Karatay Madrasa Tomb

Within the scope of the study, separate analysis tables were created for each building. These tables contain the identity information, visuals, and site plan of the buildings. In addition, the last restoration implementations of the tombs were obtained from the relevant institutions and organizations,

- schematic plan, facade, and section drawings in which the damage detected in the survey drawing and report is expressed with colored legends

- schematic plan, facade, and section drawings in which the restoration techniques applied in the building according to the restoration drawing and report are indicated with colored legends.
- There are schematic plans, facades, and section drawings in which the damages detected in the field studies carried out in 2017 are expressed with the help of colored legends.

Table 3. Analysis Tables on Closed Courtyard Madrasah Tombs in The Anatolian Seljuk Empire Period

1	Period of Built:	XIII.c.
	Location:	Afyon
	Current Function:	Tomb
	Restoration Year:	2007
	Const. System:	Masonry
Const. Material:		Stone-Brick
		
		
		
		
		

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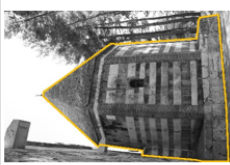

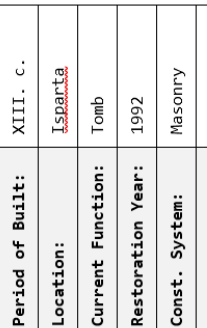
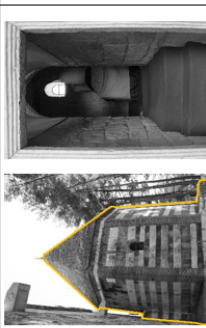
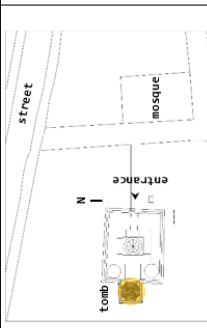
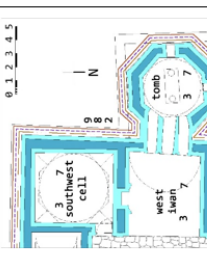
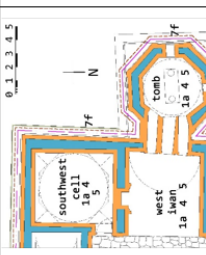
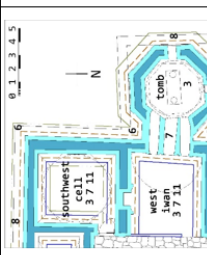
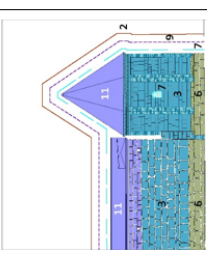


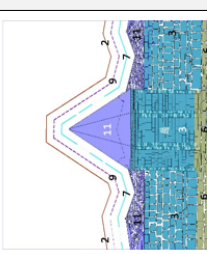

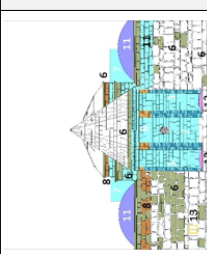
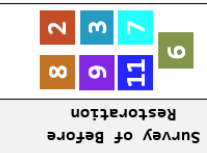


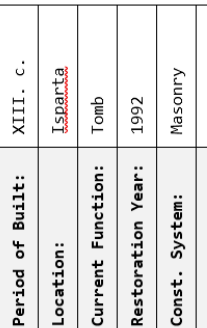
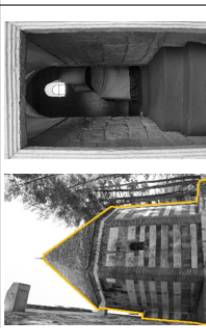
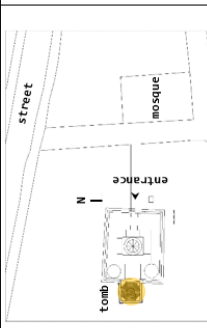
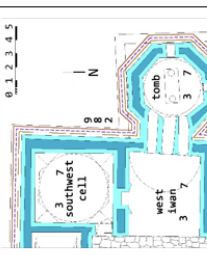
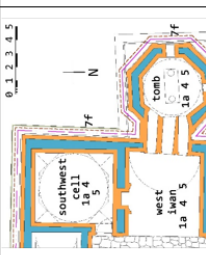
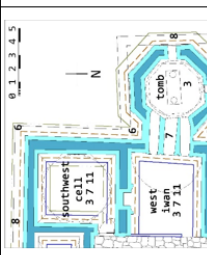
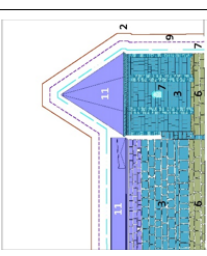


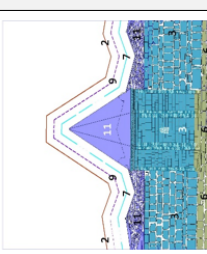

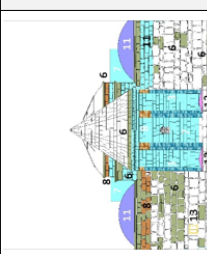
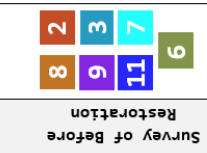


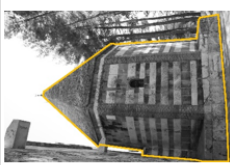

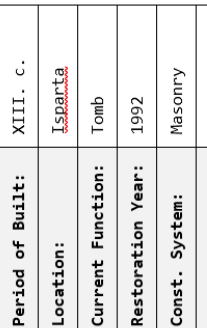
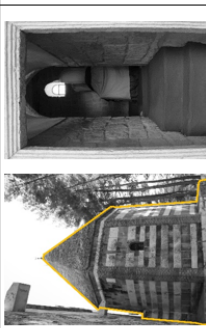
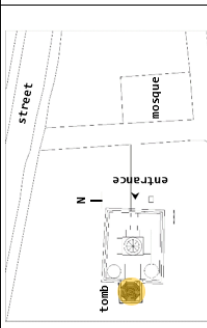
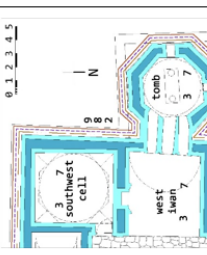
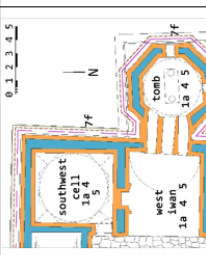
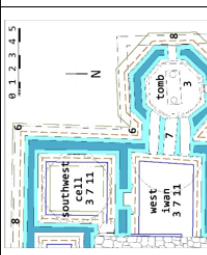
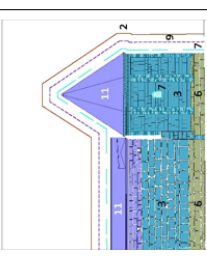


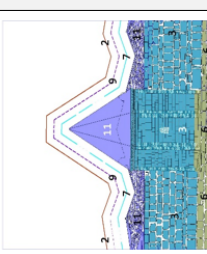

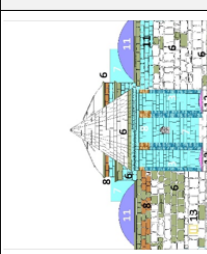
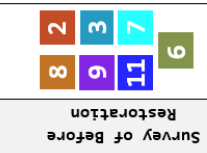


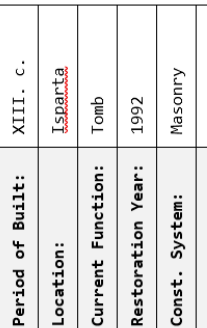
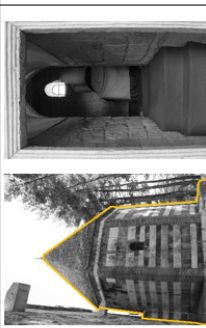
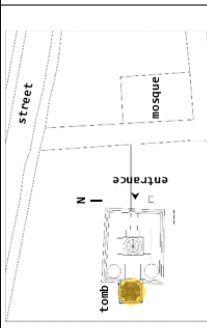
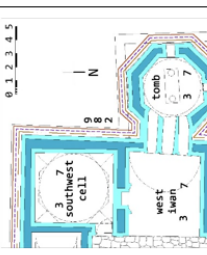
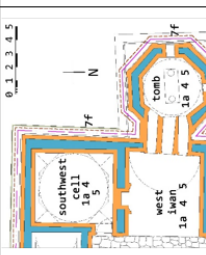
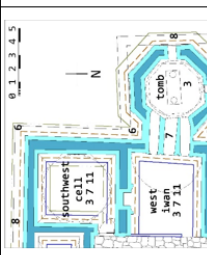
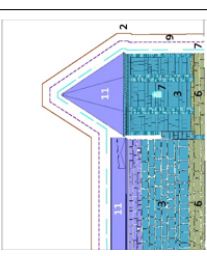


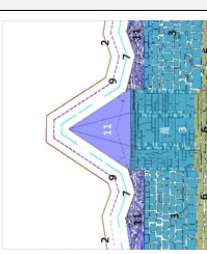

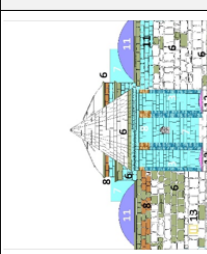
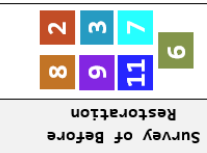


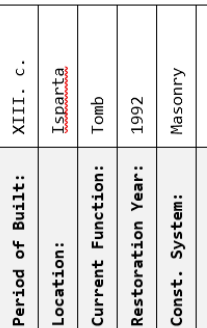
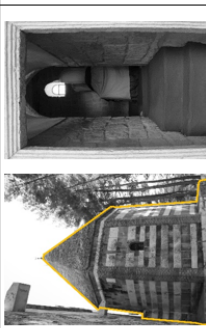
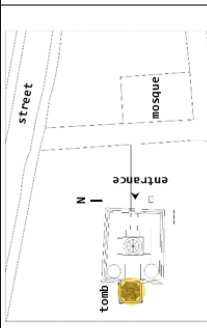
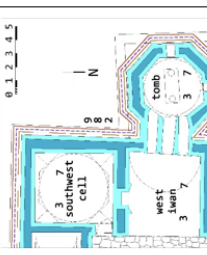
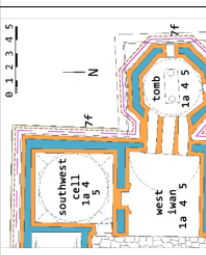
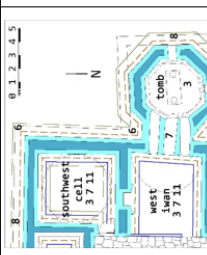
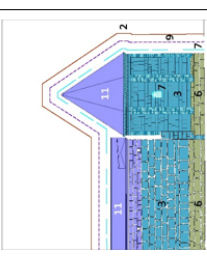


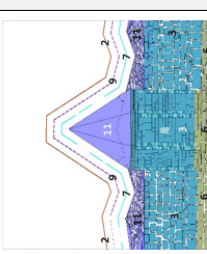

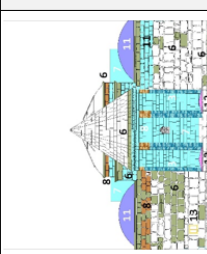
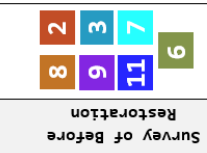


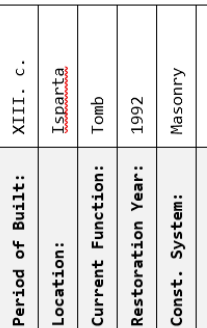
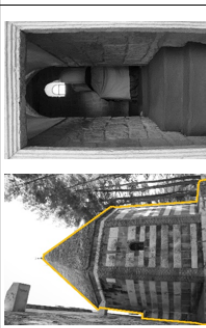
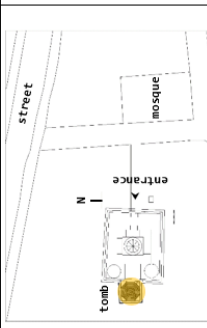
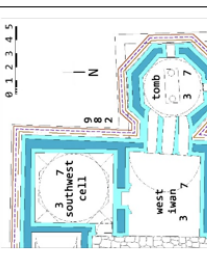
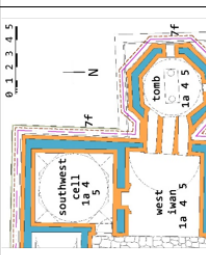
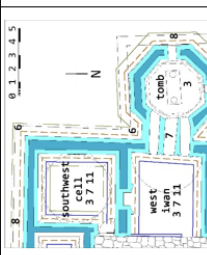
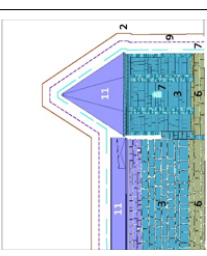


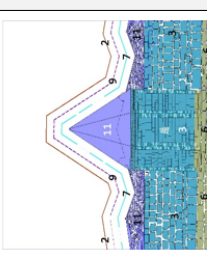

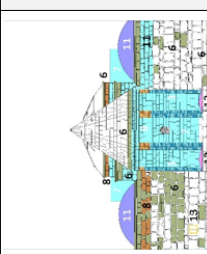
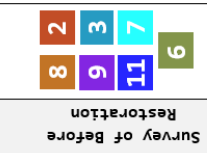


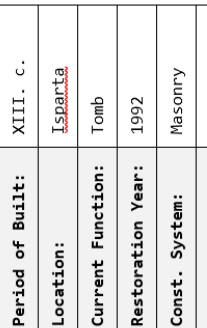
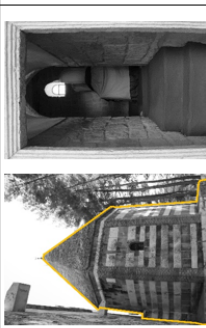
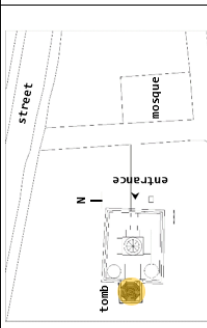
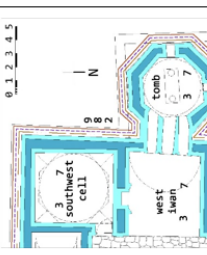
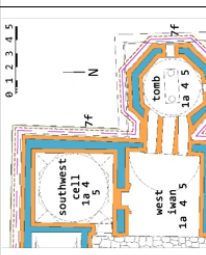
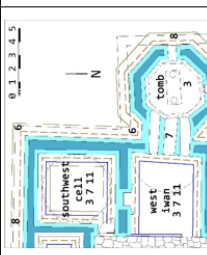
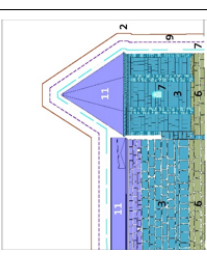


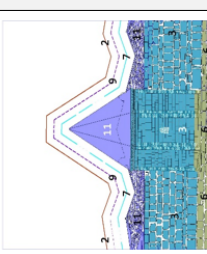

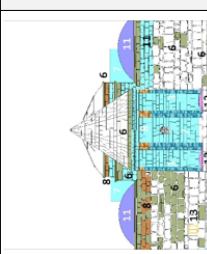
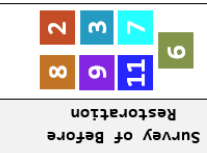


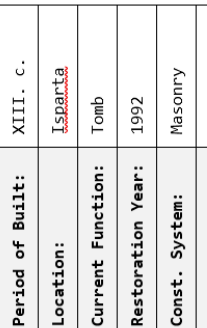
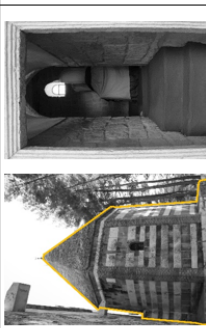
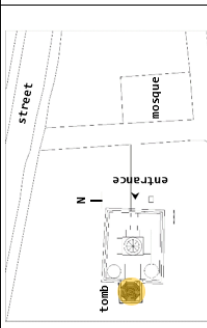
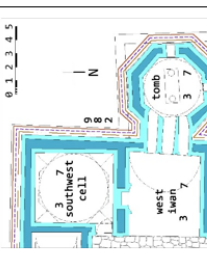
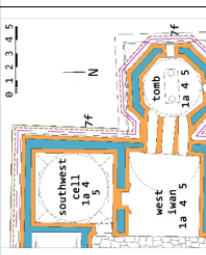
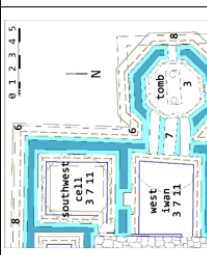
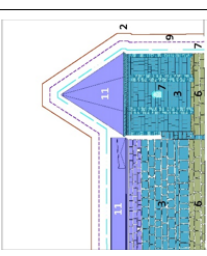


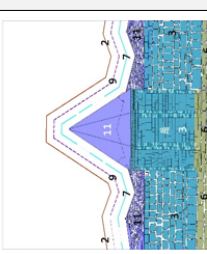

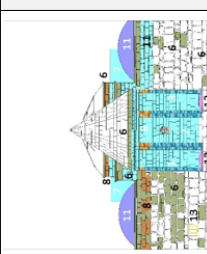
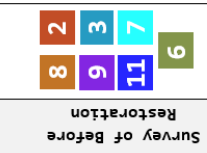


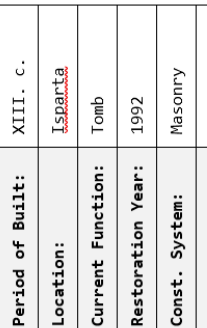
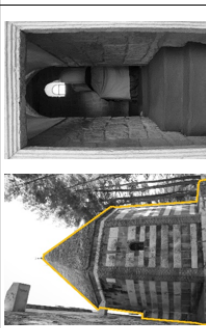
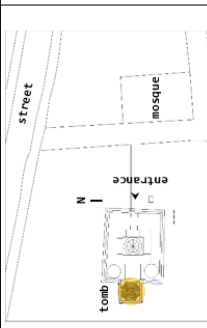
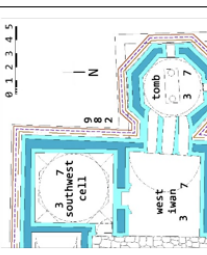
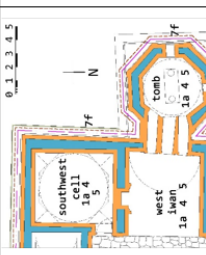
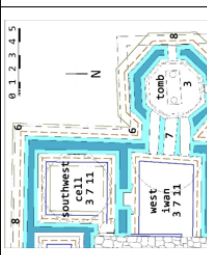
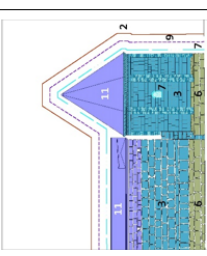


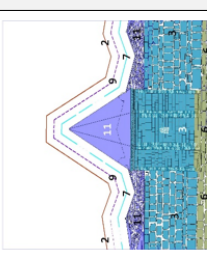

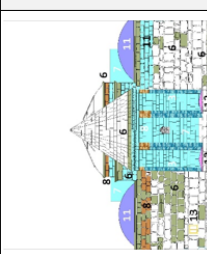
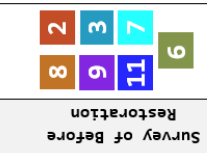


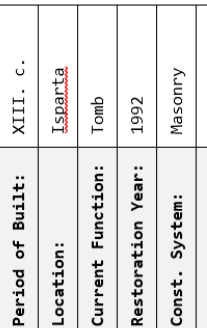
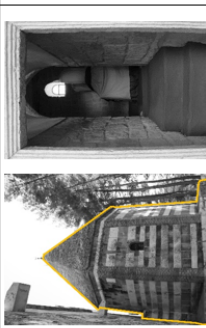
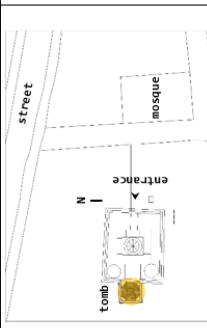
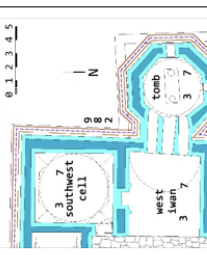
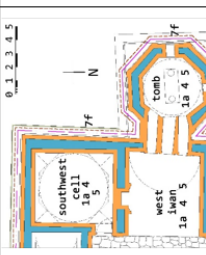
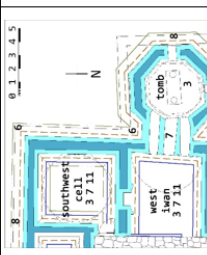
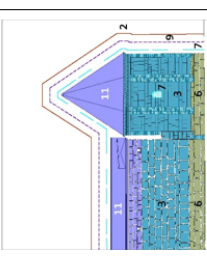


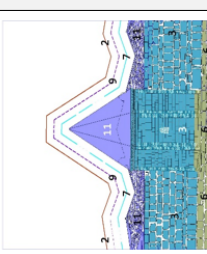

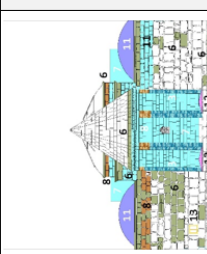
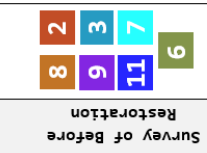


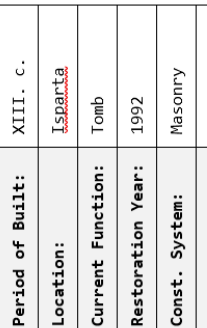
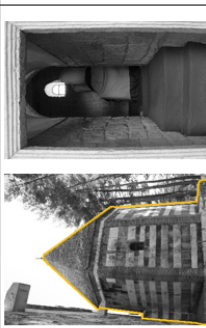
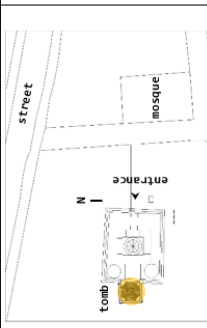
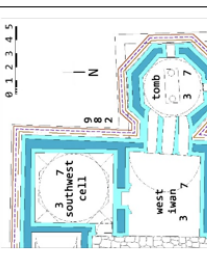
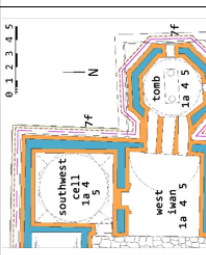
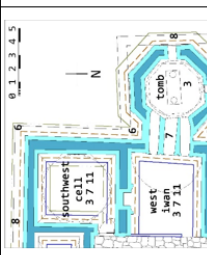
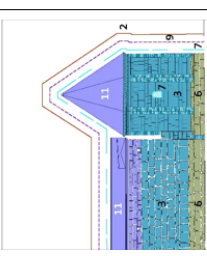


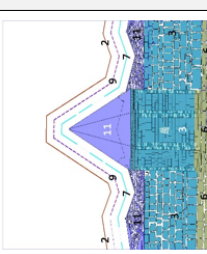

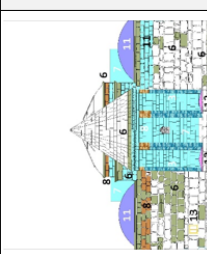
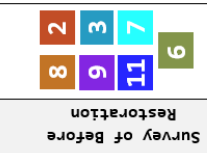


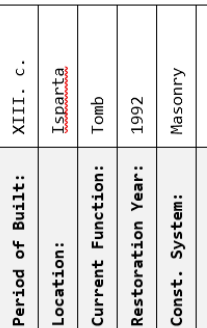
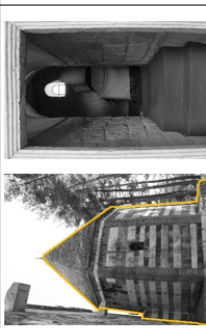
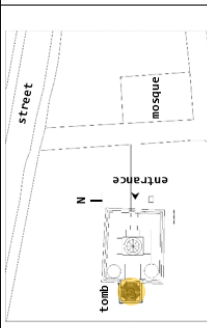
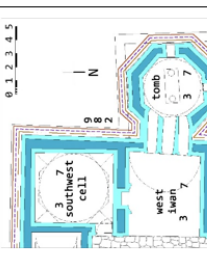
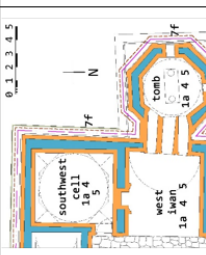
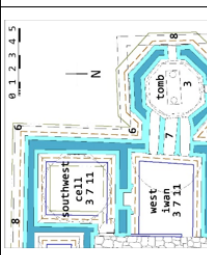
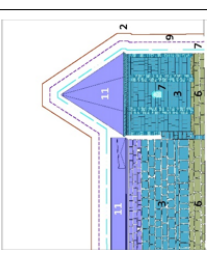


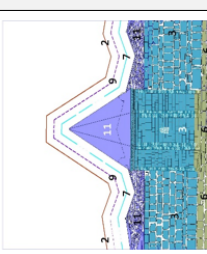

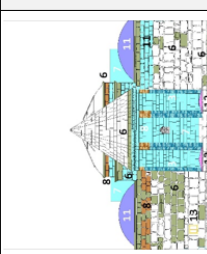
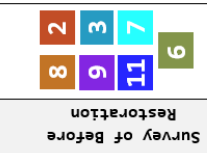


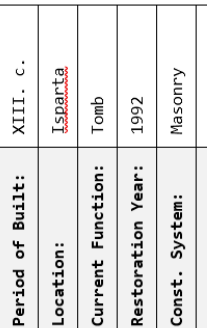
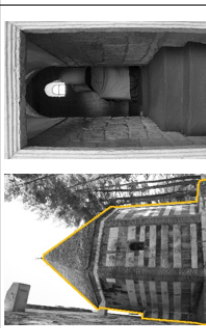
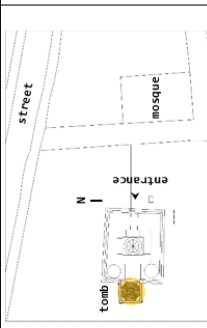
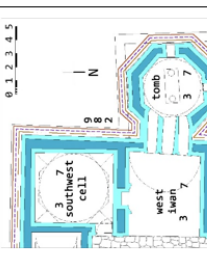
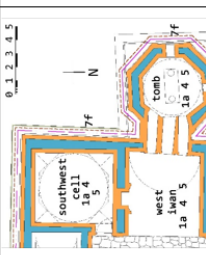
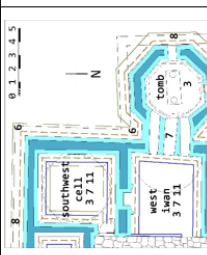
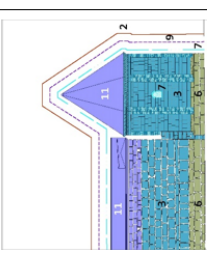


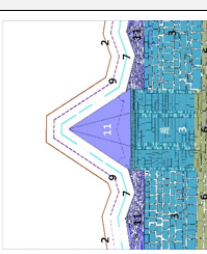

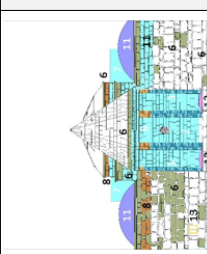
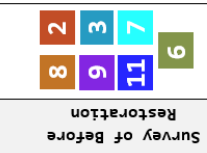


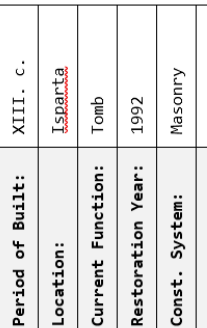
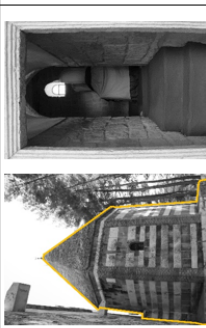
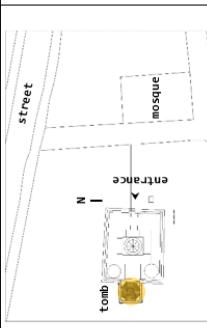
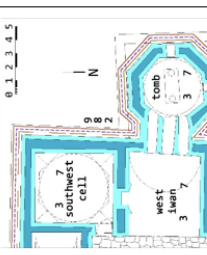
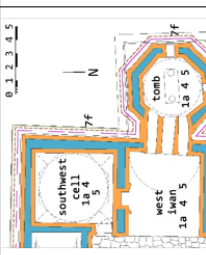
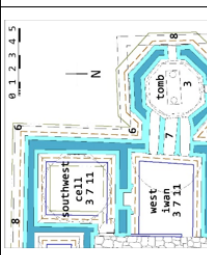
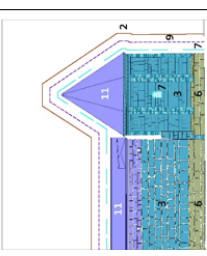


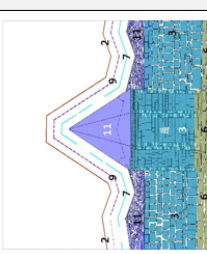

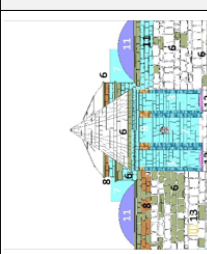
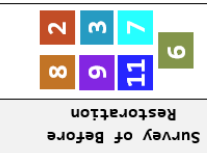
Education

Arts/ Aesthetics

Table 4. Cont.

2	Erzurum Yakutiye Madrasa Tomb																																																																																																																			
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Table 5. Cont

3	Isparta Atabey Ertokus Madrasa Tomb															
	Period of Built:		XIII. c.		 		  		  		  		  		  	
	Location:		Isparta													
	Current Function:		Tomb													
	Restoration Year:		1992													
Const. System:		Masonry														
Const. Material:		Stone-Brick														
		  		  		  		  		  						
		 				  		  		  		  		  		
						  		  		  		  		  		
						  		  		  		  		  		
						  		  		  		  		  		
						  		  		  		  		  		
						  		  		  		  		  		
						  		  		  		  		  		
						  		  		  		  		  		
						  		  		  		  		  		
						  		  		  		  		  		
						  		  		  		  		  		
						  		  		  		  				

Politics/ Policies/
Laws/ Regulations/
Ethics

Human/ Behavior

Technology/
Material/
Sustainability

Philosophy/
Theory/ History/
Discourse

Criticism/ Method

Identity/ Culture/
Tradition

Urban/ City/
Landscape/ Rural

Design

Interior Design

Conservation/
Transformation/
Re-use

Education

Arts/ Aesthetics

Table 6. Cont.


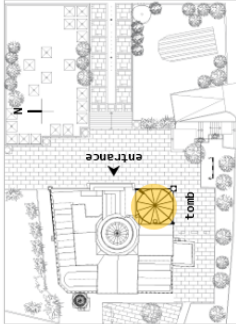
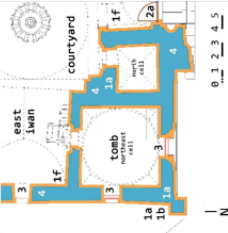
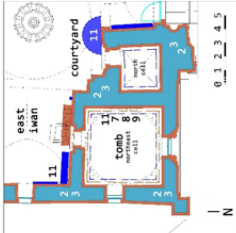


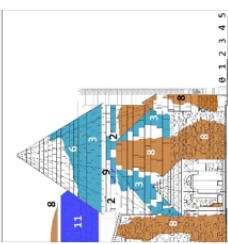
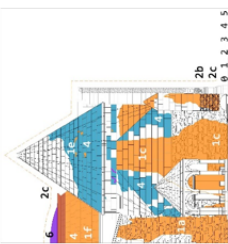





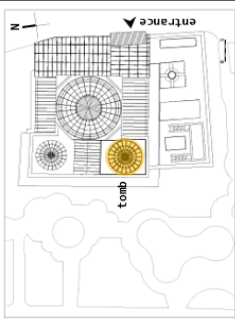
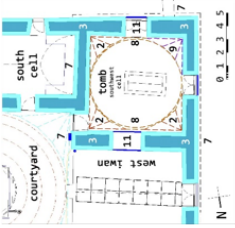
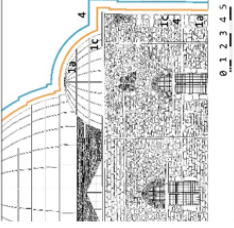
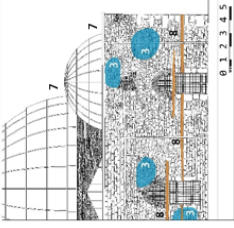
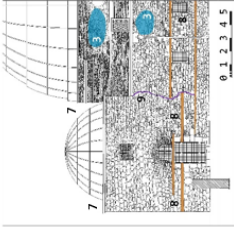



















































































































































































4	Kırsehir Cacabey Madrasa Tomb					
	Period of Built:	XIII.c.				
	Location:	Kırsehir				
	Current Function:	Tomb				
Restoration Year:		2005				
Const. System:		Masonry				
Const. Material:		Stone				
						
						
						
						
						

Table 7. Cont.

5	Period of Built:	XIII.C.																																																																																																																																																																																									
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EVALUATION & CONCLUSION

3 different tables created for each building were analyzed on the basis of plan and facade with the help of overlapping analyses. As a result of the comparisons made, a evaluation table was created, which includes evaluations for each building.

Table 8. Examination & Evaluation Table

Name of Buildings	Surveying Analysis Report / Damage Types		Restoration Implementation Report / Restoration Techniques		Damages Detected After Restoration	
	Plan	Facade	Plan	Facade	Plan	Facade
<u>Afyon Boyalıköy</u> Madrasa Tomb	2,3,6,7,8	2,3,6,7,8	1a,1b,3,4	1a,1b,3,4	2,3,5,6,7,8,11	2,3,5,6,7,8,11
<u>Erzurum Yakutiye</u> Madrasa Tomb	3,7	2,3,7	1a,4	1a,1b,2c,3,4	3,7,11	2,3,7,8
<u>Isparta Atabey Ertokuş</u> Madrasa Tomb	3,7	2,3,6,7,9,11	1a,4,5,7f	1a,1f,2c,4,5,7f,9	3,6,7,8,11	3,6,7,8,11,12
<u>Kırşehir Cacabey</u> Madrasa Tomb	2,3,7,8,9	2,3,6,7,8,9	1a,1b,3,4	1a,1b,1c,1e,2a,2c,3,4,7f	2,3,7,8,9,11	2,3,6,7,8,9,11
<u>Konya Karatay</u> Madrasa Tomb	3,7	3,7,8,9	1a,1c,1f,4	1a,1c,4	2,3,7,8,9,11	7,8,11
Damage Type Legend						
<ul style="list-style-type: none"> 1-collapse 2-fracturing / crumbling 3-erosion 4-mortar missing 5-insect / mold 6-vegetation / moss 7-soiling / discoloration 8-salt efflorescence 9-crack 10-loosing function 11-niteliksiz ek. 12-deficient application 13-non-project application 14-revised application 						
Restoration Techniques Legend						
<ul style="list-style-type: none"> 1a-mechanical cleaning 1b-chemical cleaning 1c-water washing 1d-biological cleaning 1e-cleaning of vegetation and insects 1f-cleaning of unqualified additions 2a-painting/impregnation 2b-installation 2c-waterproofing 3-renovation 4-reintegration 5-reconstruction 6-contemporary additions 7a-buttress 7b-hoopings 7c-tie rod/bar 7d-surface enlargement 7e-stitching / cramp 7f-injection system 7g-FRP app. 8-relocation 9-reuse 						

In the evaluation table prepared, whether the technique applied during the restoration phase is effective in eliminating the damages detected in the pre-restoration survey phase and the underlying causes were evaluated. According to this table,

Reintegration and reconstruction techniques have been applied for the fracturing/crumbling and erosion/mortar missing observed in all the structures. Although the reintegration and reconstruction techniques have largely eliminated the damages based on the examined structures, it has recurred due to neglect in the Afyon Sinanpaşa Boyalıköy Madrasa and Isparta Atabey Ertokuş Madrasa tombs, and due to moisture and vegetation in the Kırşehir Cacabey Madrasa tomb.

Although the vegetation damage detected before the restoration in Afyon Sinanpaşa Boyalıköy Madrasa, Isparta Atabey Ertokuş Madrasa, and Kırşehir Cacabey Madrasa tombs were removed by mechanical and chemical cleaning methods, the main problem was reoccurring due to the inability to remove moisture factor from the structure.

Although the soiling/discoloration seen in all the buildings within the scope of the study were cleaned by physical and chemical methods, they occurred



again due to humidity, air pollution, vegetation, and salt efflorescence. This has occurred because the main cause of pollution has not been eliminated.

Salt efflorescence damage detected before restoration in Afyon Sinanpaşa Boyalıköy Madrasa, Kırşehir Cacabey Madrasa, and Konya Karatay Madrasa tombs has recurred due to the inability to effectively remove moisture from the building.

In all buildings, some arrangements have been made to adapt them to contemporary comfort conditions within the scope of rehabilitation. The arrangements made are generally installation arrangements, and they damaged the structure both physically and visually during the adaptation phase.

Repairing the crack damage found in Kırşehir Cacabey Madrasa and Konya Karatay Madrasa tombs with injection technique played an active role in eliminating the damage.

As a result, common and singular findings were reached that the restoration techniques applied in the selected structures in the evaluation table were insufficient to remove the damages detected before the restoration. Particularly, it has been observed that the fracturing/crumbling and erosion/mortar missing, vegetation, soiling/discoloration and salt efflorescence damage recur due to the inability to eliminate the basic moisture problem in the buildings. Accordingly, in future restoration implementations, the necessity of investigating the main cause of the observed damage in-depth and removing this problem from the structure should be taken into consideration. In addition, researching the effectiveness of the techniques applied after the restoration works to be carried out in the future and keeping records for this will allow the development of studies to be carried out in this field.

The last restoration implementations of the Anatolian Seljuk Period Closed Courtyard Madrasa Tombs, which were a product of the central admission of a period, were examined. In this context, both the restoration implementations were evaluated and the structures with such a unique quality were mentioned in the academic literature. It is thought that the study prepared in this way will shed light on the studies to be done in the context of restoration techniques and methods and will revive the existence of the Anatolian Seljuk Period Closed Courtyard Madrasa Tombs in the academic world.

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*Politics/ Policies/
Laws/ Regulations/
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Human/ Behavior

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*Philosophy/
Theory/ History/
Discourse*

Criticism/ Method

*Identity/ Culture/
Tradition*

*Urban/ City/
Landscape/ Rural*

Design

Interior Design

**Conservation/
Transformation/
Re-use**

Education

Arts/ Aesthetics



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PART XI

EDUCATION

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TRIALS OF DIFFERENT PLACES AND SUBJECTS IN DESIGN: THE EXAMPLE OF INSIDE OUT MOVIE

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ABSTRACT

There have been various transformations in architecture. Concepts such as how architecture is perceived, for whom it is made, applications on different scales and new programs, variety of construction materials, high-rise buildings, opportunities of computer technology, and digital spaces are among the debatable subjects of architecture. Architecture has been attempting to re-establish its relation with other disciplines in a wider framework. Cinema is one of these disciplines. Defining and structuring the space in films; visualizing the conditions expressing different eras and conditions; showing the features of time, individuals, and physical surrounding through forming a life in them; conveying these through digital space, and feeding the theory of architecture make cinema and architecture connected.

Inside Out is an animation movie which presents a wide repertoire of space, and in which emotions that resemble humans in terms of appearance and behaviours are in leading roles. It is mainly set in fictional spaces that are in the human brain. The film involves strong spatial elements which trigger imagination in terms of architecture. The fact that the living spaces of the main characters are not shown in the film apart from their working times constitutes a subject to make a design on. First year students of Architectural Design class made a study in which they designed spaces for these emotions, judging from their status in the film. This study initially focuses on the relationship between architecture and cinema, and then conveys the study conducted by architecture students on the *Inside Out* movie. Within the context of the study, the “other” concept in architecture is exemplified through the cinema discipline which is the “other” for architecture; digital spaces which do not exist in real life but perceived as real; and an animation film that exists only through drawings and emotions that are fictionalized to be physically living in the human brain.

Key Words: Space; Cinema; Design; Education; Inside Out Movie

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INTRODUCTION

Nowadays, there is a debate on the status and content of architecture. The debate is significant as it makes a comparison between the current professional practice and the previous eras, and plays a role in determining the future approach and status. Architecture used to be a profession in which mayors, nobles, and the wealthy were the employers, made way to building large-scale and monumental buildings, and the number of architects limited in comparison to today. The construction of civil architectural structures was an activity carried out under the supervision of builders. Nowadays, mainly accommodation buildings are produced in the work environment. Technological advancements effect architecture. Structures of different forms can be tried thanks to computer use. Nowadays, architects work with different disciplines on different subjects. These disciplines feed the work area of architecture. These areas are engineering areas such as construction, machine, and electric; and architecture also collaborates with disciplines such as sociology, philosophy, and psychology to theoretically benefit from. Architects are no longer concerned only with the divine and the permanent. The data provided by daily life are considered as important elements that guide architectural designs. The productions realized with the participation of the clients in the design and construction process also constitute the working area of architecture. Working in different fields increase the intellectual knowledge of architects; allow them to work, think, and design on different subjects. Developments are also effective in changing the definition of the architectural profession.

Cinema is one of the fields that is connected with architecture. Basically, they are quite different from each other in terms of their working area, productions forms, and the product they present. However, a bond between them is constituted as their work area is the space. Approaching architecture from the point of view of another discipline allows one to look at life from a wider frame. One can obtain information on the atmosphere of past eras, life styles, structures, decorations, clothes, and the tools and materials used through cinema. The film ceases to be a two-dimensional surface and is perceived four-dimensionally as to include width, height, length, and time. It is important to reflect the architecture of an era to provide suitability of the space to reality. Fictional elements such as the world of future, its cities, life environment, clothing, tools and materials used are reflected in films that feature futuristic fiction. Quite distinct from architecture, the discipline of cinema still feeds architecture as the "other". Animation films, however, reflect a fictional and digital world through the screen.

Attempting different practices in architectural education makes it clear that architecture is an interdisciplinary discipline with vague limits. Cinema films distance people from reality and enable them to live in the reality of the film at that point. The viewer sympathizes with the actors, understands them, and feels like them. Sometimes, the viewer cannot escape the effect of a film even if it is finished. The feeling of sympathy and the digital space concept are experienced with all their reality in the cinema. The viewer



sometimes lives the reality of the film. They experience a similar perception just as when architects sympathize with a customer and perceive concepts through their eyes. The fact that the architectural product is drawn and modelled on a computer is in parallel with the cinema as it is produced in a digital space and perceived through a screen.

Attempting a variety of practices in architectural education, contributes to the development of architecture candidates. Architecture education is a difficult process that requires labour and devotion. Nonetheless, urban environments in Turkey lose their authentic qualities day by day and resemble each other. Although the education strives to act against this, the building stock that gradually becomes dominant in cities show that this sensitivity is inadequately reflected in the professional environment. Also, shaping the architectural designs is also problematic which dwell on beautiful, flamboyant, and interesting building visuals that can be accessed through magazines and the internet during the education process.

Working on a cinema film in the architectural design studio enables students to see the infinitude of the design process and the interdisciplinary structure of architecture. They have the opportunity to work with a variety of environments, lives, and people. It is important to work with unfamiliar conditions in terms of architecture. Because situations that have not occurred before are taking place in the contemporary world. There are at hand pandemics that have a global effect, pollution in seas, possible earthquake risks, forest fires and floods that occur simultaneously in different cities in a country. Films provide an opportunity to take professional precautions and see these situations before they took place.

Based on these findings, a study was conducted on *Inside Out* movie with the students of Architecture Department in Tekirdağ Namık Kemal University in the Spring Term of 2016-2017 Academic Year. *Inside Out* is an animation movie and is about the lives of emotions that live inside people's brains. Living in people's brains and effective in the formation of their characters and behaviours, these emotions resemble people. They put on clothes, speak, and work like people. The work area of emotions, remembering, subconscious, dreaming, imagination, memory storage, and the transportation vehicles connect these places appear in the film. These spaces and equipment they have are designed to resemble buildings, objects, and spaces that belong to people in the real world. Nonetheless, the space in which emotions pass their time apart from the work time was not defined in the film. Students designed living spaces for emotions judging from the film.

This study focuses on the relationship between architecture and cinema, and gives information on the study conducted with students. The study conveys that data obtained by taking a cinema film as the basis to determine space and subjects in the architecture design studio. Students made designs for each of the emotions that do not exist physically and materially in real life, by sympathizing with their characteristic features. The study both exemplifies an approach to cinema, which is "other" for architecture, by connecting it to architecture, and also includes designs for beings which are "other" for people as they do not exist in real life.

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Architecture and Cinema Relationship

Connected with a variety of disciplines, architecture also has a relationship with artistic fields such as literature and cinema (Akarsu, Erdoğan, 2016, p. 14). The contemporary human is intensively surrounded with stimulants (Yararel, Bayır, 2015, p. 55). The use of digital space has risen with messaging via technological webs, sending e-mails, shopping in a digital environment, and cultural activities such as museum visits. People realize various activities independent from space thanks to opportunities such as working from home, shopping from the office. These are the leading factors that have recently affected architecture. Seeing computers as a tool of design rather than a technical drawing tool in architecture, highlights the role of digital space use in the design process.

The precision of the limits between the disciplines has decreased compared to the past. Hybridization, complex structures, and new relations occur through the interaction of disciplines. Nowadays, disciplines look for solutions from their own field in other disciplines. As the borders of architecture are vague, it feeds from a number of fields and benefits from other disciplines in order to produce its own theory. This relation takes place both directly in the practical area and also in the theoretical area (Ünver, 2015, pp. 39-40). It is possible to mention the disciplines that architecture is connected as sociology, philosophy, psychology, literature, and sculpture. Cinema is also one of the fields that architecture is connected to, affects, and is affected from. Cinema feeds the theory of architecture. It is possible to benefit from data on the reflected era and human life through cinema.

As two distinct modes of production, architecture and cinema re-establish points of view and perception by approaching them in non-usual manners. Although they are different structurally, they offer each other suggestions on perception, thinking, and new space forms (Yararel, Bayır, 2015, p. 55). The fact that the space in the cinematic production is well-defined makes it possible to better understand the place the event takes place in, and internalize the atmosphere. This also makes it possible to make a personal connection to individuals in the fiction.

Cinema films and literary works can be effective for architects to trigger their imagination and boost their creativity. Especially, the utopic and dystopic fictions make people to think on these subjects. Films can be effectual for individuals to enhance their aesthetic and artistic taste, think on sociological matters, pay attention to ecological issues, and review political biases (Akarsu, Erdoğan, Özbursalı, 2020, p. 11).

Notions of space and time constitute the core of architecture and cinema. Cinema makes a connection to architecture by describing the spaces of living. Films make it possible to understand the era they describe by reflecting its features (Ünver, 2015, p. 40). For instance, in an era film narrating the old times, one can see clothing, interpersonal relations, tools and materials they used, and technological opportunities as well as buildings. They obtain information about the environment which has an effect on their lives, issues, expectations from future, and their decisions. This situation supports the fact that architecture should not only be



evaluated as the built environment, but it also should include the human and his life. Thus, cinema films become a source of information. They provide a four-dimensional life and make people believe in the reality of digital space. The viewer experiences and understands the aforementioned era by empathizing with it. This perception of digital space becomes a more informative and permanent experience to understand the architecture of the era, compared to only reading books or looking at the drawings.

Animation films have a particular place among film kinds because animation films do not have space in reality. Therefore, these are the films which require the most sensitivity to space. Architecture has a two-dimensional space representation in animation films. Space is designed through modelling technologies. Spaces in animation films are created through a meticulous research, design, and a three-dimensional study (Ünver, 2015, pp. 41, 46). Nowadays, animation films have been showing a fast development. They are becoming more realistic films rather than mere fictions. In animation films, primarily creating the atmosphere, and then the character and space formation are important. Atmosphere provides for the character and space to be harmonious. Harmony is significant in terms of the internalization it creates on the viewer. Criteria such as character, visual representation of the environment and space, connection to the viewer, impact of the design are effective in the measuring of success. Animation films are constituted by an assembly of a number of disciplines. Events are conveyed to the viewer by squeezing into a short time and a limited space. Animation films get inspiration from architecture. This situation is effective to easily comprehend the fictional design and the physical space (Yararel, Bayır, 2015, p. 55).

It is thought that every vision, smell, and sound are saved in the memory since the human's birth, and that this storage is continuously expanding with interpretation and additions. The images, which the human feels through experience and then revives them in his memory, are formed individually based on experiences that he obtains from past and the condition he is in. Creation of atmosphere in cinema includes all of these imaginative perceptions (Yararel, Bayır, 2015, p. 56). In cinema and architecture, where visualization is important, space is created not only to be perceived rationally, but also to be perceived emotionally. Sensory factors such as colour, light, and sound are significant in the creation of the atmosphere. Space is of necessity in cinema in terms of the narration of the story. Apart from the fact that cinema conveys a visual to the viewer, it can only be transformed into images through space. They acquire a meaning by integrating with the images in the viewer's memory. Having occurred and experienced in the individual's memory, a number of senses are activated transiently and form a new totality with the images that were uploaded (Yararel, Bayır, 2015, p. 67).

Working through examples in the intersection of architecture and cinema is beneficial for architecture students for the development of their design and imagination. Today, students who come to the university from high school are lacking the necessary abilities in observing the world, creating content, taking initiative, bearing responsibilities, and making designs (Kökner, 2019,

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p. 37). This situation results in a lack of qualified architectural environment because of social, economic, and cultural reasons (Akarsu, Erdoğan, Özbursali, 2020, pp. 9-11). As the first step for the individual's architecture process is the architecture education, the affirmative and negatory experiences during the education process may affect the whole professional life of the individual. Therefore, research on architecture education bears importance. Architectural design studios are also of importance since they constitute the backbone of architecture education (Kararmaz, Ciravoğlu, 2019, p. 68). As they possess a central role in architecture education, it is advised to look into architectural design studios and reconsider when there are a number of changes are foreseen in architecture. The increase of artistic effect in the sources that architecture studio feeds from, will enable to enhance the imagination of students who are architects of future. Including practices that give importance to literature, art, culture, visual, and even music in the studios (Akarsu, Erdoğan, Özbursali, 2020, pp. 9-11) will provide the studio environment to become richer and students to develop their intellectual background.

While first year students are lacking abilities in design, it is problematic to expect them to have acquired almost all abilities (Köknar, 2019, p. 37). Another negative situation is that the visual quality is paid more attention than necessary during the architectural design education; thus, the end product is predominantly visual images. When the physical experiences are not paid enough attention, the design process is only limited to the sense of sight. Experience and physical awareness should be esteemed as important in the studio (Kararmaz, Ciravoğlu, 2019, pp. 69-70). From another point of view, architecture means suggesting space and physical possibilities that are created in the space. The architect should understand himself, the human, environment, and the concept of experience in order to develop a life and experience suggestion, and realize their harmony. In other words, the ability of empathy should be developed to create a meaningful architectural product. Experience and physicality should be considered important during the education process to develop the sense of empathy (Kararmaz, Ciravoğlu, 2019, p. 70).

In today's world, architecture schools are also interested in cinema. Films can be a means to raise quality and harmony in architecture. Famous figures of architecture such as Bernard Tschumi, Rem Koolhaas, Coop Himmelb(l)au, and Jean Nouvel accept the importance of cinema (Pallasmaa, 2007; Transmit: Ünver, 2015, pp. 40-41). Working on cinema in architecture contributes to the development of theory of architecture. New studies conducted in this field constitute a point of view. Making spatial readings though cinema is an important source in terms of theory and practice in architecture. The fact that space and architecture cannot be independent from the human can be discussed through cinema which is embodied through the concepts of time and space just as architecture. Researches, which are done in this field for a qualified and harmonious architecture, will bring new points of view to scientific studies and architecture education (Ünver, 2015, pp. 39, 53).



Inside Out Movie Experience

Inside Out is an animation movie which was released in 2015. The focus point of the film is that people are directed by emotions in the Headquarters, who determine their manners and behaviours in certain situations. This situation is also relevant for other living things such as cats and dogs. Emotions start to live with the person since his birth. These emotions observe life through that person's life and live with him. Although there would be more emotions in the film, it was later arranged to be 5 emotions: joy, sadness, anger, disgust, and fear (Wikipedia). The film is based on the idea that the changes in people's moods occur based on these main emotions. The main characters of the film are the five emotions of a 11-year-old child named Riley. The changes in the lives of emotions in the film happen simultaneously with the changes in Riley's life. As a generally happy child, Riley becomes unhappy and experiences a shift in her personality when her family moves to San Francisco from Minnesota.



Figure 1. Joy, Sadness, Anger, Disgust, and Fear in Headquarters

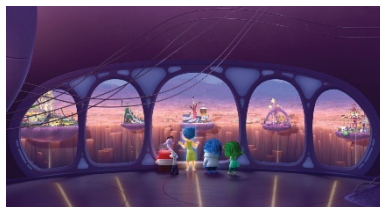


Figure 2. View of the Personality Islands from the tower-shaped Headquarters where the emotions work

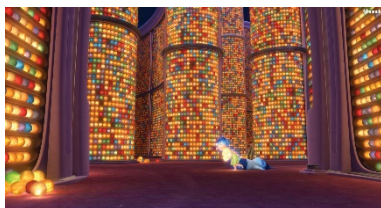


Figure 3. The labyrinth-like place where long-term memories are stored in shelves like a library

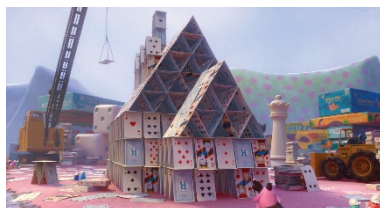


Figure 4. The construction being built by the workers out of playing cards in the Dream World

The physical appearance of emotions in the film resembles humans. They have heads, bodies, arms, and legs, and they dress like humans. But they do not look like each other based on their body types and their colours suitable to their characteristics. As the leading role in the film, **Joy** is yellow, energetic, and a restless character. **Sadness** is blue. The fact that the English word 'blue' also means sorrowful, might have been effective in the colour of the character. It has a short and stout body, wears glasses, and is

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dressed in thick clothes - compared to other characters - with a turtleneck sweater. Sadness is portrayed as a character with a low energy; it does not want to walk even under important circumstances. Another character, **Anger** is short, with wide shoulders, and red. When it gets angry – which happens in a short time – it bursts a yellow fire through its head. It can turn back to normal as quickly as it gets angry. Another character is **Disgust**. In fact, it also beckons vanity in a way. It has a green colour. With its long eyelashes and a somewhat ornamented dress, it is hardly content with anything. The last main character among the emotions of the film is **Fear**. It has a very thin, almost skinny body. The colour of its skin is pale purple. Based on people's characters, one of these emotions becomes the leader (this comment can be deduced from the fact that the film also shows the emotions of Riley's mother and father in some parts). As Riley is a happy child, the emotion of Joy is predominant in her. All emotions take their place behind the control desk as if they are going to their shift when the person awakes. Based on the experiences of the person, they have an effect on people's behaviours and feelings and direct him by taking the remote control, when there is a situation about that emotion. When the person sleeps, the emotions leave one of their own as the guard in charge of the control desk and go elsewhere.

The place where emotions live in the film, addressed as Headquarters, is described as a tower. There is a control desk and a bookcase which contains guidebooks that include features of the brain. The place where emotions live and what they do when they are not working has not been defined in the film. Emotions can see the other places in brain by looking from the windows of the tower. The place which occupies the widest space in the brain is the storage area consisting of shelves like a library, resembling a maze, and where memories which are kept in spheres are stored. There are Personality Islands which reflect a person's character and has an important effect on their personality. For instance, Riley's Personality Islands are Family, Honesty, Hockey, Friendship, and Playfulness. These features that constitute the personality are also features of the Personality Islands. There is a Memory Dump in the big gap between the tower and personality islands, where forgotten memories go and are forgotten through time. The film also features places in the mind where dreams are made by other workers, a place described as Subconscious where fears are stored, and the Imagination World. Headquarters and other places are connected to each other through a transparent tube and narrow roads. There is also a train described as Train of Thought that makes a connection between the Headquarters and other places, and has a number of stops. Joy and Sadness leave the Headquarters and go to these places because of a problem experienced when Riley and her family moved to another city. They meet oval-shaped workers that are responsible for dreams, storing the memories and erasing the old ones as well as Bing Bong, Riley's imaginary friend (Figure 1-4).

In the study conducted with students, they were required to come up with ideas on what kind of a place the emotions in a person's head have when they are not working. The study was a short project before the main study of the term took place. It was conducted with 11 first year students of



Architecture Department in Tekirdağ Namık Kemal University within the context of Architectural Design II class of Spring Term in 2016-2017 Academic Year. Students realized their ideas by making models. They supported their ideas through architectural diagrams. They handed in their end product as models and presentation boards. The number of emotions was increased as the number of students exceeded the number of emotions and only one student was required to work on a specific emotion. Apart from Joy, Sadness, Anger, Disgust, and Fear, they also made designs for Courage, Enthusiasm, Confusion, Curiosity, Doubt, Hope, and Shame. The designs were made in accordance with the characters studied. They chose their own choice of construction material and model material because the designed place would be inside a person's brain. The designs were made according to an interior space, guarded by outer weather conditions (Figure 5-6).



Figure 5. Poster design of Sadness's living space (design by Yunus Emre Albostanlı)

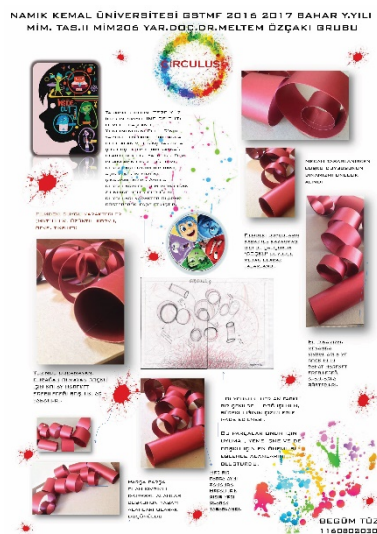


Figure 6. Poster design of Enthusiasm's living space (design by Begüm Tüz)

Colourful stripes are used for the design made for **Joy** character. Its living space can be entered through colourful vertical stripes. A bed or a door is not described. Joy can enter its living space from wherever it finds suitable and sleeps wherever it wants. The design of the structure was inspired from the circular form of a merry-go-round. As Joy likes skating (Riley plays hockey which requires gliding on ice) there is an ice-skating area near its living space (Figure 7).

Clouds are used as construction material for the living space of **Sadness** character. Sadness can shape its living space by moving clouds. It can cry with the rain by climbing over the clouds. Rain and teardrops constitute a

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pond. A swing is included in the design to help the character to be alone. It can also sit on the rocks and watch the water quietly. (In the movie, Joy asks Sadness to read the books in the library or not leave the circle it draws on the floor to stall it and prevent it from making the present memories sad ones.) Cotton is used in the model to describe the clouds in the design (Figure 8).

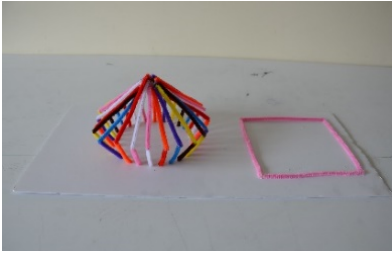


Figure 7. Model of Joy's living space (design by Kübra Ayçin Atakan)



Figure 8. Model of Sadness's living space (design by Yunus Emre Albostanlı)

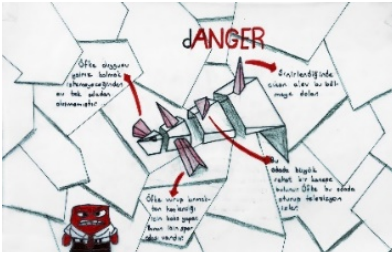


Figure 9. Architectural diagram of Anger's living space (design by Doruk Çakır)



Figure 10. Model of Fear's living space (design by Sema Kevser Akkaş)

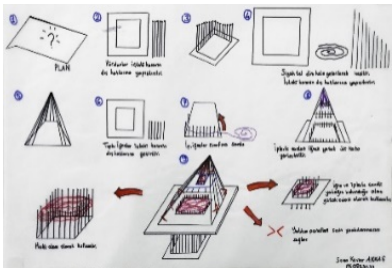


Figure 11. Architectural diagram of Fear's living space (design by Sema Kevser Akkaş)



Figure 12. Model of Courage's living space (design by Ömer Tunahan Limonci)



As **Anger** is an extreme emotion, edgy and sharp lines are used in its living space. Some of the sharp points in the structure enable the flames that Anger produces when it gets angry to upsurge without harming the structure. Black and red colours are used in the model and presentation board as it is thought that they reflect anger. The living space has multiple entrances instead of one. There are different spaces for different activities in the structure such as a place which includes a sand bag for boxing and a place to relax on a comfortable sofa and watch the television (Figure 9).

The living space constructed for **Fear** is designed so it would constantly experience the feeling of fear and do not lose this feature. The fact that this character is in constant fear is for it to struggle for survival and learn to live with its fears. It can do its hobbies downstairs. While dealing with its hobbies, the aim is that it will tangle in ropes and experience claustrophobia. The design features places without railings and panels that make the sound echo. These panels are described with short red stripes in the model. Its bed, surrounded with sticks, formed by strings with spaces between them therefore evokes the feeling of falling, is upstairs. The model of this uncanny structure that belongs to Fear includes sticks, toothpicks, pins, and strings as its main materials (Figure 10-11).

The living space that belongs to **Courage** character consists of two masses. The starting point of this design is acrophobia and the triangular form of a pine tree has been effective in their formation. The masses are situated above the sea. The structures are connected to each other by a narrow and sloping rope (walking route). There is a trampoline between these structures for it to pass its free time (Figure 12).

Enthusiasm character is thought to be a restless character. Dynamism concept is paid attention in the design. The circular structure formed with curls is designed as the living space of enthusiasm. The units constitute the sleeping, eating areas furthermore entertainment areas that are very important for enthusiasm. Each unit has its own entrance. The design of the structure gives the feeling of a random organization (Figure 13).

The building units and equipment that belong to the living space of **Confusion** are designed to be movable. The main idea is to allow for different usages in the same space. The door is described as a cylinder and a high unit. With a window that makes a visual connection between the interior and the exterior, the vision can be hindered whenever wanted. Plaque-shaped panels can turn around via a vertical shaft situated in the middle. Pictures can be drawn on these panels and the view can be changed by turning the other side on demand. The height of the bed can change according to need (Figure 14).

The living space for **Curiosity** is designed based on the idea of a life dwelling on thinking, observing, and researching. It is elevated from the ground, in a circular form, has transparent surfaces, and has a circulating mechanism. Inside, there are rooms situated around the form, complying with the circular form. The space where Curiosity sleeps is designed as a closed room. Its colour is shown to be different from the other rooms in the model (Figure 15).

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Figure 13. Model of Enthusiasm's living space (design by Begüm Tüz)

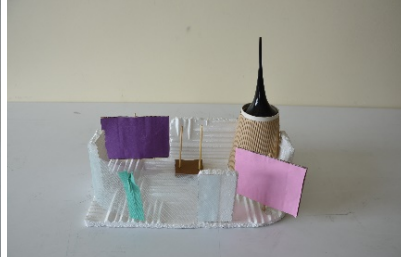


Figure 14. Model of Confusion's living space (design by Gamze Oysal)

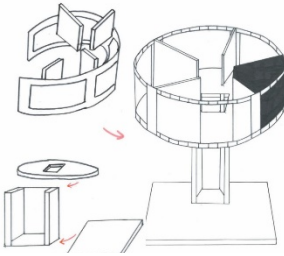


Figure 15. Architectural diagram of Curiosity's living space (design by Şeyma Türkmen)



Figure 16. Model of Doubt's living space (design by Melike Doğan)

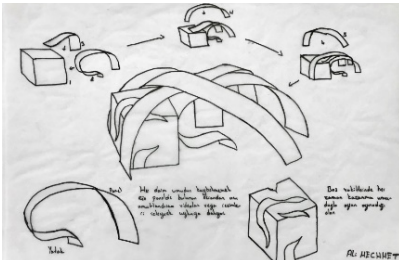


Figure 17. Architectural diagram of Hope's living space (design by Ali Mehmet)

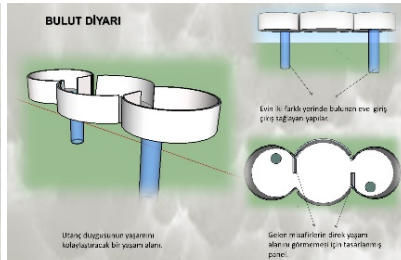


Figure 18. Three-dimensional drawing of Shame's living space (design by Beste Yorulmaz)

The dominant idea while designing the space for **Doubt** is to see all the surrounding and at the same time to be self-sufficient. Using mainly reflective surfaces in the design provides it to see the environment of the living space. There is a terrace area in the upper elevation for it to see the environment. As it doubts everything, the design contains a garden where it can grow its own food. A bookcase is designed as Doubt is considered to be inquisitive. Its bed has a circular form. White-washed tree branches are



used as the main bearing structure and CDs are used for reflective surfaces in the model (Figure 16).

The space designed for **Hope** consists of a cube and stripes surrounding it. One of the curled surfaces constitutes the bed and the following part makes the surface where the screen is on. Every night before going to sleep, Hope watches videos and pictures that give it hope on the screen across its bed. The living space is designed as a play area where it can play in its free time so that it can always be hopeful (Figure 17).

The living space designed for **Shame** is elevated from the ground and above the clouds. The structure is an assembly of three circles that beckon the cloud form. The structure has a tower form with two separate entrances. As Shame would not wish to welcome the visitors, it can exit from the other door. These two different entrances are thought to control the crowd also. The entrance way is particularly prolonged with a spiral staircase so shame can welcome the visitors with more confidence. Panels provide for an obstruction to directly see the living area in the middle when one goes to the upper elevation. Shame can see the outside without being seen with windows situated on the intersecting places of the circles in the living space (Figure 18).

The factors that differentiate the practice on *Inside Out* movie from general research subjects, in other words making it "other" are as follows:

- Conducting studies on different subjects (obtaining an interdisciplinary point of view)
- Getting used to education process by making small projects before initiating the end-of-term project
- Making a design by using various construction materials, apart from the ones used in architecture
- Using various modelling materials, apart from the ones used in architecture
- Making practices that will develop students' imagination
- Making architecture education more entertaining
- Realizing semi-open space designs rather than only closed spaces
- Making a space design different from all places that exist in daily life, real life, the real world, or that existed in the past
- Making a design for a space protected from the weather conditions outside
- Understanding the personal features of a subject for whom the design is, and making a design suitable for his character, life style, and point of view
- Making a design for a living space rather than an accommodation area
- Making a design a different place and subjects rather than what students anticipated for their work environment before they started their education (a surprise factor for students)

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CONCLUSION

Nowadays, the architecture discipline is debated upon and its position is attempted to be redefined. As architecture is a discipline that has foundation in the ancient eras, its historical past and structural repertoire is very extensive. It is directly affected from the alterations in science and technology. It is affected from advancements such as the use of digital space which also affect people's daily lives. The notion of being connected to other disciplines takes more place in the agenda. Its working area becomes diversified. Architecture is transforming into a design-making process rather than constructing monumental buildings. It assumes a more flexible, permeable or fragile form according to the situation.

Architecture and cinema also have an exemplary relationship. Although they are not directly and primarily connected to each other, they are affected and benefit from each other. Both architecture and cinema are concerned with the human and space where the human is in and realizes his activities. Cinema, in a similar manner to architecture, creates a three-dimensional space perception through a two-dimensional surface. It can reflect different periodic situations such as past, present and future. Films about the past enable cities, buildings, clothes, decors, and human life to be perceived in the fourth dimension and included in life; rather than just by reading or looking at pictures. Films that are about today create a visual archive of the present for the future. Proposals for the future offer a different life alternative than today. They enable the audience to generate ideas about what the future will be like. Negative future scenarios encourage the person not to make the mistakes made today in order to make the future better. Depending on their fiction, future scenarios in the films make suggestions of a utopian or dystopian life.

Although there are many movies that are connected to architecture, *Inside Out* is an exceptional movie. Emotions that resemble the human appearance and characteristics have personalities. Emotions are described as obtaining a human look and human characteristics. The film features spaces and a number of features that define the space. Set inside the human brain, these spaces obtain features that trigger the imagination. The film suggests a different world other than the known one. These make the film valuable in terms of architecture. Although there are rich definitions of space, the film does not include spaces that define the lives of emotions outside their work time. Thus, this creates a space for students on which they can work and make a design.

This practice is made to offer an entertainment in the first year of education by working on the *Inside Out* movie with the first-year students of architecture. The students experienced the architecture discipline through the cinema discipline. It was highlighted that architecture is not only about constructing buildings but also designing the space. They made designs by understanding the characters in the film and empathizing with them. They have also designed living spaces for emotions that are not included in the film and created a life in which they can realize their free time activities. Students also used imaginary construction material such as clouds that are in the film but cannot be used in real life. The ideas are not only debated



upon but were also visualized through description tools of architecture such as models, drawings, and presentation boards.

The study highlights the connection between cinema and architecture. Developing designs for the places and characters in the films has been educational for students. As films convey a lot of information in a short amount of time, students adapted to the environment by empathizing with the characters, seeing the world from their eyes, and perceiving the world as they do. The study also reveals the fact that architecture is limitless and can be integrated to all parts of life. It exemplifies the fact that all areas of life have something in relation to architecture.

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ARCHITECTURAL EDUCATION BEYOND THE BORDERS OF OTHER(S): A PROPOSAL FOR TRANSITIVE WORKSHOPS AS EXPANSIVE INTEGRATIVE / EDUCATIONAL MEDIUMS

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ABSTRACT

Architecture, as a multi-layered discipline, constructs itself around both *theory* and *practice*; thus architectural knowledge has always been interrelated and interconnected within the co-existing domains of theory and practice. The same duality represents itself within the educational mediums of architecture resulting in distinctive set of limitations and potentials thus constitutes a virile research niche almost unique to architectural education. This paper focuses on this research area as to understand the impact of this otherising position of theory and practice upon architectural education. With such an aim of integrating these domains, an empirical approach based on workshop practices has been developed by the authors and applied in the architecture departments of three universities. Named as “Archi(PR)act”, this series of workshops recreate several incidents of professional practice, such as meetings, briefs, methodology developments, negotiations, correspondences and (re)presentations where students participate these events with pre-defined roles. Within this paper, several experiences from former workshops with the potentials and limitations will be delivered as to assess the potential of this empirical education model for connecting the fragmented sections of architectural education and for expanding the compatibility of education to practice. This transitive medium is considered to dissolve several dualities within architectural education and enable a free-flowing line of knowledge among clusters of expertise. Such integration is believed to contribute to architectural education by improving its compatibility to its practice, as well as helping the translation of theoretical knowledge into the applied field.

Key Words: Theory vs. Practice; Education vs. Applied Field; Reverse Engineering; Experimental Educational Medium; Praxis; Multi-layered Learning by Multi-levelled Doing.

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INTRODUCTION

Architecture, as a multi-layered discipline, constructs itself around both theory and practice; thus architectural knowledge has always been interrelated and interconnected within the co-existing domains of theory and practice. Despite this intrinsic connection between these domains, the understanding of the counterparts are based themselves upon the term “other” usually referred to a contradictory rather than a complementary manner, which results in the alternation of each course or subject from each other if not the broader contexts. This limited position confined with its very own boundaries creates opposing dualities such as theory vs. practice or education vs. application. This fragmentation is believed to under-represent the three dimensional relations by reducing it into a two dimensional linear connection, blocking the autonomous and symbiotic knowledge generation between the two realms; namely theory and practice. Several embodiments of this limiting approach within architecture, especially within its education can be listed as:

1-Difficulty to connect and use theory with practice interchangeably to built efficient and sufficient connections between education and application. Currently, internships are the only mediums for students, hosting interaction with practice, which is obviously not enough in terms of duration and content. Besides, it's an activity outside the boundaries of formal education; therefore, it is a question to what extent learning is the priority.

2-Lack of inter-disciplinarity which positions the architect/designer as the one and only responsible of the design solution, Whereas in reality, the process is a collaborative process which involves many actors, a variety of roles and limitations (from the budget or the client or the regulations) etc. and thus naturally the lack of an interactive process.

3-Being unable to see and observe the results and outcomes of given decisions; while by the use of hands-on working with real projects, students are able to learn and take lessons from both the process and the end-product. Working on a completed design within all of its procedures, based on client demands, requirements of government agencies, construction stages etc. gives way to observe the consequences of each and every decision.

4-Many current hands-on projects in use in academia are not methodical in their approach. Also the lectures integrated to studio hours are, although useful in content, still put the student in a position of passive listener rather than an active participant.

Based on such concerns, Archi(PR)act initiative has been founded by the authors of this paper in order to challenge the boundaries among theory and practice, as well all among architecture and all the other courses within the curriculum through a multi dimensional approach. The initiative focuses on the questions such as:

-How can theory and practice co-create knowledge with/through/for each other in a mutually symbiotic way?



-How and through which relationship mediums this duality can be turned into a unity?

-How can it be possible to obtain interactive cross-transfer of knowledge among the actions of research, practice and theory?

-In what ways, *practice* can be a *research* in itself for producing knowledge?

-In what ways, practice can be a tool for architectural design education?

In alignment with these concerns and frameworks, Archi(PR)act initiative aims to discuss the possibility to provide alternative educational mediums to overcome such limiting borders and then to propose a new platform to bridge this gap (not linear but in a three dimensional-way) among all components of architectural education. It aims to cultivate bindings among those separated domains with the belief that it is an urgent need to create a flexible mechanism of a framework, operating perpetually to generate knowledge.

Departing from this origin, Archi(PR)act initiative has been developing a workshop series through a structured methodology in order to I-form these models (definitions, scope), II-construct an executional framework (process), III-document the data (analysis and synthesis) and IV-evaluate the outcomes (reflections and conclusions).

Archi(PR)act acts as a multidimensional framework for embracing a background for knowledge acquired by experience, sharing, observation and analysis from the realm of practice. Through the proposals of new empirical models, it is aimed to create interactive mediums integrating multi-layered and multi-disciplinary aspects of architectural practice inserted in knowledge production process of design education. This transitive medium is hoped to dissolve several dualities within architectural education and enable a free-flowing line of knowledge among clusters of expertise.

The proceeding pages of this paper explain this theorised approach and its applications by delivering the procedure and outcomes of realised workshops in the relevant departments of three universities; namely Yaşar University, Bilkent University, and Medipol University between 2019-2020.

Below is the list of executed Archi(PR)act workshops for the last 3 years:

1-Archi(PR)act workshop: Yaşar University Department of Interior Design, İzmir, April 11, 20219. Conducted by: Archi(PR)act

2-Archi(PR)act workshop: Medipol University Department of Architecture, İstanbul, May 9, 2019. Conducted by: Archi(PR)act

3-BT-Architecture Workshop; (RE)project DRAM.A.C:T , Bilkent University Department of Architecture, ARCH 440. Nov. 28, 2019. Conducted by Berna Tanverdi and Özge Selen DURAN,

4-BT-Architecture Workshop; (RE)project DRAM.A.C:T Bilkent University Department of Architecture, ARCH 428, Dec. 4, 2020, ARCH 428. Conducted by Berna Tanverdi and Özge Selen DURAN

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Mainly the focus group of these workshop series is either undergraduate students of 3rd or 4th grades or recently graduated colleagues who are aiming to get involved with multidisciplinary complex project practices. Designed to extend the studio education into the realm of practice, the participants of these workshops are invited to re-create several incidents of professional practice, such as meetings, briefs, methodology developments, negotiations, correspondences and (re)presentations with pre-defined roles. With such dramatization, participants experience for the first time a project from the perspective of possible actors involved in construction procedures; such as architects, engineers, consultants or local authorities. Although each and every workshop has a pre-defined scenario and pre-assigned roles for the participants; each session is expected to unfold with the spontaneous and key contributions of partakers.

Each workshop has been specially designed and adjusted as to implement and highlight a special focus and context depending on the department (architecture or interior design), the year (mostly 4th year students are selected for the workshop), the project typology under examination (office, residential, commercial etc.) and the duration of the workshop (all day, half day or two days).

At the end of these workshops, the participants are introduced to a new multi- dimensional architectural design approach with many procedures as to acknowledge the massive coordination and collaboration required in these procedures. By doing this, participants are expected to recognise the multi-layered structure of construction decisions and documentations, as well as to experience a glimpse of coordination between different professional groups and disciplines. Furthermore, raising and gaining awareness and sensitivity to the essentiality of each party is another outcome targeted with these workshops.

Theoretical Framework

Before discussing the details of the workshops mentioned above, the theoretical framework conducting these workshops is better to be delivered. Challenging the division between theory and practice and expanding the act of education and development beyond the formal bodies of intuitions has been an active academic research area with considerable academic outputs. Among these, Tim Ingold (2013) proposal of deuterio-learning borrowed from Bateson (1973) and Lave and Wenger (1991) proposal for 'situated learning theory' should be mentioned as significant attempts to expand the act of education by the help of active learning and first-hand experience. These theories emphasize the importance of the environment in which learning takes place. In his seminal book 'Making: Anthropology, Archaeology, Art and Architecture', within the section entitled 'Knowing from Inside'; Tim Ingold (2013) points 'deuterio-learning', a concept initially introduced by Gregory Bateson in 1973 as the kind of learning within the world itself. This model suggests a more internal type of learning process where the world actually becomes the context, a place of study, "a university in which, learning takes place from the relations with all other creatures with



which we share our lives and the lands". What he focuses on is actually an 'autonomous learning' path, which is more personal and grows out of the potentials of complex relations. The value here, when compared to a textbook learning, is that; it is not only dynamic, open to change, but also has potentials of new definitions, inventions almost unlimitedly. Besides, by adopting the situational learning theory; creating the actual environment through simulations and role-playing, the context is somehow recreated as a teaching milieu, more realistic than the conventional school atmosphere.

Similarly, Lave and Wenger (1991) created 'situated learning theory' which highlights a model of learning in a community of practice. Situated learning is learning that takes place in the same context in which it is applied. This type of climates would open up potentialities of practice-learning-action-knowledge production. Situational learning theory enriches the learning space concept by reminding us that learning spaces extend beyond the teacher and the classroom.

This paper also follows the principles of Kolb's (2004) experiential learning theory, which claims to expand the experience of education into a recursive cycle of experiencing, reflecting, thinking and acting. With such expansion Kolb claims that it is possible to learn how to learn.

Very briefly, Kolb defines the four components of experiential learning in four main topics and also briefly displayed in Figure 01:

- 1-Experiencing: Developing the capacity for experiencing. Direct experience exists only in here and now, a present moment of endless depth and extension.
- 2-Reflecting: Developing the capacity for reflecting. Reflection requires space and time for it to take place and can be enhanced by the practices of deliberately viewing things from different perspectives and empathy.
- 3-Thinking: Developing the capacity for thinking; engagement in thinking can be enhanced by practicing theoretical model building and the creation of scenarios for action.
- 4-Acting: Developing the capacity for action: acting requires commitment and involvement in the practical world of real consequences.

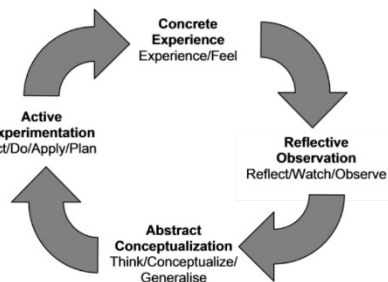


Figure 1. Model of Kolb's (1984) Experiential Learning

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Design studio itself may be examined as an experiential educational practice; yet it still requires to be developed to include more possibilities of experience, reflection and especially action. Significant shortcomings of architectural design studio education can be listed as:

- 1-Inadequate possibilities for experimentation, observation, concrete experience, which are only partially fulfilled in the conventional education system.
- 2-Lack of representation for the interdisciplinary positions the architect/designers may be held; thus the inability to experience any interactive processes between the parties involved.
- 3-Being unable to see and observe the results and outcomes of given decisions due to the pre-determined time and the lack of feedback from other parties involved within the design processes.
- 4-The passive position assigned to the student as listener or receiver. The lectures integrated to studio hours are, although useful in content, still locate the student in a position of passive listener rather than an active participant.

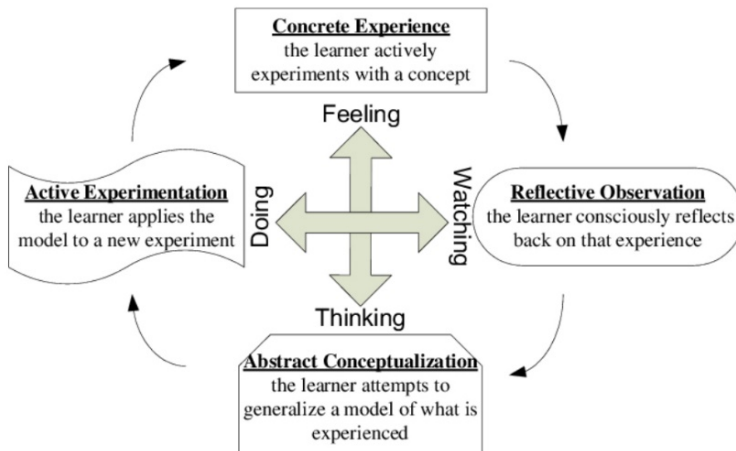


Figure 2. Experiential Learning Cycle (Kolb,1984)

In continuation with what has been represented in the above figure of Kolb (Fig.02), as to expand the studio education further into such experiential territories, new platforms of experiences should be introduced into the architectural curriculum. These new models of education should provide:

- 1-Possibilities of experience in an open and liberated environment.
- 2-A fuller range of positions and approaches participants might take.
- 3-Possibilities to share and then to reflect on the results of actions and decisions taken.



4-An active position for all participants with considerable authority upon their participation and contribution.

Autonomous learning has been another inspirational tool for the birth and development of Archi(PR)act idea: defined as ‘an approach to learning with which learners hold the power to regulate and control their own learning activities’. It is also called self-directed learning. Although university education is undoubtedly conceived to require at least partially autonomous learning; in the case of architecture, it is even more vital to be able to develop self-progress. Autonomous learning is also important in the sense that it develops the learner’s ability to integrate the knowledge learned in class or during workshops with real life problems. Therefore, being provided by the skills of autonomous learning will help students to adapt and achieve life-long learning. Within the proposed workshop modules, autonomous learning is incorporated by allowing the participants to construct the work around a tentative outline mentioned in the brief. Each participant and group are supervised by the instructors but not in a didactic manner, always leaving room for self-decision making opportunity at each stage of the process, making deductions, judgements, even re-design scenarios in ‘what-if’ conditions. With the belief that architecture is a practice-oriented discipline, its educational platforms of learning should include special techniques such as ‘hands-on-learning’, ‘learning-by-doing’ etc. with a distinctive focus on the personal experience.

Methodology of Archi(PR)act Workshops

In line with such concerns and objectives, the Archi(PR)act Workshops Series has been developed to operate as an ‘Experiential Learning Environment’ as declared by—Kolb (2004) where the participants are expected to actively harvest knowledge themselves, to develop insight and lastly to reflect upon these experiences. To gain this mindful experience on knowledge, the structure of the workshop is designed to challenge the relation between the participant and the project at hand. The participants are invited to experience the process as a partaker, and thus become the active and responsible producer and consumer of the knowledge. The same approach applies to the same division between theory and practice, the participants are asked to challenge the temporal and conceptual lineage between these two domains, and encouraged to develop a hybrid knowledge based not only upon theory and practice; but also upon data, insight and reflection.

During the workshops; the participants are asked to act as professionals as to examine a fully-developed project (and its whole process) completed with all required works of engineering and consulting disciplines. However, they are not expected to produce their knowledge. Rather they are expected to extract the knowledge of their assigned discipline from the totality of the project and (re)represent it. This deductive logic or method is called ‘reverse engineering’ which considers the artefact as an embodiment of the knowledge, both theoretical and practical; thus utilise ‘dissection’ as an operative method to garner knowledge from this very artefact.

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By employing this process of reverse engineering, the workshops require the participants first to comprehend the project in its totality and then to extract/ carve out the related portion of knowledge. The potential of this procedure of dissection is twofold: First of all, within this procedure of dissection, participants are introduced to the contextuality of knowledge by being exposed to the totality of the project. To carve out their cluster of knowledge from the complete data set, they are forced to shift their focus from forming cluster of knowledge to understanding the relation between these clusters. This focus on relations rather than clusters brings in the second and more eminent contribution of this method, which is to challenge and overrun predefined borders; such as theory vs. practice; architect vs. engineer; designer vs. consultant or theoretical vs. applied. The hybrid totality of the project houses all these dualities simultaneously, thus provides an unrestricted medium for participants to engage with the data and with others (means of both people, relations and groups of correspondences) beyond the pre-given borders. Below figure (Fig.o3) summarizes this approach and its potential in a very brief way.

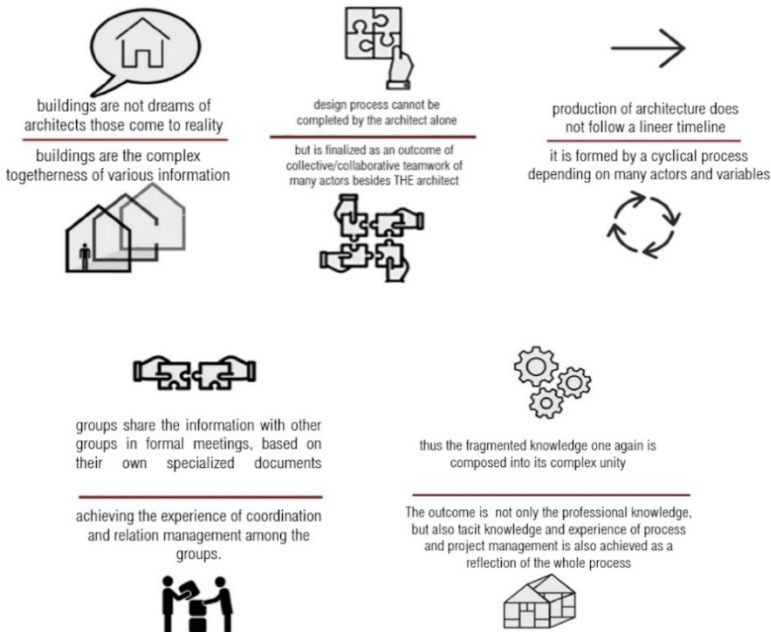


Figure 3. Reverse Engineering Method (Archi(PR)act initiative, 2019)

Time-wise, the workshops can be divided into three main phases: namely the Introduction Phase, the Extraction Phase (analysis) and lastly the Re-Composition Phase (synthesis). Below chart explains these phases and roles of the partakers.

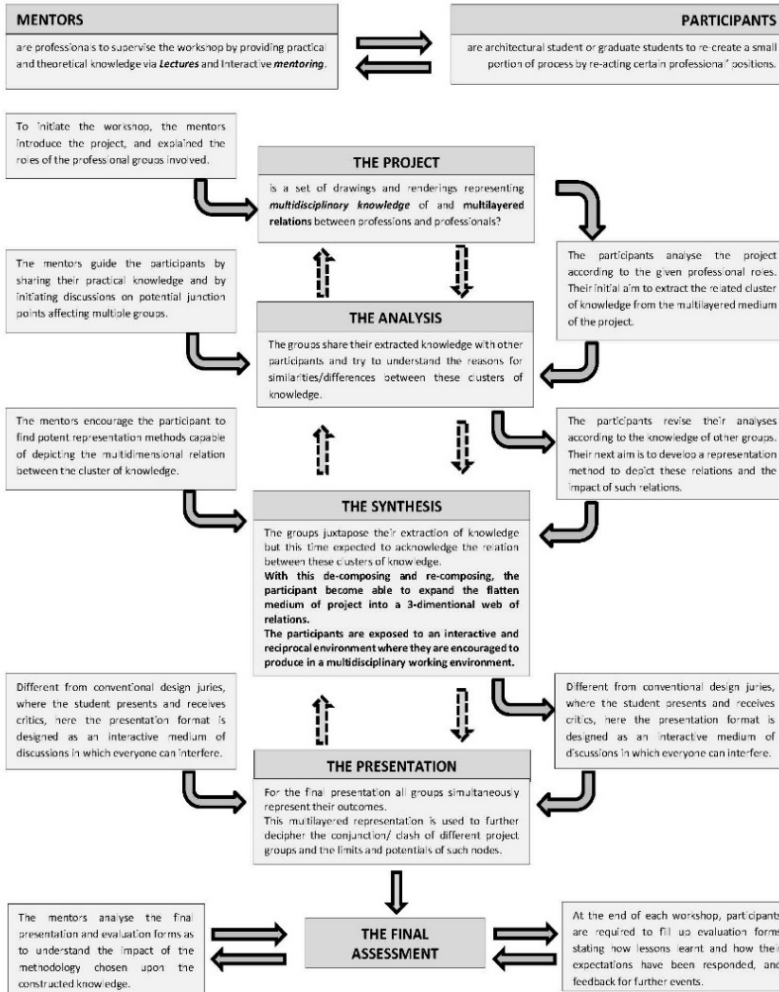


Figure 04. Diagram for workshop workflow (Tanverdi, 2021)

The first phase -introduction- delivers brief information about the selected project and especially highlights multidisciplinary approach required for project development and execution processes. Then, the participants are invited to participate to the workshop by selecting their assigned roles which will define their approach and procedures during the workshop.

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Figure 05. Photo from the opening lecture- the Introduction Phase

The second phase of the workshop -Extraction Phase- asks the participants to derive knowledge from the project by applying reverse engineering method. Each group is expected to examine the project set (a fully developed architectural application project) as to mine their own cluster of knowledge according to their professional role. This phase actually is the main environment where each participant breaks his/her boundaries for 'others' and try to sustain and develop mutual relations, correspondences and contributions for the benefit of a common process.



Figure 06. Photo from Extraction Phase



Figure 07. Photo from Extraction Phase



For the final phase -Re-Composition-, all groups represent their own clusters of data as to form the totality of the project. For this re-establishment of totality, all groups are asked to superimpose their findings on a final presentation together with their individual feedbacks on the processes held. The final output at the end is a super imposition of all data of all groups once extracted from the project- transformed and (re)represented.



Figure 08. Photo from an output of Re-Composition Phase

The Potential of Archi(PR)act Workshops for Experiential Learning

As before mentioned, opposing dualities such as theory vs. practice, education vs. application and student vs. educator are believed to under-represent the complex three dimensional relations of architectural education by reducing it into a two-dimensional linear connection, blocking the autonomous knowledge generation between the two realms.

As to overcome such shortcomings of the current educational model, Archi(PR)act workshops are designed to operate a transitive learning medium by following on the principles of Kolb's (2004) experiential learning theory, which claims to expand the experience of education into a recursive cycle of experiencing, reflecting, thinking and acting. Thus, the main aim of the workshop is to maximise the modes of learning-by-doing practice as to diversify the possibilities for hands-on experiences. Designed to become an act of Praxis, these workshops provide their participants a milieu to take action upon their received theoretical knowledge and experience\ and reflect upon the end-results of their well-informed decisions.

To experience an accelerated simulation of a design process; the participants are asked to perform role playing and complex correspondence executions between different parties as to raise awareness on the other disciplines' approaches, concerns or sensitivities. This provides the participants a chance to experience a glimpse of communication-oriented milieu of practice as well as to improve their multi-dimensional know-how on the architectural domain of practice by learning and exercising through a multi-tasking approach. The participants are now able to think from the

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perspectives of other colleagues, as well as to reflect as another party within the design team. Being able to think out of own's mind (bias in a way) and to transfer the approach and mind to the 'other' is the essential key feature of these workshop series. Sitting around the same table and 'look & listen' to others (think and experience), meet and act as an-other (act), correspond and superimpose (reflect) are tools to end up with the intended insight of a collaborative design domain.

At the end of each workshop, participants are required to fill up evaluation forms stating to what extend their expectations have been met or what has been experienced as different and the results are assessed as a feedback for future development. The feedbacks of the experiences and outcomes of these workshop series are worth to be summarized here not only to reveal the proofs of efficiency of them in uniting those so-called other domains with that of architectural discipline, but also bringing another contributive approach to the improvement of architectural education as a discourse. Based on the results of the previous evaluations, the general outcome has been very promising in many aspects as very briefly summarized below:

- Most students claimed that it was fun as well as enlightening. They mentioned that many topics came into discussion that they have never thought of before. Some of the professional practice content is claimed to have been encountered only during internships whereas here it could have been experienced and reinforced once more.
- Through role-playing, the participants declared that they actually have a unique chance to understand other parties' positions, which have never been introduced in that detail/ content before. By positioning themselves as an engineer or an acoustical consultant has been a very useful contribution to increase their awareness of multidisciplinary aspects of project development. They realized the importance of the complex interdisciplinary process of a building project's completion in a wide scale of various parties (from engineers to landscape designers to lighting and furniture manufacturing companies...etc.) through actually examining those non-architectural projects as sets of supplementary documents.
- They claimed that they have realized the existence of a complex set of missions (follow-up meetings, process management, relation management, cross coordination etc.) that they will have to perform in the future, and the importance of those issues within the design process.
- They claimed that the workshop experience helped them to develop teamwork abilities with different tasks, considering their relation with each other on a critical time basis. Although during the formal architectural education, the profession may seem like an individual performance, in reality, the process demands a high level of competencies in teamwork.
- As for a relatively negative comment; they claimed that time was too limited and that they wish these workshop series would be a part of the standard curriculum. It was clearly declared by most of the participants that the whole process was also fun besides its enlightening aspects in many ways.



CONCLUSION

This paper focuses on the developed methodology of Archi(PR)act initiative which has been proposed as applied workshops. These workshop series are considered as an innovative tool to dwell on the potential patterns of knowledge derived from the union of theory and practice of the discipline of architecture. Thus the developed method based on applied **workshops**, unfolds the **practice** into **education**, produces **knowledge** creating **theory**.

Reinterpreting the components of discipline of architecture, not as 'other' but as supplementary and contributive; the main approach of this study focuses on the maximization of such integrative mediums. The integration of technical expertise to the design courses, the translation of on-field application of knowledge in the planning phases and compatibility of design processes to the larger framework of project life-cycle can be listed as potential contributions of such mediums. Such integration is believed to contribute to architectural education by improving its compatibility to its practice; and also it helps the translation of theoretical knowledge into applied field with benefits of catalysing the process of implementing learned into applied. Therefore, these workshops are believed to perform as a base map for each and every "other" to float through each other rather than remain as fixed individual domains; thus repositioning architecture at a point to generate its own knowledge in a theoretical framework supported by its very practice. This transitive medium is intended to set an interactive, generic and innovative medium and learning environment enabling a free-flowing line of knowledge exchange and raising awareness of the essentiality and dependability of each and every cluster of expertise.

Another important benefit of the workshop series is the involvement of other actors (the professionals other than architects, such as engineers, consultants, specialists etc.) as well as involvements with the works of these other disciplines (engineering projects, consultant drawings, specialist reports...etc.). Through the role-playing sessions, they are integrated and each profession is portrayed by the participants; thus workshops become inclusive of all actors and all different contributions. Similarly, through method of reverse engineering, all dimensions of the process are decomposed into its particles to be examined and analyzed from a holistic approach. Just as all layers of architectural and engineering projects are superimposed at the design stage; within the workshop process, this superimposition is broken down to each layer, following a backward activity.

Remembering the theoretical background discussed before; four main steps of the educational approach (Kolb, 1984) as experiencing, reflecting, thinking and acting - have also been adapted to practical ground by the help of these workshops- to solve the inadequacies brought by tension of others in architectural practice and education. Not only the theoretical knowledge but also the experience of this knowledge to practice becomes the main tool to enhance maximum efficiency in architectural knowledge gathering. Thus the ultimate goal can be asserted as a contribution to the education of architecture through the construction of an enriched

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perspective of real-life experiences through active participation by role-playing and acting.

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A CRITICAL APPROACH TO DISTANCE EDUCATION FROM THE PERSPECTIVE OF THE ARCHITECTURAL STUDIO INSTRUCTORS

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ABSTRACT

The discipline of architecture is a phenomenon that has existed since the beginning of human existence and is constantly evolving. Within the scope of this study, the discipline of architecture has been examined from the perspective of education, and the study aims to discuss the relevant effects of the pandemic in recent years. Architectural education has design studio courses at its centre and the curriculum is structured holistically with other applied and theoretical courses. Studios are active spaces where students engage intellectually and socially, and switch between analytical, synthetic and evaluative ways of thinking in different activities such as drawing, making models or discussing ideas. With Covid-19 pandemic, education has been suspended all over the world as of 2020. After a while, in order not to hamper education, online or hybrid education systems were introduced in all classes. Although architectural education can keep up with the changes and renew itself over the years, it encountered many problems during this radical process. The students, who were in one-to-one contact and bilateral dialogue with the instructor of the course in the studio environment, have not been able to carry out the process of experimenting, thinking, intuiting and doing in the studio together with the instructor which is the cornerstone of architectural education. In this context, the positive and negative situations experienced in the studio classes of the architecture departments during Covid-19 period were examined from the perspective of the studio instructors. This research aims to create a critical perspective on distance and hybrid education through the experience of the studio instructor.

Key Words: Architectural Education; Distance Education; Hybrid Education; Architectural Studio; Covid 19.



INTRODUCTION

The concept of architecture reaches back to the earliest periods of humanity, and according to Turkish Language Association - TDK, it is defined as "the art of making structures in compliance with certain measures and rules" (TDK, 2019). Social structure changes, economic conjuncture and social events have led the profession of architecture to evolve into a different direction. The discipline, which went into privatization especially as a result of the agricultural revolution, gained a new meaning after being separated from civil engineering with the Industrial Revolution (Şensoy & Yamaçlı, 2015). Within the scope of this study, the discipline of architecture has been evaluated from the perspective of education and the effects of the pandemic which has emerged in the last two years and still continue have been discussed.

Almost everything has changed due to the Covid-19 global pandemic which has impacted the whole world since December-2019. The education system was also affected by this change and architectural education was carried on in different ways. Events that disrupted education in the world history were wars, terrorist incidents, natural disasters, diseases and epidemics (Kahraman, 2020). In situations that may affect the health of students, such as diseases or epidemics, all necessary precautions should be taken and the continuation of education without interruption should be ensured. At this point, different solutions have been developed for the continuity of education. With the introduction of hybrid and distance education models in universities, it is aimed to ensure the continuity of education. In the statements made periodically by the Higher Education Institution in our country, the necessity of taking regional and local decisions was emphasized due to the dynamic structure of the pandemic and infrastructure studies were intensified in order to carry on education through distance education model. While formal education was supported at a rate of 40% in June 2020, the need to bring down the number of students at campuses and reduce mobility was taken into consideration in October 2020. As a result, while many universities have implemented the full-time distance education model, some universities have applied hybrid models in which distance and formal education are carried out together.

The studio instructors present the subjects of this study which focuses on identifying positive and negative situations experienced in the remote implementation of architectural studio courses. In this context, a pilot study was carried out with fifteen studio instructors from different universities that implement the distance and hybrid education model. Open-ended questions were prepared by taking into consideration the responsibilities of studio instructors in architectural education (Aydınlı, 2001), the phases of the concept of distance education (Moore and Kearsley, 2012), time, space, teacher-student role and technology criteria (Gökmen, Duman, & Horzum, 2016). These questions were sent to the instructors. Afterwards, the obtained written and verbal data was evaluated within the scope of the determined criteria.

This study, which examines the discipline of architecture in the context of education, first reviews architectural education models. Afterwards, the

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distance education model, which is being applied in today's changing circumstances, is explained. In line with the information obtained in the literature, the findings and results of the pilot study are presented.

Traditional Architecture Education

The basic strategy of architectural education is to complete the learning-teaching process by creating new ideas, information and products with the experiences gained over time. In addition, the aim of architectural education can be defined as presenting different design experiences, taking an active role in different areas of design, facilitating information acquisition and change processes, preparing a strong communication and motivation environment, and guiding students with different cognitive/intellectual characteristics (Kahvecioğlu Paker, 2007).

Throughout architectural education, the act of design and the theoretical information that supports it, constitute the basic setup. In particular, design education is very different from the education form in other disciplines. At this point, design education consists of different mental stages. In these mental stages, the individual learns by experimenting, thinking, sensing and applying. The form of education is not limited only with the act of learning-teaching. During this education process, it is expected from the student to come up with a new, original, different and creative product and to live various experiences in order to imagine, develop new ideas and turn them into action while achieving this product (Özdemir, 2013). The aim of architectural education is to provide the architect candidates with the ability to learn, research, express, be open to criticism, and to reach positive results in discussions and to organize. Every architecture student should be trained to be open-minded, to be able to use new advances in technology and to be creative on the basis of professional knowledge, to have a design understanding fed by social sciences and a wealth of theoretical infrastructure" (Nalçakan, 2008).

At this point, it would be appropriate to examine the development of architectural education in order to better understand the "studio education", which constitutes the main fiction of the study.

When we look at the history of architectural education, "Ecole des Beaux-Arts" is known as the first long-established architecture school. The classical Beaux-Arts curriculum is divided into three groups as workshops, classes and competitions (monthly and annual). The method of learning by seeing and doing is applied in the workshops that create the education structure of this school, technical and theoretical information is given in the classrooms. The quality of the student's education is strengthened with monthly and annual competitions and conferences (Mun, 2015). Another important school of architecture and design education is the Bauhaus school. The most important feature that distinguishes the Bauhaus school from Beaux-Arts is its program which helps the students to bring themselves into the forefront, frees them from conditioning and triggers creativity. In order to avoid traditional academy education, technical and history courses are reduced to a lesser extent. In addition, the curriculum changes frequently in



line with the changing design understandings and approaches (Demirci, 2019). It has been observed in Ecole des Beaux-Arts and Bauhaus schools that architectural education changes, transforms and develops in accordance with the conditions and understanding of the period. This flexibility and actualness of architectural education have survived to the present day. Especially Bauhaus introduced an innovative and rational perspective to design and architectural education in the 20th century. In this context, the fact that students and teachers continue education by producing continuously together has also affected our country. Middle East Technical University - METU, Faculty of Architecture followed and applied this approach in the years it was founded, and then it could not fully adhere to it, due to different political situations (Erzen, 2009).

Architectural design education components in our country consist of three different actors, namely the design studio, the project coordinator and the student. At this point, we can say that design education is based on the design studios and it uses these studios as the main space. A theoretical course; expires, its use ends, after it is processed in the classroom. However, in design studios, the effective training process covers a large period of time (Özdemir, 2013). In many universities, eight hours a day are reserved for classes, and it is expected from the student and the instructor to actively use the whole day in the studio. Especially in design education, there is a decision-making process that progresses gradually. In this context, in the expression of ideas; sketches, models, two-three-dimensional expressions and contemporary presentation forms using computer techniques are used. Throughout this gradual process, there is an uninterrupted interaction between the student and the instructor in studios, based on the integration of knowledge and project review, through individual or intergroup interaction (Gül, 2016). There is a master/apprentice relationship in the form of education that takes place between the student and the project coordinator and is maintained through the dialogue established for the project prepared by the student (Ciravoğlu, 2001). In traditional education, design studio covers a process that has a specific route. The guidance provided by the master/instructor with his knowledge and professional identity becomes an applied experiment (Kahvecioğlu Paker, 2007). At this point, Aydınli defines the role of the project coordinator as follows:

- to emphasize to the student that the main goal is to gain the ability to organize the information during the design process,
- to guide the student in the correct way in solving the design problem,
- to underline the importance of noticing and being aware of the problems, as much as solving them and therefore first establishing a dialogue between the visual and verbal language of architecture and discussing the observed facts with the language of architecture profession,
- to motivate the student to accumulate knowledge through sensory and cognitive processing,

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- to help the student understand what he wants to achieve and what he is striving for, in other words, understand his own individual values, beliefs, views and priorities,
- to be able to inspire the student to learn,
- to apply the analysis-synthesis method with a scientific approach, thus enable the student to think analytically, to interpret with imagination, to synthesize with value judgements and to be open to criticism,
- to enable the students to see the problem in part-whole correlation and bring solutions, comprehend the relations and to motivate the student to organize and systematize the knowledge obtained in all lessons (Aydınlı, 2001).

In traditional education, the studio instructor is one of the main actors. In the distance education model, the role of the instructor continues in a similar way. At this point, for distance education model, the contribution of the instructor to the education process with positive-negative experiences is considered important.

Architectural Education through Distance and Hybrid Method

Distance education is an innovative education system that takes place in completely virtual environments, independent of time and place, where the learner and the instructor do not have to come together (Kahraman, 2020). Distance education is a concept that we are familiar with before the COVID-19 pandemic. Looking at the history of this concept in the world, it was first mentioned in the 1892 catalogue of the University of Wisconsin and William Lighty used this term for the first time in one of his article in 1906 (Adıyaman, 2002; Avcı and Akdeniz, 2021).

This concept has been defined in many different ways over the years. According to Peters (1973), distance education is a method in which knowledge-skills are gained, division of labor practices are rationalized, technical methods are used to provide high quality teaching materials and these materials are delivered to a large number of students living in different places. According to Moore (1990), it includes all the arrangements in which teachers and students are at different times and places, and where education is offered to individuals through printed or electronic communication methods in a planned learning environment (Gökmen, Duman, & Horzum, 2016).

In the book titled "Distance Education: A Systems View of Online Learning" by Moore and Kearsley, published in the third edition in 2012, it is mentioned that distance education consists of five phases:

- **Phase One (Letter Teaching):** Education supports independent and individual work through remote letter and home studies. There is no interaction.



- **Second Stage (Radio and Television Broadcasting):** In this stage, where visual and audio elements are included, there is little or no interaction.
- **Third Phase (Open Education Institutions):** Interaction is still low in this phase, which brings an industrial system approach to this period. Distance education is supported by face-to-face education with the use of visuals and videos, and course teams and courses are designed with a system approach.
- **Phase Four (Teleconferencing):** It is the beginning of the real-time interaction between the learner-learner and the learner-teacher for the first time in distance education, through interactive teleconferences, with the use of audio, video and computer.
- **Fifth Phase (Internet and Web):** In this phase, online internet-based virtual courses are given with the constructivist learning method. There is interaction in this system which brings together text, audio and video on a single platform.

Many different alternative models have been started to be used with the active use of internet systems in the process from the letter teaching model where there is no interaction between the instructor and the student, up to the present. Today, with the use of programs such as Microsoft Teams, Zoom and Perculus, the simultaneous live participation of the instructor and the student is ensured and two-way communication is improved effectively.

In the article titled "Theories, changes and new trends in distance education" published by Gökmen, Duman and Horzum in 2016, the change and transformation introduced by Moore and Kearsley through the five phases of distance education is defined with four criteria, as "time, space, the role of teacher-student and technology".

In the period of distance education done by letter, the fact that students have the opportunity to learn at any time they want, brings with it the lack of interaction. Since the materials come to the student's home or workplace by mail, these places usually become the learning spaces. Students are free to take these materials wherever they want. With the arrival and development of audio and video, communication and interaction with the teacher begins. Especially with the development of technological tools, the interaction between the teacher and the student has improved. Besides, simultaneous or, when desired, asynchronous distance education opportunity was ensured. In simultaneous learning styles, the learning place becomes any place where there is internet connection. Therefore the space dimension is defined as unlimited.

Since web-based systems have unique features, thanks to these systems, the instructors are no longer the only source of information. The instructors have taken on many roles such as resource provider, learning manager, instructional designer, assessment specialist, communication expert, technologist, consultant and mentor. In this process, students have become more active and gained roles such as acquiring, creating and sharing knowledge, determining learning goals, being responsible for their own learning, according to their own pace, choosing the content, interacting with

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the content, the teacher and the learners, and accomplishing simultaneous communication. Furthermore, technology has enabled the student to work in collaboration with the group in distance education. Today, distance education is used as a form of education in which interaction between the student and the teacher is ensured by the use of many different applications based on technology.

A model in which formal and distance education models are applied together has been developed in universities that have not fully adopted distance education. Hybrid education has been designed as a new model that aims to minimize student mobility and provides education both online and in the classroom environment. In this model, depending on the request of the student who wants to participate in the lesson, classes can be held in the classroom environment, by observing social distance rules, or it is possible to follow up the lesson online simultaneously. Especially the instructors using the distance-hybrid education model stated that they conducted the theoretical courses remotely and the studio courses with the hybrid model.

In this context, a series of questions has been prepared in order to determine the positive and negative experiences of architectural studio instructors in universities where distance and hybrid education models are used. Within the scope of the study, the instructors were asked open-ended questions. These questions were prepared by taking into consideration the criteria obtained from the definitions made by Aydın (2021) of the studio instructors' duties in architectural education; phases of the distance education concept introduced by Moore and Kearsley (2012); and the change of these phases over the years by Gökmen, Duman and Horzum (2016).

Findings

After six open-ended questions were designed, questions were sent to fifteen architectural studio instructors. At this point, the answers obtained through written and audio recordings were collected in a common pool. In this section, given answers and the evaluation of these answers are presented.

Fifteen studio instructors, three of whom work at more than one university, were first asked which education model they used. At this point, seven instructors stated that they used the distance education model completely, and eight instructors stated that they used the distance and hybrid education model together.

According to the evaluation made on the programs used for studio lessons, it is observed that a wide perspective of programs, such as Perculus, Zoom, Adobe Connect, Microsoft Teams, Google Meet, Mergen, Miro and Blackboard are used. In the evaluation of the positive and negative situations experienced, the first thing that stands out is the reluctance of the students to open audio and video. This issue on which all instructors agree, has been the subject of criticism, because the lesson became inefficient and



far from interaction. The instructors attach importance to video-audio participation in order to ensure eye contact and better comprehension. However, the student's resistance, from the perspective of the instructor, was interpreted as the students were dealing with different tasks simultaneously and did not care enough about the seriousness of the lesson. It was stated that the efficiency of the lesson decreased because the students did not want to talk, they listened the critics on their own projects but did not listen to the critics about other projects.

Another negative situation was the difficulties encountered, time to time, in communication, due to delay and synchronization problems in audio-screen sharing. Especially in Perculus system, problems such as having too many connection problems, difficulties students had in adjusting the camera settings and delays were stated as the negative aspects of the application. Since Perculus did not provide the opportunity to get closer, it was difficult to go into the details of the projects and, in particular, the perception of the scale concept was struggling. The fact that there is a size limit for uploading files in Perculus application has created problems in uploading architectural project sheets with very large files. It was stated that the project instructors, like the students, were adversely affected due to the files that could not be uploaded.

On the other hand, it was stated that Microsoft Teams application provides convenience in use due to its more stable interface. This application was used effectively in order to provide extracurricular interaction and share resources and content for first graders who were trying to adapt to university education.

It has been stated that technical problems were faced in Zoom and Miro applications such as sound interruption and image freezing. As a general assessment, while it is difficult for everyone to see the project critique at the same time in traditional education, it has been considered as a positive situation that many students could see the screen and listen to gap assessments at the same time in virtual environment.

Studio instructors were asked to evaluate their positive and negative experiences with regard to "internet quality, electricity, equipment quality, and tools". In general, it is observed that all instructors complain about the disconnections in the internet system. This situation caused the lectures to be told over and over again, therefore the general flow of the course could not be achieved. In addition, connection quality is seen as one of the factors affecting the flow of the course. Especially in cases where audio and video communication was required, poor connection quality led to negative situations. Audio interruptions and the image not showing on the screen distracted both the teacher and the student, and it was stated that this situation turned into a source of stress.

In addition, not every student has equal conditions in terms of technical equipment. This situation was also causing problems. Students who attend classes from rural areas or abroad had difficulties in managing the process.

Another technical problem was the insufficient performance of the computers. Especially, simultaneous camera opening or uploading very

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large files caused problems in the computer system. In addition, in terms of equipment, adhering to a few specific line types by using only the mouse was also not considered appropriate for the project dynamics.

Concerning negative situations experienced due to technical problems, the importance of planning and equipment support by institutions was particularly underlined. There is a positive opinion that over time, both the instructor and the student will adopt this new form of education and that appropriate technical opportunities will be provided.

The instructors were asked which places they used during distance education process and they were asked to compare these places with the studio use in traditional education. In this evaluation, it was observed that especially in the hybrid education model, the trainers continued the lessons in the studios, and some of them continued education in their own private offices. However, in institutions where there is no obligation to come to school, generally the instructors who continued education from their own homes, in their study rooms, expressed their opinions. At this point, it is stated that students who come to the studio in hybrid education can use much larger areas than they use in normal conditions. However, it was stated that the incoming students preferred to be only listeners instead of using the studio actively, so the studios functioned as "recording studios" rather than their previous use. At the same time, it was stated that the bilateral dialogue of the students with each other decreased and therefore interaction could not be established. For the most part, students' criticism to each other and their support for each other in technical and design issues constitute the dynamic that exists in design studios. However, one of the most important missing points in the online process was expressed as the inability to interact.

The evaluation of the studio instructor about how online or hybrid education affects his motivation was another question. Most of the instructors stated that the motivation decreased especially over time. The instructors who tried to get used to the new system at first, afterwards even if they got used to the system, stated that their motivation was negatively affected due to unfavourable reasons such as; the lack of interaction with the student, the lack of feedback from the student, technical problems, contacting the student via e-mail when faced with technical problems, eye pain and inactivity due to the need to constantly look at the screen, the pressure from the institution to fill the given course time when participation in the lesson is low and trying to communicate with the student who came to the studio and at the same time with the student who participated remotely.

However, some studio instructors, even they were a few, looked at the positive aspects of the situation and made positive comments about their motivation. They stated that reduction in paper waste, not wasting time on transport, accessing lessons from anywhere in the world, communicating quickly with files, sharing links and images from the internet simultaneously had positive effects on their motivation.

Lastly, the studio instructors were asked to make a positive and negative comparison between the traditional education model and the online and



hybrid education model. In general, the instructors stated that the concepts of "making together", "learning together" and "discussing together" can be realized in the studio environment with students. However, they stated that this is not possible with distance education and that the courses are carried out within the limits of online programs. One of the studio instructors expressed: "In distance education, the student presents, the instructor lists the critics, and then the student adds something, it proceeds in this sequence. But when we are face to face, it is more efficient to draw together, think about it together and generate ideas together at that moment."

One of the problems faced in distance education is that teachers working in public universities complain that the institution does not provide them with sufficient equipment. Even though there are institutions that provide adequate equipment, the online system is a newly used method, so integrating the equipment into architectural education has been insufficient. In traditional education, studio lessons are conducted with methods such as body language, tone of voice, mimics, simultaneous hand drawing and expression. But the inadequacies experienced with distance and hybrid education in studio lessons have caused a lack of communication, interaction and meaning between the students and the instructor.

One of the advantages of distance education is that the student who is not physically present at the school does not have expenses such as travel, accommodation, food and beverage, and printing out the layout. In addition, it was stated that the student physically gets less tired and saves time because he does not spend time on the road. However, students who live with crowded families and do not have their own private space experience space problems in terms of attending classes and using a study area. Yet, with the use of studios in traditional education, everyone is provided with an equal working space.

As mentioned before, according to the general opinion of the instructors, students can easily see each other's projects in the computer environment and they can listen to the critics again after the lessons are recorded. However, it has been stated that this positive point of view was not always right. It was stated that, in cases where the student was not interested in the lesson, he only listened to his own project critique or he did not attend the live lesson, because he knew that the lesson was being recorded. It was stated that this situation negatively affected the student's continuous participation in the lesson and his concentration in the lesson.

When the answers given to all questions were examined, it was seen that some studio instructors gave completely opposite answers to the same questions. One of the most obvious of these has taken its place in the last question. While one of the studio instructors responded to the comparison regarding the two education models: "I think these two are not even in a position to be compared with each other"; another instructor defined the distance education model as "the beginning of a process". This situation is considered important in this study in terms of ensuring the diversity of opinions.

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Landscape/ Rural*

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Re-use*

Education

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CONCLUSION

This study has been conducted in order to determine the positive and negative experiences of architectural studio lecturers, who are one of the important subjects of the distance-hybrid education model that emerged during the Covid-19 pandemic. Studies carried out by universities through questionnaires aim at identifying the problems experienced by the students in the process. This study, on the other hand, bases its originality on the positive and negative experiences of the studio lecturers. In general, the data emerging from the findings indicate a negative picture. The inability to use the studios, which was actively used by the student-instructor, led to the decrease in interaction and dialogue. Consequently, the required efficiency from the lessons could not be ensured. Only a few of the fifteen instructors were satisfied with the process, but they also had difficulties at some points. In this context, the adaptability of the distance-hybrid education system to architectural studio education without the necessary equipment support should be a matter of discussion. Especially in technical issues, many problems were encountered both by the instructors and the students. In addition, it is the common opinion of all the instructors that it was not sufficient for the students to receive the critics online, in terms of understanding and applying them. Furthermore, it is observed that in the hybrid system the instructor has difficulty in coordinating the students who attend the lesson face-to-face and who participate remotely. At this point, taking into account many factors, conducting architectural studio education online and hybrid, can be considered as a difficult way. It is hoped that the data, which is intended to be a critical view of distance education from the perspective of the studio instructor, would be a reference source for future studies. Moreover, this subject, which is aimed to be examined by conducting more in-depth interviews in the following stages, is considered important in terms of presenting a new perspective to education.

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LIVING LABORATORIES IN ARCHITECTURAL RESEARCH AND EDUCATION

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ABSTRACT

This paper discusses “living laboratory” as a method that can be situated in the intersection of academy-practice and academy-society in the field of architecture. Living laboratory is an action and practice-oriented, multi-stakeholder, multi-disciplinary, multi-method, participatory and collaborative approach in real life contexts. By these characteristics, it forms an inclusive and interactive interface that involves different practices and actors. Therefore, it has the potential to transform the problematized intersection into co-design, co-creation, co-practice, co-evaluation environment. The aim of the study is to discuss these potentials by using literature review and case study methods. The definitions and key components of living labs are explained in the literature review. There are examples both in urban and rural contexts and although they are predominantly technology oriented, socially oriented living laboratories also have been developed. Since the problem definition of the study indicates the intersection between academy (education and research)-practice-society, “the university-led socially oriented urban living laboratories” are examined and evaluated in the conclusion part. It is suggested that living lab approach would be developed as a potential model in architectural research and education in the context of Turkey.

Key Words: Living Laboratories; Urban Living Laboratories; Architectural Education; Architectural Research; Social Architecture.



INTRODUCTION

The relationship between academy-practice and academy-society is questioned in the discipline of architecture, as in every discipline. The question of how the knowledge produced in the university is used in the field of practice brings the intersection of “academy-practice” up for discussion. Furthermore, the question of how the university engages with the society opens the intersection of “academy-society” for discussion. New formulas are sought to construct these intersections in a way that all present and future actors can benefit. Living laboratories have come to the forefront in recent years as one of these formulas. As being a participatory, collaborative, experimental and action-oriented method based on mutual interaction-learning-creation, it has potential to transform the intersection of academy (research and education)-practice-society into an interactive and multi-actor interface.

Due to its potential, living laboratory has been applied by many disciplines in different contexts as alternative methodology. The examples in European context are collected in the “European Network of Living Labs (ENOLL)” created in 2006. The method was introduced into the field of planning and architecture as a result of discussions about living labs specifically in the scope of city. After that, similar studies have been carried out for rural (LIVERUR, n.d.; C-RUL, n.d.; Smart Rural Living Lab, n.d.; Schaffers, Guzmán, de la Cruz & Merz, 2010). Although the technology oriented projects are predominant among these examples, there are also socially oriented projects. Presumably application of living laboratory method, which gives an opportunity to provide a solution to today's real problems by establishing relationships with real actors in real time and real life settings, will increase in disciplines of architecture and planning.

Living laboratories can be established under the leadership of different actors such as the state, local government, private company, non-governmental organizations and universities (McCormik & Hartmann, 2017). Among those, university-led living laboratories bring a pedagogical perspective to the discussion. The changing roles and increasing social responsibilities of universities in the global and local crisis environment of the 21st century necessitate the re-establishment of academy-society relationship. New institutional positions, alternative methods and tools are being developed for strengthening the society-university relationship and transforming academic and institutional knowledge to shared, usable and social knowledge. Living laboratory can be regarded as one of these alternative methods.

Within the scope of this paper, different definitions and basic features of the living laboratory are discussed by using literature review as a research method. Afterward, in order to evaluate living laboratory as a method that can be used at the intersection of academy-practice-society, “university-led socially oriented urban living laboratories” are examined. Based on literature review and selected cases, characteristics of living laboratories are discussed in the conclusion part and it is suggested that the living laboratory approach can be developed in the context of Turkey as a potential architectural research and education model.

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LIVING LABORATORIES (LLS)

Living Laboratories are defined as “user-centered, open innovation ecosystems based on systematic user co-creation approach, integrating research and innovation processes in real life communities and settings.” Main characteristics of living labs are specified as “active user involvement, real life setting, multi-stakeholder participation, multi-method approach and co-creation” (What are Living Labs, n.d.). The concept of the living lab was first used in the early 1990s when students described a neighborhood in the city as a “living laboratory” to adopt a problem-solving approach (Bajgier et al., 1991). But the notion was first defined by MIT Media Lab researchers, William J. Mitchell, Kent Larson and Alex (Sandy) Pentland, as “a user-centric research methodology for sensing, prototyping, validating and refining complex solutions in multiple and evolving real-life contexts ” (Living Lab, n.d.). One of the early examples of living labs is the real home environment that MIT School of Architecture and Urban Planning professor William Mitchell set up to explore the application of the smart home system (Westerlund, Leminen & Habib, 2018).

Higgins and Klein (2011) compared research approaches such as laboratory research, action research and living lab and identified the characteristics specific to the living lab approach. In living labs, topics that exist in the real world and which many stakeholders, organizations and experts interact are examined. Users take an active role in creating, prototyping, validating and testing products, services, systems and technologies (Westerlund & Leminen, 2011). Research teams actively participate in multidisciplinary research environment to achieve the goals. Cooperation in physical and virtual interaction space is the key to obtain desired results. Consequently, real-life environment, active roles of users-researchers from different disciplines, active negotiation and participation are regarded as essential elements to achieve the aims of the research (Maiullari, 2017).

URBAN LIVING LABORATORIES (ULLS)

Addressing the living lab approach specifically to the city has led to the emergence of urban living laboratories. Urban living labs differentiate themselves from living labs by determining a territorial focus for social and local sustainability, mobility and energy, social interaction and integration, spatial development (revitalization of buildings and regions) (Steen & van Bueren, 2017a; McCormik & Hartmann, 2017). The city or a part of the city is used as a laboratory that can be considered both as a stage (geographically or institutionally limited areas) and as an approach for collaborative experimentation by researchers, citizens, companies and local governments. Urban living labs are promising tools to establish a connection with partners from different sectors; to produce knowledge with various stakeholders on a common platform; to test sustainable innovative ideas and use them in practice; to transform the management model in cities and to create new social networks and urban projections (McCormik & Hartmann, 2017).



Urban living labs consist of three stages: process design, operation and evaluation (McCormick & Hartmann, 2017). The steps in the operation can sequentially be identified as initiation, plan development, co-creative design, implementation, evaluation, refinement, dissemination and replication (Steen & van Bueren, 2017b). Voytenko et al (2016) revealed five key features of ULLs by analyzing five urban living lab samples funded by JPI Europe: geographical embeddedness, experimentation and learning, participation and user involvement, leadership and ownership, evaluation of actions and impact. In another study, Steen and Van Bueren (2017a) evaluated ninety local urban innovation projects in Amsterdam and explained the characteristics of ULLs in four dimensions: goals, activities, participants and context. Innovation, knowledge development for replication and increasing urban sustainability are defined as the goals. Development of innovation and co-creation are the activities take place. Users, private actors, public actors and knowledge institutes are the participants who have decision power in the various stages of the innovation process in real-life use context.

In line with its definitions and characteristics, urban living labs can be seen as innovation driven and technologically centered instrument. On the other hand, this approach has been re-identified in social context to investigate socio-spatial questions and conceptually translated to socially oriented urban living labs. Franz (2015) reevaluated the technology-oriented urban living laboratory approach with a social focus through the project "Interethnic Coexistence in European Cities" (ICEC, n.d.). She suggested three steps to interpret living lab approach by social understanding and implement living labs in social policies, projects, etc. The first step is to translate the current living lab terminology from technical to social. For example, Franz uses the concept of "space of encounter" instead of "real life environment". The space of encounter describes the experimental environment in which researchers, users encounter, the outcomes are not predefined and not set up in top-down approach. Other steps are "specification and contextualisation with regard to space, methods and expected outcomes" and "to identify phases of interaction". Franz listed the phases of interaction as "get to know, involve, activate and co-create" (Franz, 2015). When the technology-oriented living lab is reinterpreted as a socially oriented living lab, it evolves from a product-oriented approach into a process-oriented approach and shows significant similarities with "action research" method. Socially oriented living labs also come close to action research in terms of the potential role of universities in developing a well-established and long-term approach that combines both research and action.

Urban living laboratories can be led by governments and private sector (strategic labs), non-governmental organizations and non-profit organizations (grassroots), urban developers and universities (civic labs). Living labs led by the government or the private sector generally gather a large number of projects under one umbrella and operates in the whole city area. Labs led by non-governmental organizations and non-profit organizations produce micro-scale single issue projects which have limited budgets and focus on well-being and economy. Labs led by universities and

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urban developers focus on economic and sustainable urban development (McCormick & Hartmann, 2017).

Universities, with the awareness of their potential roles and social responsibilities, promote urban living labs to respond to global and local problems, to expand their impact in society and to act as a catalyst for urban change. Thus, the number of urban living labs established in partnership with the university is increasing. Within the scope of this study, examples of urban living labs established in partnership with the universities are investigated. While searching for the samples, twenty five university-led urban living labs, mostly which are funded by JPI Europe, are listed (Table 1). On a national scale, only three examples could be found and one of them, Başakşehir Living Laboratory, is not included in the list as it is a strategic lab established by local government (Başakşehir Municipality). To evaluate the cases, four criteria are defined:

- 1) to be established in partnership with a university (to discuss pedagogical possibilities)
- 2) being socially oriented (to explore the potentials to sustain engagement with community)
- 3) to define spatial problems in architectural/urban scale (to reveal the cases in the field of architecture and planning)
- 4) to propose spatial interventions (to sort out the range of products of laboratory studies in architectural and urban scale)

Among the list, three urban living laboratories on international scale (UCL Urban Laboratory, Mapping San Siro Lab and Live Works Sheffield) and one urban living laboratory on national scale (Mersin CityLab) that meet four criteria are examined under the headings of “field of study/ context”, “disciplines”, “collaborators”, “theme”, “levels of university education activities”, “activities” and “projects and outcomes” (Table 2).

University College London Urban Laboratory

University College London Urban Laboratory was established by geographer Matthew Gandy in 2005, inspired by discussions between geography and architecture, and then related to other fields such as anthropology, engineering, film studies and urban sociology. UCL Urban Lab investigates, proposes and disseminates critical solutions to a wide range of social, physical and technological urban and built environment issues across disciplinary and geographical boundaries. It works in partnership with a range of different non-academic, business, and community-based organizations. Researchers, students, practitioners, and community partners come together to address complex questions about everyday realities and urban environments. They develop new tools and methods for engaging diverse publics and producing knowledge about cities collaboratively (UCL Urban Laboratory, n.d.).



The vision of the research group called as an “engaged urbanism”. They conduct researches under this vision to maximize the impact on the world’s major problems by stretching boundaries of urban studies. The main areas of research activities were housing & dishousing, ecology & metabolism, change & crisis, imagination & design, data & place and citizenship & cosmopolitanism. In 2019, these activity areas were replaced with new priority areas as feminist cities, globalising urbanisms, housing urbanism, queer infrastructure, urban heritage, urban nights, urban verticality and wasteland. Moreover, the annual themes have been launched since then which one was “waste” in 2019 and “emergency” in 2020 (Cook, Melhuish & Rowe, 2021).

Table 1. University-led urban living labs

Urban Living Laboratories	partnership with a university	socially-oriented	to define spatial problems in architectural / urban scale	to propose spatial intervention
UCL Urban Laboratory	+	+	+	+
Mapping San Siro	+	+	+	+
Live Works Sheffield	+	+	+	+
Malmö Innovation Platform	+	+	+	-
University of Chicago Urban Labs	+	+	+	-
Pratt Center	+	+	+	-
African Centre for Cities University of Cape Town	+	+	+	-
MIT Senseable CityLab	+	-	+	-
B-Part/ The Urban Ideation Lab	+	+	+	-
C3 Places	+	+	+	-
GLIMER	+	+	-	-
FloodCitiSense	+	-	+	-
Green Blue Cities	+	-	+	-
Incubators of public spaces	+	+	+	-
ICEC	+	+	-	-
LOOPER	+	+	+	+
me2	+	-	-	-
play!UC	+	-	-	-
Smart Pedestrian Net	+	-	-	-
Smart Urbl	+	-	-	-
SmarterLabs	+	-	-	-
Smart-Fi	+	-	-	-
SmartGov	+	+	-	-
Mersin CityLab	+	+	+	+
City and design: İzmirLab	+	+	+	-

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Table 2. University-led socially oriented urban living laboratories

	Field of study/ Context	Disciplines	Collaborators	Theme	Levels of university education activities	Activities	Projects and outcomes
University of London College Laboratory	2005- London, England	The Physical and Environmental Sciences, Social and Historical Geography, Engineering, Arts and Humanities (in literature, film and media, cultural exchanges)	2019-2020 Berluti Faculty of the Built Environment School of Architecture, UCL Faculties and Institutes, several universities, Arcola Theatre Bar, Bertha Dockhouse, Bloomsbury Theatre, Free Word Festival du Tour de l'UCL Festival of Culture, Urban Tree Festival	engaged urbanism 2019-2020 annual research theme Emergency	undergraduate, postgraduate, graduate and doctoral students	Events: public events, performances, music evenings, film screenings, roundtables, exhibitions, workshops, panels, seminars, symposiums, competitions Research: actively engaged as feminist cities globally, housing, urban rights, queer infrastructure, urban heritage, urban rights, urban vertically, wasteland (since 2019)	2019-2020 At the Frontiers of the Urban (international conference); Queer spaces: London, 1880s to today (exhibition); Talks, screenings and roundtables exploring the implications of the COVID-19 pandemic; Cities Migration Project; Performance Lab Night Space (Migration, Culture and Integration in Europe) (NITE) (research project); many publications: accessible, open access publications, reports, pamphlets and digital media
Policlinico di Milano Mapping San Siro Research Action Lab	San Siro neighborhood/public housing district where low-income groups and immigrants live	Architecture, City and Regional Planning, Urban Design, Anthropology, Media and Communication	ALER Department of Architecture and Urban Studies, Politecnico di Milano (PaMi), DASTU, Bocconi University, the City of Milan, the Foundation, the Milan Community Foundation, the Cadorna and Radice neighbourhood schools, the local Santeramo network and a number of companies	the regeneration of large-scale social housing estates	undergraduate and postgraduate studies in department of architecture, planning, interior architecture, seminars and internships, workshops, research for graduate and doctoral students	Research: the role of living laboratories in marginalized territories, housing policies and projects, lack of education and discrimination in multicultural contexts Education and Culture: workshops on regional citizenship for children, trainings for teachers on community engagement, seminars, cultural events, seminars and internships Co-design projects for re-activating public and common areas of ground floors Neighborhood Archive: the collection of texts and objects from the memory of the houses, the coordination of the local Santeramo Network (2016 -) and archiving of personal memories	Public Space and Urban Regeneration Via Spinate Collaboration Agreement (2019 - ongoing) Green Living Lab (2017 - 2019) Local Networks and Competences Santander Award (2016 - ongoing) Santander Award (2016 - 2017) Don't Call Me Stranger (2016 - 2017) Reactive Vacant and Underused Spaces Space 30metriquadrati and Off Campus (2014 - ongoing) Lighting in San Siro (2019 - ongoing) School and Interdisciplinary S-Borders (2017 - ongoing) Roots and Wings (2013-2014)
Live Works Sheffield University School of Architecture	Sheffield/England	Architecture +	Sheffield University's School of Architecture (SSUA), Sheffield City Council, public, third sector and volunteer groups, charities, arts organisations, churches	community-led urban regeneration	mainly with graduate students	Urban Room: events, exhibitions, activities project inception and feasibility, in-depth research, design, prototyping, usability studies and on-site testing of prototypes strategic design: integration of practices in urban design, public art, architecture and place-making to produce visions for sustainable places that enhance people's lives build and temporary structures creative community engagement: organization of workshops, exhibitions, tours, events, and using co-produced drawings, models and installations Research Services: design research, creative research, evaluation of impact	Design Projects: Blackburn Remade, P+P (Pavilion of Participation), Experience Castlegate, Imagine Castlegate, Barmsey Public Art Maps, Remake Castlegate, Build a New Donkey Town, Toolkit Castlegate, Reconnect You Are Here, Castlegate Festival, Harmony Works, Use and Beauty Pavilion, Culbert Bank Research Projects: Live Well SYHA Project Stack, Culbert Bank-SYHA Project Stack, Experience Education Live Experience Castlegate The Cultural Value of Architecture, Around the Toilet Design Toolkit
Mersin University CityLab	Torotor district/Mediterranean area inhabited by immigrants to a large extent	Architecture, City and Regional Planning, Urban Design	Mersin University Department of Architecture, Hayriye City Municipality, Toroslar Municipality, Aquaponics, We Make the City, Street Belongs to Us Organisation and Creative Industries Fund NL	urban transformation	a design studio offered to final grade students	workshops, city games, panels and symposiums	Circular Manifesto

Methodologically, the research group mentioned two cross-disciplinary strategies which are “collaboration and experimentation” and



“internationalization and comparison” They underlined the importance of citizen participation as well as those excluded from citizenship during the production of knowledge about cities and methods of urban research. Moreover, they prioritise the internationalization and comparative frameworks to address conditions of globalization and challenge epistemological and geographical hierarchies in urban studies (UCL Urban Laboratory Activities Report 2012-2014, n.d.).

There have been many events like public events, performances, music evenings, film screenings, roundtables, exhibitions, workshops, panels, seminars, symposiums, competitions organized by UCL Lab since its establishment. Cities Imaginaries, Cities Methodologies, Stadtklang, Urban Lab Films and Urban Salon are the regular events. The international conference “At the Frontiers of the Urban”; the exhibition titled “Queer spaces: London, 1980s to today”, “Urban Essay Film” are some of the events took place between 2019-2020. The emerging space of the new UCL East Urban Room and Memory Workshop, which is under construction, is expected to be the new place for such kind of events. The outcomes of these events and research activities are published in a range of accessible, open access reports, books, papers, briefings, pamphlets and digital media exploring the urban dimension from multiple perspectives (UCL Urban Laboratory, n.d.).

Mapping San Siro Lab

Mapping San Siro Lab, which is a university-led socially oriented urban living lab in San Siro neighborhood, has been developed as a part of the SoHoLab project. “The SoHoLab project establishes and evaluates LivingLab approaches to understand how residents, housing associations and other intermediaries can be effectively involved in the regeneration of large-scale social housing estates” (SoHoLab, n.d.). In compliance with this approach, Mapping San Siro is an on-going action research and action learning project taking place in the public-housing neighborhood in San Siro, a marginal and problematic area in terms of living conditions (Cognetti & Castelnovo, 2019). The neighborhood is densely populated by immigrants, elderly people and people with psychological disabilities, therefore represented by strong socio-spatial inequalities and intercultural-intergenerational conflicts (Castelnovo & Cognetti, 2014).

The action-research project was started in January 2013 with a two month workshop (thirty students and ten teachers) took place in the neighborhood. The aim of the workshop was to decipher and examine the hidden conditions, policies, and explore physical and institutional spaces that enable or constrain changes in the neighborhood (Castelnovo & Cognetti, 2014). After this experience, a group of about twenty people (students, researchers, professors and practitioners) decided to stay in the neighborhood and conduct more research activities on three main issues: housing and living conditions; courtyards as new common spaces; underused and vacant commercial and social spaces. By focusing on these three axes, they set up a live lab to understand complex dynamics, interpret

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facts about conflicts in neighborhood, reshape the San Siro image by highlighting its positive side, build up relationship with institutions, and provide tools for actual projects (Cognetti & Castelnovo, 2019). Methodologically, four main tools have been defined by researchers (Mapping San Siro, n.d.):

- Situating (being in the neighborhood, building local relationships, opening-up a space and taking care of it);
- Networking (building local and city-level, broader networks);
- Inquiring (doing research and communicating it);
- Acting (fostering local change through small and participated actions).

The activities carried out within the scope of this project can be grouped under five headings: "research", "education and culture", "co-design" and "neighborhood archive" and "juridical service desk and legal education". The research activities focus on the role of living laboratories in marginalized territories, housing policies and projects, lack of education and discrimination in multicultural contexts. Under the heading of "education and culture", workshops on regional citizenship for children, trainings for teachers on identity and multicultural themes, cultural events, seminars and internships are organized in cooperation with schools in the neighborhood. "Co-design" activities consist of projects for re-activating public and common areas of ground floors. One of these projects is the space of San Siro Lab named "30 m²", which has been transformed from an idle place on the ground floor into the working space. "Neighborhood archive" activities include the collection of texts and materials to record the memory of the place, the coordination of the local Sansheroes Network (2016-) and archiving of personal memories (Polisocial, n.d.). According to researchers, the living lab approach made it possible to keep social, cultural, spatial and political dimensions of reality together, to produce meaningful impacts on reality and draw new design strategies and reimagine ways of undertaking transformation scenarios (Cognetti & Padovani, 2016).

Live Works Sheffield

Live Works is a University of Sheffield initiative led by Sheffield School of Architecture (SSoA) and developed out of SSoA's Live Project programme. It has been active since 2014, carries out design and research studies with the aim of community-led urban regeneration. While Sheffield University Faculty of Architecture plays a leading role in the studies carried out in different periods such as one semester, one year, two-three years, mainly with graduate students, Sheffield City Council, public, third sector and grassroots organizations, volunteer groups, charities, arts organizations and schools are involved in the process as other collaborators (Live Works, n.d.).

The activities of Live Works Sheffield can be grouped under the headings of "project office", "research" and "urban room". In "project office" design services and projects are offered. Design services of the living laboratory



include in-depth contextual and site analyses, feasibility studies and on-site testing of prototypes; integration of practices in urban design, public art, architecture and place-making to produce visions for sustainable places that enhance people's lives; detail design for existing structures, small-scale new build and temporary structures; organization of workshops, exhibitions, tours, events, and using co-produced drawings, models and installations for creative community engagement (Design services, n.d.). Blackburn ReMade, PoP (Pavilion of Participation), Experience Castlegate, Imagine Castlegate, Barnsley Public Art Maps, Remake Castlegate, Build a New Doncaster, Doncaster Toolkit, Castlegate Co-production, You Are Here, Castlegate Festival, Harmony Works, Use and Beauty Parlour, Cuthbert Bank are examples of design projects. The project outputs of the project office diversifies as toolkits, websites, feasibility studies, detailed architectural design projects, micro-scale architectural installations, strategic design, detailed design and construction, real and speculative design projects, participation pavilion/mobile classroom, festivals, symposiums, exhibitions and publications (Design projects, n.d.).

"Research" activities include research services and projects. Local resilience, sustainable regeneration, creative community engagement and co-design are the basic concepts of research services. Research services of the living laboratory include design research, creative community engagement, co-production of research and evaluation of impact (Research services, n.d.). One of the research projects that University of Sheffield is involved in with Tampere University of Technology, Ljubljana University and Urban Transition Association is the "Urban Education Live" project, funded by JPI Europe, which aims to test new models for university and community engagement, examining the role of the university in society (Urban Education Live, n.d.). The "Experience Castlegate" project, which develops inclusive urban renewal strategies in the post-industrial city, and "The Cultural Value of Architecture" project, which explores the relationship between the 14-17 age group and their built environment are among the other research projects of the laboratory (Research projects, n.d.).

The "Urban Room" is exhibition and events space located in the city center. The aim of the "Urban Room" is to develop meaningful connections between people and places by using creative methods to foster active participation of them in the future of buildings, streets and neighborhoods. Urban Rooms can be interpreted as a physical space where people can go to learn about, contribute to and debate the past, present and future of where they live, work and play. They are also pedagogical spaces where universities can continue their educational activities. In this regard, Sheffield University's "Urban Room" is the first permanent university-backed urban room in expanding network of "Urban Rooms" in the UK (The Urban Rooms Network, n.d.).

Mersin CityLab

Mersin CityLab, which was established in 2018 with the partnership of Mersin University Faculty of Architecture" and city consultancy firm "Play

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the City”, was an informal platform where various organizations and actors collaborated. One of the aims of the project was to bring together local and international experts, social scientists, citizen groups and local governments, and to create an environment for open dialogue, information exchange, learning and negotiation among them for the long-term development and establishment of participatory decision-making culture in the field of planning. Another aim of the project was to propose a circular system as an alternative to the existing short-term approaches in urban transformation (Mersin CityLab, n.d.).

The field of study is Toroslar Region, which is a prehistoric area inhabited by immigrants to a large extent. The area is at the center of urban transformation discussions. In current practices, the social difficulties of the local migrant population, environmental problems such as water and air pollution, inappropriate infrastructure and lack of housing opportunities are ignored. Alternative practices are needed to ensure environmental and social sustainability. As a matter of fact, many academicians and experts monitor the changes in the region, and private and public institutions work together in this context. In order to bring these initiatives together systematically and meet with a wider stakeholder group, the city laboratory aimed to provide an efficient and productive sharing environment. In the platform where information could be produced and shared together, it was foreseen that local people, non-governmental organizations and academicians would be able to express their expectations and collaborate for their visions and future plans regarding the place where they live (Arkaplan, n.d.). To create this platform, Mersin University launched a design studio offered to thirty final grade students.

The platform put emphasis on “open dialogue” in which stakeholders who feel responsible for the future of their cities can be involved, instead of the principle of participation and “long-term cyclical development” instead of the principle of sustainability. A systematic approach called as “circular thinking” is promoted to integrate various debates on urban development involves energy, water management, materials and people. For this holistic and collaborative approach, the city gaming method with a low threshold and multiplayer interface was applied (Kent oyunu, n.d.). The city gaming method in urban design was evolved by Ekim Tan, the founder of “Play the City”. Tan has applied this method in many cities including Istanbul, Amsterdam, Dublin, Shenzhen, Tirana, Cape Town and Brussels (Ekim Tan, n.d.).

In city game sessions that focused on the circular economy, energy transition, climate adaptation and social cohesion, future projections were created together with the stakeholders. In order to develop an interactive urban planning method, children, academicians, local politicians, cultural organizations, local governments, and professional planning offices met in iterative game sessions. The content produced in hands-on workshops, panels and symposiums such as “Cycling Tour from Alsancak-Demirtaş to Mersin”, “City Game Iteration on Sustainable Mobility”, “Workshop on the Future of Mobility in Mersin”, “Rainproof Müftü Workshop” has been reported systematically on the website (Etkinlikler, n.d.). The outcome of the



process is the “Circular Manifesto” as a long-term vision for the cyclical development of Toroslar.

CONCLUSION

The implementation of living labs as a socially oriented method in urban studies makes it possible to carry out current architectural and planning studies in real-life contexts with action-oriented and multi-stakeholder approach. Socially-oriented living labs create an experimental ground for social projects by expanding the domain of the technology-oriented living laboratory method. The characteristics of urban living labs such as participation, experimentation, co-thinking and co-creation converts the situated and site-specific knowledge to collective, transformative and usable knowledge produced in a shared environment with non-hierarchical structure. In the urban living laboratory ecosystem, the evolution of knowledge from scientific and institutional knowledge to social knowledge makes living laboratories an alternative research and education method at the same time. With this feature, it is also considered as a radical, critical and living pedagogy that universities can apply to.

Within the scope of the study, university-led socially oriented urban living labs have been examined. The cases meet the four criteria have been analyzed and criticized. As a result of the literature review and case study, the characteristics of urban living labs are summarized below:

- The changing way of producing and sharing knowledge in urban living labs, imposes new roles and responsibilities on both human and institutional actors. The questions such as “who an architect is and what architect does for society” in specific to discipline of architecture, “what a university is and what it does for society” in academy, “how and where the researcher produces and shares knowledge” in the field of research force all the actors involved in the process to discover new methods and new tools on a critical basis. Therefore, it is noteworthy that the variety of design and research methods has been used and new roles and collaborations have been defined for actors in all cases.

- The project outcomes in urban living labs range from toolkits, installations, strategy plans, urban visions, 1/1 scale spatial interventions, prototypes to speculative proposals and manifesto that demonstrate the diversity of architectural products. This diversity redefines “what an architectural product is”. It also provides flexibility in production process depending on budget and time limitations, context and problem definition.

- Two of the cases have (and one will have) physical space in the field of their studies. Having a physical space (local hubs, urban rooms etc.) outside the campus could enable the universities and students to foster connections with the community and the real world. It also facilitates the trust-building process that needed in collaborative and multi-stakeholder activities. Moreover, such education and research activities going beyond the boundaries of fictional studios creates the possibility of transforming the

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problematic gap between architectural education, society and practical field into an interactive and productive intersection.

- Concepts such as “participation, sustainability, interdisciplinarity, social architecture, architecture for society” have been frequently mentioned in recent years but mostly just in discursive level. However, these concepts are realized through actions in living labs, so, they go beyond the discursive level in practice.

-In pedagogical perspective, urban living lab experience has many learning outcomes for students. First of all, students can experience all stages of the design process in a real-life context by setting up dialogues with relevant stakeholders. Thus, the students develop collaborative and participatory skills. In a similar way, “live project” method can be referred. Both methods as “live pedagogies” aim to integrate field of practice and education with society, therefore, have potential to be placed at the intersection of education-practice-society.

Living lab is an alternative methodology that can take place at the intersection of academy (research and education)-practice-society, with its characteristics determined by both literature review and case study. It is a remarkable model for architecture and planning disciplines with its integrative, inclusive, multidisciplinary, collaborative and action-oriented approach in real world settings. It has an increasing number of examples all around the world but very few in Turkey. In consequence, it is crucial to improve this model for architectural research and education in the context of Turkey.

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DE-SCHOOLING THE ARCHITECTURAL EDUCATION

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ABSTRACT

This paper aims to discuss the act of learning architecture within the permeable boundaries of the school and to considers the different ways of learning/teaching as the dissolution of the school. It examines different learning spaces and methods through alternative and radical pedagogies by referring to historical events, schools and movements that shape architectural education, and offers new perspectives established by injecting into the existing architectural education system instead of rejecting it. As part of this study, methods of “de-schooling” the architectural education are tried to identify. Another purpose of this paper is looking for answers to how architectural knowledge is exchanged and transformed without institutional boundaries. By examining The Hara Laboratory and Learning From Las Vegas, it is inferred that injection to the existing system as adding a different research division or adding a different course, dissolution of the school can be fulfilled. On the other hand, by examining Learning from Kilburn, Obaruhu, Schools of Schools, the University of Universities, it is inferred that by articulation to the current system as learning from outside or without a school building in a nomadic and process-based way, dissolution of the school can be fulfilled. Thanks to these analyses, a virtual open archive is proposed as record the deficiencies to inject different sources, ideas to existing system in the long term.

Key Words: Architectural Education; May 1968; De-Schooling Movement; Radical Pedagogies; Alternative Pedagogical Experiments.

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INTRODUCTION

The school has evolved over time by having permeable boundaries and positioning between the students and practices. It is mentioned in the Editorial part of *Architectures of Education Collaboration* that education as a factory of subjecthood is like a lens that reflects on what it is produced by and speculates about what is produced (Axel, Balaskas, Hirsch, Lemos, & Rito, 2019). The learning experience is not strict and well-defined. It has flexible boundaries, and it is influenced by the environment. Real learning occurs among the students and outside the world (Powers, 2015). It can change and be improved over time. Just as architecture needs a broad understanding of the world, the students require to learn exactly this. In crisis situations, it is necessary to rethink the world and act differently. The late 1960s marked the beginning of radical ideas in the educational area. A seminar that took place in Mexico called *Alternatives in Education* was the starting point of the de-schooling movement (Perez-Martinez, 2019). Two years after these meetings, in 1970, *De-schooling Society* was published by Austrian philosopher Ivan Illich. He supported abolishing the schools and replacing them with “a new style of educational relationship between man and his environment”. People are capable of learning on their own terms and the physical environment is suitable for it (Illich, 1970).

The term 1968 that the period of worldwide reconfigurations through student revolts and pedagogical transformations. Some of these revolts which architectural students played a key role, extremely exceeded the frontiers of architecture schools (Colomina, Galán, Kotsioris, & Meister, 2015). These kinds of radical movements have affected architectural education in different ways. From the Bauhaus to Black Mountain College, and from Global Tools to the Sigma Group, made contributions to question and across the boundaries of design education and learning. These examples opened a brave space for experimentation and new knowledge.

This paper aims to revisit the studies on radical pedagogical experiments as particular forms of architectural education by presenting a new perspective, established by injecting into the existing system rather than rejecting it. This new reading will be organized by a discussion on the transformation of architectural education in a “time of disciplinary instability”. It is planned to benefit from a series of experiments from the case studies of *Radical Pedagogies Project* which is multi-year collaborative research project collected by Beatriz Colomina with her team and current examples of alternative pedagogical experiments. The exhibition *Radical Pedagogies: Reconstructing Architectural Education* has displayed an atlas of effectual ephemeron experiments in architectural education that deeply transformed the discipline after WWII years and its different versions have taken place in Lisbon, Venice, Warsaw with editions. The exhibition traces radical moments, seemingly short-lived, widely dispersed experiments. It presents an open archive of these case studies that trigger to discuss the temporal journey of architectural pedagogy (Colomina et al, 2015). It is suggested to re-read this selection in a different way from the current exhibition. Selected examples are aimed to analyze in terms of common or different motifs such as studio contents, materials, methodologies, and the time of activity. Not



only prominent West-based examples but also South America, Asia-based examples are studied. Within the scope of this study, considering the world itself as a learning environment the Hara Laboratory from Japan and Learning From Las Vegas from USA are selected from the Radical Pedagogies Project to define the dissolution of the school. With the help of the information obtained, ideas are developed on how to instill a radical pedagogy in an institution and offer alternative niches alongside the mainstream. Besides, as a tiny, experimental university with an itinerant nature Learning from Kilburn from England, as an alternative bio-architectural practice Obaruhu, the 4th Istanbul Design Biennial titled Schools of Schools from Turkey, and the University of Universities (UOU) are selected as the current alternative pedagogical experiments to scrutinize the articulation to the current system through learning from outside or without a school building. This paper tries to give answers on how architectural knowledge is conveyed and transformed without institutional borders. At this point, the differences from the other architecture schools in their region, and what kind of gaps these radical experiments filled or created in their time and space they belong to are important.

Dissolution of the "School": Selected Case Studies from Radical Pedagogies Project

The Hara Laboratory, Japan

As a Japanese architect and author on Hiroshi Hara, had a research division at the University of Tokyo's Institute of Industrial Science. The years between 1972 and 1978, within the scope of this laboratory it was conducted comprehensive analyses about villages and vernacular settlements around the world. The difference and importance of Hara was being pioneer of architectural educators in Japan to focus beyond the country's borders for spatial research through an ethnographic methodology. Hara and his students' research methodologies were in-field observation, documentation, and interviews. They visited over 200 villages in almost forty countries not only in Japan, but also in the Mediterranean, Central and South America, Eastern Europe, the Middle East, South Asia, and West Africa. (Figure 1) Their investigation collected by Hara into in his book *100 Lessons: Learning from Villages* in 1987. It was an unprecedented architectural pedagogy based on the study of villages abroad in the time of rapid postwar national urbanization and industrialization in Japan. In order to encourage working and learning from the world itself, for his numerous followers, Hara's work expand institutional focus beyond the classroom, the academic studio, and even the laboratory (Zhang, n.d.).

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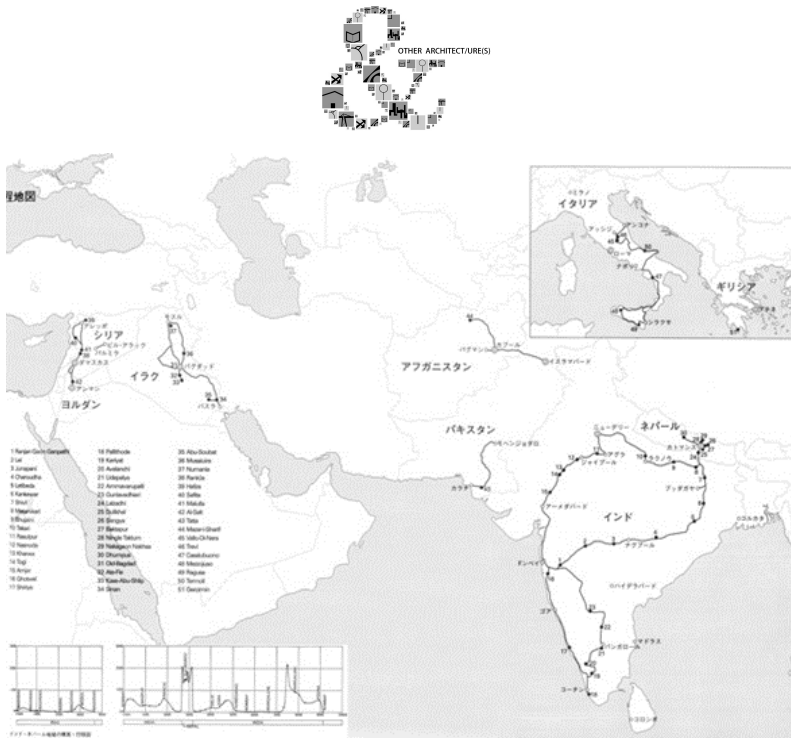


Figure 1. Travel map of fourth village survey trip in India and Nepal.

Learning from Las Vegas, USA

The Learning from Las Vegas Research Studio was one of the courses which was studying new methods of architectural education and learning lectured by Robert Venturi and Denise Scott Brown at Yale in the fall of 1968. Differentiating from the traditional design studio with its unfamiliar content and methodology, departed from the formalistic studies of individual objects, its main focus was the research. The library research and field trip to Las Vegas stood out in the course program. As an outcome of a highly innovative experiment in architectural education, a book published in 1972 by American architects Robert Venturi, Denise Scott Brown, and Steven Izenour, especially emphasized the important role of finding new techniques for visual representation of new urban forms. (Figure 2) Their research materials were relatively conventional media such as maps and charts, photography, and film. In addition to these, they contributed to integration of interdisciplinary discourse and architectural education and placed it at the meeting area of science and the arts (Stierli, n.d.).



Figure 2. Preparations for Las Vegas Deadpan film shoot, Las Vegas, 1968. Photo by LLVRS.

The Hara Laboratory and Learning From Las Vegas are alternative studies that take place in different geographies, differing from the existing system, and become an extension of the school. It can be inferred that by injection to the existing system as adding a different research division or adding a different course, dissolution of the school can be fulfilled.

Dissolution of the "School": Examples of Current Alternative Pedagogical Experiments

Learning from Kilburn (LFK), England

Learning from Kilburn was a tiny, experimental university with an itinerant nature that used Kilburn High Road and surrounds as its curriculum and campus that between October 2013 - April 2014. It is inspired by Learning from Las Vegas, New York Urban Center for Urban Pedagogy (CUP), Center for Land Use Interpretation (CLUI). Weekly classes were tutored by artists, architects, writers, thinkers and opened to everyone. (Figure 4) As content, this Studio focused on every day, untapped reserves of knowledge in local people's minds, the usefulness of surveying the "ordinary" and raised them to something worthy of study. Each class asked a single question to understand Kilburn as a whole, such as what Kilburn looked like, where it started and finished, how money worked in Kilburn, whether Kilburn even existed, where Kilburn was going. Thus, the tutor of the LFK Tom Keeley underlies that the university was a study of all the elements that contained within physically environment, within perceived environment of local memory construct a place. It also presented an alternative model of architectural education to be learned from the doorstep with an expanded notion of what architecture is or could be, in a time where formal education

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is excessively expensive. On the other hand, the real strength of LFK was that it was never being a passive learning experience and was not top-down. It could be beneficial in a more lateral structure in a university context. Its importance is that it acts as a citizen soundboard for the future of the region, the city could be discussed playfully, critically, and productively in Kilburn, where there is a real gap for a space like this (Keeley, 2015).



Figure 4. The set of Learning from Kilburn

Obaruho, Turkey

Obaruho is an alternative bio-architectural practice that based on learning from nature and constructing collectively. The team of Obaruho which consist of bio-architects, builders, farmers, philosophers, industrial product designers, researchers, social entrepreneurs focus on exploring traditional cultures and vernacular buildings with their stories about local communities, families, their beliefs, play, dance, revival and, also elements which links them all together. (Figure 5) They make revived the conventional with few contemporary additions. One of their learning tools is traveling to learn from different cultures and try and integrate them into their design sense. Their approach is community oriented and participative (Obaruho, n.d.).



Figure 5. Yenikoy Natural Building Workshop, July 2013,
Photo Credit: Xavier Allard

Furthermore, they participate in alternative architectural organizations such as the National Meeting of Students of Architecture (UMOB), Bademlik Design Festival (BTF), by this way they meet with design students, convey their knowledge, and build together out of the school. In addition to these, they have unbuilt imagined projects. (Figure 6)

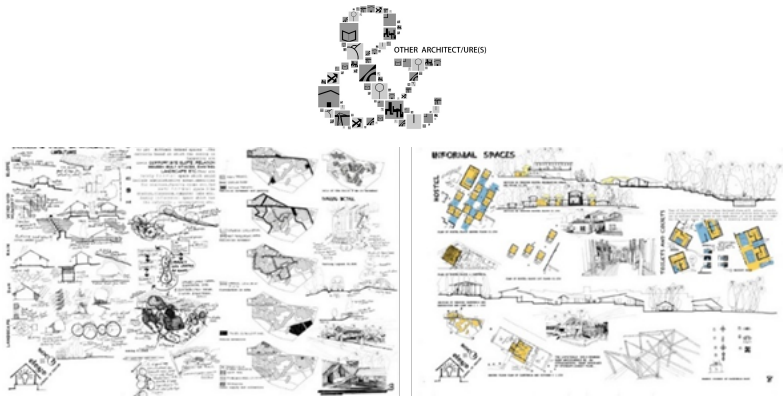


Figure 6. Imagined Project of Obaruhu: A region-based proposal for design schools, Soch-alaya

Schools of Schools, Turkey

"Biennales are often sites for pedagogical experiments."

Léa-Catherine Szacka

In 2018, the 4th Istanbul Design Biennial titled A School of Schools gave the opportunity to question the design and its education through the process-orientated platforms to research, experiment, and learn in and beyond the city. A School of Schools demonstrated as a set of dynamic learning formats triggering the creative production, continuous collaboration, and social network. Experiencing six themes as Unmaking School, Time School, Currents School, Scales School, Digestion School, and Earth School, made it clear that the learning environment is a context of interaction, sharing, and participation. With the help of this biennial, multigenerational, transdisciplinary practitioners, academics, and amateurs from Turkey and abroad came together and produced new knowledge, searched for alternatives to executed systems. Through radical diversity expanded the boundaries of the design discipline (IKSV, n.d.).

The University of Universities (UOU)

The pandemic caused instant changes and different paradigms in architectural education in a very short time. University of Universities is an international project that regarding Erasmus exchange students, developed by invited studio-based academics from international universities with different research interests, starting the academic year 2020-2021. It has born as a new pedagogy that does not try to emulate face-to-face education despite the physical and intellectual distance between students and teachers who teach/learn architecture at home. The studio layout has been redesigned dynamically. The virtual courses, crits, the submissions have been redefined. (Figure 3) The workshops are instructed with the idea of rotating leaderships. The digital architectural workshops have provided many academics who have never had the opportunity to teach students from different institutions face-to-face and exchange pedagogical ideas with other academics. Besides, it is an invaluable experience that twenty treasured teachers from all over the world participates to the same crits.

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Various workshops and weekly online meetings have held for bringing international students together and increasing the studio collectivity during pandemic. This has helped to expand the physical boundaries of universities and the studio not only as bachelor level but also as the master level which will be experienced first in September 2021. The learning space is seen as a landscape of life instead of a physical space, enriching the cultural and learning environment of the students. Ironically, it can be thought internationalization the architectural education is possible by staying at home. Aware of the different nature of teaching in each university, this educational experiment refers to a horizontal relationship that everybody teaches, everybody learns. As an outcome and a way of sharing the experience of this pedagogic initiative, a scientific journal is produced biannually under specific themes by open calls (Sanchez Merina, 2021).

In parallel with the UOU's fresh vision, Yürekli stated that the design studio is a black hole where all kinds of information and energy is sucked in and unpredictable designs which have their own reality. The black hole can be a room, a workshop, a city, the living place or all of them. She emphasized that the design studio is a place of communication, interaction, share and contemplation (2007, p.31). Although where the architectural studio is a much-debated question during the pandemic, it can be said that there are several creative ways to dissolve the virtual or physical aspects of the studio and spread the architectural knowledge.

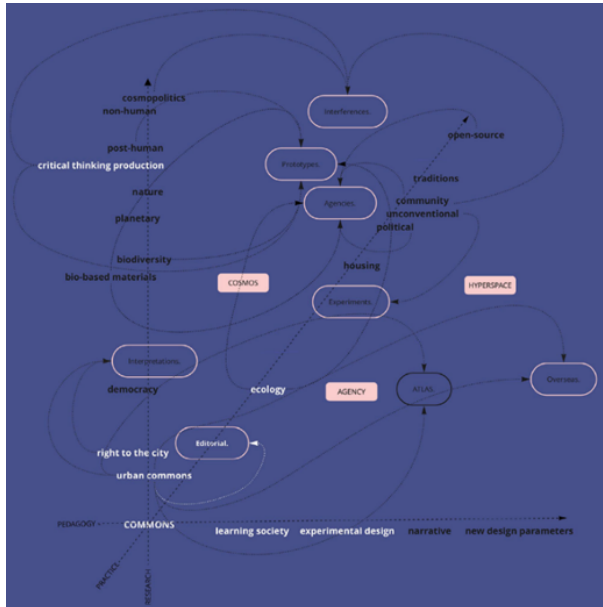


Figure 3. Redefining the basis of International Teaching of Architecture, retrieved from UOU Scientific Journal.



Learning from Kilburn, Obaruhu, Schools of Schools, the University of Universities are alternative pedagogical experiments, physically small-scale but impact-wisely large-scale, that are themselves becoming another school. It can be inferred that by articulation to the current system as learning from outside or without a school building in a nomadic and process-based way, dissolution of the school can be fulfilled.

An Evaluation: Principles Clarified by the Analyzes or Methods of “De-schooling” Architectural Education

Architecture needs to be demystified to the public, it needs to be opened up.

Tom Keeley

Thanks to the analysis of these examples, several principles stand out for de-schooling the architectural education. (Figure 7) Learning takes place from outside of the school building and touching the real world. Learning can also take place in a church or on a street. It is essential for holistic design education/thinking that learning from doorsteps, and locals. It is also important that transferring the tangible and intangible outcomes of what is learned from these experiments through a tangible book (Learning from Las Vegas, LFK), or magazines (UOU Scientific Journal), or blogs (Obaruhu). So, despite their short life span, their effects can be maintained, and new networks can be established. On the other hand, the nomadic structure of these pedagogies is suitable for do-it-yourself classrooms with light structural elements instead of permanent equipment to build in a participative way (LFK). It is no doubt that there will be aftereffects of these generally short-lived radical experiments. They generate new entities just as Learning from Las Vegas was an inspiration for LFK. Similarly, the emergence of East Coast postmodern dance and key figures by the Anna Halprin Workshops from one of the Radical Pedagogies series (Wasiuta & Herda, n.d.). The studies on this issue are continuing also through biennials in an international way (Radical Pedagogies Project, Schools of Schools).

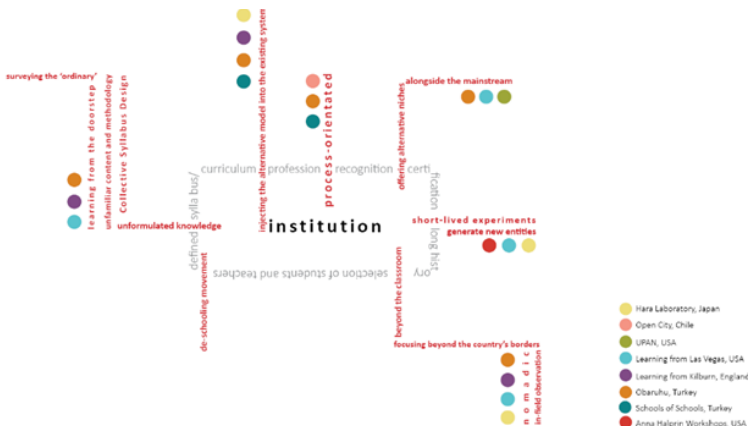


Figure 7. Dissolution of an institution

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If architectural education is fiction, the stories at least be more varied and genuinely engaging. One of the problems seems to be that it is seldom possible for more than one obsession to reign at one time in any particular school. All may potentially have value, but students usually receive anything but a balanced diet and must either conform or quit.

It is believed that the radicalization of an educational model or being an alternative to the existing model requires a site-specific and subjective starting point. Finding the deficiency within the existing system/school, creating a different niche here, and injecting the new model into this gap can be the general description of this process. The mapping of the Case Studies of Beatriz Colomina and her team's Radical Pedagogies Project describes the experiments in various regions of the world with different durations and different approaches from their period by grouping them around specific keywords. (Figure 8) Such as institutional utopia, city as laboratory, car as tool, nomadic, nonhierarchical, classless society, etc. In addition, there is not a corresponding example in the map for every keyword. Such as televised education, group therapy, blank timetable. It can also be focused on these keywords for a new educational model proposal as an injection. Parallel to the idea of blank timetable, American academician Cathy N. Davidson mentions the Collective Syllabus Design in her book *The New Education*. She states that students are assigned to organize and design the other half of a half-designed syllabus as co-authors, and not disappointed with the results (Davidson, 2017, p.235). It is thought that this kind of experiment can also be tried in existing schools in Turkey by tutors who are open to flexible and innovative approaches in their classes.



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It is considered that the trials about the proposal that can be tried in Turkey can be marked on the region and school-based virtual map such as Radical Pedagogies Project. Participatory methods are believed to have an important role in exploring the deficiencies in the existing school model. It is thought that the new model can be articulated to the existing one according to the principles determined by the (online) forums where students and teachers who experience this model can participate without a hierarchy. For example, regarding the need for practice or touching the real world, it is believed that collaboration can be made with alternative pedagogical formations, such as Obaruhu. In addition to this, a database can be designed which links trials from around the world are recorded regarding the identified deficiencies. So, an example from the Radical Pedagogies project can be an inspiration as a solution/a new idea for a deficiency/need in the field of education in Turkey. Thus, there can be two veins that feed the system. The first can be students or teachers who experience/register the deficiency. The second can be the researchers who have the knowledge to give an example from the world for the deficiency record. The veins can be increased in time. Besides, international collaborations can also be made with "Open Call" and architectural knowledge can be conveyed just as UOU.

It is important for both students and teachers to record a basic deficiency in their own schools, as well as locals and non-academicians to record their "doorstep" problem in the neighborhood where they live, also the problems they want to be researched, studied in the archive which they keep regional records of that time just as other pedagogical experiments. Studies consisting of fragments, local and temporary suggestions are valuable for enhancing the holistic design thinking/education, just like the selected examples examined in this paper. To illustrate, a design studio that carries out a project in Karaköy needs data about not only the past and present of this place but also day and night data. At this point, the doorstep experience of local people is important. The accumulation of this information on a publicly accessible platform and the use of these by students and teachers can give an opportunity for asynchronous observation, especially in social isolation conditions. Just like LFK's discussion topics about everyday issues can be accumulated on a virtual platform that can turn into a book or another school without concrete boundaries. The information gained from this accumulation can be added to this platform as a second layer. Just like the grouping with keywords in the project of Colomina and her team, it can be enriched by adding answers to the same questions produced in different schools in the same country or in different studios in the same school.

CONCLUSION

Under favour of these examples collected from different geographies and times, it is aimed to propose an alternative pedagogical method that can be tried to articulate to the existing model(s) in Turkey as a synthesis of the determined motives. Considering the conditions of the current term, questioning the existing architectural education, and the alternative models in this geography, a new model that is not under the physical roof of a school

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is intended to be developed through exploring the deficiencies in the existing school model(s) collectively.

Alongside the radical pedagogies that shake the foundations and challenge normative thinking, this virtual-cloud-school as a proposal, which is based on not contradictions, but the ideas of creating articulation and diversity, can gain its own credibility and recognition with the accumulation of the works on this virtual platform over time.

ACKNOWLEDGEMENTS

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OTHER(S) AT THE THRESHOLD OF ARCHITECTURAL EDUCATION: A READING OF THE GRADUATION PROJECTS SUBMITTED TO THE ARCHIPRIX TURKEY COMPETITION FROM 2013 TO 2020

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ABSTRACT

The final architectural design studio, mainly known as the diploma/graduation studio, is a threshold before graduation. Students' graduation projects are the capstone/assemblage/synthesis of their education life. They might also portray an institution's expected graduate profiles.

Prior research mapped the habitus/practices, thus *in-between mediation activities* (methods, processes, and execution) of diploma studios across European Schools of Architecture but has not explored how this habitus affects and influences students' outputs. To close this gap, this study capitalizes on previous research's categorizing of studio practices to analyze 1531 Archiprix Turkey competition entries and 61 winners from 2014 to 2020.

The study code competition entries into university and hometown categories, studio model categories, prize categories, and winning projects based on school assignment strategies for theme/topic/project areas. The coding is then visualized for analysis. The study analyzes the jury comments on winning projects to reveal the correlation between studio practices and jury evaluations.

The results indicate that graduates from certain schools, mostly located in İstanbul, Ankara, and İzmir, tend to participate in the competition more often than graduates from other schools. Thus, other(s) geographies/schools are absent from the scene of architectural education in Turkey. The main diploma studio practice consists of assigning building programs and predetermined project areas. Despite this, new niche practices, such as those focused on speculative approaches and requiring students to determine both the location of their project and its architectural or urban program have emerged in recent years and are showing up in competition results.

Key Words: Architectural Education; Archiprix Turkey; Diploma Studio; Graduation Project; Turkey.



INTRODUCTION

The final architectural design studio, mainly known as the diploma/graduation studio, is a threshold before graduation. Students' graduation projects are the capstone/assemblage/synthesis of their education life and become a medium that communicates students' capabilities/abilities to the professional world. Thus, they might indirectly depict an institution's expected graduate profile. Amidst the debate about the number of architecture schools in Turkey, this study extends prior research (Ruhi-Sipahioğlu and Alanlı 2020) on the habitus of diploma studios in European Schools of Architecture towards a platform, Archiprix Turkey, that manifests these studio outputs.

Archiprix Turkey is one of the long-standing and well-known competitions open for graduation projects at a national level. Since its inception in 1996, the competition has gained significant attention among architecture graduates, and for its 25th edition covering the projects of 2020, there are 330 entries.

The competition's objective is to increase competition among schools regarding their methods and approaches, overlay the diversity of the project topics, provide a discussion environment among stakeholders, and therefore enhance the quality of architectural education at the national level. (Şevki Vanlı Mimarlık Vakfı 2021). There is only one criterion for applying. The entry must be a graduation studio output from a school in Turkey or the Turkish Republic of Northern Cyprus for the academic year preceding the edition's year. In short, no limit applies to the number of submissions per school or nationality (Şevki Vanlı Mimarlık Vakfı 2020a).

The competition's online database includes all the entries and winning projects from 2013-2020, including the applicants' universities, however, it only includes the winning projects from 2004-2012 (Şevki Vanlı Mimarlık Vakfı 2020b). This platform provides an insight into the diversity of project topics and themes across different institutions and years.

Prior research mapped the habitus/practices, thus *in-between mediation activities* (methods, processes, and execution) of diploma studios across 55 European Schools of Architecture, including 14 schools from Turkey (Ruhi-Sipahioğlu and Alanlı 2020). A similar study was also conducted around the world based on data retrieved from department websites (Ghonim and Eweda 2017, 2018). Both studies investigated tutors' practices, studio environments, and topic assignment strategies, but did not address students' outputs and their evaluation at the national level. Consequently, this paper examines 1532 Archiprix Turkey competition entries from 2013 to 2020 and 61 winning projects from 2014 to 2020 to uncover the effects of this habitus and to unveil the other(s) among schools of architecture in Turkey.¹

¹ The study has limitations due to the coverage years of the database, and out of 91 schools (that have graduates as of 2019), 25 have graduated students for the last three years at the time of this study. The jury report for

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The following deep-rooted problems and questions inspired this study:

(1) Architectural thinking and making face deeply rooted challenges, ranging from climate change, internalization dynamics of the economy, globalization, and social/cultural/political/technological transformations. These challenges continuously update/renew the essence of the architectural profession so as its education. Even a cursory survey of the literature on architectural education reveals pervasive calls to innovate not only content, method, elements, but also the contexts/places of education (Habraken 2006; Masdéu and Fuses 2017; Salama 2015; Tzonis 2014b, 2014a). Almost all call for innovating the process. Can these innovations be reflected on through graduation projects?

(2) The number of departments, which was 32 in 2001, increased to 118 in 2020 (YÖK 2020). Existing research (Gül et al. 2013; Mim.Ar Çalışma Grubu 2018) underlines the constraints in human and physical resources of these schools. What is the profile of an architect raised within this environment of redundancy and constraints? 73 of 81 cities have an architectural department (Mim.Ar Çalışma Grubu 2018:35). This situation may trigger the problem of locality in the future (Tuna 2015). How does each department locate its approach within a continuum of global-local architect/ure(s)?

(3) The following elements forming the studio habitus represent diversities across schools: supervision models, students' position, and the topic/theme assignment processes (Ruhi-Sipahioğlu and Alanlı 2020). How does such a diversity correlate with the entries and winning projects?

Answering all of these questions would exceed the scope of this study. However, this paper attempts to visualize studio outputs and their categorization as a starting point for future research.

This paper walks the reader through the research in four sections. The paper begins with a summary of findings from research on diploma studios. Next, it discusses the methods used to collect and analyze data in our study. The fourth section includes quantitative analyses of submissions and winning projects, along with research questions that may be addressed in future studies.

THE SETTING OF THE DIPLOMA STUDIOS

Examining student outputs requires a brief look into the existing diploma settings. Our previous study initiated by inquiring about the objectives of the diploma studio (Ruhi-Sipahioğlu and Alanlı 2020). All the schools defined their diploma studios unequivocally with a very clear and specific objective. Students' studio processes and outputs must evidence that they have mastered and can use all the skills, knowledge, and abilities defined in the

the 2013 edition is not available. Therefore, this analysis can only cover editions from 2014 to 2020. Not all jury reports include information on eliminated projects.



learning outcomes of all their courses. Hence all the schools consider the final studio as a reflection of the entire degree program. It is nearly universal that independent design should be one of the learning outcomes.

Three supervision models were identified in the survey mapping the teaching environment and methods:

individual supervision: students work closely with their tutor(s), mentor(s), research group, or supervisor(s) on their individual projects. 22 of 55 schools follow this model. This model is not practiced by schools in Turkey.

group supervision: Diploma studios follow the same schedule as the previous semester's studios. The studio setting distinguishes this model from the previous one. Students share the same setting, the same work hours, hence can observe their peers' design process. 24 schools pursue this model.

independent, intermittently juried: Student supervision is not regular (weekly). A semester usually consists of three assessment juries. Tutors may not provide feedback to students about their design projects apart from these juries. Only schools in Turkey (9) pursue this model. These schools compare the model to the professional design process.

In terms of topic assignment, there exist four general strategies (Figure 3):

Each studio announces a general topic, which is common to all students in that studio. Studios are chosen by students. In certain schools, students select a topic based on the overarching theme;

Students decide on their FADS topic with their tutors/studio tutors, research groups, or on their own;

the faculty or FADS tutors announce a shared topic or theme;

tutors announce themes and students choose topics, so do their tutors.

The teaching staff utilizes the final studio as a testing ground to measure students' ability to work on a complete architectural design project. In terms of the studio position at the studio, based on the study, most schools prefer their students to work individually, while 10 allow them to work in groups. Only two schools mandate group projects (Figure 2).

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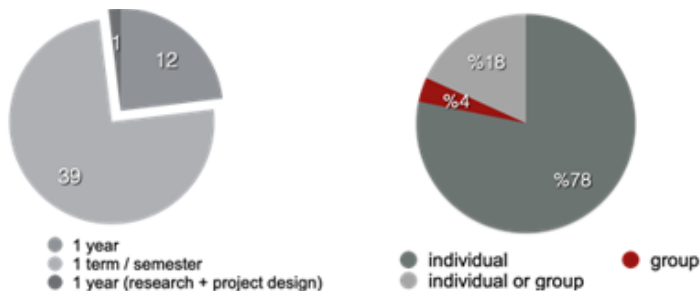


Figure 1: (Left) The duration of diploma studios (all the schools in Turkey have one semester-long studio)² Figure 2: (Right) Students' position at the diploma studio

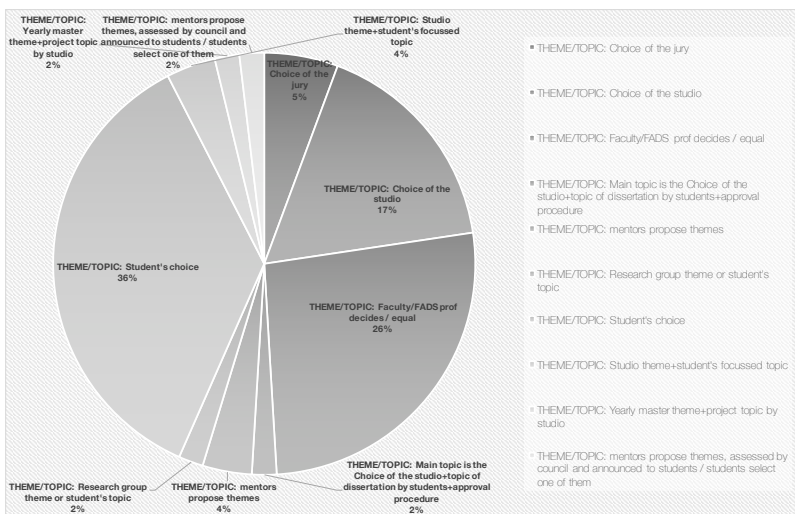


Figure 3: Topic/theme assignment process across the survey schools

² Except Middle East Technical University (METU) and TOBB University of Economics and Technology (TOBB ETU). At METU, the building program of the diploma studio is determined based on the Project area analysis made at the 7th semester studio. At TOBB ETU, the overarching Project theme and the city this theme will be discussed is announced during the 10th term, in which students are at their cooperative education program lasting 14 weeks.

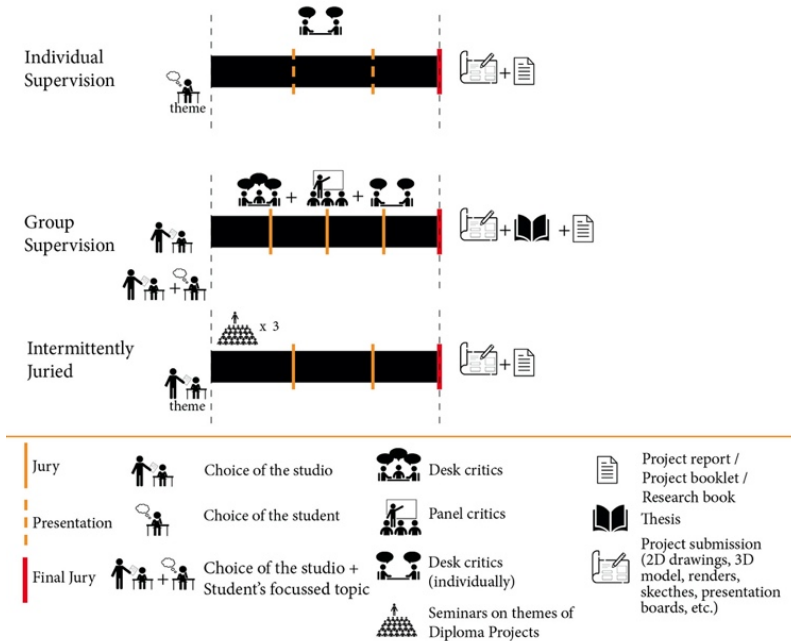


Figure 4: Representation of the studio processes (Source: The graphics were inspired by the display of the diploma studio used at the joint diploma exhibition of the e-FIADE project at the 2019 EAAE Annual Congress)

Figure 4 depicts both the studio models with their processes. But given the diversity in the duration across schools, it simplifies these models by assuming that each diploma studio lasts one semester and reflects on the models pursued in Turkey. Studio outputs range from project drawings' submission (2D drawings, 3D models, renders, sketches, presentation boards, etc.) to research books, thesis, or reports.

METHODOLOGY

The research process evolved in three stages. The first stage involved collecting the following quantitative and qualitative data:

(1) All the competition entries from 2013 to 2020 retrieved from the Archiprix Turkey database (Şevki Vanlı Mimarlık Vakfı 2020b) and Archiprix Turkey website that includes the results of this year's competition (Şevki Vanlı Mimarlık Vakfı 2021). Each entry includes the participants' university, the competition edition, a short project description, and project sheets.

(2) The jury reports from 2014-2020;

(3) The year a department of architecture graduated its first students and the number of students registered at a department yearly retrieved from

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OSYM exam results archive (ÖSYM 2021) to estimate the number of eligible graduates from each department who can participate in the competition;

The second stage involved three types of analysis:

- (1) Coding each entry with the university and its hometown, edition year, and prize category;
- (2) Coding 61 winners from 2014-2020 with theme/topic/project area assignment strategies, the project location (either in the university hometown or outside), project names given by students (Table 1 and 2);
- (3) Content analysis of jury comments on winning projects by using qualitative data analysis software MaxQDA 2020.

Table 1: The explanation of codes for topic/theme assignment strategies

Code (Topic/Theme)	Explanation
Building program	The studio announces a building program
Building program (determined at the preceding semester)	Several building programs announced by the studio based on the research/design outputs of the preceding semester.
Predetermined theme	The studio announces a general topic like a museum, renewal building, a Productive system for productive communities
A concept	The studio announces a concept, like a keyword, for example, thresholds, an architectural counter-poise: Nature&Architecture, or cultivating new habitats
A concept + list of building programs	The studio announces a concept and a list of building programs
An overarching/recent problem	The studio draws students' attention to an overarching problem in the built environment, like climate change and waterfronts.
Project area (theme)	The studio only announces a certain city, or a neighborhood and students drive the building program based on their analysis of the project area.

Table 2: The explanation of codes for project area assignment strategies

Code (Topic/Theme)	Explanation
Project area=Predetermined	The studio announces a project area.
Project area=NOT (students' choice)	The project area is selected by students.
Project area=Students' choice from a predetermined area	The studio defines a broad project area, like a city or a neighborhood and students select the location of their project in this area.

The third stage involved the visualization of the quantitative data by using the data visualization software, Tableau, mostly used in big data analytics, owing to its ease in providing new perceptions from data and enabling an interactive analysis framework.



RESULTS



Figure 5: Please scan this QR-code to access the visualizations³

The results and others(s) fall into four main areas: (1) Number of participants and winners across cities and universities; (2) The correlation between the studio models and the winning projects; (3) The correlations among studio topics/themes/area assignments, jury comments on the diploma topics, and studio topics assignment strategies across the years.

The decision to participate in the competition

Figure 6 maps the number of entries and the number of universities across cities. Figure 7 only shows the city of the university based on the number of winning projects. As of 2020, winners graduated from universities located in İstanbul (32), Ankara (13), İzmir (12), Konya (1), Eskişehir (1), Mardin (1), and Bursa (1). These maps are read as “other(s) geographies” because of the number of departments in these cities, but from another perspective, the examination of the percentages of the number of entries to the number of graduates (Figure 7) yields a further conclusion.

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Laws/ Regulations/
Ethics*

Human/ Behavior

*Technology/
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Discourse*

Criticism/ Method

*Identity/ Culture/
Tradition*

*Urban/ City/
Landscape/ Rural*

Design

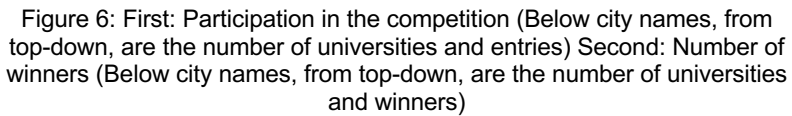
Interior Design

*Conservation/
Transformation/
Re-use*

Education

Arts/ Aesthetics

³ Please click here to access the visualizations: <https://public.tableau.com/app/profile/isilsipahioglu/viz/OthersattheThreshoIdofArchitecturalEducation/Story1>





Universities	City	Type	Number of graduates as of 2010 (from 2013 onwards)	Number of graduates eligible to participate into the competition	Percentage of Participation	Count of Competition Entries
İZMİR YÜKSEK TEKNOLOJİ ENSTİTÜSÜ	İZMİR	State	8	376	17.287234043	65
ORTA DOĞU TEKNİK ÜNİVERSİTESİ	ANKARA	State	8	656	1.961702128	7
MEF ÜNİVERSİTESİ	İSTANBUL	Private	3	180	15.091403415	99
İSTANBUL TEKNİK ÜNİVERSİTESİ	İSTANBUL	State	8	1.280	2.134146341	14
TOBB EKONOMİ VE TEKN. İZMİR ÜNİVERSİTESİ	İZMİR	Private	6	270	13.333333333	24
MİMAR SİNAN GÜZEL SANATLAR ÜNİVERSİTESİ	İZMİR	State	8	656	2.222222222	4
DOKUZ EYLÜL ÜNİVERSİTESİ	İZMİR	State	8	656	13.984375	179
BAŞKENT ÜNİVERSİTESİ	ANKARA	Private	4	160	1.09375	14
GAZİ ÜNİVERSİTESİ	ANKARA	State	8	616	13.333333333	36
İST. BİLGİ ÜNİVERSİTESİ	İSTANBUL	Private	7	700	9.298790488	61
TED ÜNİVERSİTESİ	ANKARA	Private	5	300	0.416666667	2
BİLKENT ÜNİVERSİTESİ	ANKARA	Private	5	300	10.841836735	85
CUMHURİYET ÜNİVERSİTESİ	SİVAS	State	3	93	0.255102941	2
KADIR HAS ÜNİVERSİTESİ	İSTANBUL	Private	4	240	0.258790488	1
ESK. OSMANGAZI ÜNİVERSİTESİ	ESKİŞEHİR	State	8	456	0.457317073	3
ONDOKUZ MAYIS ÜNİVERSİTESİ	SAMSUN	State	3	186	9.375	15
YAŞAR ÜNİVERSİTESİ	İZMİR	Private	8	560	8.939571429	55
İST. KÜLTÜR ÜNİVERSİTESİ	İSTANBUL	Private	8	1.040	7.857142857	55
BAĞÇEŞEHİR ÜNİVERSİTESİ	İSTANBUL	Private	8	712	0.285714286	2
ÇANKAYA ÜNİVERSİTESİ	ANKARA	Private	6	378	7.533333333	22
YILDIZ TEKNİK ÜNİVERSİTESİ	İSTANBUL	State	8	1.440	0.333333333	1
SAKARYA ÜNİVERSİTESİ	SAKARYA	State	3	186	0.833333333	2
ERCİYES ÜNİVERSİTESİ	KAYSERİ	State	8	496	5.70175486	26
GEBZE TEKNİK ÜNİVERSİTESİ	KOCAELİ	State	8	376	0.438596491	2
KOCAELİ ÜNİVERSİTESİ	KOCAELİ	State	8	496	5.913978495	11
DÜZCE ÜNİVERSİTESİ	DÜZCE	State	4	120	5.714285714	32
ULUDAĞ ÜNİVERSİTESİ	BURSA	State	8	656	0.178571429	1
MARDİN ARTUKLU ÜNİVERSİTESİ	MARDİN	State	8	248	5.673076923	59
ÖZVEĞİN ÜNİVERSİTESİ	İSTANBUL	Private	5	720	0.096153846	1
ATILIM ÜNİVERSİTESİ	ANKARA	Private	8	400	0.178571429	1
İST. TİCARET ÜNİVERSİTESİ	İSTANBUL	Private	3	120	4.838770677	9
ABDULLAH GÜL ÜNİVERSİTESİ	KAYSERİ	State	4	64	4.838770677	9
NUH NACI YAZGAN ÜNİVERSİTESİ	KAYSERİ	Private	5	225	4.521276596	17
ANADOLU ÜNİVERSİTESİ	ESKİŞEHİR	State	8	496	4.435483871	22
ÇUKUROVA ÜNİVERSİTESİ	ADANA	State	8	576	4.166666667	5
PAMUKKALE ÜNİVERSİTESİ	DENİZLİ	State	3	186	3.593414634	26
KARADENİZ TEKNİK ÜNİVERSİTESİ	TRAZÖN	State	8	656	0.152439024	1
İSK ÜNİVERSİTESİ	İSTANBUL	Private	4	320	3.629032558	9
ULUSLARARASI KIBRIS ÜNİVERSİTESİ	LEFKOŞA	Private	8	920	0.40322806	1
SELÇUK ÜNİVERSİTESİ	KONYA	State	8	576	3.75	27
NİCMETTİN ERBAKAN ÜNİVERSİTESİ	KONYA	State	4	164	0.138888889	1
NAMIK KEMAL ÜNİVERSİTESİ	TEKİRDAĞ	State	4	164	3.5	14
MALTEPE ÜNİVERSİTESİ	İSTANBUL	Private	8	1,072	3.333333333	3
ATATÜRK ÜNİVERSİTESİ	ERZURUM	State	3	113	3.111111111	7
FIRAT ÜNİVERSİTESİ	ELAZIĞ	State	2	124	3.024140615	15
GEDİK ÜNİVERSİTESİ	İSTANBUL	Private	7	455	2.951138889	17
İST. AHEL ÜNİVERSİTESİ	İSTANBUL	Private	8	592	2.688172043	5
YEDİTEPE ÜNİVERSİTESİ	İSTANBUL	Private	8	800	2.891463415	17
ALANYA HAMDULLAH EMLAK ÜNİVERSİTESİ	ANTALYA	Private	3	150	2.5	8
BEYKENT ÜNİVERSİTESİ	İSTANBUL	Private	8	1,440	2.391304348	22
GAZİANIZ ÜNİVERSİTESİ	ANTALYA	State	5	250	1.796111111	10
FATİH SULTAN MEHMET V. ÜNİVERSİTESİ	İSTANBUL	Private	7	560	0.179611111	1
ANTALYA BİLİM ÜNİVERSİTESİ	ANTALYA	Private	4	280	1.829268293	3
GAZİANTEP ÜNİVERSİTESİ	GAZİANTEP	State	7	287	1.72388060	19
MERSİN ÜNİVERSİTESİ	MERSİN	State	8	416	1.626016260	3
YENİ YÜZYIL ÜNİVERSİTESİ	İSTANBUL	Private	7	420	1.071428571	3
KARABÜK ÜNİVERSİTESİ	KARABÜK	State	8	576	1.045296167	3
İST. MEDİPOL ÜNİVERSİTESİ	İSTANBUL	Private	2	240	0.961538462	4
DOĞU AĞDENİZ ÜNİVERSİTESİ	LEFKOŞA	Private	8	728	0.952380952	4
TRAKYA ÜNİVERSİTESİ	EDİRNE	State	8	656	0.886055556	5
MEHMET AKİF ERSOY ÜNİVERSİTESİ	BURDUR	State	3	156	0.833333333	2
KIRILARELİ ÜNİVERSİTESİ	KIRILARELİ	State	3	156	0.762195122	5
BOZOK ÜNİVERSİTESİ	YOZGAT	State	8	328	0.640125641	1
ABANT İZZET BAYSAL ÜNİVERSİTESİ	BOLU	State	8	496	0.640125641	1
İST. SABAHATTİN ZAM ÜNİVERSİTESİ	İSTANBUL	Private	5	350	0.609756098	2
KTO KARATAŞ ÜNİVERSİTESİ	KONYA	Private	4	200	0.604838710	3
NIĞANTAŞI ÜNİVERSİTESİ	İSTANBUL	Private	4	480	0.571428571	2
HALIÇ ÜNİVERSİTESİ	İSTANBUL	Private	8	480	0.5	1
SÜLEYMAN DEMİREL ÜNİVERSİTESİ	ISPARTA	State	8	496	0.416666667	2
İST. AYDIN ÜNİVERSİTESİ	İSTANBUL	Private	8	856	0.40322806	2
GİRNE AMERİKAN ÜNİVERSİTESİ	GİRNE	Private	8	1,160	0.350467290	3
İST. ALTINBAŞ ÜNİVERSİTESİ	İSTANBUL	Private	6	360	0.344827586	4
BALIKESİR ÜNİVERSİTESİ	BALIKESİR	State	8	416	0.277777778	1
OKAN ÜNİVERSİTESİ	İSTANBUL	Private	7	840	0.240347497	1
LEFKE AVRUPA ÜNİVERSİTESİ	LEFKE	Private	8	840	0.209333333	1
MAJSTAY KEMAL ÜNİVERSİTESİ	ANTALYA	State	7	434	0.083333333	1
AVRASYA ÜNİVERSİTESİ	TRAZÖN	State	1	480	0	0
YAKIN DOĞU ÜNİVERSİTESİ	LEFKOŞA	Private	8	1,200	0	0
YÜZÜNCÜYIL ÜNİVERSİTESİ	VAN	State	7	252	0	0
TOKOS Ü. (MERKİN)	MERKİN	Private	5	300	0	0
NİĞDE Ü.	NİĞDE	State	4	248	0	0
KIBRIS AMERİKAN Ü. (OKT.)	LEFKOŞA	Private	8	280	0	0
İST. GELİŞİM Ü.	İSTANBUL	Private	5	700	0	0
İST. ESENYURT Ü.	İSTANBUL	Private	3	150	0	0
HASAN KALYONCU Ü. (GA.)	GAZİANTEP	Private	6	420	0	0
DOĞUŞ ÜNİVERSİTESİ	İSTANBUL	Private	8	624	0	0
DEĞİŞ ÜNİVERSİTESİ	DIVYAKIR	State	8	496	0	0
BURSA ORHANGAZI Ü.	BURSA	Private	5	275	0	0
ZİRVE ÜNİVERSİTESİ	GAZİANTEP	Private	Null	0	Null	1
GEDİZ ÜNİVERSİTESİ	İZMİR	Private	Null	Null	Null	1

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Education

Arts/ Aesthetics

Figure 7: Participation in the competition (sorted based on the percentage of participation)



The results indicate that graduates from certain schools have a higher motivation than other graduates. This may be read as “other(s) in the entries.”

The following question for future research arises from this depiction: Does a certain atmosphere in schools with a high participation rate encourage students to participate in competitions?

The correlation between winning projects and their studio models

Based on the analysis of the studio models of winning projects, it is not possible to foresee an impact of the studio model at the nominations. A detailed and statistical analysis may yield another conclusion.

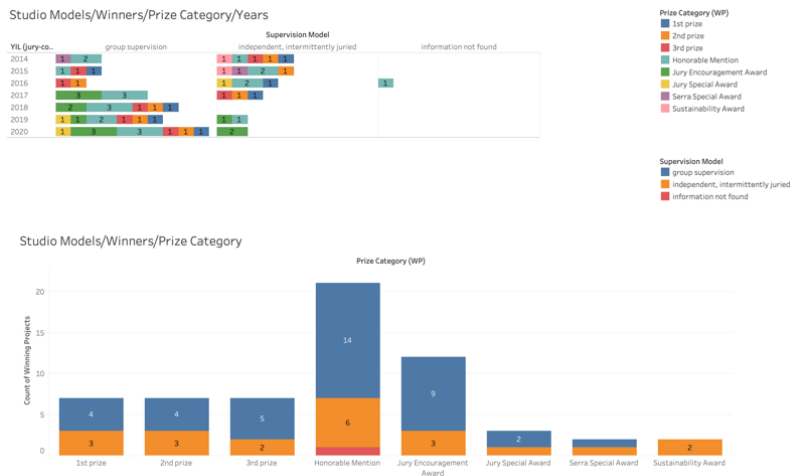


Figure 8: Visualization of the correlation between studio models and winning projects

The relationship between studio topic/theme/area assignment strategies and the winning projects

The qualitative analysis of the jury comments with a focus on their impact on topic/theme assignment strategies shows that four winning projects had a building program assigned as part of their diploma studio. When the jury evaluates the building program, how can it be truly effective?

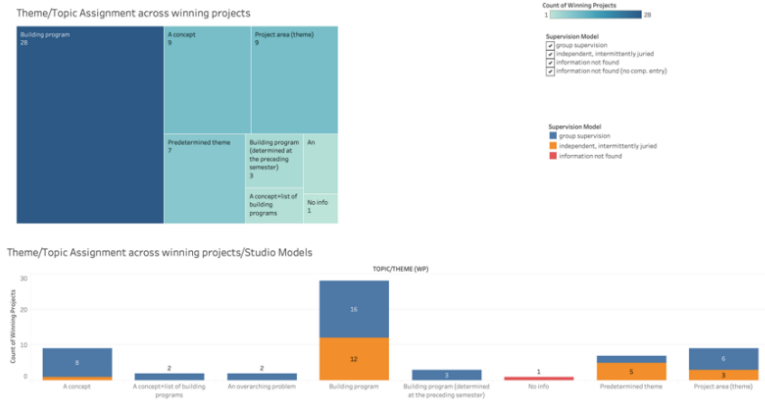


Figure 9: The cross-tabulation of theme/topic assignment on studio models of winning projects

Below the paper shares excerpts from the jury comments.

Along with current economic developments, housing projects are the most indispensable subject of Istanbul's unstoppable growth trend. The design approaches this problem verbally and conceptually, first through texts and then with readings at the scale of the Cendere Valley (Baz et al. 2014).⁴

Considering the green or ecological building design criteria, we cannot say that this design is a green, sustainable building, but in a place like Istanbul, it is very valuable to have a design that can make food and agriculture sustainable and reproducible in the city (Çağlar et al. 2015).⁵

Out of 8 winning projects from studios assigning a general concept to the diploma, 5 winning projects received positive comments on the value of the building program proposal.

It was deemed worthy of an incentive award for its search for a solution by bringing consumption/pollution and recycling issues, which are one of the most important problems of our time, to the center, and for the qualified result product, it has achieved consistent with this search (Karakurt et al. 2018).⁶

Its provocative, narrative, and utopian scenario for the distant future; The proposal of leaving the ground and settling/heading for the sky,

⁴ For the project entitled "re2 : [Re-Defined Space Scenarios in Re-Industrialized District]" by Erenalp Büyüktopcu, from İstanbul Technical University, 3rd prize, 2014.

⁵ For the project entitled "İstanbul Agropolis" by Çağdaş Delen, from İstanbul Technical University, Sustainability Award, 2015.

⁶ For the project entitled "Eye [The Facedown Mechanism]" by Özgür Kaya, from İzmir Institute of Technology, Jury encouragement award, 2018.

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the spatial search for this scenario, and the graphic language were found positive. The search for a word through architecture by pointing out today's social problems has been found valuable (Gür et al. 2017).⁷

7 Projects identifying their programs based on the assigned project area, 6 received notable jury comments about how either timely or relevant the design proposal is for the project area.

... [loophole] aimed to bring an old quarry back to the city with a sustainable and ecological approach. Suggested fiction in response to a current and difficult problem about the city... (Uçar et al. 2021).⁸

... [eco dustry] presented a building program proposal for an industrial zone and natural habitat interface. The sensitive approach of the project to a current problem related to the built environment was appreciated by the jury (Uçar et al. 2021).⁹

The number of studios emphasizing concepts that can be used to trigger creative scenario building and define overarching problems has been on the rise over the past two years (Figures 9-10). According to the study, this approach is still a niche practice, but jury feedback indicates that it will progress to become a new venture for studio learning.

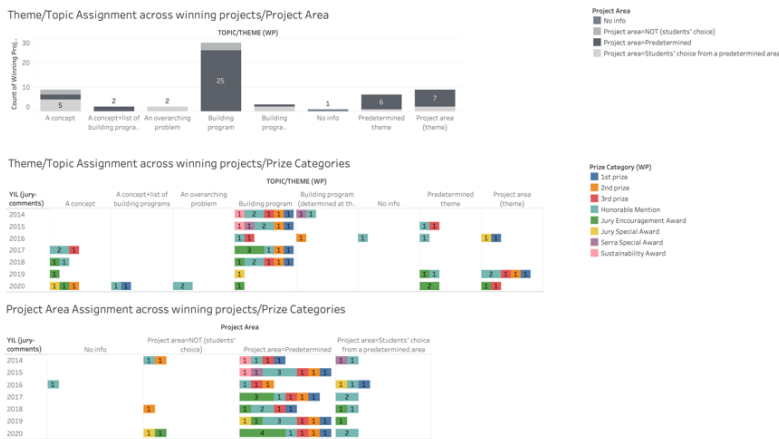


Figure 10: The topic/theme/project area assignment strategies across the winning projects/years

⁷ For the project entitled “RoboSymbioticOrganism” by Gönenç Kurpınar, from İzmir Institute of Technology, Honorable mention, 2017.

⁸ For the project entitled “loophole” by Saffet İlkey Kaya, from Yıldız Technical University, 2nd prize, 2019.

⁹ For the project entitled “Eco-Dustry” by Mehmet Kaymaz, from Yıldız Technical University, Honorable mention, 2019.



CONCLUSION

This paper aimed to initiate a discussion on the other(s)/mainstream practices at this threshold by shedding light on established regimes and niche practices within evaluation as well as setting the diploma studio, as detailed below (Ruhi-Sipahioğlu 2021):

- (1) Niche/other practices: A broader studio theme requiring students to determine both their project location and architectural/urban program; urban scale approach; group projects.
- (2) Regime practices: The assigned topic/theme is the building program, and the project site is predefined by studio tutors or jury members.
- (3) Other(s) geographies: For the analyzed seven years, most of the winning projects were from İstanbul, Ankara, and İzmir.
- (4) Other(s) in the entries: Graduates from certain schools tend to enter the competition more often than graduates from other schools.
- (5) Students from numerous schools with at least 20 entries have never been a laureate in this period.
- (6) The model of independent and intermittently juried supervision is a regime practice peculiar to Turkey.

Further research will relate these findings with the jurors' evaluation of the winning projects and discuss the other(s) classified as niche practices standing at the verge of a waiting room looking for an opportunity to call once needed.

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ARCHITECTURE FOR ACTION: REFLECTIONS ON THE “OTHER” IN DESIGN STUDIO

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ABSTRACT

This paper evaluates our pedagogical approach and outcome of an architectural studio with a theme on Othering. The theme highlighted the wider social role of architecture and unfolded as a matter of ethics and aesthetics in our studio and opened up questions of clashes between the well-established course structure with its role, aims, objectives and instructional mode within the curriculum. The theme expanded the horizon of the formal course structure as the praxis of designing against othering has become an apparent controversial dimension of the poetic process. Despite the spatial practice aspect of the theme, we had to generate and address the work within the relatively isolated, safe and fictional realm of an online studio, which further raises the question of appropriateness between the theme and its implied process. The theme also raised the question of what and how to evaluate the design work. Beyond our first set of assessment criteria (clear problem definition; research and analysis; architectural program and spatial relations; relationship with the site and presentation quality), it called for a new set of criteria to assess the success of each work based on its social and ideological engagement with the design problem. Retrospectively, we re-assess the studio work as we derive from the Spatial Agency as a practice that centralizes humanitarian and ecological issues and aims to empower the actors of lived space. Following our re-evaluation of the studio work, we critically reflect on the employment of the theme of Othering as a pedagogical tool.

Key Words: Othering; Social Equality; Spatial Empowerment; Studio Culture; Design Education.

INTRODUCTION: PRACTISING ETHICS IN ARCHITECTURE STUDIO

Although the idea of ethics finds an explicit and systematic discourse in humanities and social sciences, its relationship with architecture and similar fields is more subtle. According to Lagueux (2004), the problem of ethics remains external to hard sciences and in some cases, it is not a question of arts. On the other hand, ethics is inherent or internal to architecture as a field that designs the framework of social life (Lagueux, 2004). The concern for well-being in designing buildings and settlements dates back to the writings of Vitruvius. While sciences have witnessed an ethical turn in the 20th century after the crimes against humanity and planet, the rooted



discourse on the ethics of architecture that unfolds in the intersection of truth and beauty have further been grounded in humanitarian and ecological issues.

Palermo (1999) suggests four ethics-oriented categories in architecture that converge at the base of good, correct and fair. While distinct areas in themselves, architecture and ethics conflate through the lenses of aesthetic, ideological, social, or practical frameworks all with specific orientations ranging from critiquing a culture or giving a form to social projects to social agency or duties to the self, client, and general public (Palermo, 1999). Ethical theories are diverse but at the bottom of these orientations lies a consideration of doing "good," or "right" or "fair" with respect to self and others in a given situation" (Palermo, p. 191). The relationship with the Other forms a major ground of ethical thinking, and in contemporary times, this thinking has expanded to consider the relationship with other-than-human entities. Seen from a wide perspective, the debates on the Other, Othering, and Otherness transverse humanitarian and ecological ethics, which further reflects in ethics of architectural practice.

The field of architecture has been problematizing how to respond to ethical issues of our time, especially to the questions of spatial and environmental discrimination and injustice. In architecture, where knowledge is generated at the intersection of making (poetics) and acting (praxis), it is also an issue of how to cultivate architects to design and build with both rooted and emerging ethical concerns. Architectural education can be a starting point to address ethical questions and issues. According to Koutsoumpas (2007), the architectural studio is "the place where the new architects are forming their architectural identity" (p. 227). In fact, ethics in architecture "include not only the procedure of creation of architecture, but also that of becoming an architect" (Koutsoumpas, p.230). The generative and informative dialogue between studio instructors and students is a praxis-based unneutral environment in which designing the built environment in a good way and thus ethical values are incorporated into the poetic process.

Although an architectural studio is a place in which moral values are employed, it is possible to emphasize the ethical dimension of praxis through the particular design problem. Along these lines, in Spring 2021, we conducted Architectural Design II with the theme of othering or discrimination in which we brought praxis, ethics and the social role and responsibilities of architecture into focus. This paper discusses the explicit incorporation of social and environmental problems and ethical values into the center of the design process.

First, we will develop a design-oriented framework of the theme of Othering that constitutes the ground of the studio process, i.e., what Othering is and how design work can address it both ethically and poetically. Next, we will present the structure, environment, method, and process of the studio work that led to 17 distinct projects of spatial agency with different levels of design maturation. Retrospectively, we will qualitatively assess design proposals' engagement with spatial agency and aesthetic translation of ideas. Finally, we will critically evaluate our role and way of conducting the studio as the instructors of the course to derive lessons for our future engagements.

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OTHERING AND SPATIAL AGENCY

While originally ethics concerned itself with assuming a responsibility for the Other (Bauman, 2000), the contemporary discourse is questioning the nature of that responsibility. The theories of the Other date back to Hegelian master-slave dialectic, and from this original thought, Otherness theory in social sciences has developed to recognize two modes of hegemonic relationship with the Other. One type of relationship is based on the principle of universalism, and in that thought, the Other is assimilated by the dominant culture due to the claim of universal human (Schnapper, 2005, p.3). Thus, it aims to assimilate and remove the Other. The other type of relationship recognizes difference as a positive value but while valuing the Other, the culture of self is taken as a base, and the Other is excluded (Schnapper, 2005). On the other hand, it is possible to observe alternative ways of relating with the Other as it unfolds in the thinking of Martin Buber, which further influences Bauman. According to Best (2016), Buber's "distinction between I-It and I-Thou" suggests "two possible ways of being in relation to the Other." Best (2016) states that "In the I-It mode of being which Bauman adopts, the self considers the Other as an object of his or her activities and thoughts and fails to understand the true presence of the Other. In contrast, the I-Thou/I-You mode of being involves mutuality between the self and other, a 'meeting' between self and other; in which the self is affected by the relation just as much as the Other is genuine dialogue" (p. 46). Buber's model of participatory mode of relation with the Other shows a way in a world in which the prevailing relationship with the Other remains hegemonic, and based on race, ethnicity, income, gender and sexual identities or orientations, religion, physical abilities, or species, the Other is spatially excluded.

The participatory model of relating with the Other recognizes the plurality of voices and capacity to influence the spatial order. Beside spatial inclusion, empowerment of the Others as actors of a shared space and time was a key concern in our studio. Adams (2008) defines empowerment as "the capacity of individuals, groups and/or communities to take control of their circumstances, exercise power and achieve their own goals, and the process by which, individually and collectively, they are able to help themselves and others to maximize the quality of their lives" (p. xvi). The basis of spatial empowerment entails the creation of necessary circumstances to enable subjects to take control of their destinies (Serageldin, 1997, p. 8). It also leads to engaging subjects in the process by providing opportunity resources and support (Page, 1999). The architects voluntarily or involuntarily are involved in the constraining structures that organize societies, and they may act as negotiators "to partially reform them" (Awan et al., 2011, p. 37). In so far, the "architects and architecture can participate in the dismantling and reallocation of the spatial consequences of power" (Findley, 2005, p. 199), empowerment calls for the translation of subjects to active actors of space rather than passive categories within the space. Awan et al. (2011) calls this role of architect spatial agency, and a spatial agent is someone who "effects change through the empowerment of others, allowing them to engage in their spatial environments in ways previously unknown or unavailable to them, opening



up new freedoms and potentials as a result of reconfigured social space” (p. 39).

With an action-based view of architectural design, we questioned and raised awareness of these various modes of relating to the Other in the studio. The common conceptual approach by the students engaged with the space of dialogue, participation, and encounters. Due to the limitations of the studio, the dialogue with the Other as a generative method remained limited although the students gathered the voices of the Others through various media. Nevertheless, the students developed a spatial imagination of being-with-each-other in the contemporary context of Turkey and imagined scenarios of spatial agency.

STUDIO & PROJECT BRIEF

The overall and established structure of the course within the curriculum and temporary theme of Othering guided the Architectural Design II at the Department of Architecture at Yeditepe University in Spring 2021. The thematic title of the studio “Can Design Save the World?” further called for a specific focus on the issue of “Discrimination in the 21st Century.” While the studio theme remained open to interpretation among six independent sections, our take-on to the theme, in two combined sections where we collaborated very closely, followed the concepts of being-with-other and spatial empowerment as the students practiced a form of spatial agency, which we evaluate retrospectively here.

The General Structure and Order of the Studio

At the Department of Architecture at Yeditepe University, Architectural Design II (ARCH 254) is a six-credit studio course which increases the complexity of function and scale after the first architectural studio, builds on construction and structure knowledge, and engages natural and cultural analyses. The studio further “includes layout plan (in 1/200 scale), plans, sections, views and the model with site (in 1/100 Scale)” (Url 1). Since Summer 2019, the course coordinator Burçin Başyazıcı has updated the course content to bring more focus on social and societal issues.

According to the new order of the studio, after the general introduction of the theme, the students spend the first 8 weeks with theoretical lectures, independent research, and class discussions to analyze the design problem and formulate a design proposal. A Discussion Day, through its assigned mandatory readings, helps to establish a more nuanced understanding of the design problem. The students develop their first preliminary design proposals on the Workshop Day, which takes place on the eighth week. The duration of design work is thus shorter compared to the conventional studio structure. The studio operates with several sections, each run by an instructor individually or in collaboration. The juries take place as a collaboration between a few sections with the addition of invited critics.

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Spring 2021 Call for Design: “Can Design Save the World? Discrimination in the 21st Century”

In Spring 2021, Architectural Design II aimed to “discuss the role, limits, and possible contributions of architecture within the scope of social discrimination and design concerns and to provide alternative architectural proposal to related discussions. To achieve this aim, it is asked from students to analyze the everyday life of society in their close settlements and to realize excluded communities and their spatial habits. Each student will work in their neighborhood and/or district. Within the direction of the analysis’ findings, it is expected to organize an architectural program to provide design proposals” (Başyazıcı, 2021).

Following the brief, the theme of the studio was to understand the problems of communities exposed to discrimination, segregation, othering, and marginalization in the urban environment and to seek possible solutions through architecture. The student proposals could be heterotopic, utopic, or dystopic. The design was expected to respond to the specific character and needs of the Other. In the studio, the instructors raised the following questions to foster design thinking:

- Can architecture be a protagonist in seeking solutions to the problems of the Others?
- How can architecture offer a design-based view to overcome or lessen social isolation and spatial discrimination?
- How can architecture organize different scales of spatial empowerment of communities?

Along the lines of these questions and brief, the students were expected to select a contemporary or historic site in an urban context in their city of residence based on their observations of social issues of discrimination and an architectural program developed by students to address the issues. Thus, students were asked to understand and work within the social context of their design problem. They were further asked to propose spatial arrangements including open, semi-open and close spaces with a total project area that ranges between 3000m² and 4000m² and integrate their design proposal with their chosen context. Throughout the design process, they are also expected to question the future scenario of their design proposal in relation to its construction, finance, flexibility, transformation, and sustainability.

Studio Environment and Student Works

Participants: The particular studio focused on this paper was composed of two collaborating instructors and 17 students who resided in İstanbul, Yalova, İzmir, Batman, and Afyon during the studio. The studio also received many guest speakers and external jury members who contributed to the unfolding of the studio through lectures and critiques.



Media of Course Conduct: Because of the Covid-19 restrictions, the studio was conducted remotely. Google Classroom was used for the exchange of information and documents and communication. Miro was used for displaying and exchanging simultaneous studies between students and tutors and for brainstorming. Google Meet was used for synchronous live sessions.

Critiquing: The studio made use of a diverse critiquing setting to interact with students. These included large or small group sessions, one-to-one sessions, less formal email exchanges, interim reviews, and the final review. One-to-one critiques, held between an instructor and a student, enable an instructor to lead individual students to see their design problems from the instructors viewpoint. Group critiques provide students the opportunity to see each student's approach toward solving the specific design problem. Interim reviews involve the entire class, and all students may benefit from sharing their research, thoughts, and design process with others in the collective class environment while receiving more critical voices as external jury members. Final review is the last discussion where the students contemplate on their completed works.

During the first 12 weeks in the semester, all students attended large group sessions. After the projects settled on a more precise ground in terms of the subject of study, the students participated in one-on-one or individual virtual meetings. Throughout the semester one-to-one meetings were further held with students during extracurricular hours when requested by the students. Additionally, workshop and discussion days and seminars created an expanded environment for discussion.

Collaborating instructors, peers, external jury members, guest speakers who introduced contemporary spatial issues and raised discussions in the seminars created a diverse and multivocal environment with different vantage points and sensibilities. Throughout the term, the instructors sometimes guided the student as a master who holds the knowledge and experience, especially for finding the appropriate research tools, the analyses of the contexts and actors, and the interpretation of research findings to propose spatial programs and organizations. Sometimes, the instructors put themselves in the place of the actors of the space and spoke their language to reorient the viewpoints of the students. In particular, the group critics created an environment open to peer learning. The communication with students took place through speech, written comments (especially after the jury sessions), instant drawings, and facial gestures. The language employed by the instructors was both facilitative and directive (Oh et al., 2013).

Student Responsiveness: Critiques require students to reflect on the comments of the instructors. Some students may grasp the feedback they receive; however, others have difficulty relating to the feedback. Students made progress throughout the semester by carrying not one, but more than one of the six student models (Oh et al., 2013): thinker, listener, skeptic, follower, misinterpreter, and the affirmed. For instance, a student who was skeptical during the semester could become a follower towards the end of

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the semester. Similarly, a student who was a misinterpreter during the semester could eventually become a listener and later a thinker.

Limitations: Due to the general structure of this studio, which is designed as a theoretical project and was carried out with remote education tools and techniques under Covid-19 restrictions, the interest in spatial agency remained as imagined and speculative. Actual experience and genuine understanding of the place through site visits and meeting with the subjects of study were encouraged but not enforced. Majority of the students made field visits. Some of them were able to meet with their study subjects during these visits, while others could only make observations.

Pedagogical Process and Phases: The fifteen-week studio process entails contemplation on the brief with theoretical readings and research, creation of discussion environments, observation of the students of their immediate environments, selection of a place and a specific topic, appropriation of the brief, research on precedent projects regarding architectural program, generation of an architectural program, preliminary design proposals, design development, considerations of constructional and structural systems and representation of the completed work.

The student works have a wide range of topics that entail a confrontation with the practices and events of Othering in the contemporary context of Turkey. The projects have grown either from exposing the Self-as-othered through an introspective gaze or from externally defining Other-as-discriminated-against identities and thus potentially activating another hegemonic discourse. Focusing on the public space of encounters with the Other, various spatial strategies of inclusiveness, resistance, visibility, mobility, and transformability were employed by the proposals of the students. In Figure 1, design works of students are numbered between 1 to 17 based on their geographic locations.

RETROSPECTIVE EVALUATION OF THE WORK

The theme of Othering found a different and specific meaning in each project. Thus, the students discussed various issues encountered by the Other in various contexts. In a retrospective evaluation, the authors consider three modes of engaging with the issue—research (theory), design (poetics), and spatial agency (praxis)—that converge with the empowerment triad of spatial judgement, mutual knowledge, critical awareness.

“Spatial judgement” refers to the ability to exercise spatial decisions (Awan et al., 2011, p. 40). It refers to spatial intelligence, however it is more important to design spatial constructs that will initiate a strengthening of social relations beyond formal complexity. “Mutual knowledge” is about sharing knowledge with all stakeholders during the design process, keeping mutual dialogue and learning channels open (Awan et al., 2011, p. 41). In this regard, it refers to sharing knowledge and respecting the knowledge of others. Spatial agents assume knowledge that may be presented and evolved. The creation of a vivid studio environment toward a leap into action



thinking with seminars, invited speakers, sample projects, and a discussion day supported the realm of mutual knowledge. “Critical awareness” is to take action in a critical manner which is “to be aware of the opportunities and challenges, freedoms and restrictions of the given context (Awan et al., 2011, p. 41).” The term also refers to being self-critical.

In the beginning of the design process, the students tried to examine their subject in depth as a researcher and every week they shared their knowledge with the class in the group critiques. Students developed spatial proposals based on the inferences from the research process, and while critiquing these proposals from a designer's point of view, they also produced scenarios about how the subjects of the study would perceive, experience and live the architectural program and proposed space. Revealing how they act as spatial agents throughout the design process makes them aware of ways of doing architecture and assessing their spatial agency sheds light on the hermeneutic process of encountering the Other to build an evolving perspective and practice. In this context, spatial judgement, mutual knowledge and critical awareness have permeated all student research processes, design works, and imagined spatial agency. We evaluate the studio work retrospectively through these three criteria.

Student Research: Mapping Structures of Discrimination

Student research started with the introduction of the brief and topic followed by the studies of the assigned or self-found materials. These resources were a wide range of media such as books, articles, newspaper, and magazine excerpts, movies, activist websites, videos and interviews. Seminars, discussion day, workshops, group critiques, and different viewpoints of discussants and peers also enabled students to realize various aspects of “the otherness/othering.”

When the topic became more definite for students, they internalized some concepts with a theoretical background. Third space, gentrification, migration, child pedagogy, urban implants, architecture for empathy, intergenerational amnesia and deurbanization were some of the theoretical themes that students focused on.

During the group critiques, discussion day, and workshop day, students and instructors discussed the design methods to address the Others, architectural forms of inclusion, justice, and equality, and potential economy for an activist architecture. During the research phase, students declared their awareness about the importance of communication with the inhabitants of space and understanding their spatial needs. A discussion environment, exchanging information, digesting, and in-depth research on the issue in the design process were necessary to be able to act as spatial agents. They discussed that any change would start with them, and in this sense, they questioned the language they use, gestures and designer practices. While examining the topic of the Other, students realized that seemingly unrelated issues were connected to each other as they visualized these networks through deconstructive mind maps. Instead of trying to find an instant solution to a big issue, these maps allowed them to start off small actions.

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They comprehended the value of making an attempt in the world of an economic and powerless engine that allows less and less resources for architecture's social engagement (Gage, 2018).

Design Work: Imagining Topologies for Empowerment

The studio called for a design work in relation to the emerging socio-technological landscapes and ethical debates in the 21st century. As Gage (2018) points out, it is very important to speculate on the participation of architecture in social and political life, not because these speculations will instantly solve problems or make a huge impact but because the only other way is to leave “the disciplines of design” at the mercy of uncontrolled political and economic constructs. In this regard, there were no instant solutions to social problems explored in the studio. Instead, it aimed to orient perspectives of students as researchers, designers, and spatial agents to speculate “how we currently exist in relation to each other, how that might be changed, and how architecture can inform these relationships as we move into a quickly unfolding twenty-first century defined by new forms of social engagement” (Gage, 2018, p. 7).

Along these lines, the students practiced various spatial strategies in their studio work. The students did not work with pure form or function. Rather, they imagined an architectural program with its performance and made structures visible and open to change. They ensured participative, transformable, transformative, and receptive nature of their spaces, spontaneous uses, transparency yet security and protection. As a result, students were interested not only in the physical production of space, but also its perception and experience. They were interested in making public life and participating in public space important to the everyday life of citizens. This attitude is manifest in most works that both analyzed and represented the final proposals with an imagination of users actively participating in space.

The students further practiced dissidence as a manifestation of their spatial strategies. Weizman (2021) describes architectural dissidence as “an essential component of real politics—discontent—transformed into aesthetic practice” (p. 32). Beyond aesthetics, the potentials, activities, actions, transformability, ambiguity, and indeterminacy of space have become important in student works. In many cases, we observed a reformist attitude and proposals for dissonant architectures rather than designs that fit in their context to become one with them and propagate the existing structures.

Topologies for empowerment allowed spatial presence, subversion, resistance, assertion, visibility, or camouflage. In this sense, several works allowed users to change and occupy the space (I Have an Idea for Fikirtepe!, The Experimental Play, Growing a Community, The Zipper, The Birds in the City). Several works provided only an envelope or basic modules to let the space adapt to different programs (Empathy Space, The Center of the World, A Living Space for The Yazidi Community, Growing a Community). Some works contained multiple activities at the same time



(Empathy Space, The Puzzle Facility, The Center of the World, Othering Women). The works considered working with the otherness of topography rather than manipulating it to an extent that it is radically altered for human needs. In some works, the topography hid the structures (The Organic Meeting), and in some other works, it became important to take advantage of the opportunities offered by the topography (An Alternative Pedestrian Road, A Better Istanbul for Stray Dogs). Symbolism was also included in the projects in order to raise awareness and increase visibility (empathy circle in Empathy Space, an egg sculpture in Othering Women, colorful surfaces in The Third Space, vertical agriculture-towers in The Organic Meeting, a sculpture park made of recycled materials in Paper Collectors). In some projects, instead of gathering people at a fixed site of design, the mobile works were changably positioned to reach out the users (The Empathy Space, I Have an Idea for Fikirtepe!, The Zipper, Growing a Community).

Topologies for empowerment were established through a deep research, discussions and negotiation. Some students were able to provide this mutual knowledge by interviewing and observing real users and some did not because of the Covid-19 restrictions. At the end, visibility, being safe and secure, indeterminacy and ambiguity, being transformable and flexible, creating common spaces, and interaction were more effectual than just mere formal and functional concerns.

Spatial Agency: Acting for Empowerment

The Spatial Agency book is an important source in assessing our engagement with a vision of empowerment of the Other. To reveal how students operated as spatial agents, studio proposals were compared to the criteria of Operations of Spatial Agency (Table 1). These are a set of criteria observed from the attempts of architectural bodies and projects to redefine the scope of architecture as a spatial practice and empower the subjects of spatial assemblages. Three criteria (initiating, the economy of spatial agency and sharing knowledge) were either not evaluated or partially evaluated due to their full or partial inapplicability to the studio structure and mode of output. It should be noted that despite Covid-19 restrictions, some students were able to reach their subjects, communicate and share each others' knowledge via online platforms or face to face interviews. In the light of these underlying concepts recurring in the works of spatial agents, we evaluated the dynamics of the studio in enacting an imaginary of spatial agency through pedagogy as a retrospective assessment of methods, processes, and outcomes of the studio. After we qualitatively assessed the engagement of all design works with spatial agency (Figure 1), projects meeting all 6 criteria were explained in detail.

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Table 1. Operations of Spatial Agency (extracted from (Awan et al, 2011)).

Expanding Brief	taking the brief not as a given set of instructions but as an opportunity to open up possibilities
Appropriating	harnessing underused resources or else unsettling the status quo
Delightful Indeterminacy	Leaving unfinished, as well as defending unscripted and unprogrammed space allows others to realise a different idea of space defined through their own desires and wishes
Making Things Visible	uncovering and making visible of hidden structures, be they political, social or economic
Networks	convergence of mutual interests of various individuals or groups
Subverting and Opposing	resist and refuse to work within frameworks set by power structures set by the neo-liberal economy

No	Name	Operations of Spatial Agency					
		Expanding Brief	Appropriating	Delightful Indeterminacy	Making Things Visible	Networks	Subverting and Opposing
1	The Participation Bridge (Sultangazi)	●			●	●	●
2	The Zipper (Kadıköy)	●	●	●	●	●	●
3	The Third Space (Kadıköy)	●	●	●	●	●	●
4	I Have an Idea for Fikirtepe! (Kadıköy)	●	●	●	●	●	●
5	An Alternative Pedestrian Road (Ataşehir)	●				●	
6	Growing a Community (Ataşehir)	●	●	●	●	●	●
7	Zero Waste Center and Recycling Park (Ataşehir)	●			●	●	
8	A Better İstanbul for Stray Dogs (Ataşehir)	●	●		●	●	●
9	Music & Activity Center for Children (Maltepe)	●				●	
10	The Organic Meeting (Maltepe)	●	●	●	●	●	●
11	Othering Women (Kartal)	●			●		
12	The Birds in the City (Pendik)	●			●	●	●
13	The Center of the World (Yalova)	●	●		●	●	
14	Empathy Space (Yalova)	●	●	●	●	●	●
15	Experimental Play (İzmir)	●	●	●	●	●	●
16	The Puzzle Facility (Afyon)	●			●	●	●
17	A Living Space for The Yazidi Community (Batman)	●		●	●		●

Figure 1: The Matrix of the Evaluation Spatial Agency Operations in Proposals.



Most projects in the studio engaged with most criteria efficiently. Described below, various projects efficiently explored ways of translating their idea of spatial empowerment to efficient topologies for being-with-each-other:

The Zipper expanded the brief to consider the problems faced by homeless youth through an understanding of the issue acquired through secondary sources such as news and online interviews. By appropriating an existing parking lot, the project proposed repeated small-scale modules which formed an urban park with a large-scale canopy and allowed various ways of occupying the place ranging from hanging out on top of the canopy to sleeping in a zipper. The delightful indeterminacy entailed a vision of sleeping in the park as a potential regular activity for all. Thus, it merged park-camping local youth with shelter-seeking homeless youth. The proposal envisioned a network occurring among homeless people, locals, and volunteers. The tactical ideas of the Zipper allowed subverting and opposing the normalizing only private plots, and rather it called for commoning and public living.

Third Space expanded the brief to the discrimination of LGBTQI in the society. It appropriated a soon to be demolished unused block of the city. A long sequence of courtyard spaces set the indeterminate ground of use ranging from political protests to performing arts. The proposal employed color symbolism to make queer space visible. The work also considered a network among queer community, allies, passerbys, and NGOs. Throughout the project, the student held interviews with LGBTQI individuals and communities and referred to secondary sources which facilitated shared knowledge. Creating a vibrant and colorful urban corridor as a center of solidarity, resistance, and protest opposes the hegemony of homogeneity.

I Have an Idea for Fikirtepe expanded the brief to urban regeneration and gentrification and proposed a tactical appropriation of the voids and ruins left behind by the destruction of urban regeneration projects. The student provided a 3D tectonic frame adaptable to various contextual conditions, and thus this indeterminacy could be delightfully manipulated by the users each time. The construct aimed to make life and vivid present visible rather than dwelling on the ruins of the past. The project scenario imagined a network to form among locals, activists, and social media. These tactical sites of resistance subverted and opposed the destructive forces of neoliberalism.

Growing a Community expanded the brief to a discourse on environmental amnesia, city farming, de-urbanization, and reintegration of wilderness to city life. By appropriating a derelict and enclosed plot of land, an overly built public park, and the facades of the surrounding tall apartments, the project proposed both the re-growth of wilderness and organic growth of farming cubicles on a site and on the facades of the existing buildings leaving the evolution of the work open-ended and thus indeterminate. The work aimed to make the agency of nature visible while creating an intergenerational community network. The student indirectly communicated with the locals through questions on post-its and attached pens which received responses from willing citizens, and the student also referred to online sources and

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news to expand his knowledge of space. The work aimed to subvert heavy urbanization that alienates people from their built and natural environment and each other.

Organic Meeting expanded the brief to address class discrimination among white-collar, rural and slum communities. The project appropriated an existing parking area with a panoramic sea and city view. The project tried to create networks between people from different socio-economic classes with the help of agricultural activities. Greenery areas of the project generated indeterminate and spontaneous spaces. Vertical agriculture towers for workshops get people's attention and make the community gathering place visible. The subversion and opposition of space depended on creation of a public space in the high value capital area by leaving the space to agricultural activities, not blocking the view for the neighbors, engaging topography

Empathy Space expanded the brief to address the problems of cohesion in a multi-national city. The project appropriated an existing parking area on the shore of Yalova where networking occurs between people via various public activities. The scaffolding structure of the project conceives an indeterminate space of actions and lets the users interfere with the design. Also, mobile units can move anywhere in case of need. The lighting of the transparent empathy ring at the heart of the project can be seen from the different parts of the city as a symbol of togetherness. The subversion and opposition of space depended on creation of a common ground for people in dispute. The project laid a ground for encountering different communities and always kept its mobile units ready for the resolution of disputes in different areas of the city.

Experimental Play expanded the brief to address the rights of city children to play freely. The project appropriated the underused road refuge and a derelict mansion to create an uninterrupted path connecting three schools of the region to the mansion where networking and free play occurs. The project conceives an indeterminate space of actions and lets the users manipulate and engage with it in multiple or indefinite ways. The imagined place allows children to make playscapes of mind visible, form and reform it, and thus subvert the architectural space through mobile spatial elements. The subversion of space also depended on the creation of space without supervisors or adult-rules. Informal interviews, observations on children play, and secondary sources facilitated shared knowledge.

To summarize, all students expanded the given brief with a clear problem definition, research and analysis. Most of them had the potential for networking and making the subjects visible through spatial interventions. However, some of the projects still needed more improvement in terms of appropriating, delightful indeterminacy and subversion and opposition.

CRITICAL DISCUSSION AND CONCLUSION

Doing justice to the theme required solid preparation. Since the themes of the studios are introduced only shortly before the start of the semester, there



is a shortage of time to consider the most proper framework and mode of conducting studio. Then, the studio process becomes more spontaneous and possibly messy while the instructor tests the methods, potentials, and the limits on the go. The theme of othering gathers a discourse of power relations, hegemonic structures, (in)equality, (in)justice, and exploitation. The specific nature of the theme calls for solid action (praxis) for a genuine space of dialogue and participation rather than imagination and intention. This has come into tension with the conventional and traditional architectural studio structure, which remains in an isolated and predictable environment and which is oriented to designing on a large scale. The curriculum dictates a format, framework, size, scope, objective, and output of each studio, which limits smaller scale and action-based innovation that could be actualized in the actual world. The formal constitution of Architectural Design II and the semester theme of the studio remained in tension throughout, and this tension became the center of critical reflection here.

It was a major limitation that the studio had to operate in the representational and imagined realm rather than engaging with design intelligence like we see, for example in the works of Liz Ogbu, an architect, and, as self-described, “a designer, urbanist, and spatial justice activist, ... an expert on engaging and transforming unjust urban environments” (Url 2). Few student works that partially addressed small scale design moments, mobility, and adaptability (A Better Istanbul for Stray Dogs, The Birds in the City, The Zipper, Growing a Community, Experimental Play) gestured toward the potency of actualizing the projects through sponsorship. However, the students did not seek those possibilities which were not within the official scope of the studio work.

We were further confronted with the limitations of studio objectives and scope of the project. The listed context type as urban, project size as between 3000-4000m², space type as a combination of open, semi-open, closed, and drawing types, all promoted an imagination of a large scale building or building complex as a desired output. This further became a barrier to using design skills in a genuinely action-based project toward actual spatial empowerment. Due to this tension between potential for action and the requirement outlined on the syllabus, we received questions on area requirements and what exactly counts as the area of the project (The Zipper, The Birds in the City, Stray Dogs, Empathy Space, I Have an Idea for Fikirtepe!, Growing a Community, Experimental Play). We mutually re-defined the area requirements within the process as the students expanded their briefs. Because there is a rooted understanding of a site as a fixed piece of land with precise coordinates and dimensions and concerns of addressing a fixed and precise context, as it also appeared on the syllabus, the expressions of nomadic thought became constrained and tied back to a fixed site in several projects that became a hybrid of settledness and mobility (Empathy Space, The Zipper, Growing a Community, A Better Istanbul for Stray Dogs, I Have an Idea for Fikirtepe!). Even the projects working on nomadic (The Zipper), mobile (Empathy Space), or temporal ideas (Growing a Community) had a precisely defined site as the original

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center of the construct or where the itinerant work had to turn eventually, which favored sedentary thought over nomadic thought.

We also critically reflect on the early process of the definition of the design problem that guided students toward selecting precise subjects of study. While treating the subject of study within the scope of difference rather than otherness may seem ethically acceptable, as Balibar (2005) explains, difference rather than otherness is taken to have a positive value until it eventually falls into the trap of “essentializing the Other” (p. 31). In the beginning of the semester, the students defined their subjects of study in their lived space but the definition of the Other required to operate a hegemonic attitude to the Other. The PRAXXIS Atelier overcomes this dilemma by fostering students to look at the mechanisms that turn them into the Other and thus act from this origin (Aston et al., 2020). An alternative way to own up to the issue could be to question the mechanisms which led the students to define an Other without intimately associating themselves with that Other, i.e., remaining over and beyond the Other. The hegemonic attitude unfolded in some discourses with pitiful and corrective remarks against the Other. On the other hand, Popplow and Duque (2017) further sheds light on the ways of engaging with the Other in a design work without othering: “instead of aiming at including marginalized voices, which is a common topos in participatory design and that assumes a kind of colonizing move to decide who is marginalized and how to include ‘them’— we would like to shift our view to the notion of engaging with Others” (2017, p. 1). Thus, they engage the participants in their design work “[not] to solve a problem or represent an issue, but to co-articulate issues that emerge through socio-material encounters” (Popplow and Duque, 2017, p. 2). Thus, we further realize that there was a need for an exercise on the experience of dislocation, ontological decentralization of the Self, blurring the boundaries between subject and object, between the Self and Other, and between human and non-human.

Finally, we problematize the output of the studio as a completed project. Completion means that having seen all options and “mastering” them, there comes the time to eliminate all alternative paths for the dominant thought. Like Perry Culper, who would prefer not to finalize his drawings and settle them to a fixed end, the theme of Othering calls for remaining open to diffident possibilities and change. A genuine engagement with the theme calls for unsettling the work rather than settling it, which remains in clash with the output requirements of the studio.

These controversies explicitly posed by theme remain to be further addressed in a future studio. However, at the same time, they reveal introspective questions on conducting the design studio with a full view of its ethical implications. They also help to question external limitations imposed by the formal structure of the curriculum management. Overall, it calls for action toward making room for a pedagogical model that is open to full exploration of praxis.

The topic of othering serves as a starting point in architectural studio towards the idea of architecture as a critical spatial practice. Overcoming the practice of othering, making the Other visible, giving voice to the Other,



and facilitating opportunities of empowerment requires the critical manner of the designer toward the production of architecture in our everyday life. The imagination of inclusive, plural, transformative spaces in the realm of design studio against the mutability of real-world architecture enables students to confront ethical implications of their acts. Even if the outcomes do not enact instant change to the problems of discrimination, the students practice a discursive discussion for a new frame of architectural practice with a focus on its ethical foundations, and the process allows them to question the status quo by encountering architectural design and practice as a matter of concern rather than as a matter of fact.

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INTEGRATION OF COMPUTER TECHNOLOGY IN ARCHITECTURAL EDUCATION: THE CASE OF TURKEY

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ABSTRACT

The rapid developments in computer technologies, beginning in the second half of the 20th century, affected the discipline of architecture, and consequently, the architectural education as well as many other fields. While some architectural schools wanted to integrate these technologies into their education processes, most of them preferred to stay away from these technologies for different reasons. However, due to the rapid progress and spread of technology over time, it has become necessary to integrate computer technologies into architectural education in order to adapt to the requirements of the age and to present innovative approaches. In this study, universities in Turkey that adapt digital technologies to architecture departments have been determined and their approaches have been revealed. For this, firstly, the place and importance of digital technologies in architecture and architectural education were explained, then the names, periods, hours and credits of computer-aided design, presentation and manufacturing courses in architecture departments in Turkey were examined, then different / innovative or (so to say) "the other" applications were examined in detail and inferences were made. The main differences in the architecture departments, which we describe as "the others", can be listed as follows: In the first grades, digital technologies are embedded in the content of architectural representation courses. In addition, many elective courses related to the use of computer technologies in architecture have been opened. As a result, in this study, it has been determined that there are few universities in our country that integrate digital technologies into architectural education, and even if they have similar features, they do not meet a certain standard.

Key Words: Computer Technologies; Architectural Education; Computer-Aided Design; Others; Turkey.

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INTRODUCTION

The rapid developments in computer technologies after the 1960s have affected the discipline of architecture and therefore architectural education like in many other fields. Due to many reasons such as the continuation of developments in computer technologies, difficulties in accessing new technologies and the inadequate number of specialists who can use / teach these technologies, a certain computer-aided education approach has not yet been possible in architectural education. With the increasing number of universities in Turkey, this issue has become even more complex. Many universities and academics see computer technologies only as a drawing / presentation tool and add computer-related courses to their curricula only in this context. Universities and academics who think that these technologies have an important role in architectural design integrate them into their curricula as drawing / presentation, design and production tools. In this study, **it is aimed to determine how computer technologies are adapted to architectural education in Turkish universities and to present in detail the different / innovative / "other" applications in this field**, rather than to determine which approaches are correct and which are not.

New technologies offer a variety of possibilities and force us to think about learning and teaching in completely new ways. Although education is something that is planned and changed in the long term, advances in technology have already begun to change the classical education model radically. It is thought that computer-aided virtual education and distance education methods will replace classical education methods in the near future (Güney, 2015). One of the biggest reasons for this is people's desire to access information and education from anywhere. In addition, the recent pandemic of Covid-19 has revealed the importance of the use of computer technologies in education.

Computer technologies first entered architecture only as drawing support under the name of "Computer-Aided Design (CAD) and Computer-Aided Manufacture (CAM)". But in recent years, technologies such as virtual reality (VR), augmented reality (AR), computational design, robotic manufacturing, artificial intelligence are involved in architecture not only as a tool for representation but also as supportive tools for design and production. The use of computer technologies in architectural design has many advantages as well as disadvantages. When these disadvantages can be seen and measures can be taken for them, digital technologies will take architectural education onto the next level. The use of CAAD (Computer-Aided Architectural Design) systems in the architectural design process has many positive outcomes: Creating more realistic and impressive visuals, being faster in all design stages, ease of revision in design, creating more alternatives, more accurate and correct design, easier storage and sharing, remote access, easier communication with other partners in the construction process etc. (Güney, 2015). The most negative aspect of CAAD systems is that weak designs can be shown differently and well with impressive and believable presentations, thus encouraging bad / poor design (Lawson, 2002). And since similar models can be used from virtual



libraries in the computer environment, similar projects may emerge. Students' creativity and project quality may decrease. In addition, the problem may arise that the colorful and attractive projects prepared in the computer environment may come out unfeasible during the implementation phase due to the architect's lack of knowledge of construction and materials. From this point of view, it can be said that using digital technologies and conventional technologies together can produce more accurate results. Breen states that using a combination of both of these two techniques gives the designer additional insights and more "realistic" approaches for developing and re-evaluating a design. For example, architect Ian Ritchie and architect and civil engineer Santiago Calatrava used CAAD systems in the later stages of their projects, but in the initial stages, preferred physical models while creating forms.

In 2018, Microsoft and RIBA (Royal Institute of British Architects, 1834) conducted a survey with more than 300 construction companies to understand the current state of digital transformation in architecture. In the survey, 35% of the architects stated that they use at least one of the hybrid, augmented or virtual reality technologies, and 79% stated that adapting to digital technologies increases the project efficiency. In the report titled "Digital Transformation in Architecture", published at the end of the study, the importance of using digital technologies in the construction of better buildings was emphasized (RIBA, 2021).

In developed countries such as America, the Netherlands and England, many attempts are made for the adaptation of digital technologies into architectural education. Digital laboratories are established, symposiums are held, and various workshops and events are organized jointly with the industry. Examples include Media Lab at MIT, Digital Building Lab at Georgia Tech, and Digital Architecture Research Center (DARC) at The University of Kent. There are laboratories in Turkey, too, such as the VR First Laboratory at METU and the Virtual Reality Laboratory at Bahçeşehir University, which are aware of the importance of technology and put it at the center of their education.

As architecture schools have become laboratories for various digital design tools, the architectural design studios have become a suitable environment to explore the role of computer in architectural design. Computer-aided architectural drawing, modelling, calculation and analysis methods both change the structure of design studios and affect the architectural education curriculum structure. There are many studies investigating the integration of digital technologies into architectural education in this context. In a study of 20 of the world's most distinguished universities (Soliman, et al.; 2019), it has been determined that 2D and 3D presentation techniques are taught most intensely (50%) since the first year. Then comes digital fabrication (13%), programming, coding & scripting (9%), simulation (7%) and environmental technology (5%) courses. In addition, it was determined that 68% of computer applications were integrated into the design studio, and 32% were given as independent courses.

In this study, a quantitative and qualitative analysis will be made on computer-aided design courses and supporting technology-based courses

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of architecture departments. Then, the few departments (whom we call “the others”), which consciously integrate digital technologies into the curriculum will be examined and evaluated in detail. We are able to convey this study in Turkey thanks to the opportunities of digital technologies and almost all universities' four-year curricula and course contents are available on their web pages or in "Bologna Information Systems". This study was carried out in line with the data available there. Since the curricula of 4 universities which are Turkish foundation universities in TRNC or state universities abroad (“3rd group” for short) could not be reached, these universities were excluded from the research. In addition, since the web pages are constantly updated, some courses may have been removed, added and names or periods may have been changed. These later changes were not regarded in the study.

COMPUTER TECHNOLOGIES IN ARCHITECTURAL EDUCATION IN TURKEY

In the 2020-2021 academic year, there are architecture departments in 57 state universities, 44 foundation universities, and 13 universities from 3rd group, which make a total of 114 universities (Table 1). As 18 of these universities teach both in English and in Turkish, the total can be considered 132. Although there is a huge number of architecture departments and a significant part of these departments have opened recently, a new "Turkish Architectural Education Policy" has not been formed yet. Therefore, a policy regarding the integration of technologies into architectural education has not yet been prepared.

If a revision is to be made in architectural education today, one of the most important pillars of this would be digital technologies. For that, analyzing the condition of computer technologies in current architectural education and identifying different / innovative approaches will be an important step towards reconsidering the education.

Table 1: Turkish Universities with Architecture Departments (YÖK, 2021)

	State Universities (1st group)	Foundation Universities (2nd group)	Foundation Universities in TRNC and State Universities Abroad (3rd group)	TOTAL
Education in Tur.	50	21	3	74
Education in Eng.	4	11	7	22
Education in Tur. -	3	12	3	18
Total	57	44	13	114



It was found that the architecture departments of 110 universities in Turkey, whose information can be accessed from the internet, have similar approaches in the integration of digital technologies into education. Considering the intensities of **computer-aided drawing, presentation, design and production courses** in the departments, it has been determined that there are mostly **drawing and presentation** courses and these courses usually start in the 2nd or 3rd semester. There is no certain standard in the theory, practice and credits of these courses. Regarding whether computer-aided design courses are compulsory and/or elective; they are compulsory in 106 universities (96.4%), not compulsory in 4 universities (3.6%). Among those universities, which announced their curricula, these courses are elective in 95 universities, and not elective in 5 universities (28%). In other words, computer-aided design courses are in the curricula of all universities, either compulsory or elective.

Some universities, which do not add computer-aided design courses in their curricula as compulsory courses, hold the idea that students should learn computer programs on their own or through external courses, while others prefer to provide that content within courses such as architectural presentation techniques and communication techniques. Apart from these, **universities that effectively add computer technologies to their curricula and adopt innovative approaches** have also been identified. In this study, these approaches that we call "the others", which are outside of the central tendency, will be examined in detail in the next section.

At the end of the general review, it was also found that the majority of the universities **focus on digital visualization courses; and computational design, digital fabrication and robotics courses are not given much importance**. It has been determined that **52 universities (47%) start the computer-aided drawing and design courses in the first year** of architectural education, and **54 universities (49%) in the second year as compulsory courses**. And in 4 universities' (4%) curricula, computer-aided design courses are not compulsory. Even this fact alone can be shown as an important evidence for the lack of a specific architectural education approach in our universities.

INNOVATIVE APPROACHES TO THE INTEGRATION OF COMPUTER TECHNOLOGIES IN TURKISH ARCHITECTURAL EDUCATION: "THE OTHERS"

Modern education models include less direct / face to face education, more distance collaboration, and forms of self-directed learning (Microsoft, 2021). This is because digital technologies make it possible and because many people can easily access these technologies. The fact that almost all students studying architecture have personal laptop computers can be considered as one of the factors that make the integration of computer technologies into architectural education easier.

When we look at the integration of architecture departments with computer technologies in 110 universities, whose information is accessible from the internet, slightly different / innovative approaches have been identified.

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These innovative approaches - “the others” - will be examined and evaluated under these 4 headings:

1. Digital Presentation Techniques (Digital Visualization and Mixed Reality)
2. Computer-Aided Design (Computational Design, Artificial Intelligence, Biomimetic Design etc.)
3. Computer-Aided Manufacturing (Digital Fabrication and Robotic Systems) (DARC, 2021)
4. Supporting Courses (Information Technologies, Communication Techniques etc.)

Courses apart from computer-aided design, presentation, drawing and production (for example: architectural design, building technology, architectural history and culture) are excluded from the study.

DIGITAL PRESENTATION TECHNIQUES

The courses in this group, which is defined as computer-aided drawing and design courses, are compulsory in 52 universities (47%) in the first year (usually the second semester), and in 54 universities (49%) in the second year. Of these 52 universities, 26 are state universities, 24 are foundation universities and 2 are 3rd group universities. Of the 54 universities, 29 are state universities, 18 are foundation universities, and 7 are 3rd group universities.

What we call “the others” is the practice of including **digital presentation techniques courses in the content of courses such as architectural expression techniques or technical drawing** since the first semester. Thus, presentation techniques are not separated into analog and digital, but both are taught together. The content of these courses include free hand drawing techniques; collage, montage and photomontage techniques; video and picture formatting methods, and computer-based 2D and 3D drawing environments. In the first semesters, programs such as Photoshop, Freehand, Illustrator, AutoCAD, Autodesk Fusion 360, FormIt, and in the later periods, programs such as SketchUp, Rhinoceros 3D, Grasshopper, Lumion are used.

While building information modeling programs such as AutoCAD, 3ds MAX and Photoshop, which have been widely used in the field of architecture in the last 20 years, are used in many universities in digital presentation and expression techniques courses, universities with innovative approaches use programs such as Revit, ArchiCAD and Allplan on the other hand.

Apart from computer-aided design and drawing courses, **architectural portfolio is compulsory in only three universities**. Elective courses such as architectural animation, Photoshop, web design, media and architecture, architectural portfolio design, virtual reality are also digital presentation-oriented elective courses taught in different semesters in each university.



Computer-Aided Design (Computational Design, AI, Biomimetic Design etc.)

Computer-aided design-oriented courses such as computational design or design calculation are compulsory in 6 universities and elective in 6. Only about 11% of all universities add this course to their curricula and only 5.4% of them include this course as compulsory, which is an important data showing that digital technologies are not yet integrated into design in architectural education. In this course, students are taught the concept of computation and its applications in architectural design, and the reflections of digital design, fabrication and production technologies on architectural design are shown. By giving information about the geometric modeling software Rhinoceros and the algorithmic software Grasshopper, applied information is taught using laser cutters.

Courses like **parametric design, algorithm and generative design, building information modelling, artificial intelligence** are usually given as elective courses in the last years of education. Under the title “computer-aided design”, there are also different courses that are just put among elective courses without any content in a few universities. These are: **computer-aided energy performance analysis / performance evaluation in the artificial environment with computers, computer-aided construction cost calculation techniques, computer-aided project and resource management, computer-assisted measurement techniques. 3D documentation techniques, computer-aided structural system setup, computer assisted settlement and building shadow analysis, collaborative design in virtual environment.** Some of these courses can also be included in the first heading “digital presentation and expression techniques”.

Computer-Aided Manufacturing (Digital Fabrication and Robotic Systems):

Computer-aided manufacturing or digital fabrication courses are available at 11 universities (10%) as elective and are usually added to the curriculum in the 3rd or 4th grade. In such courses, students are expected to meet with the world of digital production at a basic level. Within the scope of the courses, Rhinoceros 3D modeling program and Grasshopper 3D algorithmic program, which are shown in the computational design courses, are taught. Models created with these software are turned into physical models using CNC and laser devices. They learn to produce projects involving CNC milling, 3D optical scanning and robotic manufacturing. The names of these courses are as follows: **digital fabrication, digital production, introduction to robotic technologies, computer-aided production technologies in architecture.**

These interrelated courses such as virtual reality, augmented reality, computational design and digital production techniques, which were discussed under the first three headings, are mostly taught at the postgraduate level in architecture and design education. While these

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courses are generally theoretical courses in our country, they are mainly applied courses in universities of developed countries.

Supporting Courses (Information Technologies, Communication Techniques, Programming etc.)

Courses such as information technologies and communication methods under this heading are common courses in which the skills of writing in the computer environment, preparing tables, creating graphics and making presentations are taught universitywide as compulsory courses in some universities. Apart from this general approach, there are also elective courses such as computer programming, programming with Pascal, media and representation tools provided by the departments themselves or by the other departments of the faculties. Even today, when primary school students are taught coding, programming languages are still not added to the teaching plans at the desired level in architectural education.

CONCLUSION

With the widespread use of the internet, computers are inevitably entering every field with each passing day. There have been significant changes in learning, teaching and training methods in the last 20-30 years with the effect of technologies. Architecture is one of the most affected among these fields. In this study, the contributions of computer technologies to the field of architecture and education were examined, then, the integration of computer technologies into undergraduate education in architecture departments in Turkish universities was examined in detail and different approaches that emerged in this integration were identified and tried to be conveyed.

The foremost innovative and technology-compatible approaches of departments, which we define as “**the others**” and which show different approaches in the integration of computer technologies into architectural education, can be summarized as follows:

- Computer technologies are included within the content of courses such as **presentation techniques, architectural drawing, design geometry and visualization techniques** and computer-aided drawing and design education begins with them in the first semesters.
- The "Computational design" course is added to the curricula as a compulsory course in the first semester and thus the effective use of digital technologies in architectural design is encouraged.
- Among the **compulsory courses** are **computational design, parametric modeling and digital fabrication** and **architectural portfolio design** courses. With this approach, it can be said that all students are expected to be aware of current computer technologies and to adapt them to their architectural projects.



- There are also many elective courses where students can develop themselves at the intersection of architecture and technology. These are courses such as **building information modeling, parametric design, robotics and production technologies, architectural animation, computer programming in architecture, web design, digital production, artificial intelligence, energy performance analysis, building cost analysis.**

With this study, it is clear that most of the universities providing architectural education in our country have not yet integrated computer technologies. Despite being a minority, the universities that we call “the others” exhibit innovative approaches. The **integration of compulsory computer-aided design and presentation courses from the beginning** of architectural education, **the increase of such compulsory courses** and **the addition of a wide variety of elective courses** can be considered as foremost important developments.

Note: The official web addresses of all universities are used as source.

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YOUR HOME THROUGH MINE

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ABSTRACT

The house is a subject that is rarely addressed in recent architecture courses, except as a problem of social housing, where the emphasis is rather on standardization and urban planning. We could say that the house itself is not a subject of interest.

This article examines possibilities, such as the didactic performance when studying the house. This experience was developed in an undergraduate online workshop. It took place in the second semester of 2020, in Santiago de Chile, in the middle of the Covid-19 pandemic, with most of the students and faculty quarantined, all locked at our homes.

The proposed methodology is one of the contributions of this action-research that stems from one's own experience making its way through simulations and utopias in pursuit of the theoretical, aesthetic, and technical concretion of a solution, as real as possible, for an "other"/classmate. In the process, students evolve from the role of a client to that of an architect, and the teaching team brings in multiple specialists to take on the project.

The work of our 24 students provides an overview of the different ways of living, the different constitutions that families have today and the new requirements to which architecture is subjected.

In the study, we report the results of the course, evaluated by a commission, and the opinion of the students. We also reflect on our own situation as teachers and on the need to establish an ethics of care in the teaching of architecture.

Key Words: Workshop on Pandemic; Classmate as an "Other"; Our Home; the House; Action-research.

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INTRODUCTION AND BACKGROUND

In the context of the Covid-19 pandemic, after a semester of quarantine and having already assumed the indefinite extension of health measures, we proposed to develop a workshop in virtual mode. This experience allowed participants to put in value and discuss one of the places we inhabit the most and where we have been forced to be intensively during recent times: the house.

To this end, it arose the opportunity to develop this theme in Workshop 8, or Bachelor's Workshop, the last design course of the Architecture program at Universidad de Chile. This situation would allow us to capitalize on students' previous knowledge in order to develop professional projects in detail, taking advantage of the scale of the housing project. Additionally, it was possible to address one of the most avoided topics in the studies of the discipline, the "ordinary" housing without a social or luxury dye, but rather focused on the user. The housing we all know best, our own.

We named our course *En casa del herrero, cuchillo de palo*, a Spanish proverb that we can translate as "In a blacksmith's house, the knife is made of wood", which is equivalent to the saying "The tailor's wife is the worst clad". In this way, with some humor, we were aware of how controversial the project of a house was, compared to the topics addressed in the other three sections of the workshop: the rehabilitation of high-rise buildings, an Olympic village, and large sports facilities. In other words, complex architectural programs of large surface area and public interest are consistent with the professionalizing and public nature of training at Universidad de Chile. The School of Architecture, founded in 1849, is the oldest and one of the most prestigious in the country, with a total enrollment of more than 1,200 students.

The training of architects in Chile, a common situation in Latin America and unusual in the rest of the world, gives universities the responsibility to professionally qualify their graduates. This fact challenges the schools to train architects with integrity and qualified for professional practice. That is why undergraduate workshops usually deal with large projects, committed to urban planning, often developed on an individual basis. For the same reason, the possibility of getting to the details and resolving the project in depth is difficult. It is also frustrating for students, after they graduate, to face their first assignments in their real professional life—which might be rather small when compared to the assignments developed during their undergraduate years—and yet sometimes not know how to solve them. This is an experience that many of us architects probably share.

Thus, the idea of approaching housing from a retrospective view, starting from the house itself, was an interesting challenge. The scale of the problem allows us to achieve a higher level of development, to acquire knowledge and sensitivities about living in detail, and to find an "other" with their unique and real needs.

Another important aspect was that, because of the pandemic, many of the students were back in their family homes located in other regions of the country, or even outside the country, which originated the opportunity to



study habits and ways of living in our vast and varied territory (Figure 1). We were also able to detect the diversity of family compositions.

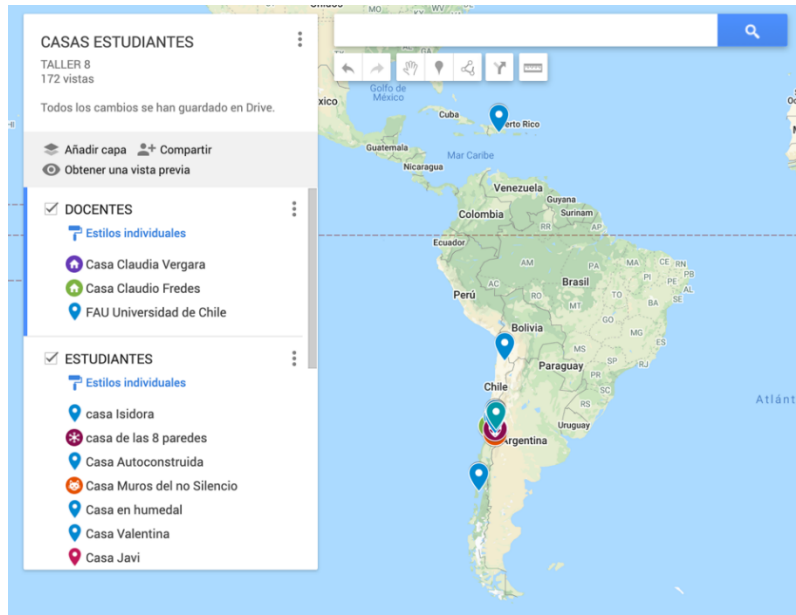


Figure 1. Distribution of student-projects in the territory. By Claudio Fredes.

Our teaching team also offered some particularities, given by the pandemic condition. Pilar and Sofia, mother and daughter, lived together the intensity of the pandemic and shared the interest in evaluating the way we lived our own house and the permanent effort to improve it. The team included: Claudia Vergara, María José Sepúlveda, Dominga Natho, Claudio Fredes and Felipe Casals, students or qualified architects who formed a large team, exceptionally led by women. This fact together with the proposed theme were factors that triggered the interest that this workshop sparked in the students. It is worth noting that, even though the architecture program has an average enrollment of 51% women, it has a low female participation in workshop teaching, especially in the final year courses, which are usually led by male professors.

En casa de herrero, cuchillo de palo is presented as a workshop that seeks to put in value the inhabiting, from the experience of oneself and of an "other". The "other" is the classmate, but it could also be Le Corbusier when he projects the house for his mother, or Matias Ungers when he thinks the house inside the house (Archer, 1981).

The question that arises is whether we are able to turn these experiences into an architectural problem.

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METHODOLOGY

As a teaching team, we approached this course under the precepts of action research, a term first used by Kurt Lewin in 1944, which described a form of research that could link the experimental approach of social science with actions that responded to contingent social problems. Through action research, Lewin argued that theoretical advances and social change could be achieved simultaneously. This text attempts to account for this. Together with our students, the teaching team also analyzed, gathered information, conceptualized, planned, executed, and evaluated, recursively, with the aim of achieving reflective teaching, heir to Donald Schön's "reflective practitioner"(1998).

In this model, the research "subjects" (each one of us) play a central role in the formulation and execution of the research. For the students, by becoming personally involved in this project, they turned the design process into a significant experience, meaningful learning, Ausubel (2009) would say, by structuring prior knowledge, detecting gaps and shortcomings, and incorporating new knowledge.

The different units of the course emphasize design thinking, experimenting, and awareness that the project is a process that involves logic, imagination, intuition, and systemic reasoning.

People-centered design uses techniques that communicate, interact, empathize, and stimulate the people involved, gaining an understanding of their needs, desires, and experiences. To be successful, students must combine observation, data capture, reflection, analysis, brainstorming of solutions, rigorous development of technical aspects and, finally, the ability to effectively communicate their ideas to others.

In order to make conscious and train design thinking, stages are marked, and some tools of ethnography are provided, such as the use of the logbook; but also interviews, simulations, role-playing and extreme situations. The means of representation are strongly exercised, from the limits of art to the rigor of technical drawing and constructive details, as well as video and other media explorations.

Approach to students:

The workshop is approached as a back and forth between theory and practice, where we discuss architectural problems from theory and suggested readings, put to the test in projects developed in depth and detail.

The course is composed of:

- Theoretical classes
- Lectures with invited specialists
- Personalized reviews of projects and proposals
- Group peer reviews



- Group presentations on cases
- Individual work (i.e., logbooks and final project)
- Group work
- Pair work
- Training in digital tools

We propose a transversal work between the whole workshop team, both between teachers and students, as well as among students, in order to achieve feedback that allows to reach a common level of accomplishment among members of the group rather than individual achievement.

We propose to play with the boundary between theory and practice, seeking to address in detail the difficulties and complexity of the requirements of the undergraduate workshop, together with the complexity of architectural thinking and theoretical research obtained through practice. In this way, each student is able to show the competences of an architecture graduate.

Considering the aforementioned aspects, the workshop will be structured in five stages:

Unit 1: MY HOUSE

The aim is to gather all the daily activities, all the subjects that intervene in it, all the movements that fill the spaces we inhabit, as well as the problems, limitations and over demands.

To this end, we will begin the workshop by elaborating an individual analysis of the experience of one's own home, making a complete and constant survey, in the form of a log, which allows us to elaborate a case study, an architectural problem from the everyday.

The log will overlap with units 2 and 3, continuing its registration.

It is accompanied by the reading of *Casa Collage* by Xavier Monteys & Pere Fustes (2001); and *Une petit maison* by Le Corbusier (1954).

Unit 2: THE HOUSE

"People, the people who inhabit buildings, are still, in the end, the great forgotten in residential architecture. However, a house is a dwelling plus the people and the objects it houses" (Monteys & Fustes, 2001, p. 14).

Group analyses of emblematic houses allow us to compare, extract architectural discourses, and evaluate our own experience of living in them.

We propose to revisit emblematic houses, starting from what is already known, imagining themselves living in them during the pandemic, together with 2 or 3 classmates. They chose 7 out of a list of 25 houses, being among them: Wright's Robie House, Barragán's Casa Estudio, and Mies Van Der Rohe's Farnsworth House (Figures 2 -3).

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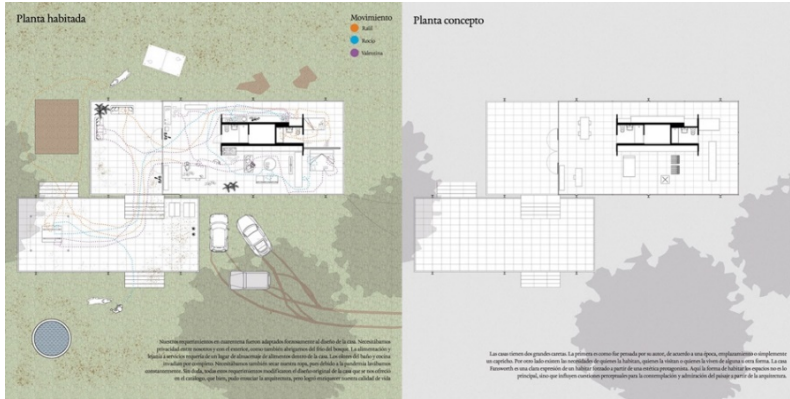


Figure 2. Farnsworth House by Rocío Gaete, Raúl Rojas and Valentina Urrea.

The assignment aims to study the occupation and use of space according to the different temporalities of a house inhabited during a pandemic, rescuing the movement and actions of the inhabitants, evaluating the adaptability and flexibility of the architecture in the face of this event. Minimum aspects are evaluated, such as: program, movement, temporality, lighting, thermal sensation, and ventilation among others.

Unit 3: UTOPIAS

Dreaming about the future of the house and of living has been a theme that the discipline has addressed on several occasions: the *avant-garde*, groups such as Archigram, and brutalist architects such as the Smithsons and many others. With the aim of distancing ourselves from both our own experiences and the rigidities of practice, we propose to dream of other possible worlds and extreme situations. To do this, we work in groups analyzing cases of utopias that have been part of our imaginary future through architecture, film, and literature. The group is asked to construct a written and pictorial account of how each group would use these utopian scenarios during a day of quarantine (Figure 3).

They are invited to find the dystopias that arise in these utopias, their shortcomings, and their dangers in order to create their own scenarios.

In the second part of the exercise, each member of the group individually proposes a utopian dwelling adapted to the needs and customs of each one, projected to the year 2050 (Figures 4 and 5).

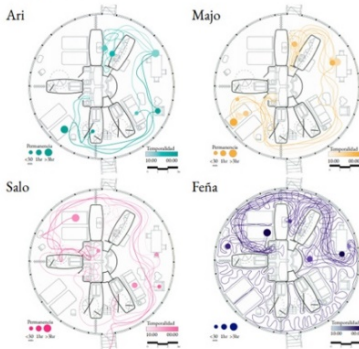


RELATO

Llevamos un tiempo habitando la casa en cuarentena, debido a que fue la única que nos pudo recibir y que cumplía con algo fundamental para la investigación: una casa aislada en medio de un bosque, sin la necesidad de mucha interacción con demás personas. En un principio, como estudiantes de arquitectura fue un placer poder vivir allí, pero con el correr de los días empezamos a notar ansiedad que la casa no logaba satisfacer. Desaparecieron las redes, el agua, el viento, como cualquier privacidad entre nosotros, que se hacía difícil en una casa de un solo ambiente. La comida se convirtió en todos los problemas, no habíamos lugar para comer, se estaba moviendo a una gran velocidad. Nos vimos obligados a hacer un horno, además de un estufa después para almacenar una mayor cantidad de alimentos, que nos estuvieran plantando en el interior de la casa. Cada vez que alguien de los tres entraba, el olor se hacía respirable y nosotros toda la casa. El interior fue uno de los períodos más difíciles. La casa es edificacional por los muros, la red se venía en los muros, media para, comida, implementando una red a parafina. La solución de la casa, que se hizo una habitación dentro del bosque, no logaba colgar del filo que era imposible. Fue momento la simulación de un sistema puntual, para poder por en todo el filo, y por eso empezamos un poco más de privacidad, pero un día llegó un pedazo de vida y nos vio cambiando.

Figure 3. Farnsworth House by Rocío Gaete, Raúl Rojas and Valentina Urrea.

Usos por individuo



neo dymaxion house Composición estructural



Figure 4. Study Utopias. Dymaxion House, Buckminster Fuller, 1920 by Fernando Castro, Arantza Flores, María José Haddad, Salomé Muñoz and (right) Proposed Utopia. neo_Dymaxion_House_2050 by Fernando Castro.

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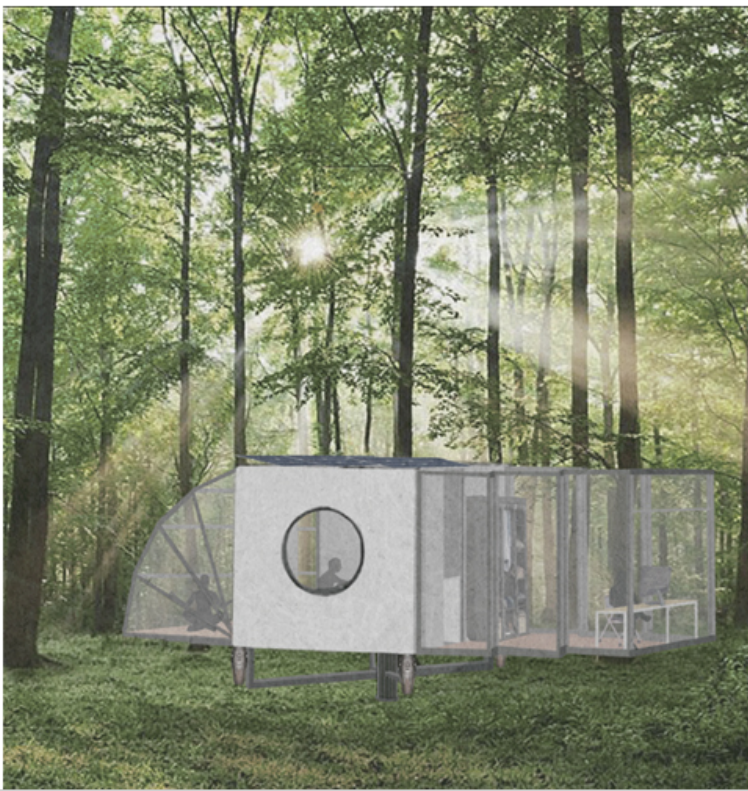
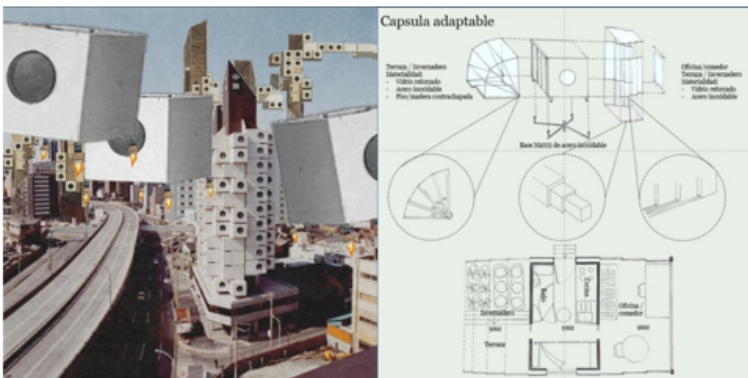


Figure 5-6. Utopia Proposal. Utopian Quarantine 2101 Adaptive Capsule by Alvaro Tello.



Unit 4: EN CASA DEL HERRERO, CUCHILLO DE PALO

From the logbook developed in parallel to the previous exercises, a deliverable is elaborated (Figure 7).

The logbook becomes a request of proposal to be communicated to an “other” as an architectural problem. The assignment is born. In this way, the architect becomes the client, the blacksmith, whereas the partner becomes the subject who receives the problem from the outside, the architect.

At this stage, individual projects will be elaborated for each case, proposals that, fed by the imaginaries of utopia, will allow us to question how we inhabit and, in practical terms, how to carry them out. This will be accompanied by the client's experience, who, as a partner, will have to evaluate and guide the process, without intervening.

For this purpose, everything learned throughout the course is put into practice: regulations, landscape, installations, sustainability, structure, construction, details, costs, etc. Various specialists are invited to complement the common knowledge and support the execution of this process.

The product is the house's Technical Construction File, which materializes the proposals into constructible and evaluable projects in both theoretical and practical terms (Figure 8).



Figure 7. Logbook by Catalina Teuber

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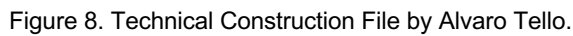
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In every project there is a discourse, which is communicated through representation, schemes, and a specific aesthetic. To end the workshop, special importance will be given to the whole process that makes it possible to create this discourse. A great part of the success that a project can have depends on how to show, attract, and expose it, and that is why, once the content is finished, we will work on how to present it.



This stage will allow us to rethink how we dream about the house, how we obsess about it, how we imagine it, and how we are able to transfer that experience to others, to conquer the other with our proposal (Figure 9).

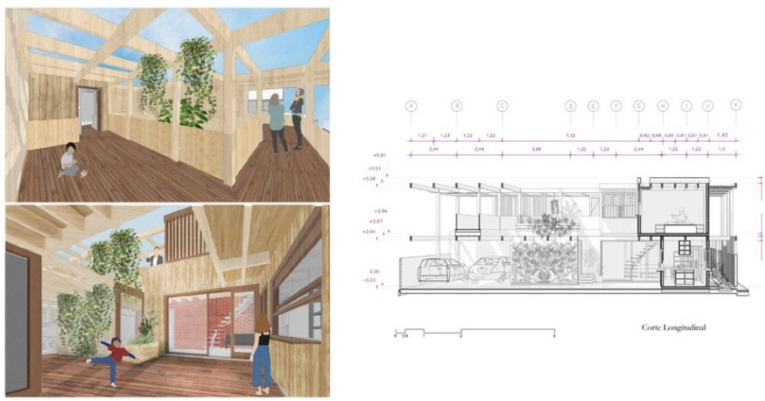


Figure 9. Karla Lopez's final work

RESULTS

In this study, we report results of the course, evaluated by a committee of external professors, whose average grade was 6,1 (from 1 to 7), and where 4 students obtained the maximum grade (7). The results of the course, as shown in Table 1, were the best of the four parallel sections of the workshop. The teacher survey conducted by the School of Architecture resulted in a grade of 3,8 (from 1 to 4) for the teaching team. We surveyed the students at the end of the course and seven months later, when they are faced with the final project, about their perception and evaluation of the workshop. Several students recognize an almost therapeutic action of the workshop, in the recovery of their self-esteem and in the overcoming of critical situations due to the flexibility and the good atmosphere created within the course. The units related to construction systems, construction budgets, and calculation of fees are especially valued.

Table 1. Results.

WORKSHOP-8	
TEACHER EVALUATION	
SECTION	RANGE 1-4
1	3,2
2	3,8
3	3,2
4	3,8

WORKSHOP-8	
STUDENT'S FINAL AVERAGE	
SECTION	RANGE 1-7
1	5,2
2	6,1
3	5,3
4	6,0

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Beyond the concrete results of the design process, the most important aspect of the experience developed in this workshop is the process of analysis and validation of the design needs of an “other”, close and present.

Taking advantage of the experiences of each one of the students as the main input that is capable of defining the limits and objectives beyond the creativity and genius of the architect but demarcated by the already understood and evaluated needs of each user, as the main axis of project development.

This awareness of the need for a participatory design, tailored to the needs of others over the personal interests of the architect, was also one of the greatest lessons learned by the teaching team. It was possible to put into practice the participatory design which is often celebrated as an ideal but rarely applied, looking for ways to generate this participatory design from and despite virtuality.

Also, the development of the workshop was proposed from an assignment that put the learning process in the hands of the students, so as to turn the workshop into a formative space for all participants: students, assistants, the instructor and all those invited together made up a work team where everyone faced a challenge. Both the case studies and the development of the projects were inputs that depended on the students, while the teaching team participated as collaborators and guides of a process that they did not necessarily handle as experts. As each case was different and each problem to be solved required different specialties because they had their own challenges, we proposed to address them by inviting specialists who provided tools, and together with the team, we all learned how to apply them.

CONCLUSIONS

The pandemic has put all the spaces in our homes to the test, allowing us to identify their shortcomings, their surplus spaces, and their opportunities. Under this intense gaze, we designed a pedagogical experience that, based on self-observation, allows the student to move from the role of an architect to the role of a client and viceversa. Each personal analysis had to be communicated - as an architectural assignment - to a colleague, and in this way, the “other” would be closer, both by the distance of colleague-architect and by a similar experience as a quarantined inhabitant.

Parallel to this process of self-observation, different critical approaches to the idea of “the house” were developed. First, emblematic houses by Le Corbusier, Lina Bo Bardi, Mies van der Rohe, Frank Lloyd Wright, among others, were analyzed. Students already knew them during their previous courses, but this time they studied them to assess what it would be like to live in them under sanitary quarantine. This study made it possible to identify both the shortcomings of these idealized examples of architecture, and to promote self-observation of the ways of life of each student, trying to bring their personal models of life to these dwellings. In unit 3, it was proposed to do the same exercise, but on utopian and futuristic models, such as the



impossible dwellings proposed by Archigram, Buckminster Fuller and Kisho Kurukawa, or those dystopias found in series such as Black Mirror. In addition to assessing the ability to sustain their own life in the pandemic in each case, the students were required to propose their own models of utopian housing.

Naturally, along with these studies and self-observation, differences with traditional architectural models emerged from both the examples studied and those established in the norm and scheme of social housing, where houses are designed for a determined number of inhabitants and family structure that is theoretical and increasingly removed from reality, which was quickly evidenced by the personal experiences of each student-architect. Families of relatives, single mothers, immobilized grandparents, families of one, families that grow and shrink depending on the day of the week.

In this workshop, which we called *En casa de herrero, cuchillo de palo*, we recognized ourselves as architects who make little use of our own experience to design for others. Also, we discovered that without understanding our own needs, we can hardly design for "others" that we do not know and try to pigeonhole in a non-existent model.

Each particular case, each "other", allowed us to reflect on the different ways of living, social and economic differences, unstable family structures, loneliness, overcrowding, and good and bad architectural solutions. It was shown how in the one-person housing that is becoming massified in the centers of our cities, the lack of space and conflicts with neighbors are experienced for the development of the basic activities of any student, from studying to exercise, taking care of a pet or creating a vegetable garden. A major challenge was how to do this critical analysis with respect for privacy and how to implement the ethics of care in the process.

The role-play of client and architect as equals, of direct and fluid communication, brought out in the students a strong commitment and engagement to the project and a passion for a job well done. There were no turned-off cameras during the synchronous sessions since the contents of the class were each and every student and their own homes. According to their own testimonies, this bond was not found in the large museum, stadiums, and megastructure projects, which are usually the subject of advanced courses. This commitment to the scale of the project and the experience of the inhabitant made it possible to reduce the distances generated by the online experience of teaching, achieving a fluidity in relationships that would be difficult to reproduce in other educational spaces limited by social distance and virtuality.

This presentation seeks to share the experience lived in this workshop exercise of an on-line semester, and to expose the reflection from our personal experiences, mother and daughter, architects and teachers, locked in the pandemic. This workshop workspace became a safe space where our students opened the doors of their own homes, invited us to know their intimacy, and thus allowed us to tell our own experiences and transform them into knowledge for our discipline.

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PART XII

ARTS / AESTHETICS

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ASSOCIATION OF ARCHITECTURE WITH THE ART OF PAINTING ON THE "OTHER" AXIS

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ABSTRACT

One of the most important elements that combine architecture and painting, which directly or indirectly interact with art, is the phenomenon of "design". Art and creativity are concepts that are inseparable from each other, design products emerging with creativity keep architecture in interaction with other art disciplines. In this study, Architecture will be compared with the art of painting, which is one of the interaction fields, by being interpreted within the framework of the concept of "the other". In the study, qualitative and quantitative research methods will be used in a mixed way. Qualitative research is a method that is questioning, interpreting and trying to understand the form of the problem in its natural environment. In order to make an evaluation on two different arts. In order to make an evaluation on two different arts comparative analysis method will be used. Two branches of art will be considered separately and the works of architects and painters will be compared, and the results obtained from the analysis will be interpreted by making an evaluation. The reason why the art of painting was chosen as the sampling area within the scope of the study is that it has a strong connection with architecture from the past to the present, and it has been observed that it has different interactions with architecture in every period of history. Basic design elements and principles constitute the basic standart used by designers in creating painting composition and performing architectural design. By courtesy of these principles and elements, the fact that the works produced in both fields have visual values and the design factor plays a major role in the formation of values, makes these arts similar.

Key Words: Architecture; Painting; Art; Design; Comparison.

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INTRODUCTION

Since design is at the center of to a wide range of disciplines, it can be expressed in various definitions. Design, in lexical meaning, is "the act of designing or the designed form, envisagement and drawing." In English, the word "tasarım" corresponds to "*design*," while in French, it corresponds to the word "*projeter*." It is a plan or thing that is envisioned, shaped, or imagined by producing to create a plan or sketch (Aktaran: Çetinkaya, 2011: 2; Hasol, 2002: 446, Ketizmen, 2002: 2). The term "arrangement" could be applied to the concept of design as well. To bring the shapes that emerge in the mind to life, certain arrangements must be made in the individual's mind and transformed into stages; only then products that emerge in this manner can be called *design*. The term "*design*" can be expressed as a concept that has an impact on nearly every field, from everyday tools and equipment to industrial products, technological and scientific activities, and art or as a plan or idea developed for the purpose of resolving a problem (Yılmaz, 2019: 3). As is the case with any discipline that interacts directly or indirectly with art, such as the plastic arts and architecture, one of the most significant elements that unites the disciplines of architecture and painting in this study is again the phenomenon of "*design*." "Design" can only exist through creativity.

Creativity, as the ability to reason, build bridges between concepts and events, and draw conclusions about them, is the most significant characteristic that distinguishes humans from other living beings. The fundamental element of creativity is the ability to establish a new idea through the combination of two or more existing ones. Creativity is the ability to generate new ideas. In fact, innovation is a process, and creativity is the set of skills or natural inclinations that allow this process to happen. Additionally, creativity is a mental activity that results in innovation, while innovation is the physical or external manifestation of creativity. Creativity is closely related to reasoning and problem-solving. This characteristic is defined as a mental process and is viewed as a manner of thinking that contradicts logic and rationality. Being creative means thinking about any subject in an unusual or unconventional manner—thinking "*outside the box*." This way of understanding of overcoming the constraints of "normal" thinking has resulted in the development of numerous techniques for generating creativity. The majority of these techniques are based on two fundamental mental processes. They establish unusual or intriguing connections between ideas and reverse or question certain aspects of the subject at hand (Yıldırım, 2007: 110). There is no absolute creation or criterion for creation. What distinguishes creation from other processes is the "*space*" in which it occurs and the pre-creation conditions. (İnam, 1993: 4). We can discuss the existence of creativity in a variety of contexts, from art to design, from science to daily routines. For that reason, the concept that covers a variety of spaces has various definitions. Torrence, who views creativity as a form of problem-solving, defines it as "...*sensing gaps, disturbing or missing elements and developing thoughts about them, making assumptions, presenting them, comparing, modifying, and retesting results*", whereas Bartlett defines it as "*deviating from the known path, being open to the new, and experimenting*", in other words, overcoming



stereotypes. Getzels, on the other hand, bases creativity on the divergent and convergent union of intuition and rational imagination, as well as the ability to analyze, imagine, and control. According to Gartenhaus, creativity is *"...the capacity to generate ideas and possibilities that result in personal discovery, change, and a high level of understanding, beyond habitual and opinion-forming functions"* (Gartenhaus, 2000: 15). According to Read, who deals with the concept more through the lens of art, creativity is the act of giving existence to something that previously lacked form and face. He believes creation can exist out of nothing; however, it is more of reuse and readaptation of existing material (Ağluç, 2013: 4). Art and creativity are inextricably linked concepts, and the design products that emerge from creativity keep architecture interacted with other art disciplines. In fact, the birth of this metaphor in plastic arts, as in other branches of art, the transformation of images from cognitive and pre-cognitive stages, whose origin is in subconsciousness, into new arrangements and finding the most suitable material for their manifestation and it is the process of transferring it to concrete form, that is, the matter in the material, within the productive thinking processes; what matters is the manner in which they manifest and express themselves.

The concept of space is one of the fundamental subjects of plastic arts, philosophy, psychology, and physics, particularly architecture. One of the most important common elements of painting and architecture is the concept of *"space"*. The paintings created and exhibited throughout history, from cave walls to the walls of churches, museums, and galleries, continue their existence dependant on architectural structures. In this perspective, the cave walls can be considered to have brought the art of painting and the physical space together. Until recently, the path to being a pioneer of architecture was inextricably linked to a theoretical foundation; however, this has been replaced by the requirement to connect with art. To illustrate this example, Zaha Hadid began his career by studying Russian Suprematism and Constructivism. Additionally, Diller Scofidio+Renfro integrated various art forms (conceptual art, performance art, feminist art) with architecture. For designers motivated by minimalism, the relationship between art and architecture is equally important; just as minimalists associate art objects with the surrounding architecture, these architects have acquired a minimalist sensibility for appearance and form. However, architecture and painting do not have a one-sided relationship. Sometimes, the works of painters serve as inspiration for architects. The color-form similarities between the pioneer of Neo-Plastisizm, Dutch artist Piet Mondrian's abstract paintings that feature geometric shapes, plain colors, and prominent intersecting planes influenced by Cubism and his architectural designs, and the works and architectural structures of Austrian architect-painter Hundertwasser can be cited among the examples.

While Le Corbusier defines the relationship between architecture and art as *"Architecture is form of art above all"*, Auguste Perret defends the idea that *"Architecture is the art of organizing space"*. According to the German philosopher Hegel, *"Architecture is the root of all art forms"*. Like Hegel, F. L. Wright regarded architecture as the primary art form. Giorgio Vasari, one of the founders of the academy in Florence in 1562, views architecture as

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one of the "most beautiful arts" along with painting and sculpture. These were then grouped together under the heading "*fine arts*". Considering the multiple definitions of art (art as creation, expression, reciprocity, consciousness, language, and forming) in Masiero's (2006) work, he argues that each has a certain validity for architecture. In this context, it is possible to claim that art and architecture have a strong relationship. In the latter half of the 20th century, while many artists began integrating painting, sculpture, and film into the surrounding architecture, many architectures started engaging with visual arts. This encounter, which can take the form of collaboration or competition, has developed into the primary environment for creating images and shaping space in the cultural economy (Şensoy and Işık, 2018: 78). In this study, architecture will be compared to painting, another field of interaction, by interpreting it through the lens of the concept of "other." With knowledge of another field, our own field becomes more readily understandable, where the critical point is the existence of the "*other*" and the existence of a paradoxical relationship between the "*other*" and the "*self*". This relationship enables the acquisition of knowledge and the determination of one's own position through comparisons with the "*other*". That is, it is only through the existence of the "*other*" that our own existence can be qualified.

METHOD

Qualitative and quantitative research methods were applied together in the study. Qualitative research is an inquiry-based method that examines, interprets, and attempts to comprehend the nature of the problem in its natural setting. Comparative analysis, a method of scientific research, were employed to evaluate two different art forms. With the method employed, two branches of art were dealt separately, and the works of architects and painters were explained by relating them to other branches of art, supported with illustrations. Later in the research, the interaction between architecture and painting was detailed, with examples drawn from both the frescoes on the cave walls and contemporary works of art. The art of painting was chosen as a sample area within the scope of the study because it has a strong connection to architecture from the past to the present and is seen to interact in a variety of ways throughout history.

Interaction of Architecture and Painting with Other Art Branches

Certain disciplines are closely related to other disciplines and fed by others, and thus share numerous characteristics. These disciplines include architecture and painting, which are not only closely related to the positive sciences but also have a strong relationship with art. Indeed, the idea that architecture is a branch of art, as is the art of painting, is quite common (Şensoy and Işık, 2018: 78). In this context, when the relationship between architecture-painting disciplines, which are the core focus of the study, and other branches of art is examined; The relationship between **cinema and painting** was first manifested itself in avant-garde cinema and has persisted



to the present day. Today, several filmmakers are working in this genre (Yağız, 2015: 408). In some cinematic examples, the painting is animated one-to-one. For instance, Sofia Coppola's *Marie Antoinette* (2006) features a scene from Jacques-Louis David's *Napoleon Crossing the Alps* (1801-1805) painting (Figure 1) and Alexander Payne's *About Schmidt* (2002) features a scene from the *La Mort de Marat* (1793) painting (Figure 2).



Figure 1. Jacques-Louis David, *Napoleon Crossing the Alps*, 1801-1805, Sofia Coppola, *Marie Antoinette*, 2006 ("Sanal", 2021).



Figure 2. Jacques-Louis David, *La Mort de Marat*, 1793, Alexander Payne, *About Schmidt*, 2002 ("Sanal", 2021).

When considering the relationship between **architecture and cinema**, it is difficult to think of a film that does not include architectural images. This claim is valid regardless of whether an actual structure is visible in the film, as framing, scaling, or lighting an image implies that it is already at a specific place. On the other hand, defining a place is the primary function of architecture; the initial purpose of architecture is to define the place of people in the world (Ünver, 2015: 6). The film *Metropolis* (1927) is one of the best examples of the intersection of architecture and cinema. The architectural representations and sets of *Metropolis*, which symbolize the main city, the universe, the machine, and the spirit of the city, were designed by Fritz Lang, who received education in architecture, and Erich Kettelhut, also an architect (Jacobsen ve Sudendorf, 2000: 19). The film *Metropolis*'s

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colossal monument symbolizes the heart is reminiscent of Walter Gropius' *Monument to the March Dead* (1921) (Figure 3). As a result, the relationship between modern architecture and film is not restricted to films and film sets. Similarly, the technological appearance of the film was mirrored in the real space (Yüksekli Akgün, 2013: 60).

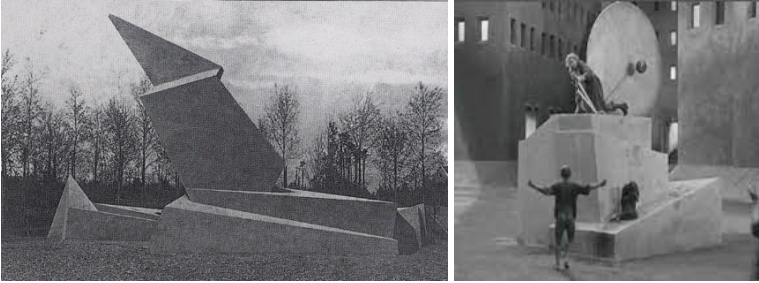


Figure 3. Walter Gropius, *Monument to the March Dead*, 1921, The Colossal Monument Symbolizing the Heart in the Movie *Metropolis*, 1927 ("Sanal", 2021), (Yüksekli Akgün, 2013).

Fashion and art have numerous connections. These ties have been the subject of many studies since the second half of the 19th century, when the phenomenon of modern fashion first emerged. Fashion designers occasionally presented themselves as artists by distinguishing themselves from other craftsmen and tailors; they claimed to belong to the world of high art rather than the world of commerce; and sometimes they participated in modern art movements and produced clothing products, adhering to their principles and dynamics (Özüdoğru, 2013: 211). Art has an effect on fashion in the sense that it imparts an aesthetic understanding of clothing rather than directly referencing the works. It is possible to see the reflections of famous French painter Marcel Duchamp's *Fountain* (1917) critically, Andy Warhol's painting named *Campbell's Soup Cans* (1962) (Figure 4), and numerous other pieces on the art of fashion.



Figure 4. Marcel Duchamp, *Fountain*, 1917, Andy Warhol, *Campbell's Soup Cans*, 1962 ("Sanal", 2021).

Fashion and architecture are two separate disciplines that actively employ the concepts of creativity. At first glance, these two fields seem to differ



since fashion is viewed as a transient and shallow phenomenon, while architecture has opted for a more monumental and lasting approach. This situation is also reflected in the materials used. Materials used in fashion are softer and more delicate, while those used in architecture are strong and enduring. Indeed, there are significant disparities in production scales in this process. While the fashion designer bases the design on a human body, the architect designs space large enough to house a great number of people. Despite these distinctions, both fields share a common starting point: the human body. Apart from their protective and hosting functions, they sometimes serve as a means of expressing one's personal, political, or cultural identity (Hodge et al., 2011: 27). When we examine the structure of Jorn Utzon's *Sydney Opera House*, we notice how the unusual sail-like roof form has become an inspiration for fashion as well as it did to architecture. Moreover, it has been observed that fabric designs utilized in fashion are also used in interior design, particularly on ceramic surfaces. Therefore, both architecture and fashion have profited from each other on multiple occasions (Figure 5).



Figure 5. John Utzon, *Sydney Opera House* and Fashion, Fashion and Interior Space Design ("Sanal", 2021).

In addition to common characteristics, **music and painting** also share the same language. Colors, like notes, have characteristic tones, and the harmonic blending of notes and colors is referred to as composition. Composition and harmony serve as the foundation for shared characteristics. In other words, color, line, and form in the art of painting appear as sound, timbre, and tone in music (Önal, 2018: 107). Loris Chaknavarian's paintings are fundamentally based on musical notes. Cheknavian stated of this issue; *"I am not following any trend in painting; I am simply attempting to transmit to the canvas what is in my thoughts my paintings are the physical manifestations of my music, and my music is the audible manifestations of my paintings."* The use of colors in the paintings of an artist without a visual arts education (Figure 6) is almost symbolic. However, the juxtaposition of colors, like notes, reveals traces of his personal experiences and lifestyles. The reason he employs the language of abstract art stems from his strong relationship with music (Agdam, 2018: 38).

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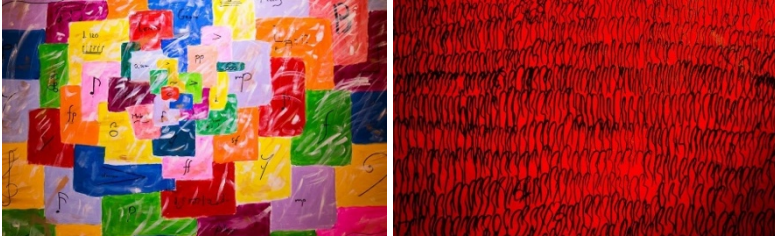


Figure 6. Loris Chaknavarian, His Mixed Techniques on Canvas (Agdam, 2018).

It has been claimed that while similarities and bridges have been built between music and architecture at times, which is one of the disciplines with which architecture interacts, there are times when no relationship can be established by highlighting the contrasts. Music and architecture are both based on creation. In both music and architecture, concepts such as rhythm, measure, harmony, and composition are prevalent. These are common concepts used by composers and designers. The designer's awareness of musical rhythm in his design, as well as the composer's awareness of structure and form in his composition, brings these two disciplines closer together (Üstün and Kalaycı, 2017: 17). There is a relationship between Salzburg Cathedral and Mozart (Figure 7) in Salzburg, Vienna State Opera House and Beethoven in Vienna, Prague Opera House and Dvorak in Prague, and finally St. Thomas Church and Bach in Leipzig. For instance, in the Salzburg Cathedral, the relationship consists of the first performance of Mozart's composition called *Mass in C Minor* (Sağlam, 2020: 1).



Figure 7. The Relationship between Salzburg Cathedral and Mozart's Music ("Sanal", 2021).

From the beginning to the present, the arts of **painting and sculpture**, as indicators of artistic development and change that reflect social, political, cultural, and economic conditions, have been parallel throughout art history. Although they appear to be quite dissimilar in terms of tools, technical



equipment, and end product used to the extent that their unique nature permits, they share numerous points due to the fact that they both require spatial perception and understanding, or three-dimensional thinking (Pelikoğlu, 2004: 1). A case in point is the three-dimensional bronze sculpture of Salvador Dali's oil painting *The Persistence of Memory* in the United Kingdom's *Kew Gardens/Palm House* (Figure 8).

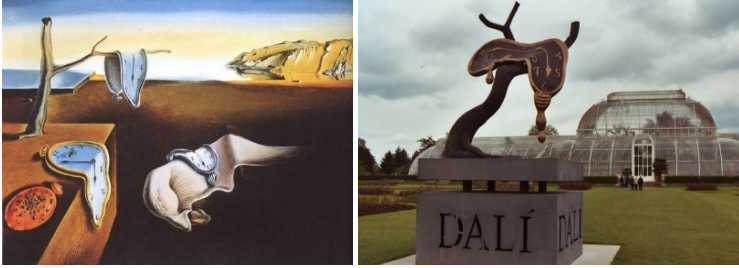


Figure 8. Salvador Dali, *The Persistence of Memory* and Kew Gardens/Palm House, Bronze Sculpture ("Sanal", 2021).

When we look at contemporary contexts, we see architectural examples of how social and cultural diversity are integrated, different architectural styles are assimilated, and physical and virtual space become hybridized. Apart from these examples, those that illustrate the harmonious coexistence of **sculpture and architecture** despite their contradictions, provide a new perspective on hybrid architectures. Thus, sculpture, which is a three-dimensional art form that exists solely for the purpose of being observed, and architecture, which can be defined as the act of designing and producing functional structures for human use, merge to form the art of building in a new context. When we consider these two disciplines, which are on the verge of diverging, in terms of human use, the sculpture has two distinct scales that are viewed from a distance, whereas architecture is experienced from within. The sculpture, which was a component of Baroque and Gothic architecture and was used to conceal the structures, was separated from architecture in the 19th century as a result of the modernization brought by the Industrial Revolution. The process of hybridization between sculpture and architecture, which has occurred or broken apart since the dawn of humanity, led to the emergence of the concept of 'architectural sculpture' in the twentieth century (Akçali, 2013: 1). It is possible to state that the concepts of architectural sculpture and architectural structure are inspired by one another in terms of form. For example, the *Wave Garden Sculpture* in London and the *GT Tower* in South Korea (Figure 9).

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Figure 9. Wave Garden Sculpture, London, England and GT Tower, Seoul, South Korea ("Sanal", 2021).

Relationship between Architecture and Art of Painting

It is clear that there is a deep historical relationship between painting and architecture. From the cave walls (France Lascaux cave) to the walls of churches, museums, and galleries, the paintings created and exhibited continue their existence depending on the architectural structure (Figure 10) (Sönmez, 2018: 312). Berkus states the following on the relationship between architecture and painting: *"Frequently, the organizing elements that contribute to the comfort and excitement of a space find their equivalents in art. Both art and architecture are related to the creative space organization. While it is unlikely that a building could be designed in the same way as a painting is created, there are similarities in the ways we understand and comprehend this vastly different visual experience. (...) I have a passion for art and believe that I learned as much about space arrangement from looking at paintings as I did from studying construction principles"*. What is meant with organizing elements is to embody the ways of perception and comprehension that play a role in the creation of space design and provide visibility, rather than structural elements such as columns, beams, and walls. The relationship between architecture and painting can be viewed as explanatory about the similarity and existence of these ways (Beken, 2007: 12-13).



Figure 10. France Laxcaux Cave ("Sanal", 2021).

Joan Miro's mural painting "Personnages Oiseaux" (Figure 11) can also be viewed as a surrealist work that illustrates the relationship between architecture and painting. The relationship of the works, which resemble the large paintings on the façade of the Ulrich Art Museum, with architecture is by virtue of the mural painting being connected to the surface of the building. However, paintings and reliefs on architectural surfaces are gaining large scales like free plastic elements in the modern era (Üner and Erdoğan, 2020: 172).



Figure 11. Ulrich Art Museum, Mural Study Called Personnages Oiseaux, Joan Miro, 1977–78 ("Sanal", 2021).

When it comes to painting and architecture, it is clear that they are undergoing change and development at the same rate. Throughout history, architects have inspired painters, and painters have inspired architects. The abstract paintings of Piet Mondrian (Figure 12) laid the groundwork for

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numerous designs of disciplines. In the artist's works, simple geometric patterns and colors capture the viewer's attention. Indeed, the examples of the artist's works are described as the essence of art by some art critics as an effect of abstract understanding.



Figure 12. The Works of Piet Mondrian That Lay the Groundwork, ("Sanal", 2021).

Mondrian has limited his palettes to the primary three colors of black, white, and gray, avoiding a detailed and expressive painting language, and instead aims to convey the essence of universal harmony and balance. On the other hand, architects and space designers (Image-13) reduced all of the painting's elements to straight lines of varying widths that intersect on a white ground and form rectangles and squares of various sizes (Üner, 2019: 25). Red, blue, yellow, black, and white colors that give the painting its name are used in the interior design in Figure 13. All surfaces of the circle are adorned with lines and geometric shapes used in the artist's works. One of the most intriguing aspects of the design is the way space appears to alter with viewpoint and appears to have no end.

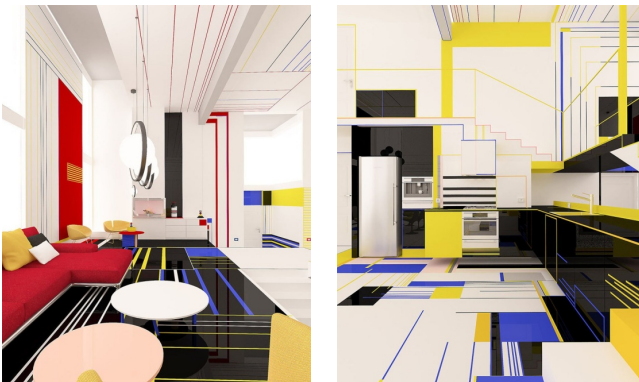


Figure 13. Interior Design Inspired by Mondrian's Works ("Sanal", 2021).



Following Mondrian, another example is Maurits Cornelis Escher's 1953 work titled "*Relativity*" (Figure 14).

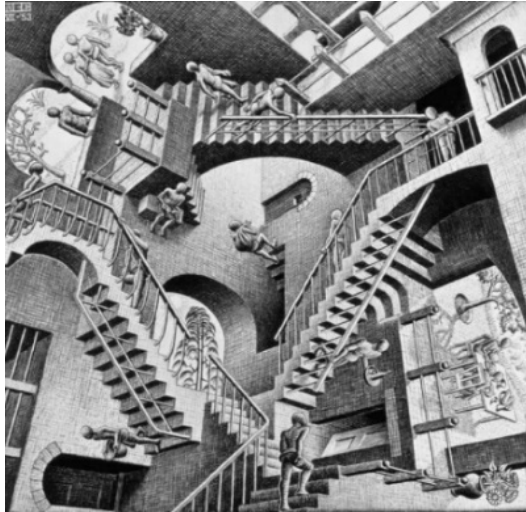


Figure 14. Escher, *Relativity*, 1953, ("Sanal", 2021).

When we examine Escher's work, we see stairwells with reversed or conventional railings. It looks like people go up when they in fact go down. In this case, regardless of the direction in which the painting is rotated, it remains unchanged. In this context, it is possible to say that an infinite paradox is depicted. Studio 10 reflected Escher's *Relativity* painting on the interior of the guesthouse named *The Other Place* in Guilin, China. (Figure 15).



Figure 15. Studio 10, *The Other Place* Guesthouse, China, ("Sanal", 2021).

The design team aimed to create mysterious, infinite, and impossible spaces through optical illusions with the techniques they employed. They aimed to create a vibrant and serene atmosphere by using green and white into the interior design. The surreal staircases in the space lead visitors to

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doors that appear to be leading to unexpected universes. just like the infinity paradox depicted in Escher's painting.

Hundertwasser is an extraordinary painter and architect whose works attract attention through their use of color and form. He went beyond the ordinary by reflecting in his architecture the paintings (Figure 16) he created with vibrant colors and organic forms (Figure 17). While Hundertwasser initially painted on buildings, he began constructing structures to paint in the following years (Şensoy and Işık: 2018, 83–84).



Figure 16. Hundertwasser, Blobs Grow in Beloved Gardens, 1975, ("Sanal", 2021).



Figure 17. Hundertwasser, The Forest Spiral of Darmstadt, 1998-2000, Germany, ("Sanal", 2021).

The Contarelli Chapel and Caravaggio's St. Matthew's paintings complement one another functionally as an architectural space. Space and paintings are inextricably linked. The relationship between the three paintings and their placement in the space almost creates a triptych effect. While the paintings influence how the architectural space is perceived, the



characteristics of the architectural structure directly determine the content and effect of the paintings. Renaissance art was a pioneer in redesigning and creating paintings in terms of composition, form, and content, as well as architectural space. Michelangelo and Rafael concentrated on the visual effect of their frescoes in the space, and the masters who followed them transformed their compositions according to the position in which their paintings would be visible in the architectural space. Caravaggio had a direct influence on how architectural space is perceived and was able to use architectural features as a pictorial element in his Saint Matthew paintings for the Contarelli chapel (Figure 18).



Figure 18. The Chapel of Contarelli and the Paintings of St. Matthew by Caravaggio.

CONCLUSION

Architecture has been in interaction and communication with many branches of art throughout history. The relationship between art and architecture is critical in shaping space and establishing social culture. Artist and audience memories, which are shaped by changing perceptions of art and societal conditions, can reach authentic productions with the assistance of interdisciplinary approaches and alternative materials. The relationship between architecture and the art of painting on the "other" axis was examined in this study, and the similarities in the works of painters and architects and their interactions with each other were investigated and evaluated comparatively. The present study, which investigated relationships and similarities between architecture and painting arts, which are two distinct disciplines, concluded that designers are effective at increasing the level of creativity. When we examine the 21st-century works (Painting, Architecture, Sculpture, Fashion, and Cinema, etc.), we see that they cannot be separated; rather, they are more effective when viewed as a whole. According to the study findings, it has been observed that the disciplines of architecture and painting have concepts that meet at a common ground. The main design themes, fundamental design elements, and principles of design are the fundamental criteria that designers use when creating a painting composition or performing architectural design.

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Both the historical impacts of the movements and the visual value of the works created in both fields, as well as the fact that design plays a significant role in the formation of those values, make these arts interactive.

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QUASI-OBJECTS OF ART-ARCHITECTURE IN EXHIBIT: REVISITING MULINO STUCKY PROJECT AS A TRANSVERSAL EXHIBITION IN THE VENICE BIENNALE OF 1975

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ABSTRACT

In the late 60s and 70s, while artists used architectonic forms in exhibitions, architects pursued the artistic category of installations as a form of architectural production and proposed new spatial conditions for more socially-oriented practices. This “other” practice that is defined as “making (for) the exhibition”, ascribes a flat ontology to disciplinary concepts, processes and techniques, while bringing out the repetition or resemblance of spatial works in large-scale visual art or architecture exhibitions and pointing out their insignificant categorization today. “Art-architecture coupling” that refers to a field beyond visual arts and architecture, necessitates a redefinition of its practitioners and categories which are aimed to be represented in this paper referring to Peter Osborne and Eric Alliez’s characterization of the “transdisciplinary” and “transcategorical” works of artistic practice. An emphasis on the processual and performative character of exhibition as a “project” suspends the object/subject or work/viewer division and assigns them an “agency” in equal terms. Yet, their distributed agencies within the relational assemblage of the exhibition are brought into question drawing upon the concept of “quasi-object” in Michel Serres and Bruno Latour’s terms, and how quasi-objects of art-architecture performs in the transformation or re-assembling of the dynamic social space, such as an exhibition, is opened to discussion. This paper recalls Venice Biennale, and a peculiar historical moment of its decentralization from the academic arts, having a social orientation with the articulation of visual arts and architecture in mid 1970s. As a transversal project, the case of the 1975 Mulino Stucky exhibition that marks the art-architecture coupling in the Biennale history, is reassessed through archival visual documents deciphering material and social relations of its performative processes, established by different conceptualizations and materializations of the quasi-objects in exhibit.

Key Words: Transdisciplinarity; Transcategoriality; Art-Architecture Exhibitions; Quasi-Objects; Venice Biennale.



INTRODUCTION

The evident resemblance of art and architecture exhibitions, is one of the signs of our time. While architects are turning back to artistic research in terms of adopting techniques and categories of art, artists, in turn, create architectural installations or fragments that question the spatial and social conditions of a given space, landscape or building. The phenomenon of exhibition has always been an inseparable element of art's existence; for architecture, however, it was only of secondary importance together with building modern architecture discourse. It can be said that transforming the field of architecture into an object of interest is a new phenomenon that can be considered as a practice of making (for) exhibitions. With the fact that the line that differentiates the architecture from the arts in a certain way has lost its distinctiveness and the exhibition has become a common form of practice for both disciplines, changing the status of art "and" architecture into art "-" architecture, yet still addressing an "alternative" or "other" form of practice for "the architecture proper". In this regard, this paper aims to conceptualize exhibitionary practices of art and architecture that couples the two disciplines. "Art-architecture" expression as a state of coupling, is beyond the disciplines and beyond the usual categories of disciplines, and requires a re-definition of a trans-disciplinary practice and practitioner subject. This state of coupling is suggested to refer to a third, transdisciplinary and transcategorical ontologies of mediations [1] by means of the exhibition "as a project that extends beyond the parameters specific to both art and architecture" and as a construction of a series of conditions or active processes in need of performativity that defines a "space" not for consumption but production of art and architecture [2]. An emphasis on the processual and performative character of exhibition as a "project", not only suspends the object/subject or work/viewer division but also assigns them an "agency" in terms of their "performance" throughout the exhibition as a "process": both the work of art-architecture and the viewer (as user) become mediators within the composition of the exhibition. The transcategorical character of the exhibitions today heterogeneously assemble diverse forms from different disciplined practices, such as art and architecture, while these forms mediate into objects of thought, creating an assemblage beyond the categories of those disciplines.

In this paper, the agency of the objects of art-architecture within the relational assemblage of exhibition will be brought into discussion revisiting the concept "quasi-object", a term coined by the French philosopher and theorist Michel Serres (1982; 2007) and later enhanced by his colleague and friend Bruno Latour (1993), questioning how exhibitions by means of quasi-objects performs as transversal practices cross-cutting disciplines and categories [3] [4]. As a speculative concept, quasi-objects radically redefine the relation between the subject and the object, in a vision of world questioning the human/non-human or culture/nature duality, being neither an object on its own but addressing the subject that could not exist outside their relational condition. This paper suggests that exhibition as an assemblage, is a gathering of people, things in multiple spatio-temporalities; of material and social relations established partly by quasi-objects. Drawing upon Serres and Latour's conceptualization of the term, quasi-objects are

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defined in this study as having an intentionality in spatialization and allowing for designation of a new social condition or a new program definition by assembling different subjects; having an agency in the transformation/reorganization of the mobile realm of social space, such as an exhibition. In other words, quasi-objects are suggested to have an intentionality to transform the program determined by the artist-architect in an exhibition, yet argued that they correspond to the “other” objects of art and architecture rather than their disciplined ones and conceptualize the practice of art-architecture coupling.

Venice Biennale, with a long and significant past, has been a progenitor institution and a large-scale international exhibition in global networks of art and architecture. Despite of the ensuing exhibitions of art and architecture sectors of Venice Biennale, this study claims that both the Art Biennale and the Architecture Biennale hold a transdisciplinary position that accommodates displacements of the objects and subjects of the two sector. In this regard, Venice Biennale, as a seminal biennial of arts for over a century and of architecture for almost three decades, is presented as the network-field of research for “transdisciplinary” ways of making and exhibiting art-architecture, and revisited in terms of its historical moments composed of a tangled relation between the artists, the architects, the works and the Venice as the city itself in the mid-Seventies [5]. The *Mulino Stucky* (Stucky Mill) project, curated by Vittorio Gregotti, the (very first architect) director of the Visual Arts and Architecture Department (the peculiar department foreshadowing the foundation of the autonomous department of architecture in 1980), as an open call for ideas and projects on the old mill in the island of Giudecca, and an exhibition of the in-situ-works created by the invited artists and architects from Europe and America. The exhibition is reassessed by means of the archival documents and photographic narrations that unveil materiality of its performative processes, by deciphering quasi-objects of art-architecture in exhibit.

An-other Practice: Transversal Exhibition Cross-cutting Disciplines and their Categories

The blurring of disciplinary boundaries is not a direct process, but the findings of the ongoing consensus on the ethical and aesthetic principles of both art and architecture [6]. The transformation of the field of architecture into an object of interest as a practical form of “making exhibitions” and “making for exhibitions” is a phenomenon that can be considered new. It can be argued that art “and” architecture have turned into art “-“ architecture [7] in the context of exhibition, as the exhibition has become a common form of practice for both disciplines. Art-architecture expression is a case of coupling; calling for a definition of the practice and practicing subject beyond the disciplines and beyond the conventional categories of them.

While talking about contemporary architecture, Lavin (2003) suggests that it should be taken into account that architecture requires an “exhibition mode” and is based on exhibition and therefore on curatorial practice, recalling its modernist exhibitionary references [8]. The author defines



curatorial practice as a neglected dimension of architecture, since it emphasizes architecture as a mere spectacle and is defined by architects as the "other" practice. According to Lavin, "contemporary practice" has opened and validated this dimension of architecture; it has made visible the "curator", who is not just a person or a subject but a function and practice [8]. Similarly, the expression "making (for) exhibition", used in this paper to indicate curatorial practice, describes the practice together with its function, superimposing the practicing artist or architect as both the practitioner of the exhibited work and the curator of the exhibition. It can be claimed that the spatial equivalent of this practice, the "other" space produced with the "exhibition mode", is not a representative space but has a processual character, and its performative nature can be addressed in the sense that it realizes the construction of experience as a form of making [8]. Architecture can be exhibited not only with conventional representational objects, but through spatial agency, just as in art exhibition, with processual objects. In other words, it is possible to say that "work" as "an-other practice" defines a form of practice that does not convey meaning from another object, but produces that meaning through itself, through subject-object relations while transcending disciplines, their definitions and categories. This form of practice displaces the centralistic approach of the representational exhibition categories that foreground the creator subject/author, with the decentralizing perspective of the processual exhibition format as a "project" including various actors that "perform".

Osborne (2016) deals with contemporary art works, which he defines as post-conceptual, with the concept of transcategory. [9] While Alliez (2017) argued that the pragmatics of an operant way of thinking, are simultaneously transdisciplinary and transcategorical [10]. In other words, while different forms from different planes (such as art and architecture) are brought together heterogeneously and transformed into objects of thought, the fictional character of this act of bringing together creates an assemblage beyond the categories of previous planes. (At this point, Alliez refers to Deleuze and Guattari's ideas of "flat ground" in *A Thousand Plateaus*). Transcategory, as quoted by Osborne, as a way of looking at contemporary art, is a reflection of the plurality of spatializations and multiple materializations of work, in terms of producing different and unlimited ontologies of work, breaking the identification of the work with any particular medium, or category. According to Osborne, a fictionality is an important action that moves the work to a different place from the conventional categories in which the artist (or architect) is the author and the practice of documentation is assumed to be objective. [9] In line with Osborne's concept of transcategory, a work cannot simply be identified as it has physically taken place. For example, the current state of the art of installation in the given architectural context is one of the instances or "installations" of the idea; however, its repositioning in another architectural context is related to its plural re-spatialization, or its becoming a part of other assemblages in other spatio-temporalities through its photographs is related to its multiple materialization. In this sense, when the work is considered in a transcategorical character, its own medium or category has a literality only as a "moment" and it is possible to talk about its other presences of each medium (actual or digital) in which it is rematerialized.

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An-other Concept: Spatial Agency of the Quasi-Objects of Art-Architecture

Quasi-objects are defined in this study as transdisciplinary and transcategorical objects of art-architecture coupling. For exhibitions, when reassessed a dialogic phenomenon that realizes exchanges between art and architecture, quasi-objects are argued to have an agency in establishing the dialogue between disciplines through their inseparable presence in those exhibitionary environments.

The terminological contribution of the French thinker Michel Serres has been carried to the research as a concept that attributes agency and intentionality to the object itself. By referring to Serres's definition of quasi-object, objects that tend to "spatialize" and that enable a new social situation or a new program definition by bringing together different subjects are defined as quasi-objects [3]. This paper reapproaches the concept in the sense that the quasi-object corresponds to the "other" indifferent to the disciplined objects of art and architecture, and suggests that making (for) exhibitions as transversal practices are realized through the agency of quasi-objects.

Quasi-object as a speculative concept radically redefines the relationship between subject and object. The concept, which was first produced by Serres, was later developed by his friend-colleague, French thinker Bruno Latour. Latour has questioned the common belief that the world is symmetrically divided into two separate worlds—the human sphere and the outer sphere. In this dichotomy, the "human" sphere brings together the social structures of language and culture, while the "external" sphere consists of factual objects [4]. According to Latour and Woolgar (1986), since there is no purified nature and purified culture, every existence is composed of karmas, collectives, quasi-objects [11]. Serres (1980/2007) defines objects as follows: "...*This quasi-object is not an object, but it is one nevertheless, since it is not a subject, since it is in the world; it is also a quasi-subject, since it marks or designates a subject who, without it, would not be a subject...*"[3] Crucial to the definition of the term is that what circulates or makes circulation possible must also be co-managed and transformed. Thus according to Latour, the object as a moving or changing thing that acts or performs must transform what moves it and thus transforms it.

Luhmann (1984/2000) argues that quasi-objects were invented for the benefit of a special function such as transforming and arranging social space [12]. Performative contemporary art and architecture exhibitions, which require participation, are public spaces within a certain temporality. In a similar vein, Barriaud (1998/2005) defines art as a relationality that allows multiple modes of behavior and offers a rich space for social experience [13]. When Barriaud's relational situation, which is limited only between the participant/experiencing/practicing subject and the work, is extended to the sub-parts of the work and the space considered as an integral part of this practice, it is possible to extend the relational art to the relational space.



In other words, the ability to act is not only in the artist/architect subject or the participant/viewer who experiences the exhibited work, but also in the tectonics that creates the work, or in the building or space that covers or environs the work. A new ontological situation is defined in every different instance in which spaces are used after their construction or installation is completed. In this context, quasi-objects are participants, not receivers. Yet, biennial pavilions and the architectonic elements that “construct” them, the tectonic objects of the act of making (for) the exhibition, can be defined as the quasi-objects with the ability to “act”. The quasi-object of art-architecture coupling in exhibit have the ability to transform the spatial programs for the artist-architects: not only an existing or given object in the work-space-participant integrity, but also an object that performs the total work that could not exist without it, as implied by Serres.

This study is based on the assumption that the processual and performative practice of making (for) exhibition which is transdisciplinary and transcategorical in character, should not be considered as a singular object or as the creation/act of a singular subject. It is suggested that the transversal work or the exhibition as a total project necessitates multiple readings with its material relations that determine its very own making. Venice Biennale, as an international large-scale exhibition, is regarded in this paper as an assemblage, as a gathering of people, things in multiple spatio-temporalities, of material and social relations. Late 1960’s and ‘70s are revisited in terms of the Biennale’s reformation and decentralized position from being an elite and inflexible art institution to a democratic and social ground for various fields from visual arts to architecture. As focused in this paper, coupling of visual arts and architecture in terms of the radically changing structure of the institution and its operational actors, forms of its exhibitions and their socio-spatial extent, is the marking condition that foreshadows today’s independent but look-alike Biennales of Art and Architecture and presents a precedent for the relational social sphere created by the phenomenon of exhibition.

First, it is necessary to better understand the conditions that catalyze that very idiosyncratic event of the Venice Biennale, the special case of Mulino Stucky “Project” with the very first architect-director (or curator) of the Biennale who brought together artists and architects on the same common ground for thinking about space.

An-other Exhibition: Reformed Venice Biennale and the Mulino Stucky “Project”

The specific period of the Biennale that this paper focuses on, initiated as a direct consequence of the cultural and political atmosphere 1968 events, witnessed a radical transformation of the Biennale structure and the criticism of the elitist condition of art exhibitions, calling for democratization of art and. Accordingly, 1970s were important in the history of the Biennale in terms of the very first experimental attempts to move towards a more democratic, and participatory Biennale. Szacka (2016) states that a series of exhibitions and events in the 70s became instrumental not only to

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represent architecture, but rather to create a space for discussion and exchange by reinventing the discipline [14]. In the context of the Biennale, the 1970s – especially the 1975 exhibitions – are considered in this paper as a productive period in the sense that the art-architecture coupling produced a transdisciplinary discourse.

In 1968, the Biennale –as a cultural institution and in terms of its exhibitions– became subject to criticism and protests, in terms of its distance with the public. 1968 Biennale was closed due to the occupations and annulled altogether in the 1974. Events of 1968 marked the end of an era for Venice Biennale, but gave start to anew period of the institution as “an open, permanent and constantly evolving Biennale”, while 1970s marked the experimental period, and for the very first time created the possibility of setting a “common theme” that would be discussed by the commissioners from different countries and the artists would tailor their work accordingly. This was an intention to transform the Biennale’s long term image as a trade-fair of independent national representations into a competitive international exhibition, to make it a platform for artistic production and research.

The four-year plan for the ‘new’ Biennale covered the plan of activities and events from 1974 to 1977, and it was presented and discussed in the public meetings of 18-19 May and 3 June 1974. The qualitative characteristics of the ‘new’ Biennale were presented under four main titles: (1) social engagement, (2) transnational operation, (3) structural and methodological renovation and (4) spatial expansion of the exhibitions. These reforms refer an “other” position for the Biennale in many different contexts. Social engagement would lead to a move from the rigid and closed circuit of art realm towards the public realm. The canonized identifications of the sectors/departments would be decentralized which would engage cultural structures other than The Arts (painting and sculpture) determined by an interdisciplinary approach and could move beyond the limits of the conventional mediums of art: from figurative arts to visual arts to address the “other” contemporary artistic practices. As a consequence, three departments were identified: (1) Visual Arts and Architecture, (2) Cinema and Telefilm, (3) Theater and Music Department. The first and foremost department, The Visual Arts and Architecture included a broader range of arts and architecture, assembled sculpture, painting, graphics, photography, industrial design, serial art; and architecture, restoration, urban design, landscape design under the same roof [15].

The Italian architect Vittorio Gregotti was assigned as the director of the Visual Arts and Architecture Department and was expected to ‘organize’ (or ‘curate’ in its contemporary terminology) the 1976 Biennale together with its predecessor activities. In parallel with the interdisciplinarity claim of the new Biennale, Gregotti for the very first time “as an architect” were in charge of the seminal exhibition of the soon-to-reborn Venice Biennale. It is possible to argue that, architecture as a social practice was the solution to the problems faced by the Biennale around the idea that the art no longer has a social utility. Yet, it is no coincidence for architecture’s institutional articulation with the Venice Biennale in 1980, it has its very roots in the



social, cultural and political atmosphere of late '60s and '70s. The objects of exhibitionary practices were also decentralized, architecture itself as both a spatial and social product together with artistic methods for research would define a research field for the Biennale, that questions "how to exhibit architecture?" "Could exhibition be an agent, an intermediary to think about the city, the architecture, the public realm?" As Martini quotes (2011: 126), Gregotti wanted to change his working method by focusing on the preparation phase of the exhibition and research; it has made clear its intention to transform the biennial from an institution that makes an anthological evaluation of the most recent artistic outputs to an institution that "supports a research method expressed through the exhibition itself [16]. In this sense, exhibition as a transversal project, a transdisciplinary practice and a transcategorical medium was put into question in one significant institution of the arts per se, which was in the turn of a radical reformation.

Organized by Gregotti as a special edition of the Biennale in 1975, the Mulino Stucky exhibition is based on "architectural proposals for the rehabilitation of the old and magnificent factory structure Mulino Stucky" located on the island of Giudecca. It was an open-call competition and workshop, an invitation to think about the large area on which the former flour mill Mulino Stucky at the west end of Giudecca is located, with an intention to finally exhibit works produced on-site/site-specific and submitted as a response to the call. Gregotti stated that the initial intentions of the competition and exhibition were not to consider Mulino Stucky as a particular place, but as an occasion to talk about many other problematic urban conditions present in the rest of the city. The show, which lasted from September 15 to November 4, was described as an "international laboratory" (un laboratorio internazionale) proposing "a common theme as a ground where art and architecture collide". It defined the city as a working space and a laboratory for art and architecture; described the space as a research object. Researchers, which were the artists and architects, in the laboratory used space as a thinking tool on a common ground, translated and produced works beyond disciplinary boundaries and categories.

The exhibition brought together art and architecture in different layers. In the institutional sense, the two disciplines, which were already established in the same section, had also been decisive in the exhibition's setup. This was the first exhibition in the history of the Biennial where artists were invited to work on site. The practice of doing in situ and "making (for) the exhibition", transforming the place in the exhibition process was something Gregotti specifically wanted to achieve: "the exhibition itself being a means of expression, researching by making (for) exhibition [17]" (Martini, 2011: 168) Here, the paper will present different conceptualizations of the quasi-object notion through various works exhibited in the Mulino Stucky event addressing the materiality of the exhibitions in various forms.

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Lines as Quasi-object: Conceptual Performativity

The Italian artist Gianni Colombo, proposed a conceptual work entitled *Considerazioni elastiche debordanti l'area*, meaning “elastic thoughts that overflows the area”. Colombo noted “area and volume” on the collage including an aerial photograph of the Mulino Stucky, representing the old factory building together with its “environment”, Venice, taking on a contextual approach. In his work which Colombo represented the planimetric layout of the factory by bending over nails white elastic lines on a black panel hung on the wall. The material relation between the factory building and the city finds its abstract form in the elastic space created through the materiality of his work. The changing relationship of the elastic lines creates different spatial conditions when any active viewer of the work changes the nodes of the composition. Having its intentionality through its multiple possible forms, quasi-object of this exhibition has an agency in the relationship between the conceptual and production processes, between the thoughts on the factory and the elastic space created in infinite forms of volumetric configuration, in which the viewer partakes as well.

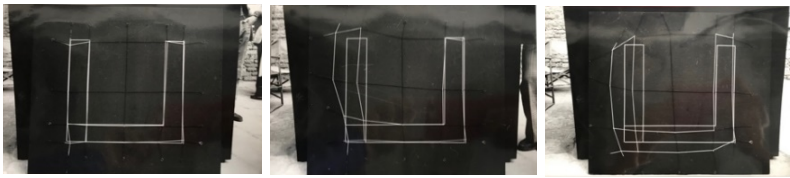


Figure 1. Gianni Colombo's elastic “space”, Mulino Stucky Exhibition, Magazzini del Sale. (ASAC, 1975: A.V.107.1975.6)



Figure 2. Gianni Colombo's work. Mulino Stucky Exhibition, Magazzini del Sale. (ASAC, 1975: A.V.102.1975.8)



Platform as Quasi-object: Fictional Performativity

Dutch painting and sculpture artist Mark Brusse, who interacted with the new Realism and Fluxus movement in the 60s and 70s, was one of the actors of the event. He proposed to build a large pyramid-sculpture on the land given as a thinking tool for the idea competition announced as the premise of the exhibition, and placed a 1:20 scale model of the sculpture in the exhibition. The text in Brusse's exhibition catalog expressed the experience that the sculpture will offer if realized at 1:1 scale. Brusse wrote in his text in the exhibition catalogue: "This pyramid, that will actually cover a square surface with sides 14 meters long and be 7 meters high, a chair 3 meters 80cms high and clogs 60cms long will float on the water in front of the mill in question. To get a splendid view you'll be able to clamber upon the pyramid...When you've got to the top you'll have the right to take a rest (for a limited time) and gaze at the mill as well as at whoever else is climbing up the pyramid."

Brusse's fictional pyramid would define a new action program for those using the pyramid, enabling another kind of visual relationship with Mulino Stucky. Platforms superimposed on each other, which Brusse formally described as pyramids, can be thought of as amphitheaters oriented in four directions. The artist preferred to use the verb "build" in the description text of the work in the catalogue, which can be claimed to address the materiality of the work. The pyramid or platforms are quasi-objects, having an agency that presents to its users a physical (climbing in and out of the clogs on the steps) and visual relationship (Mulino from an elevation above the ground/sea level) through itself. The construction of "watching Stucky" experience created a fictional exhibition as a whole composition, including the object of thought (the mill), object of action (platforms) the place installed (Venice) and the users (active viewers).



Figure 3. Brusse's installation. Mulino Stucky Exhibition, Magazzini del Sale alle (ASAC, 1975: A.V.105.1975.6)

Politics/ Policies/
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Room as a Quasi-object: Factual Performativity

The architectural duo Mario Ceroli and Gianfranco Fini installed a container in Saint Mark's Square, almost similar to the ones that large scale artworks are transported, with the names of the artists and architects partook in the exhibition on it. It was a symbolic container carrying all the thoughts on Mulino Stucky in it, and was put into fire by Ceroli and Fini recalling the fires that the old mill went through in its history, finally, half burnt, was moved to the exhibition space Magazzini del Sale, old salt warehouses.

The spatiality that the architects referred to in the work they proposed is constructed through the displacement of the box. Its spatiality is defined through displacement, not through the containment function, which is the box function. The architects participated in the exhibition in the warehouse by displaying a small-scale model of this box and the collages they produced based on the aforementioned concept of "displacement" on four panels. In the collages, the box produced by the architects was replaced with the Mulino Stucky estate, montaged to real photographs of Giudecca Island, or depicted in pencil drawing, on a scale that covers the entire area. It is important to reiterate that looking at the architects alone or the box itself is not sufficient for the research method of this study. Particularly in the context of Ceroli and Fini's work, material relationships are as important as the idea itself, yet the process and performance of the work/the work partook in is important as a whole process.

The archival documents and photographs illustrates the whole process that transcends the architects and the object of exhibition; they unveil more than what is visible in the exhibition catalogue and its categorization of the work. The photographs presents a narration through multiple spatio-temporalities: the box was first assembled and dismantled in the Giardini; the boards were transported to the Saint Mark's square on a vessel; the pile of boards left on the square before its installation acted as an urban furniture on which people stop by to have a rest; architects reconstructed the container; in another spatio-temporality container became a room in which Gregotti and Ceroli could have a private talk; firemen making preparations for the soon-to-be-started fire; the container set on fire this time on a barge floating over the lagoon; and finally re-assembled in the Magazzini del Sale for the final exhibition. This very site-specific work, not only proposes an insight for the city of Venice with its conceptual construct, but also produces multiple spatial and material constructs, overreaching the initial intentions of the architects, highly engaged with the public, creates dynamic material relations between people, places and things by means of its multiple displacements. Regarding the processual and performative character of the work that involves contingent acts and actors through the exhibition, the box of Ceroli and Fini is a quasi-object, and each "situation" it constructs and its plural materializations (photographic documentation of the performance is one) in the Giardini, San Marco, the lagoon and Magazzini del Sale, are transcategorical.



Figure 4. a. Gathering materials in front of the English Pavilion at the Giardini di Castello. (ASAC, 1975: A.V.107.1975.1b) b. Transportation of materials from Giardini to San Marco. (ASAC, 1975: A.V.107.1975.2)



Figure 5. a. Before installation of the container transported to San Marco. (ASAC, 1975: A.V.107.1975.3b) b. Installation of the container placed in San Marco. (ASAC, 1975: A.V.107.1975.6)

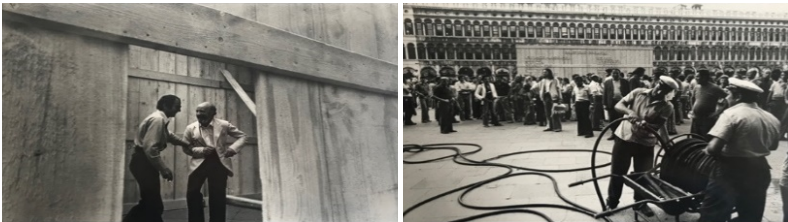


Figure 6. a. San Marco, Ceroli and Gregotti in the container. (ASAC, 1975: A.V.105.1975.6) b. Spectators in the background, container and firefighters in the front in San Marco. (ASAC, 1975: A.V.105.1975.6)

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Figure 7. a. The burning of the container in the lagoon. (ASAC, 1975: A.V.107.1975.16b) b. Re-installing the container in Magazzini del Sale. (ASAC, 1975: A.V.107.1975.12b)

CONCLUSION

This paper reappraises Venice Biennale for its significant role in the institutionalization of the exhibitionary practices, especially for architecture's "other", since it decentralizes the conventional representational media of architecture (representation of artefacts by means of scaled drawings, models and photography), distributing communicational power to other experiential and performative media traversing other disciplines, such as visual arts. Through the practice of making with an "exhibition mode", spatial agency mediates between the conceptual and the factual, from the representational to the experiential, expanding the object of exhibition to a field of multiple material relations. Yet, artistic view of architectural tectonics and space within the contextual background that this paper focuses on in relation to the history of the Biennale, redefines art and architecture on a common ground with all social and material aspects, assigns work and space a flat ontology together with their distributed agencies of processual and performative ontologies. Drawing upon a view of exhibitions considering all the actors (human and/or non-human) and their performances through multiplicity of relations and their materializations, by means of archival documents and photographic narrations that decipher materiality of their processes, it is possible to make different spatial re-readings, constructing new spatial narrations.

Regarding architectural production on the axis of curatorial practice that can no longer be defined within rigid disciplinary boundaries and be limited to discipline-specific media, the conceptual and methodological framework proposed in this paper, intends to present an alternative view of object-subject of art-architecture in exhibit, by deciphering quasi-objects throughout this very specific historical context and exhibition. Lines, platforms and rooms acts as quasi-objects in the construction of conceptual, fictional and factual performativity. The spatial works produced as a response to a call to rethink an urban complexity Mulino Stucky of Venice, are partly revisited by means of the visual and textual documentation that could not find or given a place in the exhibition catalogues but could be revealed through archival research. Drawing upon this methodological approach and the conceptualizations of quasi-object, this particular



exhibition in its very own conceptual and material conditions becomes visible in different social and spatial terms and produces other meanings over transdisciplinary and transcategorical practices of other ways of doing art-architecture.

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- Figure [1-7] La Biennale di Venezia. (1975). Fototeca, Allestimenti, ASAC, Venezia.



DIALECTICS OF OTHER WITHIN HUMAN-ACTION-SPACE TRANSFORMATION

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ABSTRACT

The concept of “other” refers to the one that is not itself in terms of its structure. Thus, the othering act causes the othering human, that human performs in relation to other beings even species or objects that he has created with his own hand.

The increasing use of machines, computers and technical equipment in everyday life, sometimes makes these devices “the assistant of human” and/or sometimes makes them “the subject, as leading the rise of concepts such as robotics, virtuality, virtual reality” related to the era which the human is in. The concept of “post-human”, which refers to a possible next-human form, gives signs that a human will be forced to become an “other” if he does not change or transform.

Within the intersection point of cinema and architecture, especially the genre of science fiction movies present a productive area in terms of reflecting the results of this change, transformations and the future predictions.

In science fiction movies, human-other phenomenon appears in possible human-android, human-robot (humanoid robot, hybrid structure), or sensitive human-digital forms. The interaction of human and the other also requires spatial interactions, which are sometimes harmonious, sometimes in a tense relationship.

In this context, analyzing and examining these relations within the framework of other-human, other-action and other-space phenomenon is an important research problem. In this regard, the sample of the study covers the films; “I Robot (2004)”, “Ex-Machine (2014)” and “Blade Runner: 2049 (2017)”, which contain various forms of representations within the framework of the human-other relationship, aiming to identify the spatial meaning and spatial character types created due to the cognitive and operational differences.

Key Words: Other; Human; Action; Space; Science Fiction Films.

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INTRODUCTION OVER “THE OTHER”

“I is someone else ... I is another ...

It seemed to me that to every creature several other lives were due”,

Arthur Rimbaud, A Season in Hell.

The concept of the other is a rather ambiguous concept in terms of its structure. It deciphers the distance between two entities, two elements, two objects, or two extremes in the opposite position. The fact that the boundaries of the element of “contrast”, which is the reason for this distance, are not drawn, makes it difficult to make a clear definition of this concept. If the element of contrast is in a symmetrical style, it can be said that the other has a distinct identity, and if it is in an asymmetric style, the other has a non-distinct identity (Onur, 2003).

In a general sense, the concept of the other refers to the non-self in terms of its structure. Thus, the act of otherness causes the person who performs the otherness to need a certain limit. In other words, each other comes across as an act of exclusion applied to those who are located opposite the person's point of view, border. From the first days when human existence began to be questioned, the boundary that a person finds in himself is a state of self-acquisition and inclusion. Therefore, the most naturally realized otherness act is the otherness act that a person performs in relation to other beings - or even objects that he has created with his own hand - that he is or is not a type of.

Other is the one who is not me, except for me, a stranger to me. Thus, the self-other relationship is established with the principle of necessity (Aytekin and Bahadır, 2019). Identity construction is a two-sided process that involves identifying the self and the other. In this process, the self exists simultaneously with the other (Posos Devrani, 2017): I become the other and the other becomes me.

Nowadays, the other is rebuilding itself in all areas when it is considered with possible future predictions. The new definitions of the other that have emerged and are expected to emerge as a result of the era in the future bring the modern person to the position of a temporal other. At the same time, it gives signs that the existing otherness will disappear. With the developments in fields such as mechanization, computer, software, neuroscience and robotics technology, brand new “subject” definitions have been started to be made. These new definitions of “subject” are an indication that new relations of otherness will be established. It is expected that in the future, with a post-human understanding, beings such as robots, cyborgs, android and artificial intelligence will gain consciousness. It is a matter of great curiosity whether these conscious beings will alienate people in the human-other relationship by displacing them from the position of the subject that has been going on for centuries. The other does not have a fixed distinct identity and can co-exist with its own antithesis by constantly undergoing changes and transformations. This situation shows that the otherness relationship is a dialectical relationship that carries contradiction or obscurity, requiring the relationship of other elements associated with the



subject's identity, rather than only occurring in a dec-subject form. It is one of these elements that the space and the actions of space, which include the human right to exist, are embodied in. For this reason, the space and the act that determine the identity of the subject are also part of this dialectical otherness relationship. As a scene where the relationship between the self and the other takes place, space contains tense relationships and actions in the subject-object dialectic.

Such as cyborgs, robots, artificial intelligence and android machines that appear as others in front of human point to the concepts of transhuman and posthuman. These beings also alienate man over time, leading the universe to a time-spatial impasse. Therefore, it is possible to read this fluid relationship dynamics of the other as a product of the changes and transformations that existence, mode of action and space have undergone, the historical process that includes yesterday, today and tomorrow.

In this context, the article based on the concept of the other aims to trail the traces of the other in the future by focusing on the movies containing new representations of the other in science fiction cinema. The main purpose of this study is how new forms of action, which are formed as a result of changing subject-object dynamics, affect and transform space. In this study, it is aimed to examine the change of human, action and space concepts in the context of digital technology difference in the future. For this reason, human-action-space elements have been analyzed within the framework of the other concept from selected movies using the visual content analysis method.

The selected movies consist of "I, Robot (2004)", "Ex-Machine (2014)" and "Blade Runner: 2049 (2017)" movies that contain different human-character representations within the framework of the human-other relationship and shape their narratives around various non-human forms such as artificial intelligence, androids, robots, replicants, and simulation systems.

DIALECTICS OF HUMAN-ACTION-SPACE TRANSFORMATION

Historical events that caused social changes have reshaped the dynamics in the relationship of many living or inanimate species in the category of being. This situation has forced certain changes and transformations of humanity and its way of life. Nowadays, with many technological developments such as mechanization, digitalization, cyber-physical systems, virtual reality, the internet services, the subjects that are expected to appear in the future have already become part of our daily lives. A modern person can find himself using contact lenses, artificial limbs, pacemakers, wearable computers, smart phones and make them a part of his body. Thus, the fact that the human has already turned into cyborg beings (cybernetic subject) (Akşit, 2017) and this has become an undeniable situation. In addition, as a result of technology, many non-human beings other than human beings have started to take their place in our daily lives. The technological human with or without bodies that we interact with has shown that we need to update our current life practices.

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Disembodied representations of the non-human come across as driverless cars, smart home systems such as home assistants that interact with sounds, chatbots on phones, and the like. Machines and robots that human has started to see in many private and public areas such as housings, factories, hospitals, offices come across as human beings with or without bodies. Nowadays, with such technological and biological developments, it is seen that the structure and content of the entity is radically changing from an ontological point of view (Demir, 2018). Non-human beings, such as autonomous and non-autonomous robots, artificial intelligence, androids and digital systems, are envisaged to have one-on-one interactions with human in our daily lives. Thus, it is known that these systems are designed to exhibit behavior and abilities similar to humans with the principle of imitating human tendencies and actions (Yıldırım, 2020). It is clear from these systems that entities such as robots or androids attributed to a physical entity exhibit a mechanical structure in terms of function and action, despite the fact that they are equipped with humanoid appearance and qualities. Therefore, in the future, in various places such as factories, workplaces, residences, it is expected that the human voice, sweat and smell will be replaced by the smell of a heated circuit and the sound of mechanical operation (Erdoğan, 2021).

Nowadays, with the exception of attempts to initiate, control and terminate, people are separated from actions and live in a world performed by inanimate beings. Most actions that people make it possible to perform with commands given by touching or talking to a screen are being digitized. These digitized actions are; visual, tactile, auditory, and, subjected to sensory reductions. It is clear that the forms of action and their sensory qualities have undergone radical changes.

Androids with artificial intelligence perform many actions such as cooking, serving, driving, consulting, judging, treating, designing faster and more accurately than humans. This situation refers to the automated and temporally compressed structure of the actions of these entities (Erdogan, 2021). Service robots that meet people, cook and serve food (Bozkurt Uzan and Sevimli, 2020) make it possible to have unmanned restaurants today. Subjects and their actions are monitored through various cameras and sensors placed in spaces, and data belonging to individuals' private lives are collected, processed and recorded via virtual networks (Erdoğan, 2021). Thus, the element of operational and spatial privacy of individuals subjected to constant supervision and surveillance is eliminated. Most actions such as reading, working, chatting have been transformed and mechanized into a structure that can be performed anywhere via digital platforms. In these examples, where the boundaries of space are blurred, concepts such as work, overtime, rest are also blurred, the boundaries of such actions fall into each other (Yankın, 2019).

Nowadays, it is possible to talk about the internet of objects and their communication, as well as about the actions of objects. Thanks to the increasing technology that mobile phones have ceased to be just a means of communication as becoming a encompassing complex such as camera, clock, calendar, stopwatch, compass, video player, etc. (Yankın, 2019).



Thus, it embodies many actions and allows it to perform them simultaneously. In this regard, there is a digitization of actions that make it possible to perform through a cyber network system. Existence and identity are becoming part of a huge network system. In the physical environment, people's actions are restricted due to the increasing concentration of these digital, intelligent and robotic systems. Thus, it is observed that individuals are pushed to the object position by becoming passive in spaces (Yılmaz, 2018).

Virtual spaces are encountered in real space with the introduction of systems such as virtual reality and augmented reality in spaces that have been transformed through digitalization (Ekin, 2013). Such technologies lead to the hybridization of space and its transformation into audio-visual products that contain virtual characters and virtual acts. Nowadays, spaces can be produced digitally, stored and saved, and added to physical spaces. Therefore, the boundaries of spatial reality have also been blurred, such as the boundaries of operational and individual reality. Today space has become the carrier of the other in itself. In this context, man, action and space are in a dynamic tight relationship that affects and influences each other. The change and transformation of any of man, action and space brings about changes and transformations of elements in other categories.

As a result, many design disciplines such as architecture, cinema, and art, which cannot be considered independent of man and his actions, have had to revise their own products. In cinema and architecture, this dialectical structure of the other, which has been the subject of many movies, also attracts attention in the genre of science fiction. Sci-fi cinema contains important examples in terms of reflecting the changes and transformations of being, mode of action and space in the context of possible future predictions.

ANALYSIS

Contemporary science fiction cinema considers the relationship of human, machine, robot, android, cyborg species and extraterrestrial beings and serves as a basis for their questioning of the "other" as a person and a subject (Akşit, 2017). In this context, the "I, Robot (2004)", "Ex-Machine (2014)" and "Blade Runner: 2049 (2017)" movies which contain various non-human beings, artificial intelligences, androids, robots, replicants, and simulation systems are chosen. Depending on the cognitive and operational differences of the main characters in the movies, the spatial meaning and types of spatial characters created in their interaction with the other are revealed, and the spaces created are compared. Visual content analysis method is used as the method in the article.

"I, Robot (2004)" over Other Human-Action-Space Transformation

The 2004 movie "I, Robot", directed by Alex Proyas, was adapted from the same named short story written by Isaac Asimov. With the fact that robots are becoming quite common in everyday life in the future, the movie is about the suspicious death of a scientist in a company that manufactures robots.

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A detective who thinks robots are unreliable holds a robot responsible for this death. In this context, the main emphasis in the movie is on the center of human-robot otherness, which is formed around physical spaces and technological spaces.

The movie tells its story shaping around the main characters such as; detective Del Spooner, robot psychologist Dr. Susan Calvin, robot Sonny, VIKI (Virtual Interactive Kinetic Intelligence) and robot designer Dr. Lanning. The movie, which presents a narrative fiction centered on Spooner, a technophobic policeman, contains various representations of beings such as humans, robots, cyborgs, and artificial intelligence. The constructed city exhibits a heterogeneous structure with multi-storey buildings and historical structures. High-speed trains and highways are located on the upper layer, pedestrians and cyclists are located on the lower layer, and ads are posted on huge screens.



Figure 1. Human-Action-Space in “I, Robot (2004)” - I

The intensive use of robots in a wide range of individual and public jobs, such as housework, shopping, babysitting, garbage collection, makes them a part of everyday life. In this context, the deconstruction of a multipart cosmopolitan society in which different beings coexist is shown in the movie with different representations of space.

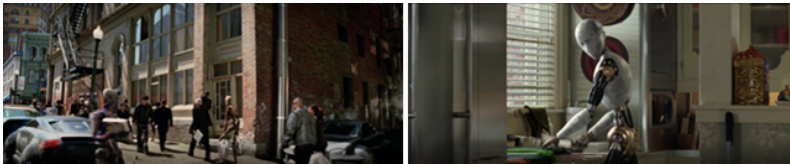


Figure 2. Human-Action-Space in “I, Robot (2004)” - II

Although it is designed based on human body measurements, with its mechanical and androgynous appearance, strong and agile structure, the robot Sonny comes across as a representative of technology and the other of detective Del Spooner. Spooner, on the other hand, still wakes up with an alarm clock, prefers a controlled music player and a manual driving system. In this regard, it represents a more traditional one, far from the technological innovations of the era.

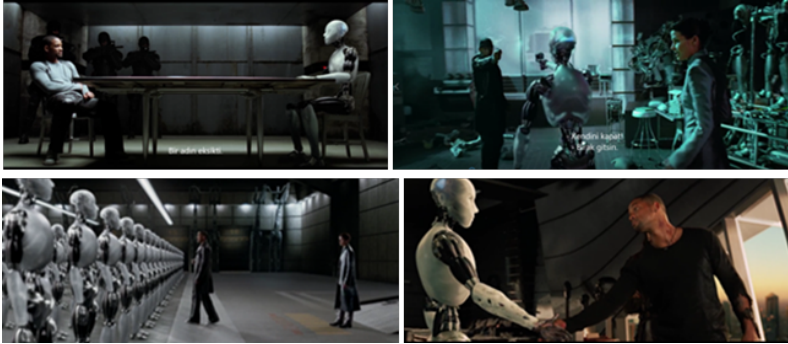


Figure 3. Human-Action-Space in “I, Robot (2004)” - III

The spaces in which beings and their actions are inherent contain opposites to each other, such as traditional-technological, unity-multiplicity, upper-lower, natural-artificial, biological-mechanical.



Figure 4. Human-Action-Space in “I, Robot (2004)” - IV

The “I, Robot (2004)” movie predicts that in the hybrid society of the future, many beings will develop a heterogeneous way of life, such as human and machine hybrids (cyborgs), non-living beings such as robots (androids) and natural human beings. In the movie, it is observed that by maintaining their genre differences, coexisting beings give rise to different, non-intertwining spatial deciphering from each other.

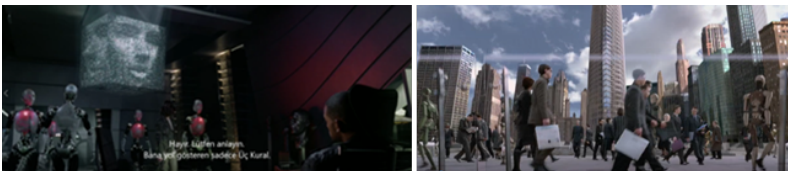


Figure 5. Human-Action-Space in “I, Robot (2004)” - V

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“Ex Machina (2014)” over Other Human-Action-Space Transformation

“Ex-Machina (2014)” is a British movie written and directed by Alex Garland, which has received many awards. It deals with the selection of a computer programmer working in a software company to test artificial intelligence. In the movie, the relationship between artificial intelligence and human with a half-human, half-machine appearance is questioned. Therefore, the movie is set in a research laboratory, which is the habitat of two different species, and houses the habitats of two species.

Although there are many different characters in the film, such as company employees, pilots, other people, and other artificial intelligence robots, the film establishes its narrative through four main characters: Caleb, who works as a programmer at the Blue Book company, is the CEO, and Nathan; a technology entrepreneur, Ava; an artificial intelligence robot, and Kyoko; a humanoid service robot. The main theme of the movie is shaped around human and non-human relationships.



Figure 6. Human-Action-Space in “Ex Machina (2014)” - I

Caleb initially reestablishes the male-female otherness that was blurred in his relationship with Ava, forgetting that she is an androgynous machine (Wennergren, 2018). Ava, on the other hand, deceives Caleb, who knows that he is watching her, exposing his primal instinct of protection and attracting her to his side. In the movie, Ava and Caleb’s differences are highlighted by the characters’ positions, actions, and spatial arrangements. Despite this, Caleb gets caught up in the human-centric hierarchical sexist thought structure and ignores the real existence of the other (Wennergren, 2018). The affective closeness between the characters increases in the genre context, decays in the context of otherness. Ava’s bed is a symbolic bed that mimics the actions of people to sleep, her closet is a symbolic closet that mimics the act of dressing. Her cell, on the other hand, is a symbolic room that mimics the others’ room and excludes her real actions. Ava is the other one in this room.



Figure 7. Human-Action-Space in “Ex Machina (2014)” - II

The above-ground areas of the structure that receive natural light are identified with Nathan and Caleb, limiting the use of artificial intelligence in these places. This situation provides an example of hierarchical otherness within the framework of the concepts of parent and child in the structure. The upper floor spaces contain more free and uncontrolled areas than the lower floor. For this reason, it is positioned closer to the residential function and the modern understanding of architecture, and therefore closer to humanity. In this context, according to the flow of the movie, the above-ground spaces acquire an identity that excludes the non-human and the underground spaces that exclude the human beings.



Figure 8. Human-Action-Space in “Ex Machina (2014)” - III

It is observed that the function and temporal image that accommodate multiple actions in spaces are decoupled together simultaneously. Thus, the traditional-technological, natural-artificial, local-global, controlled-release, whole-piece, ground-surface, solid-transparent concepts expose spatial forms on the axis of meaning and shape. Due to the fact that the most of the events take place in a single structure, the opposite actions and postures of the characters are encountered within the same space. Accordingly, it is seen that spaces exhibit dual characters on the basis of

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dualistic oppositions. The concepts of hybrid and in-between become part of spatial identity, making the boundaries of space indistinguishable.



Figure 9. Human-Action-Space in “Ex Machina (2014)” - IV

“Blade Runner: 2049 (2017)” over Other Human-Action-Space Transformation

Denis Villeneuve is the director of the 2017 movie “Blade Runner: 2049”, a sequel to the 1982 movie “Blade Runner” (URL1) . The movie, which is about what happened thirty years after the events that took place in the first movie, shapes its story around the fiction of a dystopian future. The movie is set around a hunter who hunts down the remaining replicas by producing and removing human-like replicas from the market in the future. The movie, in which the boundaries of replica, human, and virtual reality become unclear, takes place in the future and houses spaces transformed by technology.

The story of the movie, which is formed around a wide variety of representations of beings such as people, replicas (copies), holograms and hybrid beings, also includes new lifestyle fictions about the year 2049. In the movie, where people remain in the minority, non-human representations are concentrated, most of the main characters are included in the non-human category. Human representations are presented by the characters of Lieutenant Joshi and Deckard around the police department.

The main character is officer K., a “blade runner”, an android and a next-generation copy. K.’s function is to find and eliminate the old version replicas by retiring them. A box he found on a protein farm during his mission, carries clues to a child who was born as a hybrid of a human and a replica. The fact that K.’s memory match these clues pushes him to an identity query. Therefore, from this point on, the movie turns into an identity quest that takes shape within the framework of K.’s encounters with other characters.



Figure 10. Human-Action-Space in “Blade Runner: 2049 (2017)” - I

The fact K. found Dr. Ana Stellina, a memory generator, indicates the encounter of a real hybrid in the virtual world and a duplicate being in the real world. The glass fanus in which Stellina with a collapsed immune system lives serves as a boundary separating Stellina and K., hybrid and copy, real and fake, living and mechanical. The world to which Stellina belongs is built on virtual spaces, to which the most vivid, full of life and natural places of the film now remain in the memories. The world to which K. belongs is based on real spaces, mechanical and soulless, covered with artificial materials such as glass, steel and concrete.



Figure 11. Human-Action-Space in “Blade Runner: 2049 (2017)” - II

In the movie, it is seen that K.'s girlfriend Joi, a holographic being, and Mariette, a prostitute, a replica, touching K. by intertwining their physical and non-physical bodies. In these and similar scenes, we witness that the boundaries of actions are also blurred in a context where the boundaries of beings are blurred. The hybrid act of touching synchronized bodies refers to a hybrid, mixed reality in which physical and virtual space overlap.

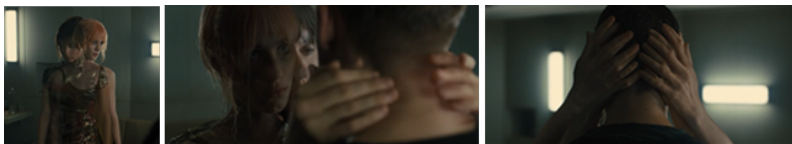


Figure 12. Human-Action-Space in “Blade Runner: 2049 (2017)” - III

The representation of the city center and its border as opposing sides that decouple each other stands out in terms of the way people and replicas coexist. There is a dense construction of multi-storey buildings in the city center, flying cars, huge holographic advertisements projected on buildings. On the other hand, there are places where housing excluded, oppressed characters such as destroyed and ruined buildings, metal waste storage areas, orphanages are located. In this context, it is observed that the city center and the city border have become the “other” of each other by taking opposite positions to each other.

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Figure 13. Human-Action-Space in “Blade Runner: 2049 (2017)” - IV

Blade Runner: 2049 (2017) movie reflects a rather heterogeneous but intertwined structure of society-people, replicas (copies), hologram beings and hybrid beings. The movie is based on the novel “What does it mean to be human?” aims to reach the answer to the question in exchange for a human-replica. In the movie, where entities, identities, objects and actions overlap and cannot be distinguished, spaces also contain representations at various scales where virtual and real are intertwined.



Figure 14. Human-Action-Space in “Blade Runner: 2049 (2017)” - V

CONCLUSION

Space is one of the integral conditions of existence as a place organization inherent in human and his actions. Space contains important data about the identity synthesized in the relationship between the self and the other, moreover, can be changed, transformed and reproduced according to the self-other interactions and dialogues. In this context, space creates its own others in one place as well as being as the other.

Each object carries some kind of conflict and contradiction in its essence. As a bilateral process in which these conflicting and conflicting opposing parties can change and transform each other over time, identity acquisition



is a dialectical process that requires constant movement and flow. It is known that in nature white has meaning with black, existence with absence, life with death, they exist thanks to each other and with each other. In this regard, everything is with the opposite, I am with the “other”. Human has been living together with the non-self for millions of years. Nowadays, new definitions of “other” and “otherness” have emerged due to technological advances and changing lifestyles. The journey of understanding the existence of human reveals his synthesized identity, the essence of existence, which is produced by the dialogues and encounters he enters with these othernesses.

“What does it mean to exist?”, “what is being?” these questions are closely related to the actions of human in his timewise and spatial existence. To exist is to be in a time and space. According to Aristotle, space is formed by a number of force formed by interacting entities and interactions (Güvenç, 2012; Sevinç, 2013). In other words, space is a relational and dynamic phenomenon whose boundaries are ambiguous, which changes and transforms with the interactions and actions of beings. Space is a process (Sevinç, 2013) and it continues to be produced with new encounters and interactions about the self and the other on an ongoing basis. For this reason, space can be considered as a field of struggle (Sevinç, 2013), which is shaped by the relationship between the self and the other, and, forms this relationship with their action.

As can be seen from the article that human, action and space are an integral whole, a product of relations produced with each other and the other. In this context, the actions of an entity include space, and space contains a dialectical relationship that changes and transforms entities and their actions. It is clear that the fundamental changes in the relationship of human, action and space will be shaped in relation to each other also in the future due to digitalization and technological developments today. The situation of displacement of human, his act and space and their replacement with a whole new reality will be discussed as possible consequences of technology.

As can be clearly observed that human, action and space exhibit a strictly interconnected, relational and causal dialectical structure. Innovations and digitalization brought by technology bring new definitions of assets, these assets bring new definitions of actions, and these forms of actions bring new definitions of space. It is a fact that this dialectical relationship, which has taken shape in the past in relation to the categories of otherness in the present, will also emerge in the future. This dialectical relationship that the elements of human, action and space have established with each other and with their own others will continue to be a dynamic relationship that is constantly changing and transforming depending on the other.

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URL1: <https://www.imdb.com/title/tt1856101/> (24.08.2021)

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STATES OF OTHER(S) AND OTHER'S SPACES:

ANAMORPHOSIS OF SNOWPIERCER

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ABSTRACT

The space establishes an existential connection with human and plays an important role in discovery of himself and of the space that he is located in. The human often tries to know his specific place by determining boundaries for the purpose of recognition and identification. These determined boundaries exclude others as the reason for single centrism and reductionism.

Anamorphosis is an important form of reflection and illusion which is based on scientific infrastructure. It allows space to reconstruct its dimension within space and meaning it has, and to reveal other fictions it contains. Anamorphosis is also a philosophical concept used to reach and understand the system of thought behind designed fictions, questioning the relationship between real and seemingly real representations.

Anamorphosis '*allows you to reach out to others without excluding it by moving away from what is in the center*', and in this aspect, it creates a perceptible space that causes the boundaries and reality of space to be questioned. This area allows the boundaries between the center and the others to vary between certain and uncertain states. It is the re-experience and perception of space, in the reproduction and acquisition of meaning within the boundaries it has.

In this context, the aim of the article is to sample the '*other states of meaning and form generation*' under the main heading of "space" through multiple forms of vision and ways of seeing with visual content analysis method. In this context, the article discusses the '*other states of meaning and form of space*' through the example of *Snowpiercer* movie (Bong Joon Ho, 2013) over anamorphosis. Other definitions of space and space productions in order to achieve the concepts of anamorphosis; such as; "perspective", "deformation", "illusion", "certainty", "uncertainty" are discussed through *Snowpiercer* to present the creation of other states of meaning and form of producing architectural spaces.

Key Words: Other; Space; Anamorphosis; Cinema; *Snowpiercer*.



INTRODUCTION

Human establishes a communication with everything that he encounters when realizing his existence. This communication is a complement to the existential side of human and a promoter of his existence. A person is born, grows, lives and dies, and when performing these he touches a lot of people, living beings, objects, nature, space, time, in short, other beings and existences. Human is a part of the world within the existing "order"; he continues to act as a whole with formations with his own and outside his own. Human who sees the other as a catalyst, knows that he must be side by side with the other, sometimes brings the other closer to his center, sometimes ignores and despises the other, but the other -perhaps- have existed as the most effective assistants in human's self-deciphering. So there has been other(s) in all philosophical, political, sociological, social, economic, individual and human formations. The other is a negative, ineffective, excess, but complementary one according to the changing time and space.

Human needs himself and what is outside of himself when defining himself, as well as various places to act while existing himself. Space provides an environment for human self-realization. Every response that space gives to human makes an impression. These effects trigger new space formations and changing thoughts. This communication, which space establishes and is obliged to establish with human, also allows the search for the concept of the other through space.

In this context, the article re-examines human and space on the basis of "other" with an interdisciplinary approach. Within the scope of the article, the concept of "other" is identified with anamorphosis, which is used as a dynamic in art and science since 15th century and forms the basis for studying the states of human and space. Anamorphosis is the deformation of the clear, representing the visible face of the deformation. With the set of limited concepts contained in it, it allows the emergence of unlimited potential within it. In the article, other states of human and space are examined with the concept of anamorphosis, which allows a search on the contact surface of the disciplines of cinema and architecture.

THEORETICAL BASE

Other

The other, as a concept that has been the subject of various studies, has also been shaped on "different" base over the ages. Different colors, races, languages religions, geographies, cultures, values, beliefs, meanings, images, looks, feelings, thoughts, feelings, behaviors are the judgments that create the other.

The other is basically defined as "the one that is far within two objects in importance and position" (TDK, 2021). The other is the excluded side of the self and what is in the center, it is what helps the self-identification of the

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self, it is a meaning aimed at determining its position in society (Şeker, 2018), (Bayrakçı, 2009:60). Society consists of me and the others, and each other is another self. The other is a primary being, like the self, and it is real (Gasset, 1999; Gülten, 2003). According to Foucault (2006:455), the other is the descriptive, external and indispensable one that is not included in the order. According to Baudrillard (2004:152), the other is the one whose existence is mandatory in order to become one's own; the other is the one who ensures the continuity of the existence and meaning of the self (Kökten, 2013:30). The other is the missing (Schnapper, 2005), which does not belong (Frankenberg, 1994), what modernity characterizes as a threat (Baumann, 1991), what human needs to be identified (Levi Strauss, 1997), (İnce, 2011; Öztürk, Gümüşoğlu & Gezer, 2018).

The definition of the other that establishes a relationship with the self leads to the fact that it is built not only in the past and present, but also in the future. In all subjective and objective expressive fields there are others that vary from each other on the basis of "different". These fictitious others give rise to the continuity of the position and changing definitions of the other by imposing a purpose and responsibility on human.

Space

Architecture is a discipline that regulates, organizes, limits human life, offers aesthetic integrity and an impressive image, produces solutions with scientific and technological developments, and constantly renews its definition and production with the changing desires of the age. Space is made for human, and human shapes space, and therefore his own movements and freedoms.

Every moment of a human passes in a space. Space, with its meaning and form of expression, is not absolute and unchangeable (Altan, 1993). The space is placed in a meaning and position by being perceived by human with every feature that it contains and carries in its fiction. Each consciously used texture, smell, color, material, etc add meaning to the integrity and depth of space. Space is political and strategic, it is a product and a producer, it is social and it has a history (Lefebvre, 2014).

Other and Space

The idea of leaving out the traditional productions and achieving a universal linguistic unity such as modernism has led to otherizations in space and architecture with the points of view taken at the center in various periods. The other is also included in architecture as a concept of expressing human and human beings (Ensarioğlu, 2020). The space is organized with others that are constantly changing; it becomes the space of the other during the construction and the using process (Uluengin, 2011). The space is arranged according to various people, limited and stamped in the context of certain meanings in order to reference the relationship between human and the other. Utopias and heterotopias, virtual spaces, local and global structures,



cosmopolitan cities, metropolises, dark dirty streets are seen as other spaces or places as undesirable and different ones.

Anamorphosis

Human lives by exploring, achieves and enjoys new things by seeing and acting. Seeing is also one of the ways in which human expresses himself, because human tends to see things that leave traces in his memory. When the way the truth changes, its reality also changes, and the mind tries to reach the sense of visible reflections of reality. In this context, anamorphosis can be considered as an approach that references the way the truth is expressed (Keleşoğlu and Uygungöz, 2014: 3-4).

Anamorphosis, which arose with its development after the discovery of perspective in 15th century, makes it possible to produce productions that cause the questioning of reality as a phenomenon and has acquired its place in various disciplines. In the etymological dictionary, anamorphosis is defined as “distorted projection or drawing”. The word of Greek origin was formed in 1727 from the combination of the two words; the “ana” as “up, back, counter, again” and the “morphe” as “form”, which anamorphosis points out a “transformation”, (URL-1, 2021).

Anamorphosis is used in various disciplines such as visual science, astronomy, photography, perceptual psychology, physical-plant-natural sciences, biology, information processing and retrieval in computers and videos as distortion of form with metaphorical point of view, a method for hidden messages in art dynamics (Collins, 1992).

In philosophy, anamorphosis is a method that Zizek uses to analyze and study cinema and literary products by adopting an awry point of view over Lacan's concepts. In his book “Looking Awry: An Introduction to Jacques Lacan through Popular Culture”, Zizek treats anamorphosis as an “awry look”, which means that the hidden sides of the visible can be reached with an “other” view, and the comments reached with this view present the changing states of *‘there is’* and *‘there is not’* between subjectivity and objectivity (Zizek, 1992).

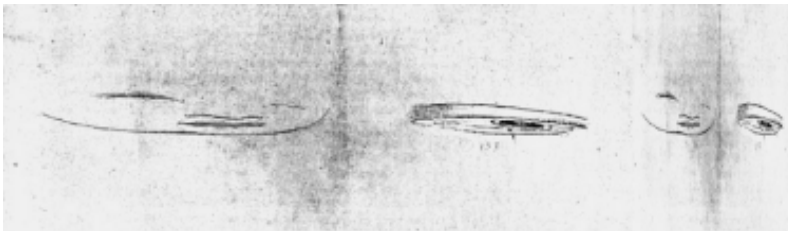


Figure 1. Anamorphosis of a Child's Face and an Eye, Leonardo da Vinci, (Baltrusaitis, 1977: 33)

Anamorphosis in art first exists with the drawing of Leonardo da Vinci's “A Child's Face and an Eye”. Hans Holbein's “The Ambassadors” comes the

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subject of various studies. Anamorphosis in art is an approach with its own set of concepts and technical characteristics which is a perceptually effective stimulus, conditioned to see with its own objectivity, presented by secrecy and subjectivity.



Figure 2. The Ambassadors, Hans Holbein, 1533 (URL-2, 2021)

Technical and systemic deformation creates a general unsystematic image of anamorphosis (Yazıcı, 2015). Anamorphosis is related to perspective, it is distortion, formlessness, experimentality and mystery (Kaya, 2020), (Kocalan and Türkdoğan, 2018). It allows you to rise to the potential of deep power that reflects the way we see the world coming together with the tension of attention, perception and questioning, an approach to put the relationship of human and his seeing in the center, an eccentric information source, an exploratory metaphor, the harmony of artistic expression and fiction (Collins, 1992).

Anamorphosis, as an approach that has been discussed and studied by various thinkers and is the subject of various studies, presents a changed and consciously distorted image of a work in the same fiction as its original state, whose balance and integrity are intact. The distorted, deformed image is a triggering perceptual stimulus for human. The perception and the meaning produced through the way allows new interpretations, meanings and views that the anamorphic image presents to the viewer.

Anamorphosis in its own expression includes certainty, uncertainty, deformation, perspective, illusion, meaning and reflection.

Anamorphosis refers to deformation, while deformation is an uncertainty. In other words, anamorphosis represents the moment when uncertainty becomes decisive. The interrelation of certainty and uncertainty forms the area that allows anamorphosis to exist. The perspective that leads to make the image visible, sometimes creates a reflection, sometimes creates an illusion. A reflection or an illusion is a message, meaning, point of view and a fact that can be questioned.

Other and Anamorphosis

Anamorphosis is the reproduction and construction of vision with certainty and uncertainty. Anamorphosis refers to both the central one and the other.



The two-way relationship of the center and the other allows both to be identified and questioned. In this context, anamorphosis is defined as "another one". It defines the main image in the center at a general and special glance, centers its designed fiction and makes every look other than its own.

Cinema, Architecture and Space

Cinema is an art that allows communication with the audience, which hosts interdisciplinary interactions. Cinema offers deep meanings that affect the audience with each piece it contains, creates a space full of symbols and images, transforms not only the perception of the individual, but also the way of thinking and understanding, this transformation shapes the effect of fiction created with conscious arrangements in the cinema on the audience. (Sarmış, 2015). Cinema has a fiction based on movement and focus. In this fiction, the camera can both move in all directions and allows all existing movement to be organized and shaped. The camera; identifies the human with movement and causes him to live in a simulation, in this case the concepts and perception of reality and reality in the fictional universe are the product of camera movements. (Çiğdem, 1999). The camera presents a framed image. Within this framework, each object, not only visible but also invisible, indicates a meaning, the way the image is presented improves the way the individual sees and changes the way of his understanding. (Arisoy, 2019). Cinema is a new method of space identification that can represent space and make criticism of architecture, allows discussions with examples for architects, and makes "others" possible in the way it presents space (Kaçmaz, 2004). It creates a rich resource for architecture and architectural space in these aspect. In this context, the venue that cinema reveals is actually located on the variable axis between the center and the other.

METHOD

The *Snowpiercer* movie is one of the important examples in terms of showing the others and other spaces. The part of the dominant system that shapes people and therefore society is shown through the movie with a dystopian world. Social formations organized by political power limit individual-social power, access and circulation by organizing the formation of spaces and the otherization of people with their spaces.

In the movie, the habitable world is placed on a train and a new world scale is created that is socially repetitive and spatially integrated with the old world. The characters featured in the movie continue to take shape on the basis of "me and the other" as a reflection of the current world order today. Spaces, on the other hand, make various others possible by containing uncertain variations within certain boundaries. In this context, the characters and spaces of the movie are analyzed with the anamorphic concepts of "perspective", "deformation", "illusion", "certainty" and "uncertainty" which makes the others accessible. The "other meanings and forms of space" is put forward by visual content analysis method with an anamorphic view.

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SNOWPIERCER MOVIE

Snowpiercer (Bong Joon Ho, 2013, South Korea, Czech Republic) is an award-winning science fiction movie based on a French comic book, released in 2013. The scenarists are Bong Joon-ho and Kelly Masterson who tells the story of a railcar of 1001 train called Snowpiercer, its being as home to the last living people, who are kept under control for balance and order (*Snowpiercer*, 2013).

In the movie, a gas called CW7, released into the atmosphere by a common decision which many countries came together to fight global warming in 2014, quickly lowers the temperature of the earth beyond the level to be experienced, and, the earth freezes. Selected, lucky people with a ticket are forced to lead their lives on a train for seventeen years. Except for elite people who have tickets, people without tickets, called tailors, also get on the train. In the train, there are groups of people who follow each other as VIP, economy and tail section from the front to the back.

While those in the front part can adopt the train as a natural world and take advantage of all its facilities, the tail section has been forced to live in a metal machine with limited access in a small area. Limited access to vital needs has also led to the occurrence of various riots in the tail section within seventeen years. The movie tells about the rebellion, which will be called the "Curtis Rebellion" by Wilford, which took place in 2031.

ANAMORPHOSIS OF SNOWPIERCER: STATES OF OTHER(S)

The characters of the movie are Curtis, Gilliam, Edgar, Tanya, young children Tim and Amy, from the prison; Namgoong and his daughter Yona. As providers of order; Mason, executioners, soldiers and a teacher, and from the locomotive department, Wilford and Wilford's close friend Claude are other characters. Apart from these characters, the movie features various characters from the front section/VIP, economy and tail sections in various scenes.

Snowpiercer is presented as a habitable new world. In the context of a new and livable, self-contained world, the system-power (Wilford) does not give up the distinction between his own and the other. The system organizes living standards and social relations by moving to an economic classification. The new societies of the new world are formed on the basis of power and money rather than different races, languages, religions. Social relations appear on different scales as those who are served and those who serve. The movie is a reflection-illusion of the current world order today.



Figure 3. States of Other(s)-I



Throughout the movie, the emphasis on “different” comes across in every scene. The relationship between human and other is based on the “differences”. The tailers are described as an undesirable other for all the remaining groups on the train. With their rebellion to improve their freedom and living conditions, they alienate all groups except themselves and try to settle in the “I” position. The economic department creates another balance for the front department by pointing to a society where living standards are starting to get better with providing and receiving services. The front part is the new self of the newborn, who sees himself in the center and needs various others to meet his needs. Duringout the movie, Wilford is the rule-maker as the provider of balance and order.



Figure 4. States of Other(s)-II

Curtis, one of the main characters, represents a variable other-self relationship between certainty and uncertainty throughout the movie. Certainty allows the definition of boundaries, while uncertainty refers to variables with variations. It is difficult to control and predict uncertainty. Curtis, placed in different positions in the context of various others and groups, is a student as a result of his relationship with Gilliam, but wild for tailers as a starving human and baby meat-eating individual when he first boarded the train. After starting to feed on protein bars, in seventeen years Curtis becomes a comrade for Tanya, Edgar and the other tailors, while for the regulars, he becomes a threat that must be stopped during the rebellion process. Curtis is a dirty tailman for Namgoong, the leader of the future for Wilford. All these situations prevent Curtis from being a certain other, Curtis is an uncertain self and other.



Figure 5. States of Other(s)-III

As providers of order, soldiers, executioners and teachers represent certain others in position and function. By working for balance, they fulfill the responsibilities imposed on them without question.

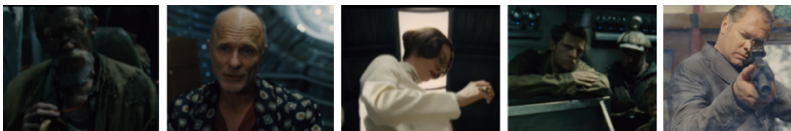


Figure 6. States of Other(s)-IV

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Education

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When the characters of the movie are approached with the concept of illusion, Gilliam and Mason appear as the characters who most harbor the illusion in the self-other relationship. Gilliam can be considered as an other whose definition varies depending on the person he contacts. Gilliam occupies the position of an altruistic sage among the tailors. According to Mason, it is a remarkable other. The cooperation and friendship with Wilford that appears in the final scenes reveals that Gilliam is actually in a sense in the center, who provides the central dominance.

Mason, on the other hand, is shown as a reflection and illusion of Wilford. He is effective for order, control, and provides communication. He is the one who harbors fear and anxiety in himself and easily changes his life for the sake of survival. These features also indicate that Mason is an ambiguous character. In fact, he is neither as himself nor as the other in this whole system. He is a representation of the reflection and illusion of the self-other relationship.

Edgar, who wants strength and comfort, thinks that the only way to get rid of the perception of being other that is labeled on him is to destroy himself. This desire points out the deformation in himself in leading the destruction of Edgar for being as the other. In the same way, the constant reduction policy has been tried in the tail section such as restrictions on accessing the food and other needs, but on the contrary, the ability of the locomotive to work and the need for service with the tailors is also an indication that destruction of one self endangers continuity. In other words, one needs the other as well as the other needs one, and this interaction is necessary for the continuity of life.

Another deformation in the movie is shown by the fact that a soldier whose friend died also killed other soldiers who came in front of him to kill his friend's killer, ignoring the responsibility that the system placed on him. This situation is actually an example of how an individual can get rid of the perception of the other and become the self again, both created by himself and stamped by the system on him.



Figure 7. States of Other(s)-V

When viewed through language and communication, Namgoong becomes an other among others as a Korean who does not speak English. But he becomes valuable with the ability to open doors. As long as there is no need, tailors, that is, those who take the train for free, are undesirable and should be kept under control. Art, science, science, health care and all other "luxuries" are exclusive only to the elite, to those who are in the center.



ANAMORPHOSIS OF SNOWPIERCER: STATES OF OTHER/'S SPACES

In the movie, Snowpiercer appears as a world that houses various venues within each other. In fact, the train is the place of various others. Small cabins, in which several guests maintain a short-term reign, make each other a short-term self. Within the scope of the movie, the train traveling through many different geographies, which is constantly moving and navigating, is actually presented as a social place that clings to life with the presence of the other. If there are no other geographies that it will move to, the train will not be able to continue its life. The fact that the train, which is a place of others, is trying to get rid of the others and also needs their presence, indicates a semantic and spatial conflict caused by ideology.



Figure 8. States of Other/'s Spaces-I

In the movie, the spatial scale has changed with the freezing, the city-residential scales have melted into each other, leaving their place to the wagon units. The spaces of otherized people are also otherized. The otherization begins with the restrictions of a person's movement. Acting with the body, he experiences space, produces and gives it meaning. The train represents the body of society as a newborn. All otherizations in society refer to the otherizations of the train from a spatial point of view. Instead of the function of space to shape a person, the function of a person shapes space. This situation leads to the emergence of new definitions of space for the newborn. The definition of a space where the person's being is in the center turns into the only thing that defines space. In other words, the function of a person causes space to acquire a name and definition.

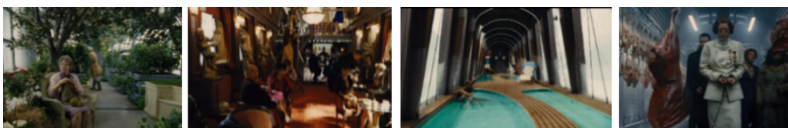


Figure 9. States of Other/'s Spaces-II

With in the scope of the movie, the train presents changing images in various perspectives such as house, garden, restaurant, school, prison, dentist, aquarium, casino, bar, etc. All these spaces actually represent the social, desired, undesired, comfort and interference spaces of the real world. The spaces in the movie, within sharp boundaries and limitations, form certain and ambiguous variations for the self and the other.

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Figure 10. States of Other's Spaces-III

For tailers (from the perspective of an other), the train is a colorless, lightless, limited, lethal pressure mechanism in which food, life and health units are intertwined, general needs are reduced and reorganized in the relationship between the self and the other. It is a comfortable new world with all the facilities for the members of the front section. The train corresponding to a different perspective from the eyes of each other is actually a machine and is quite far from being natural.



Figure 11. States of Other's Spaces-IV

When approaching movie spaces with the concepts of certainty and uncertainty, various others come across. The train is presented in a fiction where the boundaries and design are fixed, but the entire border and design are reshaped by the actions of the user. This fiction also allows a combination of deformed and deconstructed images of the train.



Figure 12. States of Other's Spaces-V

In the movie, the flexibility of space is not the limits, but the flexibility of the parts, objects, and colors used. In fact, each place on the train can take on a different space with several objects. Each changing space creates the other for the other. It can be seen that comfortable spaces are produced for the needs of each object, color, texture and front section used in certain areas. From the economics department to the tail section, there are binding spaces that are not clear whether it is circulation or a living space, and vital areas that are intertwined with several items. The production of these areas is rather unclear. Because it is the function of the user, not the action or the need, that ensures the production of space. There is no natural light in the tail section, the train is interpreted as a machine control mechanism. Within this framework, various spaces have been superimposed, the special state of the space has been deformed. For having certainty and uncertainty, spaces have turned into spaces that respond to many needs at the same time and actually do not respond to any function. The tail section is otherized



in a similar way to the trail, dirty, dark streets. In this section, the living space and vitality are completely based on the artificial. It refers to the “natural” prohibitions for tailers. The most specific places of the train are the garden-aquarium-butcher’s places. The reason for this is the clear answer given by the user not for its function, but for its need.



Figure 13. States of Other’s Spaces-VI

The fact that the train cabins have similar proportions in terms of width, length and height, give the illusion that there is a homogeneous space distribution where there is no physically a central space. But in the scenes, heterogeneous distributions are involved, rather than a homogeneous image. This situation refers to the deformation caused by the meaning shifts related to the users. The spaces in the train contain various deformations of physical, semantic and functional dimensions, and these deformations make other productions of the space possible.

In the movie, the greatest physical deformation is shown by the loss of the vitality of the real world. While the world is home to people as an existential and natural place, it has been deformed by freezing due to habitability, and therefore it has been otherized. The fact that the train manifests itself naturally and alienates the real world, the train is an indicator of deformation in a semantic dimension. The movie features an artificial natural environment bounded by a built environment. This artificiality provides a new definition of the natural environment. As a functional deformation, the train has moved away from being a means of transportation and turned into a new world for the last people to live in, and this new world contains various spaces as a reflection and an illusion of the other world. The train changes its meaning from transportation to transportation forever and presents the audience with the illusion that it can actually always respond to many functions.

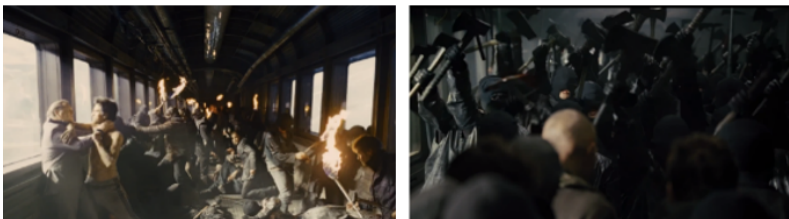


Figure 14. States of Other’s Spaces-VII

Another semantic deformation is that the train, which is replaced by a world for the continuation of vitality, responds to various functions, turns all the spaces into a place of death and war throughout the movie, distorts the vital from a semantic point of view and connects it with death. The meaning of space is deformed, and the space hosts it as a witness. This also refers to

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another illusion that the movie presents through the vital. Because death and war are meant to keep the others out of self's comfort zone. It is seen that illusion and deformation allow for various productions and analyses that trigger each other.

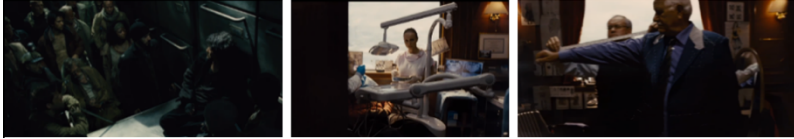


Figure 15. States of Other's Spaces-VIII

The prisons in the movie appear as a box resembling a morgue. The economics department is full of cabins that will meet various professional groups and vital needs. The functions that differ with each cabin are shown. Nature, animals, light, music, entertainment are presented in the front section with carefully prepared spaces for man.



Figure 16. States of Other's Spaces-IX

In the ending scene of the movie, the disappearance of the train which is the place of artificial productions, the demonstration of the world which is livable again, indicate that the entire fictional reality is an illusion.

CONCLUSION

The concept of space has continued to enrich itself by increasing its power with developments in the field of art and science, starting with the need to mentally and physically shelter from the past to the present. Space continues to be constantly produced with images and definitions that change as a human being between the center and the other, and it takes on different meanings with its multifaceted side it contains. The center exists with the other, in order for the center to be defined, it is necessary to be different from it, the other is what is inside and outside the center.

Each space has an arrangement for human actions, ergonomic approaches and possibilities of the place in which it is located. With the developing technology, each space definition has also improved and hosted new regulations. Every space that is physically, virtual and mentally generated approaches the center by moving away from being the other. The concept of space, which is located on the common axes of different disciplines, societies and geographies constantly changes between the other and the



center in this aspect. This cycle also allows the space to take on various roles.

Snowpiercer movie presents new definitions of space, other space states and other states by analyzing the concepts of perspective, deformation, illusion, certainty and uncertainty that are contained in the concept of anamorphosis in order to make other productions accessible from an anamorphic point of view. Each image in the fictional reality refers to various self-other relationships for a search and interrogation. Self-other relationships within the scope of the movie are determined by the user's function.

In the movie, it is seen that the thought of deformed and transformed meaning becomes a means of expression, a representation for space. With the acquisition of the illusion property of meaning, the variability between the qualities that should and should be owned in the spaces begins to be deciphered. In contrast to the spatial formations produced through repetition, where the central one is superior, the spaces in the work present images that transform with the quality and function that the user has, where their boundaries remain constant, rather than a meaning and formatting that corresponds to the spirit of space.

In the movie, changing images appear as a reflection of changing others. Mental formations, built up by past experience, in addition to physical, semantic and functional organisations, produce various spaces as visible facts. These spaces refer to various perspectives in the way of production. Each perspective takes on a different meaning and function and creates others that are different from each other. Approaching the *Snowpiercer* as a machine, on the other hand, reveals the meaning that all other perspectives are an illusion. The illusion defines a field for questioning the apparent reality. With this inquiry, it is seen that the others on the train are made accessible by the deformation of meaning and function. Deconstruction is the cause of the change between certainty and uncertainty. In this context, it can be said that all kinds of deformations that have occurred on both characters and spaces present images that vary between certainty and uncertainty and form the basis for the production of the other.

With the *Snowpiercer* anamorphosis, it has been observed that the way of using and displaying space can change itself with changing conditions and reveals other fictions and definitions of space contained in it. In this context, it can be said that the integrated change of space to changing living conditions is being reshaped in the unchanging human-human and human-space interaction. With the analysis of the movie, it becomes clear that every time the space becomes an exhibition object, the definition of which now changes. From a semantic and formal point of view, spaces are treated by differentiating again and again, and these differences form the others of space.

As a result, the following questions are raised: What kind of perspective bases on the relationship that we have with the other? Is the relationship we have with the other actually a deformed relationship? Does this deformation

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trigger otherness? Do we rely upon illusion to create the other? Does this illusion show us ourselves? Does uncertainty give rise to the other? Is the otherness generated to make the uncertainty specific? Will the otherness end when the uncertainty disappears?

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HABITABLE CINEMA AS DISPOSITIF OF OTHER ARCHITECTURE[S]

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ABSTRACT

For about seventy years, Cybernetic technologies determine the actual conditions for [re-] production / [re-] representation of architectural praxis, by forming a functional network where heterogenous events [verbal-visual elements, technological, discursive, cultural, social etc] interact, communicate, consume, circulate and exchange on a global scale. In this way, the physicality of Cartesian-Newtonian absolute space migrates to the millions of bits of algorithmic cells of the cyberspace that can be produced by means of a computer-based media. The digital technology which arises in the liquid, mobile form of data and information, always enable to generate the new environments in cyberspace. However, this does not mean the end of physical space. Network space has become a social territory by simultaneously and continuously re-combining digital data and physical spaces within real spaces where people negotiate through information, time and space. The alterations of visual events, internal contents and social expressions in reality will also influence the creation of other -alien-architecture[s]. Architecture has been converging to cinema, with which it has been allied in a kind of 'world-making' practice for more than a century, and the two intertwine to form a contemporary dispositif of heterogeneous events that enable this convergence. This somewhat connotes the very idea of 'Habitable Cinema' is what architect Marcos Novak has identified it as the convergence of architecture, cinema and networked virtual environments. For him, Habitable Cinema might reflect, at first hand, one's desire to reveal the morphology of liquid architectural experiments [or "n-dimensional manifold of opportunity" for alien architectures] in cyberspace; second, reveal a "matrix" in which all Cartesian dichotomies [subject-object, actual-virtual, image-reality, interior-exterior, verbal-visual, etc.] that are at the root of representation and reproduction, are constantly articulated. In that direction, this paper explores these two issues through the concept of dispositif analyzed by some philosophers [J.L Baudry, M. Foucault, G. Deleuze, G. Agamben]. In conclusion, it will profound that today's digital technologies and their capability of [re]producing/[re-]presenting other architecture[s] should be read by means of "knowledge-power" relations of the Control Society [G.Deleuze].

Key Words: Dispositif; Power; Control; Network; Panopticon; Pantopicon.

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INTRODUCTION

concept of "Habitable Cinema" is useful for discussing the production other architecture[s] within his transdisciplinary [cyber-] architecture praxis. Here, "the 'trans' indicates the "transmodern condition" refers to the lack of constancy and "its ceaseless motion". The current global situation (in contrast to the various states and forms of globalization during the previous history of mankind), says Novak (1995; 1996), is also a "virtual one in which physical distance has been reconfigured." And, "what is known here can be transmitted with the click of a mouse to the other end of the human world." Therefore how the idea of a body in motion in relation to space and time – i.e. Paul Virilio's (2006) notion of "habitable circulation" was at the core of the relationship of architecture and cinema, the idea of a body visualized in computer is climax of the convergence of network, architecture and cinema.

Habitable Cinema, is what Novak (1996) called as "the future of cinema" in the transmodern era, and unlike traditional cinema, the same concepts in different areas with a set of axiomatic systems and processes through computational technologies by combining, in a sense, fulfills the promise of cybernetics. Yes, once Gene Youngblood's (1970:54) "Expanded Cinema" had delved into the possibilities of a future cinema on the grounds of cybernetics. In a world where change is the only constant, he notes, it is obvious that we cannot afford to rely on the traditional language of cinema. In the seventy years that have passed since the birth of cinema, "the world has changed immeasurably: for one thing, the 'world' now includes the microcosm of the atom and the macrocosm of the universe in a single spectrum." For him, the new cinema is not something inside the "environment", but points to the "intermedia network", a social organism and mechanism in which information determines things and words. "From cinema we receive conceptual information (ideas) and design information (experiences)" in the Cybernetic age in which human has learnt that to control his/her environment both physical and metaphysical.(Youngblood 1970:54)

However, Neil Spiller (2002) points out that in the chronology of technologies and theories that shape the understanding of contemporary "cybertechnology", it has evolved from 'first order' to 'second order' cybernetics, that is, within Norbert Wiener's communication and "control-oriented" system, observer interaction has shifted in the direction in which it has become important. With the emphasis of N. Katherine Hayles, if the-first-order cybernetics is concerned with the "flow of information" within a system; second-order cybernetics is about the interaction between the "system and the observer." Yet, in Novak's works, it is possible to find traces of many figures who have contributed to the development of Cybernetics since its emergence in the postwar. Among them, especially the cyberneticist Gordon Pask (1969:494-496), who published an article, entitled "The Architectural Relevance of Cybernetics" in one of the most prestigious magazines, *Architecture Design*, in 1968, might play a leading role -and still remained a central figure-. In this seminal essay, Pask (1969) points out that architecture and computer science share the same epistemology and that, as a corollary, the theoretical and methodological



framework of architecture should be to think and to build computing. For him, Cybernetics for architects means how spatial "systems organize themselves, reproduce themselves, evolve and learn." Its highest point is the question of how architecture organizes itself.

Now, we are in the digital age in which communicative flows intersect and overlap and, as Novak says, it is determined by the multidimensional, multiform, spatial-temporal cultural strategies of art, architecture and cinema through the mediation of transmedia that always tends to produce an alien. In this context, the question is how Habitable Cinema provides to incarnate the alien or other architecture. The method and procedure for obtaining "alien space" refers to two things: first, the convergence between architecture, art, cinema, computer, network, even music, and the tendency to create a single but liquid environment. This desired convergence creates, according to Novak (1996), an "extreme transmedia" that enables the coexistence of different intelligent species, and thus, a domain of "worldmaking" occurs.

Worldmaking, and Dispositif

Marcos Novak (1991:225-254) is known today as one of the leading thinkers in the field of speculative world-making. His titles such as researcher, artist, theorist and beyond architect derive from his contemporary and provocative works relying on these works. "Liquid Architectures in Cyberspace" (1991), which he wrote especially on the poetics of cyberspace, is the threshold of his studies. Among other things, he defines a fluidity between virtual and real, made possible by the digital space that extends to all aspects of data, information and form. This fluidity also includes minds and bodies, which have the potential to be represented as a liquid form in cyberspace. In this context, it can be said that world-making is Novak's (1991:226-227) ontological and epistemological crossroads. He investigates the other, the alien by questioning the field of possibilities of the cosmos. In doing so, he undoubtedly attempts to shape the world, its orbit and even minds through his algorithmic design and digital technologies.

Novak (1996) points out that the extreme changes brought about by technology are creating unprecedented new opportunities for designing new species, new alien forms. The characteristics of these spaces are the transition from a familiar setting to a new and unfamiliar form, a dimension that transforms traditional modes of expression, what he calls an "extreme intermedium". According to Novak, that "extreme intermedium" is the medium between two media, equally distant from both, [and] precisely neither from the one nor the other. In his 1996 article "Trans- TerraForm: Liquid Architectures and the Loss of Inscription"(1996), he explains this movement in terms of worldmaking, as follows: "Architecture becomes liquid, music becomes navigable, cinema becomes habitable, dance becomes disembodied. As distant as these new options seem from their origins and from each other, they are related to one another by what can

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only be called 'worldmaking.' Worldmaking is, in my estimation, the key metaphor of the new arts."

Here, the question of what conditions allowed this intermedium to form is critical. The world-making conditions were the consequence of an "episteme shift" that took place in the knowledge and seeing regime. Novak (1996) describes this epistemological shift as follows: "the shift from the society of the centripetal panopticon to the society of the centrifugal pantopicon is already well underway. Until today, Jeremy Bentham's panopticon expressed the now obsolete desire to see everything from one place, to focus the world on (...) A new condition is upon us, or, perhaps, a new desire has overtaken us. That desire is manifest in the construction, everywhere, of the pantopicon."

As can be understood from this poetic expression, the term Novak (1996) coined here, namely the Pantopicon, refers to the state of being in "all places at one time", rather than seeing "all places from one place": It is "pan+topos". The pantopicon has emerged as a result of disembodiment, that is, technology of virtuality, therefore, although it denotes a being, it is being via "dis-integration, via subatomization of the consciousness, rather than by concentration or condensation."

In this context, the relationship between trans/inter/media and architecture should be conceived "as historically situated assemblages of technologies, techniques, aesthetics, institutions, spaces, publics, and affects". (Vasudevan, Thomas, Srinivas, et al, 2017: viii) Therefore, I suggest to use the concept of dispositif which is theorized by Michel Foucault (1975) in terms of the Panopticon as the diagram of the modern disciplinary society. For Foucault, dispositif is "a thoroughly heterogenous ensemble consisting of discourses, institutions, architectural forms, regulatory decisions, laws, administrative measures, scientific statements, philosophical (...) in short, the said as much as the unsaid." Such are the elements of the dispositif as the system of relations that can be established "between these elements." (Foucault 1980: 194–196). Dispositif not only allows us to understand how heterogeneous elements that emerge in certain historical conditions are intertwined with knowledge and power relations, but also enables us to explore an extremely rich field between the discursive and the non-discursive, the symbolic and the material, the said and the unsaid, and the visible and the invisible. "Dispositif analysis privileges historical specificity over medium specificity, media environment over technical apparatus", and particularly assists with interdisciplinary or/and transdisciplinary "insights into the meanings and powers of media forms." (Vasudevan, Thomas, Srinivas, et al, 2017: viii)

As Novak has emphasized, Panopticon (1791), designed by the English jurist and philosopher Jeremy Bentham, is the analytical arrangement of the gaze directed from the central watchtower to the outer walls. Foucault (1995) reveals the ways "in which human subjects became object of observation, in the form of institutional control or scientific and behavioral study; but he neglects the new forms by which vision itself became a kind of discipline or mode of work." (Crary, 1992:18) "The Panopticon is a



machine” says Foucault (1996:202) “for dissociating the see/being seen dyad”.

Gilles Deleuze (1992), in his “Postscript on the Societies of Control,” notes that after WW2, we are/were moving from what Michel Foucault defined as a Disciplinary Society and toward a Society of Control. In his analysis, by control as a form of power, he emphasizes the mobility, the liquidization, the flows, the production of desire, the individualization of machine interfaces and operating systems that are designed to increase the communication. The shift of capitalism from production to financialization reveals the transition from analog to digital. Cybernetic control dominates space and time.

In this direction, Habitable Cinema becomes the transmedia of Pantopicon's unique and unprecedented opportunities, the innovations made possible by digital technology, and the all-encompassing world-making act that emerges under the conditions of instant telecommunication. It should also be considered as the definition of the cinema through the biological and nervous system of the body-subject. Therefore, besides implying the “future of cinema”, it also shows the episteme shift in the alliance of cinema and architecture in the 20th century. This slippage reveals a new design model in which cinema and architecture are mutually combined through new cybernetic technologies. Habitable Cinema transforms the viewer-subject under the control of the Pantopicon directly into the designer of the object of viewing, of “alien spaces” or other architecture[s].

Allogenesi s : Creation / Production of the Alien or Other

If anything is possible, then nothing is interesting.
H.G. Wells, *The Time Machine*, 1935

Looking on oneself as something alien, forgetting the sight, remembering the gaze.

Franz Kafka, *The Blue Octavo Notebooks*, 1948

Marcos Novak (2000) begins the article related with his installation in 2000, ZeichenBau:Virtualités réelles for TransVienna, saying that “Space is no longer innocent.” With the transmodern conditions of [trans]architecture, space reflects a tension between the familiar and alien within. He points out that how the installation combines the ideas adverted in transarchitectures in diverse modalities forming a space in flux: “Under the impact of science and technology ordinary space has become just a subset of a composite “newspace” that interweaves local, remote, telepresent, interactivated, and virtual space-time into the new spatial continuum that is the focus of emerging transarchitectures.” (Novak 2000)

According to Novak (1999) literally described as “architecture beyond architecture”, “transarchitecture” is the architecture of hitherto invisible piers. It has a twofold character, says Novak; the first exists in cyberspace as a liquid architecture transmitted over global information networks; the

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second exists in physical space as an invisible electronic double superimposed on our material world. Deriving from "liquid architecture", transarchitecture emphasizes the idea of spaces becoming alien, and of transforming themselves. For Novak (1999), alien is a term representing the state of "virtuality" where the boundary between spatial and temporal events becomes blurred and distance disappears. The tendency of virtuality here is to transform what is known as familiar and unfamiliar or alien. Both are combined and the varying qualities of the sensory modalities are explored. Novak (1999; 2002) describes these as "data-driven form" discoveries. It is the study of how data from human genomes is used and the study of patterns that can be translated into architecture. Data is converted to formats before converting to a specific behavior. In this case, the person sees, then interacts. This is when the familiar and the alien come together, - a mix of virtual and real. For Novak (1999; 2002), this opportunity provided by digital architecture enables the screening of utopian forms or other / alien architecture[s] in the mind.

In what follows, the phenomenon of the "alien", the uncanny or the strange[ness] seems to have been at the center of his "cyberarchitecture" experiments from the very beginning, which "presents a whole new worlds to experience and explore" (Novak, 1999; 2001; 2002) The convergence of technological and scientific developments in the fields of biology, robotics and computer science (especially the Genome project, nanotechnology, biotechnology, Artificial Intelligence, Artificial Life) and Neuroscience has led Novak to increasingly interrogate unknown, completely alien habitats. (Roussel, 2012) (Novak 1999; 2002) All these technologies admit of what Novak (2001) calls as "technological virtuality" that enables access to even greater worlds. In short, it can be said that "becoming-alien", or alien architecture is the leitmotif of Novak's corpus. So, what is alien? And in what way does alien architecture[s] come to life?

Novak (1999), in particular, has introduced the notion in a critical article "Alien Space" for an exhibition entitled "A Shock of the New" : "It signifies not only the Other, the monstrous, the hybrid, the cyborg, or even the clone and transgenic, but that which does not follow from its roots or indeed, that whose roots can no longer be traced, or have become irrelevant, or are unknown, or follow from principles outside previous understanding (...) Allo-, the root for alien, means other, but not in the trivial sense that everything that is not self is other, but in an extreme sense of the other as belonging to another order entirely. It would thus seem that the impulse towards self-referential reflexive architectures should be at odds with the impulse towards allo- referential alien architectures." (Novak 2002:65)

Novak (2002:66) explains the background of the process, emphasizing that he wants to explore "how virtuality can be 'everted' into physical space as the invisible form" rendered in what he calls "sensels. This is a kind of sensor-elements or fields of the perceived space that are understood not only as input, but also as output. Here invisible forms are created by sensor/effector pairings arranged by "space interactivation" to generate "virtual synaesthetic" awareness in their own virtual free way. In short, "Alien Space has been to evert its insights onto physical space and to construct



passages between interactive local, remote and virtual space.” (Novak, 1999)

This point about the “informed body” brings to mind Deleuze's (1992b:218) questioning: “What is the structure of a body? And: What can a body do? A body's structure is the composition of its relation. What a body can do corresponds to the nature and limits of its capacity to be affected.”

Rehearsal of a Habitable Cinema” or Journey through Other Architecture[s]

“I'm sure many of you have already been through this kind of thing... and as you are sitting down in your seats... it is as though you are taking a journey, a journey to another place and another time... a journey on the inside... Take a deep breath... and as you listen to the sound of my voice... I'd like you to hold your hands out in front of you... and I'd like you to focus between your hands and imagine there is a magnetic energy between your hands... Just close your eyes and focus between your hands...” Marcos Lutyens (2001)

For Novak (1996), “the new creative problems implied in the idea of “Habitable Cinema”. Therefore, in his oeuvre, Education: Alienwithin (2001), “as a performance, an installation and concert”, (Palumbo, 2001) but ultimately an architecture where the real and the virtual are hybridized, can be conceived as a “Habitable Cinema” rehearsal. In collaboration with the L.A. based new media artist Marcos Lutyens, he attempts to manifest a virtual environment in which the viewer is “inducted into a deep state of hypnotic trance and introduces into a navigable cyberspace”. (Silva, 2000:24) This is the state of hypnotic immersion level “hypnotic trance”, in which the viewer-subject voluntarily enters the field of “induction”. In that process, the viewer's body is brought under control, it is necessary to make the body as rigid and unresponsive as possible. For this, a number of procedures are performed, such as testing and deepening, so that cathelepsy is expected to occur. The viewer will be unaware of his surroundings and will experience a state of “trance”, in which he is unable to respond to stimuli. Thus, the viewer switches to a navigable cyberspace, that is, a kind of flexible structure in which s/he can move, and the journey to “alien space” begins. And the trance state of the volunteer-viewer is “projected for the audience on a large overhead screen.” (Palumbo, 2001)

For Novak, this exceptional tectonic state of mind is linked to the possibility of preserving the properties of such an area, as it works in relation to what is known about the potentials of architectural components and/or materials. This shifting state between waking and dreaming not only creates a “cognitive suggestibility landscape” but also corresponds to both the “essence of cyberspace” and the utopian essence of the visionary architect. (Novak, 1991:266) His method of designing with algorithms, on the one hand, opens up the possibility of exploring a sort of rendering or visualization of mental space, while on the other hand it demonstrates the capacity of the digital medium to act not only a virtual immersion, but also the opposite and inverse vector. Here the theoretical issue is opened up to

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discussions about the interpretation of the mind and, in particular, its "spatiality". The technical issues related to the capacities of the digital environment, on the other hand, lead us to think about the manipulation and performance of the digital architecture. By combining "fluidity and multidimensionality", two main features of the design environment on which the virtual world of Education is based, have been obtained. "However, there is actually "a third element" at the heart of this "dream machine", which aims to make the hidden patterns of the mind visible. It is a very special algorithm that bridges between "the subject and the object, the eye and the shape, the observer and the observed." (Palumbo 2001)

Once Barjavel has stated that the "future form of cinema would need neither a filmstrip, nor a projector, nor a screen." (Kessler, 2016:269) Since the images would be transmitted to the mind via waves and incarnated without the screen, might be immaterial. Kessler (2016:269), while elaborating this prescience, gives an example from Kathryn Bigelow's sci-fi movie *Strange Days* (1995) and draws attention to how "moving images are transmitted directly into the brain of the viewer" with the support of "a device called SQUID" in film. Through the current experiments with "head-mounted devices" transporting users "into a virtual environment", he says, it's hard to predict "whether the screen (in every sense of the word) will be a part of the media experience of future generations." (Kessler, 2016:269)

A film on Habitable Cinema: The Cell

In one of his interviews, Novak (2006) has pointed to a Hollywood science-fiction film, -a kind of techno-thriller - *The Cell* (Directed by Tarsem Singh, 2000) as an example of how we can grasp this alien reality within ourselves, which creates the medium of other architectures. The film opens with the plan where the main character, Deane, is walking through a vast desert and encounters a small boy. The sand is a bright white, the dunes are a strong luminous orange, and the sky behind them is almost lavender blue. Subsequently, it turns out that the landscape is the image of the subconscious mind. In the real world, Deane is a child psychiatrist "working in a sophisticated high-tec lab on an electronic/pharmaceutical process which allows her to virtually enter the mind of catatonic patients which has lost all contact with the mundane world." (Gullbring, 2006) This juxtaposition of the real and the virtual-reality (mind) is consistent throughout the film. The new events will reveal how, on the one hand, dichotomy between these two worlds and the physical and virtual bodies reconcile and, on the other hand, in a new reality, the differences between the object and the subject become blurred. An FBI agent (Vince) asks Deane to enter the mind of a schizoid serial killer (Stargher), who fell into a coma while being captured, and find the location of his last victim. Wandering through the dungeons of bloody torture rituals, to which former victims were subjected, the doctor also encounters the wounded childhood and youth self of the killer. The film ends in a space of mind, where the doctor's cherry trees bloom in the desert landscape of the young Stargher, merging the features of both mindscapes



These scenes also highlight "the mechanical aspect of Stargher's mind, echoing Leibniz's depiction of the **mind as a mill which one might enter.**" (Mayo, 2020: 256) Leibniz (1968:228) asks his reader to: "suppose there were a machine, so constructed as to think, feel, and have perception, it might be conceived as increased in size, while keeping the same proportions, so that one might go into it as into a mill. That being so, we should, on examining its interior, find only parts which work upon one another, and never anything by which to explain a perception." As the "camera jumps from one mechanism to another", in particular the room filled with glass screens that Deane finds herself through his mind is akin to be the inside of a machine-mind. It is at this point that the concept of the *dispositif* becomes crucial: "the combinatory machine making a generative process possible." (Coté, 2011: 383) Film is also a *dispositif*, "a machinic conglomeration working the flow, structuring things, creating some constant reactions, and so on." (Coté, 2011: 383)

The director tells his unique inspiration for the film: "What interested me was the blank canvas of going into the mind... I wanted to go into the mind and play it like an opera, like theater." (Singh, 2005) The significance of this film for Novak might be that, on the one hand, through a visual narrative, it shows millions of viewers around the world that the spaces of the mind can be visualized, and on the other hand, it makes the theory of Habitable Cinema intelligible. According to him, film reveals how human being can live in both virtual and real space. It is what the Habitable Cinema serves. In his words, "liquid architecture" becomes the space of the individual's mind. Habitable Cinema enables to create new spatial constructs of any environment which then becomes an interface between physical and inner world; "once this information is extracted and processed, the body can become the interface between the outer and inner space, thus promoting an internal sense of belonging."* It seems revealing a new kind of relationship between the cyber-environment and the body derived from the space of mind.

What the film evokes is Howard's (1991) marvelous implication about the **dispositif** of screening the mind: "I was standing in a carpeted room, gripping a handle, but I was also staring into microscopic space and directly manoeuvring two molecules with my hands. Perhaps someone in an earlier century experienced something similar looking through Leeuwenhoek's microscope or Galileo's telescope. It felt like a microscope for the mind, not just the eye."

CONCLUSION

Do we live in what the philosopher Gilles Deleuze (1992a) calls a "control society"?

In this paper, I conclude how the networked nature of the Habitable Cinema has represented a characteristic feature of Deleuze's concept of "societies of control" in which "digital technologies" that continuously "enable and

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accelerate circulation". (Deleuze, 1992a) (Conley, 2009:33) Because matching with "information becomes a precondition for visibility in control societies." (Bogard, 2009: 19) As Deleuze (1992a:5) emphasizes, "the numerical language of control" consists of codes that mark or deny access to information.

The Pantopicon dispositif is formed by information flows across networks and provides instant telecommunications.

The viewer or the user can look through any place where the camera can go, or wherever the cameras cannot go

by computation or algorithmic design. (Novak 1996). In this way, it becomes possible to project a virtual screen in which there is no screen, showing that the visual performances can be constructed in the mindscape through Habitable Cinema. "Control societies experiment with the limits of panoptic enclosure and the serial connection of spaces", says Bogard (2009: 21) and continues as follows: "These are organised by a model not of visibility, but of communication over distributed networks.(..) Your information does not flow serially between discrete spaces of control but is redistributed simultaneously and selectively across multiple networks, each protected by slightly modified codes, effecting a continuous modulation of control independent of location. 'Visibility' does not organize these redistributions; codes do, in the sense that the passage of information within and between distributions entails having the right code."

Thus, Pantopicon, in the context of Deleuze & Guattari's (2005:6-7; 16) "rhizome" model, might also be conceived as a space formed by a series of interconnected lateral networks, in contrast to the hierarchically and vertically articulated concept of arborescent space (that of the "Panopticon"). Because, like rhizome, Pantopicon has "no centre and no enclosing borders." (Conley, 2009:33) Nevertheless, for Deleuze & Guattari (2005) rhizome is considered a bivalent concept – "can carry a positive or negative valence" (Conley, 2009:35)

Contemporary power is the "abstract machine", the diagram, which becomes a function of "machinic assemblages". (Deleuze & Guattari, 1987) In other words, they are abstractions that reflect the desire to embody abstract events -such as "liquid architecture", "mindscape", "invisible architecture", "alien space" and the like- concrete (physical) spaces. As the rhizome produces "lines of flight" (Deleuze & Guattari, 1987) - this is what Novak calls Centrifugal[u]e-, power is more flexible and multiform; It is permanent and recognizes no bounds. "Power in control societies is therefore harder to name, and to resist." (Rajagopal, 2006:280) It creates possibilities for constructing new fluid, informed subjectivities, spaces of freedom and desire. But, at the same time, it determines the network space, that is, a cybernetic control model, through codes and algorithms.

The main question here is that Novak (1991; 1995; 1999) mentions internet and computer technologies, which are an indirect or direct "control" system, providing an environment, a place of unlimited freedom in terms of architectural experiments in the Pantopicon era. This seems to be related to the issue that, as Deleuze (1987;1992a,1996) implies, the notions of



freedom and control are becoming increasingly indistinguishable, even that they are combined in the production of desire. Wendy Hui Kyong Chun (2006), in her work "Control and Freedom" based on Deleuze's (1992a) theory, follows the emergence of the internet as a mass medium and interrogates the current political and technological connection of freedom with control. She reveals that the parallel myths of the Internet as "total freedom" / "total control" stem from the fact that people reduce political problems to technological problems. Tracing Deleuze (1992a;1996) and Foucault (1995), Chun (2006:9;85) analyzes contemporary events of Panopticism (or Internet Panopticon) -as such electronic surveillance, gps, dataveillance, neurocontrol etc.-, and points out that the relationship between control and freedom in networked contacts and operations is mediated by desire and affect. According to her, the desire of cyberspace for cyberpunk fictions in cinema and literature reflects the mapping of the transformations of the public/private into open/closed.

As a final word, I would like to draw attention to Sasha Costanza-Chock's (2001:133) musical hum that accompanies the images overlapping in his mind – "virtual space (disembodied): inside a dream-dream" after his visits to the MIT Media Lab Brain Opera and a shopping mall: "cybernetic capital / ultramodern power / ultramodern capital / cybernetic power."

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