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PROF. DR. SERTAÇ GÜNGÖR

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Contents

Chapter 1

CONSTRUCTION SYSTEMS FOR TEMPORARY SHELTER UNITS: SYSTEMATIC AND SCIENTOMETRIC ANALYSES

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1. INTRODUCTION

The temporary shelter unit enables the disaster-affected population to continue their lives in a habitable place where their basic needs such as shelter, food and medical treatment are met. The population is gradually relocated from temporary shelter units to permanent dwellings with the reconstruction process. Temporary shelter units are temporary fabric tents or lightweight prefabricated structures that can be set up in a short time by international organizations, usually resistant to climatic conditions (Moreno-Sierra, Pieschacón ve Khan, 2020). Although different designs are being worked on for temporary shelter, the common point of all of them is to create the most suitable environment where basic needs can be met in the fastest way possible. In response to the problem of shelter, temporary shelter, collective temporary shelter and temporary housing are produced in the process. Temporary shelters offer a more reliable and healthier living environment than tents (Avlar, Limoncu ve Tızman, 2023). In the literature, there are different shelter designs belonging to many organizations. However, these design proposals cannot be produced with locally specific construction materials. This slows down the process by limiting the participation of the community in reconstruction practices. Recently, new approaches have been proposed in which local materials are used and the community participates in this process (Sheppard, Tatham, Fisher ve Gapp, 2013).

In recent years, the number of natural disasters has been increasing rapidly with global warming and has a great impact on the built environment. When the built environment is damaged and people become homeless, the need for shelter comes to the agenda. In this process, the idea that the new construction period should be started as soon as possible in order to return the affected societies to their pre-disaster lives is accepted. It is thought by many researchers that temporary shelter units should be switched to rapidly produced permanent housing units. Apart from the need for shelter, it is vital for the population affected by disasters to return to their normal lives by providing employment and social factors quickly in order to make the process easier (UNDRO, 1982). Therefore, the construction systems used for fast and mass production in temporary accommodation units are of great importance. With this study, it is aimed to determine the appropriate construction system for mass production and to make suggestions. In this direction, the study covers the examination of the publications belonging to the WOS and Scopus database in the context of the construction system in order to examine the construction systems used in the construction of the temporary shelter unit. In this context, the literature was examined using scientometric and systematic analysis method. The systems used in the studies were evaluated and it was aimed to determine the appropriate construction system for mass production after the disaster and to make suggestions.

2. CONSTRUCTION SYSTEMS USED IN THE DESIGN OF TEMPORARY SHELTER UNITS

People may need temporary shelter in different situations. In cases such as epidemics, natural disasters, homelessness, temporary shelter units are used to meet the need for emergency shelter. The desire to build temporary shelter units in a way to meet the basic needs and in the fastest time causes differentiation of construction systems (Avlar ve ark., 2023). In this part of the study, temporary shelter units, criteria affecting the design of temporary shelter units and construction systems are explained.

2.1. Temporary Shelter Unit

Temporary shelter units are needed more after disasters. Shelter units used after disasters are divided into four different stages. First, "emergency shelter" can be the first solution that can be produced in case of emergency, such as under a plastic sheet, a public shelter or a friend's house can be a shelter. Secondly, "temporary shelter" can be a tent or collective shelter for a few weeks after the disaster, during which time food and medical needs are met. Thirdly, "temporary shelter" can be a rented house, a prefabricated house or a house with different solutions in a temporary place where they will carry out daily life activities such as school education, trade, work, shopping. Finally, "permanent housing" is the process of moving to a rebuilt house or a new house where they can settle permanently (Quarantelli, 1995). Temporary shelter is a place where individuals who have been rendered homeless by a disaster are sheltered until they can secure a permanent home. The difference between temporary housing and housing is that in temporary housing, the duration of shelter is indefinite and the process continues until permanent housing is found. Housing, on the other hand, is a place where people plan to stay for a long time (Johnson, 2007). There are criteria affecting the design of temporary shelter units used by people affected by the disaster until they move to permanent housing. These criteria also affect the construction system and provide diversification of the designs.

2.2. Temporary Shelter Unit Construction Systems

Housing units are designed by considering some criteria. The importance of these design criteria in the literature varies according to the subject of the study. It is stated in 2012, Yalaz's study "Evaluation of Temporary Housing Samples and Construction Systems Built After Disasters" the criteria affecting the design are stated as packaging, portability, storage, lightness, flexibility in design, the way the structure is connected to the ground, economy, fire resistance, climate adaptability and reuse. Packaging, portability and storage criteria of the temporary shelter unit are important for the shelter unit to reach the area in large numbers and in a short time. With the folding feature of the temporary shelter unit, it is ensured to have minimum storage space and it

becomes easier to deliver the maximum number of shelter units to the disaster area or to the areas in need. In the lightness criterion, when the total weight of the construction system of the shelter unit and the weights of the materials used are evaluated, it is important that it is portable. Flexibility in design emphasizes the necessity of designing for the needs of housing units by taking into account the social structure and the number of individuals in the family. Although the design of different types may cause economic problems, the design of the systems in a way that allows the spaces to be enlarged constitutes flexibility in design. The way the structure is connected to the ground, dismountable and removable materials should be preferred so that temporary shelter units cause as little damage to the environment as possible after dismantling. With the economic criterion, it is aimed to ensure that the temporary shelter units, which are needed more after the disaster, are low cost, fast and can be produced in large numbers. The temporary shelter materials selected in the design should be fire resistant. Climate compatibility criterion, on the other hand, is a factor for individuals to live comfortably whether the shelter unit is according to the climatic conditions of the region where it is needed. With the reuse criterion, it is emphasized that the construction system should be well designed and the joint details should be solved in order to dismantle the shelter units used in disaster areas and use them in other places (Yalaz, 2012). In 2022, Saka's study "An Alternative Solution Proposal for Temporary Accommodation Units after Earthquake: WikiGEB" the design criteria were determined as shelter duration, health and safety, transportation, proximity and flexibility, functionality, spatial quality and privacy, and respect for the permanent environment (Saka, 2022). Design criteria affect the construction system of the temporary shelter unit. Different construction systems have been developed for design criteria. These systems are tent, portable, demountable, demountable, portable-container and systems made with local materials.

Tent systems are fast installation and affordable systems to solve the need for shelter in a short time, usually as a result of natural disasters. The use of lightweight material in the construction of the tent allows easy transportation and fast installation with a simple construction system (Yalaz, 2012). In the tent system, it is appropriate to consider the air permeability and light transmittance of the fabrics to increase indoor comfort as seen in Figure 1, and to use light elements for fast installation and easy transportation (Obyn, Moeseke ve Virgo, 2015).

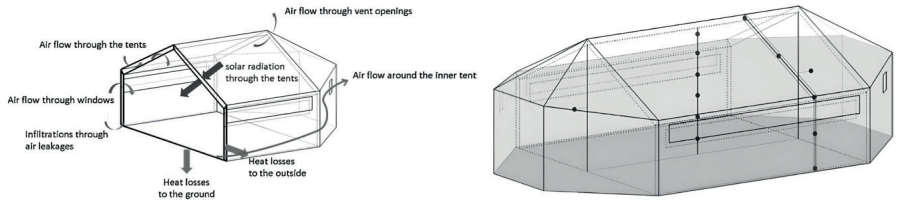


Figure 1. *Tent system (Obyn ve diğerleri, 2015)*

Portable system is a system that can be transported in one piece to the place of urgent need after the production of temporary housing. The fact that the dwelling comes ready-made allows it to be installed without any connection to the ground and can be transported as a single piece (Yalaz, 2012). As seen in Figure 2, they are compact transportable houses made of prefabricated, lightweight materials or different materials that can be installed quickly (Pérez-Valcárcel, Aragón, Muñiz, Freire-Tellado ve Mosquera, 2023).

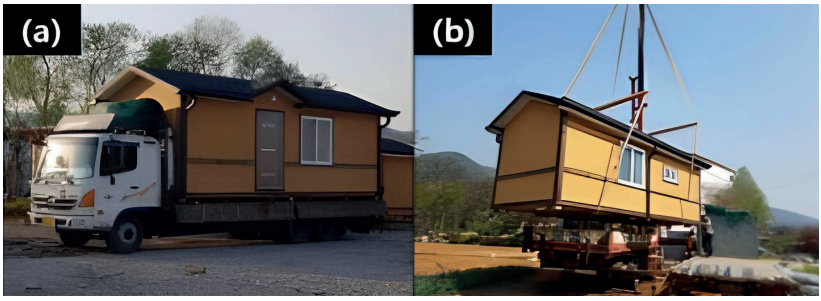


Figure 2. *Portable System (Yang ve diğerleri, 2020)*

Demontable System is a system in which the parts of the temporary dwelling are manufactured and then assembled where needed. As can be seen in Figure 3, the fact that it can be added later allows for the expansion of spaces (Yalaz, 2012). Temporary shelter units have been created to increase the patient capacity of existing hospital structures in case of epidemics (Yatmo, Harahap ve Atmodiwirjo, 2021).

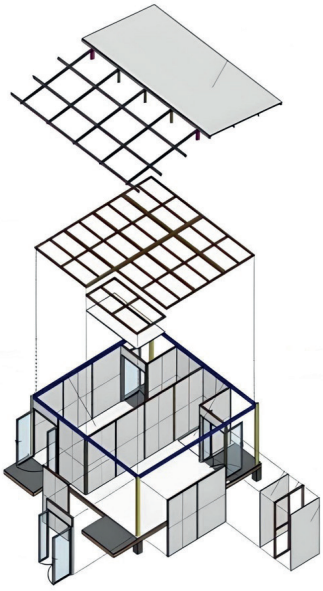


Figure 3. *Demountable System (Yatmo ve diğerleri, 2021)*

Portable Container System is a system where a single unit of temporary housing is produced. It can be mounted side by side or on top of each other and shows modular system feature. Its vertical placement allows the construction of a large number of houses in minimum places (Yalaz, 2012). As seen in Figure 4, alternatives are also created in the layout with a design that can be transformed into different functions in the modular system (Cerrahoğlu ve Maden, 2022).

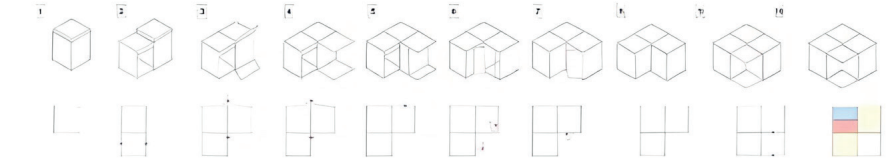


Figure 4. *Portable Container System (Cerrahoğlu ve Maden, 2022)*

In the systems built with local materials; these are the houses where local materials and construction techniques are used in the area where temporary houses will be built in the disaster area (Yalaz, 2012). For example, as seen in Figure 5, in the temporary shelter units built after the earthquake in Indonesia, houses were produced with bamboo material and unique binding techniques. Bamboo mat covers were used to cover the structure made of bamboo (Federation ve Societies, 2008).

Figure 5. *System Made with Local Material (Federation ve Societies, 2008)*

In temporary shelter units that may be needed as a result of any disaster that may occur worldwide, transportation and installation and service transportation in a short time to meet the urgent need are of great importance. Construction systems for fast production, which is the main motivation of the study, are the most important factor in this issue. From this point of view, the study continues with the compilation and evaluation of the studies on temporary accommodation

units in the national and international literature. In this context, the method used in the study is explained in detail in the following section.

3. METHOD

This study involves a systematic and scientometric analysis of the literature data, as shown in Figure 6, in order to the studies on temporary shelter unit construction systems. Firstly, the topic of "shelter unit" was searched through Web of Science (WOS) and Scopus database. There were 2384 publications in the Web of Science (WOS) database and 14,067 publications in the Scopus database. In order to narrow the search area, 98 publications in the WOS database and 935 publications in the Scopus database were obtained without limiting the subject area (categories) as a result of researching the subject of "temporary shelter unit". These publications were imported into VOSviewer with the (.RIS) extension for scientometric analysis. VOSviewer is open source and is used for scientometric analysis in many areas of data visualization (Eck ve Waltman, 2023). With this analysis program, it is possible to access the most studied topics and their relationships with each other in the studies on temporary shelter units. Based on the results of the scientometric analysis, the most used keywords on the subject (construction, temporary housing, temporary housing unit, emergency shelter, natural disaster, Covid-19, homelessness, earthquake) were identified and systematic analysis was performed again in WOS and Scopus database. When the keywords "temporary shelter unit" and "construction, temporary housing, temporary housing unit, emergency shelter, natural disaster" were systematically analyzed separately in the WOS database, 146 publications were identified. When the keywords "temporary shelter unit" and "Covid-19, temporary housing, natural disaster, homelessness, emergency shelter, earthquake" were systematically analyzed separately in the Scopus database, 614 publications were identified and 124 publications were limited with the keyword construction. As a result of the restrictions, 146 publications from the WOS database and 124 publications from the Scopus database were identified. Finally, publications related to construction systems were selected and 10 publications in the WOS database and 22 publications in the Scopus database had been examined in detail.

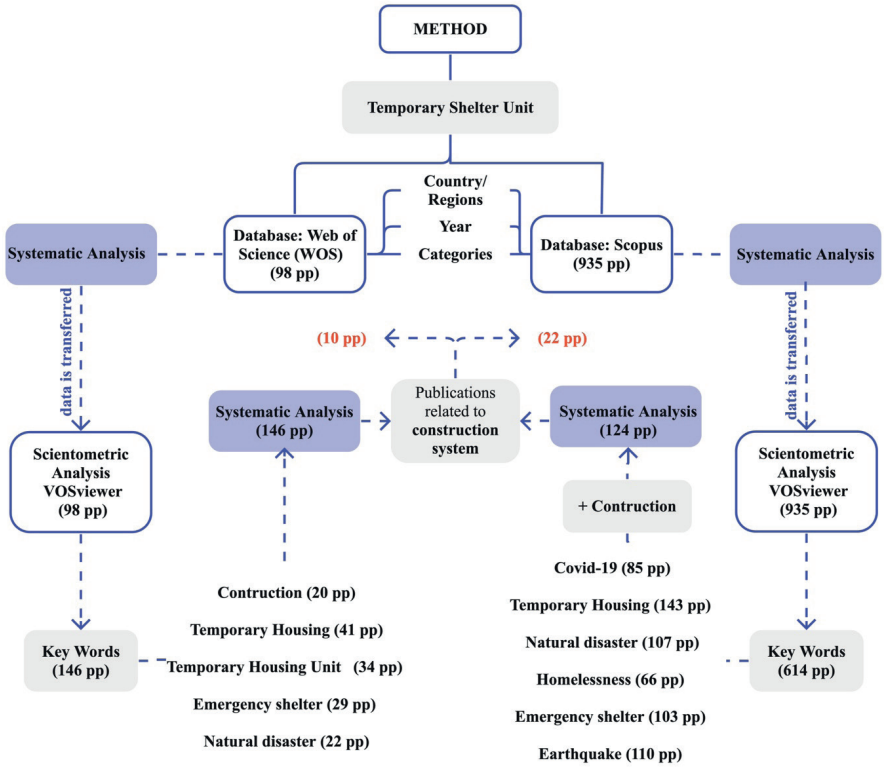


Figure 6. *Number of studies limited by the study method, process and keywords*

3.1. Scientometric Analysis

In the WOS database, 98 publications on "Temporary Shelter Units" were analyzed by country/region, year of publication and WOS categories. Table 1 shows the top ten countries with the most publications, the last ten years with the most publications and the top ten categories with the most studies on the subject. By country/region; USA, Japan and Turkey are in the top three. According to the year of publication; an increase in the number of publications has been observed in recent years. According to WOS categories; it has been determined that the number of publications is high in fields such as earth sciences, water resources, construction building technology, architecture.

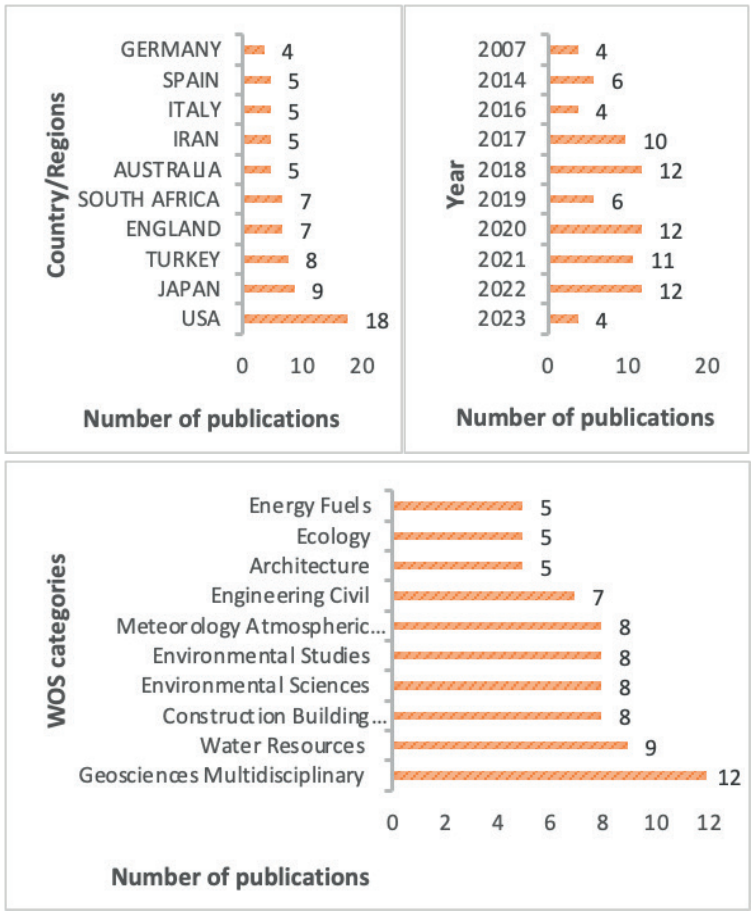


Table 1. *Top ten ranking of publications by country/region, year of publication and WOS categories (WOS data base, Ağustos 2023)*

In the Scopus database; 935 publications on "Temporary Shelter Units" were analyzed by country/region, year of publication and Scopus subject areas. Table 2 shows the top ten countries with the most publications, the last ten years with the most publications and the top ten categories with the most studies on the subject. According to Country/Regions; USA, United Kingdom and China are in the first three places. According to the year of publication; there has been an increase in the number of publications in recent years. According to Scopus subject area; it has been determined that the number of publications is high in fields such as engineering, social sciences and environmental science.

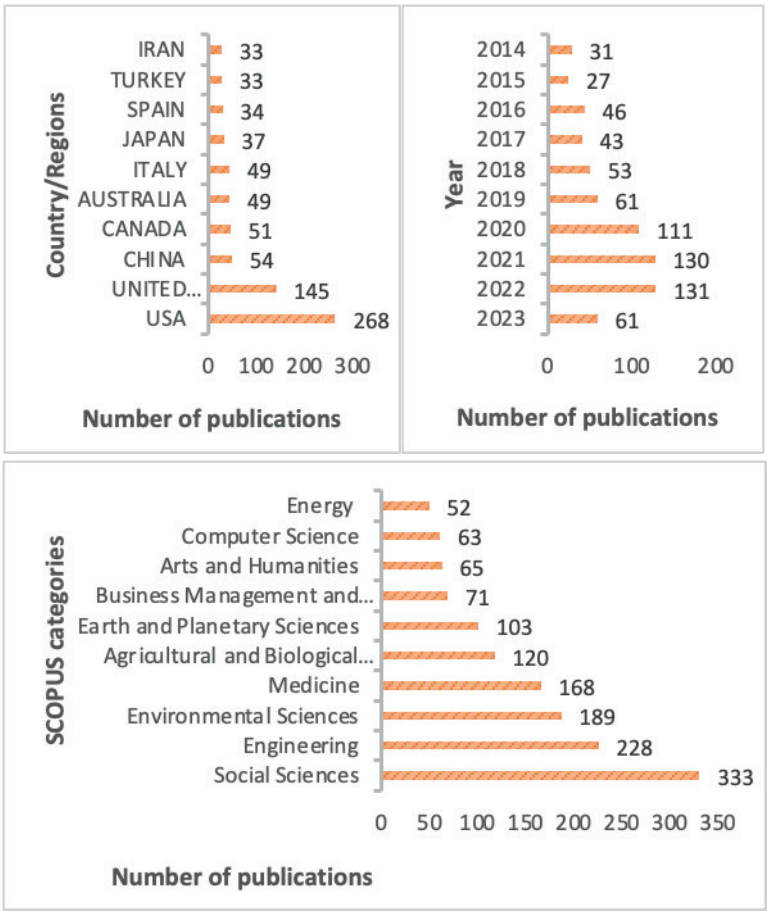


Table 2. *Top ten ranking of publications by country/region, year of publication and Scopus subject areas (Scopus date base, Ağustos 2023)*

When the publications were examined in the literature, it was determined that the publications concerned many areas such as disasters, epidemics, homeless people and asylum seekers. As a result of the search in WOS and Scopus database, a total of 1033 publications were obtained and the data of the publications were transferred to the VOSviewer program for scientometric analysis. The most used keywords in the data transferred to the program and the number of publications on which subjects increased or decreased by years were determined. Figure 7 shows the results of the scientometric analysis of the WOS database. In the image, the connections of keywords with each other are expressed by network mappings and the formation of keywords according to the frequency of correlation is seen in direct proportion to the diameters of the circles. This shows the importance of frequently used keywords in the study. The colors used in the circles indicate that the keyword is also used in articles on different topics. The transition from warm

colors to cold colors expresses the intensity of use of keywords and shows that the intensity of use decreases from warm colors to cold colors. The most matched keyword in publications is "unit". The keyword "unit" has matching keywords for epidemics such as Covid, natural disasters and emergency shelter needs. These keywords were evaluated by considering the network matching with the construction system. According to the results of the analysis, five keywords were identified: construction, temporary housing, temporary housing unit, emergency shelter and natural disaster. Temporary shelter unit and these keywords were examined separately by systematic scanning through the WOS database. In this, a total of 146 publications were identified when the five keywords obtained in the VOSviewer program were scanned by limiting the WOS categories to the architectural category.

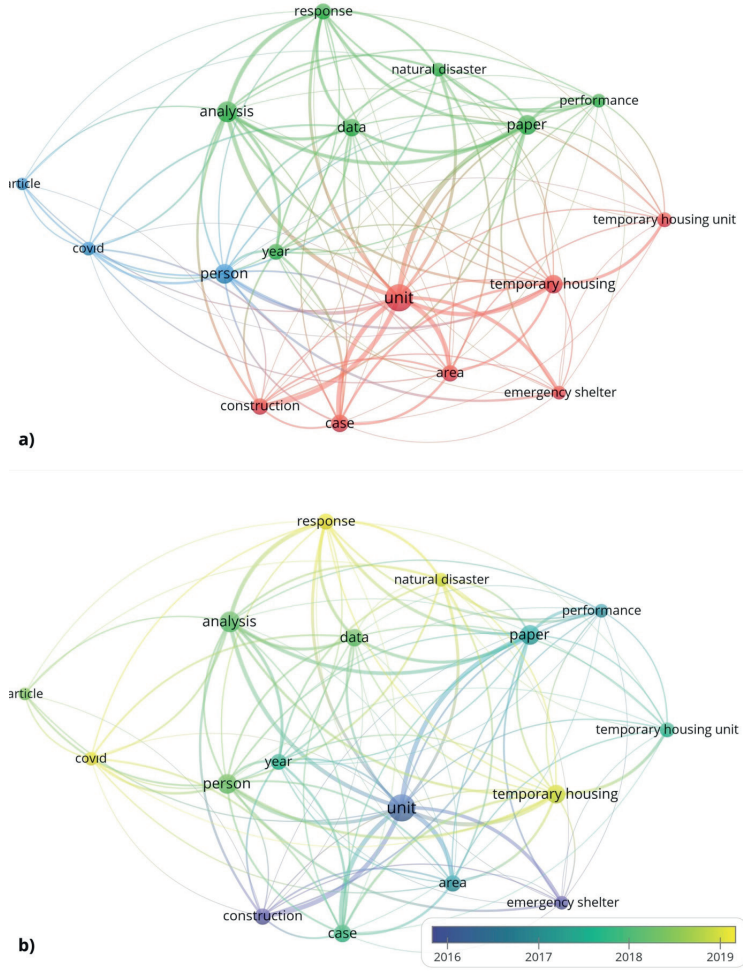


Figure 7. *Keywords in Wos database and a) network mapping, b) network mapping by years*

Figure 8 shows the results of the scientometric analysis of the Scopus database. Since there are more publications on the subject in the Scopus database than in the WOS database, the network mapping appears to be more intense. As seen in the image, the color diversity shows that there are publications on different topics. The most matched keywords in the publications are "Covid-19" and "temporary housing". These keywords are also used together with keywords corresponding to many fields such as epidemics, natural disasters, homelessness, emergency shelter. When the analysis results are analyzed by years, it is seen that more publications have been made on Covid-19 in recent years. According to the results of the analysis, the most used keywords to identify publications on the construction system are Covid-19, temporary housing, homelessness, natural disasters, emergency shelter and earthquake. In the Scopus database, temporary shelter unit and these keywords were examined separately through a systematic search through the Scopus database. In this, a total of 614 publications were identified when the six keywords obtained in the VOSviewer program were scanned by limiting the Scopus subject area as engineering. The 614 publications obtained when a systematic search was made for six keywords, including the keywords "temporary shelter unit" and "construction", were limited to 124 publications.

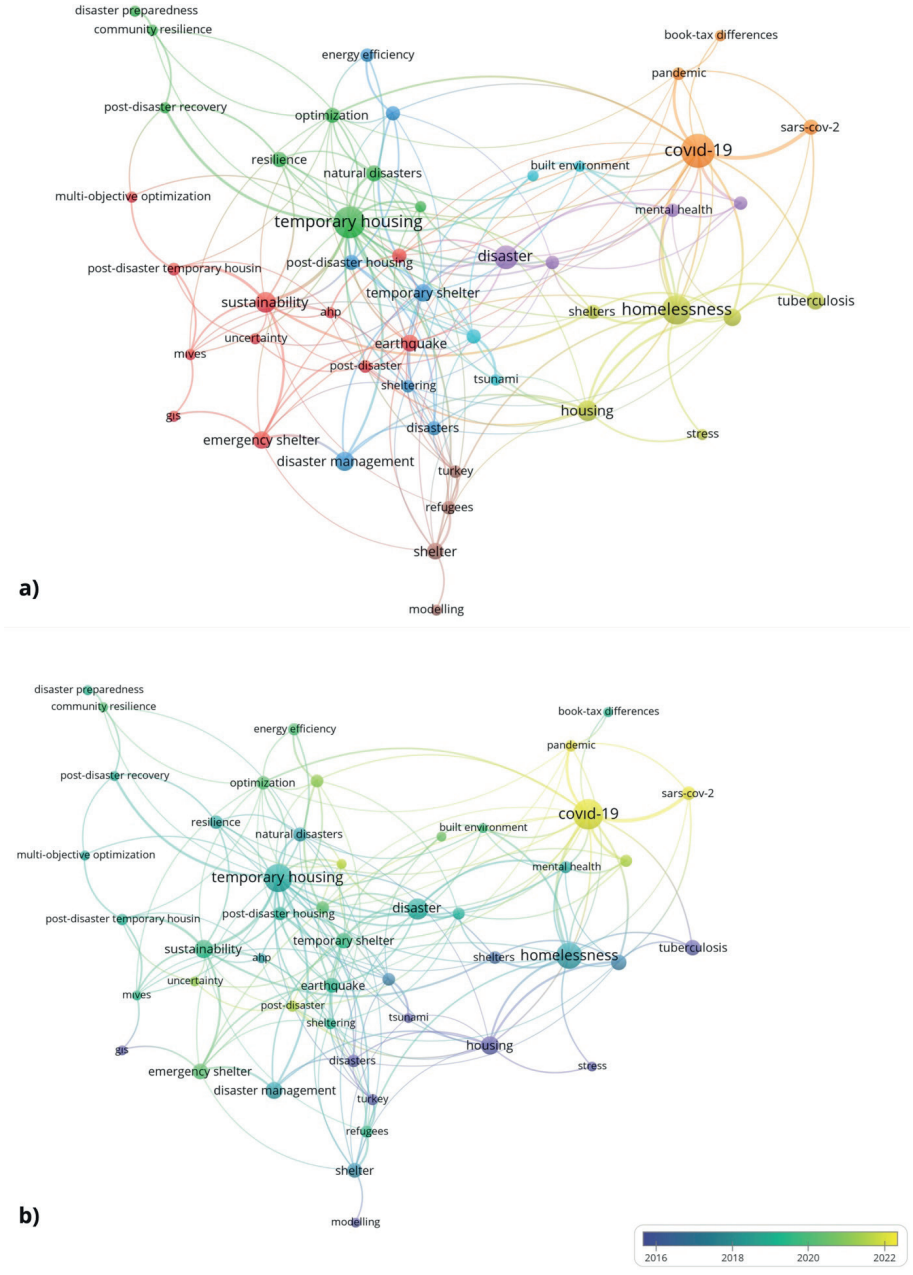


Figure 8. *Keywords in Scopus database and a) network mapping, b) network mapping by years*

3.2. Systematic Analysis

A systematic analysis of the data obtained as a result of the scientometric analysis was carried out in WOS and Scopus databases. By searching the keywords in both databases, construction systems were identified and the scope of the studies were examined. As a result of the search, publications with common keywords were identified and publications not related to the construction system were eliminated. Although the systematic analysis of the WOS database is shown collectively in Table 3, the detailed contents of the studies are given in the text starting from the current sources. Accordingly, among the studies published in 2022; "Design of transformable transitional shelter for post disaster relief" analyzed existing temporary shelters and proposed a new model. With a design that can be transformed into different functions in the modular system, alternatives have also been created in the layout (Cerrahoğlu ve Maden, 2022). "Floods: Shaping Resilient Emergency Relief Housing", temporary and permanent shelter units created as a result of natural disasters were investigated. A shelter unit design that can be quickly raised from the ground in natural disasters such as floods is proposed (Gutierrez, 2022). In the 2020 study "The use of recycled plastics for the design of a thermal resilient emergency shelter prototype", it was investigated that the emergency shelter module can be produced by recycling waste plastic materials in case natural disasters affect buildings. The module made of plastic material was designed by testing its resistance to climatic conditions (Moreno-Sierra ve diğerleri, 2020). Among the studies published in 2019; "Flexible Refugee Shelter" publication is a study that emphasizes that fast and low-cost shelters are built for refugees as a result of wars and disasters, but that units should also be designed to meet the needs of people (Oliveira ve Campos, 2019). "Learning from the past: Temporary housing criteria in conflict areas with reference to thermal comfort", the design of temporary housing units for people who cannot live in their homes after the war is proposed by considering thermal comfort (Asfour, 2019). In the study "Design of a post-disaster shelter through soft computing", it is focused on the fact that the shelters, which are desired to be produced and installed rapidly as a result of the recent wars and disasters, offer shelter opportunities where life will continue as a community such as a neighborhood by using the genetic algorithm method (Karaoğlan ve Alaçam, 2019). In the 2018 publication "Streets of Hope: An Urbane, Ecological Approach to Temporary Housing for EU Asylum Seekers", a proposed design model for housing units and urban settlement was developed to solve the problem of refugees migrating mostly from Middle Eastern countries in Europe (Economakis, 2018). In 2015, in the publication "Thermal performance of shelter modelling: Improvement of temporary structures", the air permeability, light transmittance and the use of light elements of the fabrics used in the construction system to increase indoor comfort in temporary shelter units were examined (Obyn ve diğerleri, 2015). In the 2012 publication "An analysıs of physıcal and psychologıcal expectatıons of earthquake victims from temporary

shelters: a design proposal", the physical and psychological expectations of earthquake victims were determined by interviewing earthquake victims in Kocaeli province of Turkey. Design guidelines were examined and shelters were determined (Yüksel ve Hasirci, 2012). In the 2014 study "Air Shelter House technology and its application to shelter units: the case of Scaffold House and Cardboard Shelter installations", a modular design with high thermal performance was proposed by using thermal reflective lightweight insulation material for fast installation using the example of scaffold house and cardboard shelter (Imperadori, Salvalai ve Pusceddu, 2014).

Table3. *Research in the WOS database*

Author(s)	Country/ region	Title	Study scope/ keywords	System
(Cerrahoğlu ve Maden, 2022)	Turkey	Design of transformable transitional shelter for post disaster relief	Temporary Shelter Unit- Construction- Temporary Housing Unit	Portable Container
(Gutierrez, 2022)	USA	Floods: Shaping Resilient Emergency Relief Housing	Temporary Shelter Unit- Construction- Temporary Housing Unit- Natural Disaster	General systems
(Moreno-Sierra ve diğerleri, 2020)	Saudi Arabia-Colombia	The use of recycled plastics for the design of a thermal resilient emergency shelter prototype	Temporary Shelter Unit- Construction- Temporary Housing Unit- Natural Disaster	Demountable
(Oliveira ve Campos, 2019)	Portugal	Flexible Refugee Shelter	Temporary Shelter Unit- Construction- Temporary Housing- Natural Disaster	Demountable
(Asfour, 2019)	Saudi Arabia	Learning from the past: Temporary housing criteria in conflict areas with reference to thermal comfort	Temporary Shelter Unit- Construction- Temporary Housing Unit- Emergency Shelter	Demountable
(Karaoğlan ve Alaçam, 2019)	Turkey	Design of a post-disaster shelter through soft computing	Temporary Shelter Unit- Natural Disaster- Construction	Demountable
(Economakis, 2018)	ABD	Streets of Hope: An Urbane, Ecological Approach to Temporary Housing for EU Asylum Seekers	Temporary Shelter Unit - Construction - Temporary Housing	Made with local materials
(Obyn ve diğerleri, 2015)	Belgium-Luxembourg	Thermal performance of shelter modelling: Improvement of temporary structures	Temporary Shelter Unit- Construction- Temporary Housing Unit	Tent
(Yüksel ve Hasirci, 2012)	Turkey	An analysıs of physıcal and psychologıcal expectatıons of earthquake vıctıms from temporary shelters: a desıgn proposal	Temporary Shelter Unit - Construction - Temporary Housing- Natural Disaster	Demountable
(Imperadori ve diğerleri, 2014)	Italy	Air Shelter House technology and its application to shelter units: the case of Scaffold House and Cardboard Shelter installations	Temporary Shelter Unit- Construction- Temporary Housing Unit	Demountable

The systematic analysis of the Scopus database is presented in three different tables (Table 4, Table 5 and Table 6) according to years. While the systematic analysis for 2023 is shown in Table 4, the detailed contents of the studies are given in the text starting from the available sources. Accordingly, among the studies published in 2023; "Towards improving provision of wooden temporary housing: Analysis of repairs of temporary housing built by local contractors after the Great East Japan Earthquake" analyzed the types and numbers of repairs of wooden temporary housing in Fukushima between 2012-2017. According to the findings, it is argued that the strength of the wooden houses to be built in the future will be improved and can be used not only by those affected by the disaster but also by the region and can be included in the building culture (Iwata, Harada ve Maly, 2023). In the study "Structural and Spatial Minimal Requirement Efficacy of Emergency Shelters for Different Emergencies", different temporary and permanent shelter solutions were examined in different emergencies (Beatini, Rajanayagam ve Poologanathan, 2023). "Characteristic analysis and improvement methods of the indoor thermal environment in post-disaster temporary residential buildings: A systematic analysis" comparatively evaluated the quality of the indoor thermal environment of temporary accommodation units built for displaced victims based on existing studies (Qin ve diğerleri, 2023). In the study "Applıcatıon of design for manufacturıng and assembly on temporary shelters in the phılıppınes", as a result of the typhoon natural disaster in the Philippines a new shelter was designed within the scope of the disaster recovery and recovery plan on the research of the need for durable and easy-to-build housing (C. Roxas, 2023). In the study "Transportable temporary homes with folding roof", a new model was proposed and produced by examining prefabricated, lightweight, portable houses that can be installed quickly and modular designs that can be stored compactly and easy to transport (Pérez-Valcárcel ve diğerleri, 2023). "Post-earthquake temporary housing unit: CLT E-BOX", a new shelter unit was proposed by investigating modular structures and wood (CLT) products that can be used after an earthquake (Avlar ve diğerleri, 2023).

Table 4. *Research in the Scopus database*

Author(s)	Country/ region	Title	Study scope/ keywords	System
(Iwata ve diğerleri, 2023)	Japan	Towards improving provision of wooden temporary housing: Analysis of repairs of temporary housing built by local contractors after the Great East Japan Earthquake	Temporary Shelter Unit-Construction-Temporary Housing	Demountable
(Beatini ve diğerleri, 2023)	Denmark, Newcastle	Structural and Spatial Minimal Requirement Efficacy of Emergency Shelters for Different Emergencies	Temporary Shelter Unit-Construction-Natural Disaster-Emergency Shelter	General systems
(Qin ve diğerleri, 2023)	China	Characteristic analysis and improvement methods of the indoor thermal environment in post-disaster temporary residential buildings: A systematic	Temporary Shelter Unit-Construction-Temporary Housing	General systems
(C. Roxas, 2023)	Philippines	Applıcatıon of desıgn for manufacturıng and assembly on temporary shelters ın the phılıppınes	Temporary Shelter Unit-Construction-Temporary Housing	Demountable
(Pérez-Valcárcel ve diğerleri, 2023)	Spain	Transportable temporary homes with folding roof	Temporary Shelter Unit-Construction-Temporary Housing	Portable
(Avlar ve diğerleri, 2023)	Turkey	Post-earthquake temporary housing unit: CLT E-BOX	Temporary Shelter Unit-Construction-Temporary Housing	Portable

The systematic analysis for the years 2022-2021 is shown in Table 5, and the detailed contents of the studies are given in the text starting from the available sources. Studies published in 2022; In the study "Post-COVID-19 modular building on problem-seeking framework: function, form, economy, and time", a literature review was conducted to identify existing studies in this field, as modular housing design came to the agenda again with the Covid 19 pandemic. Based on the findings obtained in the study, function, form, economy and time were identified as problems and information on the introduction of modular housing design to design better housing after the pandemic was given (Hwang ve Kim, 2022). "Potential of Modular Offsite Construction for Emergency Situations: A New Zealand Study" evaluates the potential of modular offsite construction in the reconstruction process for those affected by disasters in New Zealand through a survey method (Shahzad, Rajakannu ve Kordestani Ghalenoei, 2022). "A Highly Sustainable Timber-Cork Modular System for Lightweight Temporary Housing", a wood-cork modular system is proposed for lightweight temporary housing. A modular system was created by attaching spruce boards to each other with hinges (Barreca, Arcuri, Cardinali, Fazio, Rollo, Tirella, 2022). "Improving the livability of lightweight emergency architectures: A numerical investigation on a novel reinforced-EPS based construction system", improvements such as passive cooling techniques have been developed to provide thermal comfort in temporary shelters

(Maracchini, Orazio ve Paulo, 2022). In the study "Exploring Utilization of the 3D Printed Housing as Post-Disaster Temporary Shelter for Displaced People", shelter production with 3D printing is proposed for fast access to temporary shelter units after a disaster. It evaluates time, safety, environmental impact and transportation logistics (Subramanya, Kermanshachi, 2022). Among the studies published in 2021; In the study "Modular Isolation Units for Patients with Mild-to-Moderate Conditions in Response to Hospital Surges Resulting from the COVID-19 Pandemic", the design for the isolation facility is proposed to increase the patient hospitalization capacity in hospitals during the pandemic period. This was intended to control the contagiousness of the pandemic (Yatmo ve diğerleri, 2021). "Fundamentals of temporary dwelling solutions: A proposed sustainable model for design and construction" examines the experiences of design and construction of temporary housing units for Egypt, where natural disasters are frequent, and proposes a paper tube construction system as a sustainable housing design by analyzing the Nubian resettlement area (Faragallah, 2021). In the study "Structural and thermal performance assessment of shipping container as post-disaster housing in tropical climates", the resistance of shipping containers against earthquake and wind was investigated by referring to the rapid accessibility of shipping containers after a disaster (Zafra ve diğerleri, 2021). "COVID-19 on the Ground: Managing the Heritage Sites of a Pandemic" discusses the purpose-built structures that emerged with the Covid-19 pandemic. Temporary structures were built to form an extension of permanent structures and facilities. Temporary shelters, vaccination areas and testing areas constitute temporary units (Spennemann, 2021).

Table 5. *Research in the Scopus database*

Author(s)	Country/ region	Title	Study scope/ keywords	System
(Hwang ve Kim, 2022)	Korea	Post-COVID-19 modular building on problem-seeking framework: function, form, economy, and time	Temporary Shelter Unit-Construction- Covid-19	General systems
(Shahzad ve diğerleri, 2022)	New Zealand	Potential of Modular Offsite Construction for Emergency Situations: A New Zealand Study	Temporary Shelter Unit-Construction- Temporary Housing Natural Disaster	General systems
(Barreca ve diğerleri, 2022)	Italy	A Highly Sustainable Timber-Cork Modular System for Lightweight Temporary Housing	Temporary Shelter Unit-Construction- Temporary Housing Natural Disaster-Emergency Shelter	Demountable
(Maracchini ve diğerleri, 2022)	Italy	Improving the livability of lightweight emergency architectures: A numerical investigation on a novel reinforced-EPS based construction system	Temporary Shelter Unit-Construction- Temporary Housing- Natural Disaster	Demountable
(Subramanya, Kermanshachi, 2022)	ABD	Exploring Utilization of the 3D Printed Housing as Post-Disaster Temporary Shelter for Displaced People	Temporary Shelter Unit-Construction- Temporary Housing- Natural Disaster-Emergency Shelter	General systems

(Yatmo ve diğerleri, 2021)	Indonesia	Modular Isolation Units for Patients with Mild-to-Moderate Conditions in Response to Hospital Surges Resulting from the COVID-19 Pandemic	Temporary Shelter Unit-Construction- Covid-19	Demountable
(Faragallah, 2021)	Egypt	Fundamentals of temporary dwelling solutions: A proposed sustainable model for design and construction	Temporary Shelter Unit-Construction- Temporary Housing- Natural Disaster	Demountable
(Zafra ve diğerleri, 2021)	Philippines	Structural and thermal performance assessment of shipping container as post-disaster housing in tropical climates	Temporary Shelter Unit-Construction- Temporary Housing	Portable Container
(Spennemann, 2021)	Australia	COVID-19 on the Ground: Managing the Heritage Sites of a Pandemic	Temporary Shelter Unit-Construction- Covid-19	Tent

Finally, Table 6 shows the systematic analysis of the studies conducted between 2020 and 2014, and the detailed contents of the studies are given in the text starting from the available sources. Published in 2020, "Developing energy-efficient temporary houses for sustainable urban regeneration: Manufacturing homes with loess, pearlite, and vermiculite" published in 2020, a construction system has been developed with soil material, which has a porous structure (Yang ve diğerleri, 2020). In 2019, "A matter of speed: The impact of material choice in post-disaster reconstruction" comparatively analyzed nine different reconstruction solutions on speed and material for emergency shelter needs after the Nepal earthquake (Celentano, Zea, Göswein ve Habert, 2019). Among the studies published in 2018; "The use of intermodal steel building unit (ISBU) for the provision of habitable homes: Enablers and challenges" examines the use of shipping containers as temporary shelters to address the housing shortage in Nigeria (Nduka, Mosaku, Omosa, James, 2018). In the study "Intraregional reuse of emergency temporary housing in Japan", the housing types used to meet the housing need were analyzed after the Japan Earthquake. There are examples where different materials such as wood and steel are used as construction systems (Seike, Kim, Hosaka, Ida ve Masuda, 2018). Among the studies published in 2017; "Integrated Framework for Emergency Shelter Planning Based on Multihazard Risk Evaluation and Its Application: Case Study in China", the calculation of shelter capacities by determining the number of people in need of shelter on the accessibility of shelters with multi-hazard risk assessment and shelter planning for this purpose is designed to be applied to Changshu city in China (Fan, Zhai, Zhou, Zhang, Qiao, 2017). "Architecture for Refugees, Resilience Shelter Project: A Case Study Using Recycled Skis", a structural system was created using steel columns and steel pulleys to meet the need for emergency shelter as a result of natural disasters. This system is in use in Guinea Bissau as a humanitarian aid mission (Salvalai, Imperadori, Lumina, Mutti ve Polese, 2017). The 2014 study "The Genius Loci In The Globalization Millennium: temporary Dwelling"

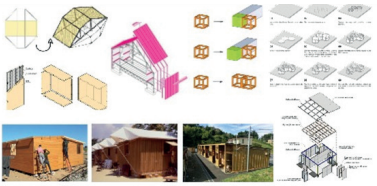
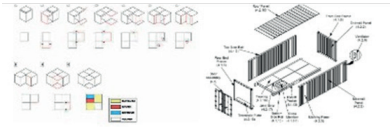
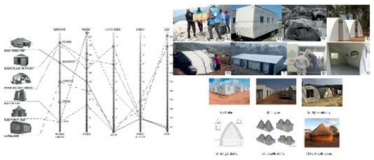
proposed a temporary dwelling made of steel and wood for people affected by disasters (De Berardinis, Gregorio, 2014).

Table 6. *Research in the Scopus database*

Author(s)	Country/ region	Title	Study scope/ keywords	System
(Yang ve diğerleri, 2020)	Korea	Developing energy-efficient temporary houses for sustainable urban regeneration: Manufacturing homes with loess, pearlite, and vermiculite	Temporary Shelter Unit-Construction-Natural Disaster	Portable
(Celentano ve diğerleri, 2019)	Switzlerand, Portugal	A matter of speed: The impact of material choice in post-disaster reconstruction	Temporary Shelter Unit-Construction-Emergency Shelter-Earthquake	Demountable
(Nduka, Mosaku, Omosa, James, 2018)	Nigeria	The use of intermodal steel building unit (ISBU) for the provision of habitable homes: Enablers and challenges	Temporary Shelter Unit-Construction-Temporary Housing Natural Disaster	Portable Container
(Seike ve diğerleri, 2018)	Japan	Intraregional reuse of emergency temporary housing in Japan	Temporary Shelter Unit-Construction-Temporary Housing-Earthquake	Demountable
(Fan, Zhai, Zhou, Zhang, Qiao, 2017)	China	Integrated Framework for Emergency Shelter Planning Based on Multihazard Risk Evaluation and Its Application: Case Study in China	Temporary Shelter Unit-Construction-Emergency Shelter	General systems
(Salvalai ve diğerleri, 2017)	Italy	Architecture for Refugees, Resilience Shelter Project: A Case Study Using Recycled Skis	Temporary Shelter Unit-Construction-Emergency Shelter	Tent
(De Berardinis, Gregorio, 2014)	Portugal	The Genius Loci In The Globalization Millennium:temporary Dwelling	Temporary Shelter Unit-Construction-Natural Disaster-Emergency Shelter	Demountable

When the researches on temporary shelter units and construction systems in WOS and Scopus database are analyzed according to keywords and years; it is seen that studies on temporary shelter units and temporary housing needed as a result of natural disasters were conducted in 2023 and 2022. In 2018, 2019 and 2023, studies on temporary housing needed after earthquakes were conducted, and in 2021 and 2022, studies on the Covid-19 outbreak were conducted. In 2014 and 2017, studies were conducted on the need for emergency shelter. The analysis of the studies conducted according to construction systems together with the content evaluation is shown in Table 7.

Table 7. *Publications on construction systems in temporary shelter units*

Systems	WOS	SCOPUS	Description
Tent	(Obyn ve diğerleri, 2015)	(Salvalai ve diğerleri, 2017) (Spennemann, 2021)	
Portable		(Yang ve diğerleri, 2020) (Pérez-Valcárcel ve diğerleri, 2023) (Avlar ve diğerleri, 2023)	
Demountable	(Oliveira ve Campos, 2019) (Yüksel ve Hasirci, 2012) (Asfour, 2019) (Imperadori ve diğerleri, 2014) (Moreno-sierra ve Pieschac, 2020) (Karaoğlan ve Alaçam, 2019)	(Yatmo ve diğerleri, 2021) (Iwata ve diğerleri, 2023) (Barreca ve diğerleri, 2022) (Maracchini ve diğerleri, 2022) (Faragallah, 2021) (Seike ve diğerleri, 2018) (De Berardinis, Gregorio, 2014) (Celentano ve diğerleri, 2019)(C. Roxas, 2023)	
Portable Container	(Cerrahoğlu ve Maden, 2022)	(Zafra ve diğerleri, 2021) Nduka, Mosaku, Omosa, James (2018)	
Made with local materials	(Economakis, 2018)		
General systems	(Gutierrez, 2022)	(Hwang ve Kim, 2022) (Shahzad ve diğerleri, 2022) Subramanya, Kermanshachi (2022) (Beatini ve diğerleri, 2023) Fan, Zhai, Zhou, Zhang, Qiao (2017) (Qin ve diğerleri, 2023)	

As a result of the review of two different databases, it is seen that there are publications that examine tent, portable, demountable, portable container, systems made with local materials and more than one system in general. The visuals of the systems proposed in the study are indicated according to the categories. The fact that the tent system can be used for short-term temporary shelter has led to the development of demountable and mobile construction systems. Although publications on the tent system were made in previous years, it is seen that research on the tent system was conducted again in 2021 with the Covid-19 outbreak (Spennemann, 2021). The portable system was

developed when the temporary shelter unit was being transported as a whole, and the system was developed as a result of investigations that developed folding one-piece designs to meet the needs of faster and more people (Avlar ve diğerleri, 2023). Demountable systems are the system with the highest number of studies in the WOS and Scopus databases. In the system, which has a total of 15 studies, the system has been developed over time with new designs with different joint details and different materials by conducting research from 2012 to the present day. In 2023, a new shelter design was proposed as a result of the natural disaster of typhoon (C. Roxas, 2023). Although there are very few studies on the portable container system, it is used in many areas with its features such as packaging, portability, storage, flexibility in design. When the publications are examined, studies in which modular designs are developed are included in the literature (Zafra ve diğerleri, 2021). When both databases are analyzed, there is only one study that includes a temporary shelter unit made with local materials. This study constitutes a proposed design model for the shelter unit and urban settlement for refugees (Economakis, 2018). The number of studies on general systems is higher in the Scopus database and mostly conducted in 2022 and 2023.

4. EVALUATION

As a result of the examination of existing studies, it is seen that the number of publications on temporary shelter units needed in emergencies such as epidemics, natural disasters and migration varies depending on the years of epidemics and disasters. According to the studies in the WOS database, among the construction systems, most studies have been conducted on demountable systems. There were no studies on portable systems. When the studies are evaluated in the country category, Turkey is the country with the highest number of publications. The studies conducted in Turkey in 2012, 2019 and 2022 cover the examination of demountable and portable container systems of temporary shelter units built as a result of natural disasters. In 2019 and 2020, a study was conducted in Arabia on the demountable system. In these studies, it is seen that temporary shelter units are needed in post-war migrations and studies have been carried out in this field. In 2019, a study conducted in Portugal examined the shelter unit built with demountable systems after natural disasters. In 2014 a study conducted in Italy, a temporary shelter unit was developed by proposing a model for a demountable system with lightweight materials. In 2015, a study on the indoor comfort of the tent system was conducted in Belgium. Looking at the studies in the Scopus database, it was determined that there are more studies than in the WOS database, but it was seen that the most studies on the demountable system among the construction systems in the Scopus database. When the studies in the Scopus database are evaluated in the country category, it is seen that many countries such as the USA, the Philippines, China, Italy, Japan, Indonesia,

Turkey, Egypt, Nigeria have conducted studies on temporary shelter units and construction systems. In 2021 and 2022, there are studies conducted in Australia, Indonesia and Korea in the context of tent, demountable and general systems of emergency shelter units needed as a result of the Covid-19 outbreak. In 2017, a study conducted in Italy examined the tent system as an emergency shelter. In 2020 and 2023, studies conducted in Korea, Spain and Turkey examined the shelter units needed after disasters such as earthquakes in the context of portable systems. Studies conducted in Korea, New Zealand, USA, China and Denmark in 2017, 2022 and 2023 were conducted in response to Covid-19, natural disasters and the need for emergency shelter and more than one system was examined. While the portable container system can be preferred more with its modular feature and its usability in many areas, it is seen that there are not enough studies in this field in the literature. It is thought that new model proposals specific to this system should be made and existing designs should be improved.

5. CONCLUSION

With this study, existing studies were examined through WOS and Scopus database in order to determine suitable costructuring systems for mass production in temporary shelter units and it is aimed to guide new designs and researches that can be applied in the future. Within the scope of the study, scans were made from WOS and Scopus databases and scientometric analysis was performed with the help of VOSviewer program. The keywords identified as a result of the analysis were examined by searching the databases in the context of construction systems. Most of the literature has been studied by the regions where disasters occur. The systematic and scientometric analysis in the study provides access to all existing studies in the WOS and Scopus databases, but also covers a part of the studies in the literature as there are studies in different databases.

With the evaluation of the studies compiled through WOS and Scopus databases, it was determined that among the construction systems, most of the studies were conducted on demountable systems and fewer studies were conducted on portable systems. Since the parts produced in demountable systems can be assembled where they are needed, the parts can be easily transported. The fact that it can be added to increase the area of the shelter unit ensures that this system is used more and the number of studies on the system increases. In portable systems, the temporary housing produced is transported to the place where it is needed as a complete piece. Although it provides fast installation, it is not preferred for emergency shelter needs as it reaches a small number of areas because it is not packaged and transported. This has led to fewer publications.

When the studies are evaluated in the country category, Turkey and Italy are the countries with the highest number of publications. Following Turkey and Italy, studies on temporary shelter units and construction systems have been carried out in many countries such as Arabia, Portugal, Belgium, USA, Philippines, China, Japan, Indonesia, Egypt, Nigeria. As a result of the examination, it is seen that tent, portable, demountable, portable container, systems made with local materials and more than one general system have been examined. In the researches conducted, it has been determined that the fact that the tent system can be used for temporary shelter for a short time is effective in the development of demountable and portable construction systems. It is seen from the publications examined that the portable system, fast and folding one-piece designs to meet the needs of more people have developed. In demountable systems, it is seen that the system has developed over time with new designs with different joint details and different materials. In the portable container system, although studies have been carried out for the development of modular designs, it has been determined that there are not enough studies. It is noteworthy that the number of studies on the system in which temporary shelter units are built with local materials is low.

While the portable container system can be preferred more with its modular feature and its usability in many areas, it is seen that there are not enough studies in this field in the literature. Proposing new models specific to this system and improving existing designs will also contribute to the application. When the advantages and disadvantages of construction systems according to the design criteria are evaluated, it will be effective in the development of innovative systems by providing fast production with the modular feature of the portable container system. However, it has been determined that there are few systems made with local materials and there are not enough studies on this subject. For future studies, it will be beneficial in terms of climate adaptability and sustainability to develop new systems by focusing on construction systems that are built quickly with local materials specific to the region where natural disasters occur and for disasters. This study identifies the existing systems belonging to WOS and Scopus database and undertakes the task of being a reference for future studies by identifying the gaps in the field.

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Chapter 2

ARCHITECTURAL ELOQUENCE: HISTORICAL AND CONTEMPORARY INTERPLAY OF RHETORICAL PRINCIPLES IN BUILDING DESIGN

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Introduction

The disciplines of architecture and rhetoric have shared a deeply intertwined relationship throughout history, a connection particularly evident in the works of seminal figures such as Vitruvius and Alberti. These thinkers seamlessly integrated rhetorical principles into architectural theory, demonstrating the profound impact of rhetorical concepts on the evolution of architectural ideas. Numerous architectural terms and concepts originate in rhetorical terminology, while spatial vocabulary and architectural metaphors are frequently employed to elucidate rhetorical theories. Despite this longstanding relationship, the historical interplay between these fields has been marked by periods of conflict and obscurity.

Vitruvius and Alberti played pivotal roles in intertwining rhetoric with architecture. In his treatise "De Architectura," Vitruvius emphasized the importance of rhetoric in communicating architectural ideas effectively, advocating for integrating technical knowledge with rhetorical skills. Alberti expanded on these ideas in "De Re Aedificatoria," introducing concepts such as "concinnitas" (harmony) that reflect rhetorical principles of balance and persuasion.

This article is structured into several sections to explore this interdisciplinary connection thoroughly. First**,** the paper examines the semantic evolutions of rhetoric, highlighting its complex history and various definitions that extend beyond mere eloquence or oratory. Next, it delves into the historical and contemporary connections between architecture and rhetoric, focusing on significant periods such as the Classical Era, the Middle Ages, and the Renaissance. This section also discusses the influence of prominent figures like Vitruvius and Alberti. Recent philosophical reflections on rhetoric have deepened our understanding, prompting a reconsideration of the relationship between these two disciplines.

The study further explores three levels of rhetorical composition: shaping beliefs (conviction), imparting knowledge, and fostering understanding. These levels provide a framework for understanding how rhetorical principles can be applied to architectural theory and practice. Another section of the paper categorizes research into rhetoric as communication, the art of eloquence, and the art of synthesis. This categorization helps to differentiate the various ways rhetoric can influence architectural design and theory. The concept of rhetorical situations and architectural design situations is also analyzed, drawing parallels between the complexities faced by rhetoricians and architects. This section emphasizes synthesizing diverse knowledge and perspectives to create coherent and impactful outcomes in both fields.

The conclusion reiterates the importance of understanding rhetoric as the "art of synthesis" and its potential to address contemporary architectural

challenges. It calls for integrating rhetorical knowledge into architectural theory and education to promote coherence and unity in architectural practice. By examining the inherent connections between architecture and rhetoric, this paper aims to broaden architectural theory's scope and highlight this interdisciplinary correlation's essential and notable achievements. Given the longstanding historical connection and evolving interpretations of rhetoric, this research investigates the authentic links between these fields, exploring their most genuine interpretations and interconnections. By contemplating the "art of composition," this study examines how rhetoric can be conceptualized at three levels. The rhetorical position, akin to the architectural design position, involves comprehending and integrating all aspects of composition into a cohesive work. From this standpoint, rhetoric and architecture share comparable roles, as both disciplines are composed at different levels to produce a unified, influential, and convincing outcome. Hence, the relationship between these fields is not merely superficial and interdisciplinary but is a genuine and intrinsic connection.

This study employs a methodology that integrates descriptive research and logical deduction. It aims to identify and review the previously unexplored connections between architecture and rhetoric. By analyzing the results of this review and applying logical reasoning, this paper uncovers a genuine relationship between architecture and rhetoric, serving as the main focus of this study.

1. Semantic Evolutions of Rhetoric

The term "rhetoric" has a complex and multifaceted history, challenging its precise definition. As Dickson observes, "Everyone knows how slippery and complex this word is. It has been used both to praise and to condemn, and it is so flexible that it can be flipped" (Dixon, 2010). Similarly, Edwin Black notes, "The different uses of the term rhetoric cannot be completely separated from each other, and for this reason, defining the term rhetoric is not easy" (Black, 1965, p. 259).

Historically, rhetoric has been associated with meanings such as "oratory," "the art of eloquence," "the science of discourse," "the art of persuasion," and "the art of composition" (Vaisheh, 2005; Kennedy, 1994). This diverse range of meanings results from the historical evolution of rhetoric, as documented in numerous historical encyclopedias and rhetoric histories (Buchanan, 2018).

In contemporary usage, "rhetoric" is often translated as "eloquence" or "the art of discourse." However, "eloquence" evokes images of literary embellishments, while "oratory" recalls religious and moral sermons. Understanding rhetoric merely as eloquence or oratory renders its relationship with architecture superficial and weak, limiting the potential connection between architecture and language (Wisse, 1989).

Returning to its roots in ancient Greece, rhetoric initially found its primary application in the courts. Over time, it expanded to various types of speech and fields related to linguistic or visual expression. These fields included all the arts, such as painting, sculpture, music, and architecture (van Eck, 2007; Vickers, 1988). Buchanan posits that rhetoric encompasses all the arts involving construction with words or other materials. Therefore, rhetoric should not be confined solely to speech but to any system of meaning construction, including architecture (Buchanan, 1995).

Numerous definitions of rhetoric exist, but Aristotle's perspective remains particularly influential. Aristotle viewed rhetoric as an art, knowledge, or technique not confined to a specific subject. James Herrick provides a comprehensive definition, emphasizing that "rhetoric is the study of how human thought and emotion are influenced through the strategic use of language (or other meaningful systems) in decision-making and the actions of others" (Herrick, 2018).

Modern rhetoric extends beyond language, addressing the foundational mechanisms of discourse and rhetorical contexts. While literary scholars often view rhetoric as a set of formal literary techniques, philosophers of language see it as a "rational art" and a framework for understanding thought and reasoning—a "method of argumentation" (McKeon, 1995; Perelman & Olbrechts-Tyteca 1969). From this perspective, rhetoric is a "dynamic tool that creates and shapes various states of thought" (Backman, 1987; Toulmin, 1958).

Thus, modern rhetoric aligns more closely with philosophical views and distances itself from traditional literary rhetoric. Instead of focusing on compositional rules, it addresses the foundational mechanisms of discourse. Given that this paper seeks to deeply understand the meaning of rhetoric by examining its key concepts and mechanisms, the authors' perspective on rhetoric aligns more closely with the philosophical view of rhetoric.

2. Exploring the Historical and Contemporary Connections Between Architecture and Rhetoric

Evolving interpretations of rhetoric and diverse conceptualizations of architecture shape the dynamic and intricate history of architecture and rhetoric. This relationship is dynamic, mirroring the changing patterns in both fields. Although a detailed analysis necessitates a separate and extensive study, a thorough review can uncover the historical semantics of rhetoric and its impact on architectural practice.

Historically, this relationship has been examined during the classical period, the Middle Ages, and the Renaissance (Eck, 2007), with significant contributions from Vitruvius and Alberti. Vitruvius's "Ten Books on Architecture" is one of the earliest documents illustrating this connection. Vitruvius's th-

ree principles of good architecture—firmitas (strength), utilitas (utility), and venustas (beauty)—mirror Aristotle's three modes of persuasion in Rhetoric: logos (logic), pathos (emotion), and ethos (credibility) (Frith, 2004, p. 41). This influence is evident in the content and structure of Vitruvius's writings, significantly shaped by Cicero's rhetorical theories, particularly his work "On the Orator" (Smith, 2003, p. 56). Vitruvius believed that an architect must possess rhetorical skills to effectively communicate and justify their designs, ensuring that their structures were functional, beautiful, and persuasive in their conception.

Table 1. Comparison of Vitruvius's Principles and Aristotle's Modes of Persuasion

Vitruvius's Principles	Aristotle's Modes of Persuasion
Firmitas (Strength)**:** Ensuring structural stability and durability of a building.	Logos (Logic): Using reason and evidence to persuade.
Utilitas (Utility)**:** Designing buildings that are functional and useful.	Pathos (Emotion): Appealing to the audience's emotions.
Venustas (Beauty)**:** Creating aesthetically pleasing and beautiful structures.	Ethos (Credibility): Establishing the speaker's credibility and character.

Firmitas (Strength) and Logos (Logic) are aligned due to their shared emphasis on the significance of a sturdy basis, whether in construction or argumentation. Utilitas (Utility) and Pathos (Emotion) aim to satisfy practical needs and evoke human experiences and emotions. Venustas (Beauty) and Ethos (Credibility) rely on appealing to aesthetic values or moral character to establish trust and admiration.

Leon Battista Alberti**,** a prominent figure in architectural theory during the Renaissance, employed rhetorical terms and concepts to articulate his ideas. Alberti sought to redefine various artistic fields, including painting, music, and architecture, by incorporating them into the principles of rhetoric. He uses the term "composition," borrowed from rhetoric, to explain the concept of paintings (Kirkbride, 2020, pp. 76–77). "concinnitas," first introduced in "On Architecture," denotes harmony and proportion. Initially used in rhetoric, it is now applied to architecture (Eck, 2007, p. 101). Alberti's architectural theories are closely intertwined with rhetoric, leading scholars to argue that a thorough understanding of certain innovative aspects of his architectural theory can only be achieved by grasping rhetoric (Smith, 1992, p. 232).

Figure:1 Façade of Santa Maria Novella, Florence
Source: https://www.thegeographicalcure.com/post/guide-to-santa-maria-novella

Leon Battista Alberti's creation of the Santa Maria Novella facade in Florence is a prime example of compositional principles. The harmonious arrangement of geometric shapes and proportional elements exemplifies Alberti's application of rhetorical principles to architecture.

Figure 2. The Parthenon, Athens
Source: Iktinos and Kallikrates, Parthenon, Acropolis, Athens, 447–432 B.C.E. (photo: Steven Zucker, CC BY-NC-SA 2.0)

The Parthenon in Athens is a classic example of using the Golden Ratio in architecture. The building's harmonious proportions exemplify Alberti's principles of concinnitas, where each part contributes to the overall beauty

and balance of the structure.

In contemporary settings, rhetorical principles continue to influence architectural practices. Modern architects like Frank Gehry and Zaha Hadid employ rhetorical strategies in their design processes. Gehry's Guggenheim Museum in Bilbao, for instance, uses bold, curvaceous forms that evoke strong emotional responses from viewers, akin to the pathos in rhetoric. Hadid's innovative use of fluid forms and dynamic spaces in buildings like the Heydar Aliyev Center in Baku also demonstrates the application of rhetorical principles. Her designs often challenge conventional architectural norms, persuading viewers and users to experience space and form in new and unexpected ways.

Figure 3. The Guggenheim Museum Bilbao / Gehry Partners
Source: https://www.archdaily.com/422470/ad-classics-the-guggenheim-museum-bilbao-frank-gehry

Figure 4. Heydar Aliyev Center / Zaha Hadid Architects
Source: https://www.archdaily.com/448774/heydar-aliyev-center-zaha-hadid-architects

The prevalence of Cartesian rationality in the modern era led to a weakened correlation between rhetoric and architecture. The architects Alison and Peter Smithson published their architectural manual titled "Without Rhetoric: An Aesthetic of Architecture 1955-1972" in 1972, emphasizing the clear distinction between different architectural styles during that period (Smithson & Smithson, 1972, p. 14). However, there has been a resurgence of interest in studying rhetoric in recent years. This is primarily due to the shift towards linguistic analysis in philosophy, advancements in technology, the rise of mass communication platforms, and the establishment of the academic field of "communication studies." Therefore, in the last fifty years, the connection between architecture and rhetoric has become a significant research topic for many architectural theorists (Herrick, 2018, p. 23).

Numerous scholars have meticulously examined the intersection of architecture and rhetoric, leading to various interpretations and connections that can be categorized into three primary groups:

a) Rhetoric as Communication:

One dimension of rhetoric involves influencing and engaging with an audience (Dixon, 2010). Recent studies in communication sciences, by defining "rhetoric as communication," have provided fertile ground for exploring rhetorical issues. Some theorists in this domain argue that integrating rhetoric and architecture transforms architecture from merely a decorative art into a social art, emphasizing its interactive nature with the audience and society (Gutenschwager, 1996, pp. 246-258). From this perspective, architecture is perceived more as a social phenomenon than an artistic endeavor. Through the term "interactive architecture," Wollner aims to elucidate the communicative dimension of architecture under the lens of rhetoric, positing that interactive architecture arises at the intersection of contemporary rhetorical theory and architectural knowledge, focusing on themes such as meaning, communication, and identity formation. (Wuellner, 2008, P. 29) In these studies, the reference to rhetoric is crucial because it can act as a gateway to considering the social dimension of architecture and addressing communication issues within the field. Communication in architecture can pertain to scenarios where architects engage with society: within small communities of architects and colleagues, in academic circles, and in the relationship between the architectural profession and the broader culture in which it operates. As a profession and discipline, architecture often requires the power of rhetoric to persuade its audience (Hattenhauer,1984, pp. 71-77).

In order to demonstrate the application of rhetorical communication in architectural practice, we can analyze some prominent instances:

The High Line is a public park in New York City. It is a raised linear park constructed on a previous New York Central Railroad spur on the western side

of Manhattan. The project involved the community through public meetings and feedback sessions, demonstrating interactive architecture integrating public discourse. The design promotes community engagement and dialogue, converting an obsolete industrial structure into a lively social hub.

Figure 5. The High Line Park is between West 28th and 29th Streets. Photo © Iwan Baan, 2011
Source: https://placesjournal.org/article/above-grade-on-the-high-line/

The Eden Project in Cornwall, United Kingdom, showcases expansive Biomes containing many plant species. The project's communicative aspect is apparent through its educational programs and interactive exhibits, which actively involve visitors in discussions about sustainability and conservation. The architectural design of the Biomes employs visual rhetoric to effectively convey the significance of environmental stewardship.

Figure 6. The Eden Project in Cornwall, United Kingdom, by Grimshaw
Source: https://amazingarchitecture.com/exhibitions/the-eden-project-in-cornwall-united-kingdom-by-grimshaw

In such contexts, rhetorical and communicative skills and knowledge play a pivotal role, and the significance of rhetoric in these situations cannot be overlooked. This connection between architecture and rhetoric mirrors the relationship between rhetoric and other disciplines that use rhetoric to enhance social interactions (Gottschalk et al., 2016). The application of rhetorical communication knowledge and skills in architecture is not only acceptable but essential. However, a deeper understanding of the relationship between architecture and rhetoric will reveal this application in a new light.

b) Rhetoric as the Art of Eloquence:

Another category of research is based on the assumption and understanding of rhetoric as knowledge related to text and language, which itself includes two main subcategories:

- **Rhetoric as an Approach to Analyzing Architectural Texts:** Like any other discipline, a collection of speeches and texts has been produced in the architectural field. Some of these texts are historical, while others pertain to dialogues and discussions among architects or between teachers and students of architecture. Like any other, these texts can be analyzed through a rhetorical lens. The works of Serap Durmus exemplify this approach to the connection between architecture and rhetoric(Durmus & Öymen Gür, 2014). Additionally, studies on the rhetoric of documents related to architectural competitions fall into this category (Tostrup, 1999).

An example of rhetoric used to analyze architectural texts can be observed in the case of the Sydney Opera House in Australia. The design and construction of the Sydney Opera House included extensive rhetoric in proposals, public speeches, and architectural texts. Jørn Utzon's visionary ideas and articulate descriptions were instrumental in convincing stakeholders and the public of the project's worth. In his 1956 competition entry, Utzon employed persuasive rhetoric to emphasize the distinctiveness and practicality of his design, utilizing intricate illustrations and evocative descriptions that resonated with both judges and the general public (Murray, 2003). Throughout the project's development, Utzon consistently shared his unique ideas and opinions about the project's technical and aesthetic aspects through public speeches and writings. In his speech at the University of Sydney in 1965, he highlighted the pioneering use of precast concrete shells. This design element was robust and aesthetically pleasing, persuading the audience of the project's innovation (Drew, 1999).

Architectural texts and documentation during construction reveal the project's progress and the rhetorical techniques used to navigate political and financial obstacles. Utzon's communication with the New South Wales government and the Sydney Opera House Trust is a testament to his persuasive ability to advocate for design modifications and increased financial support.

This showcases his rhetorical prowess and resilience in keeping the project on track despite the challenges (Murray, 2003).

Figure 7. Sydney Opera House / Jørn Utzon
Source: https://www.archdaily.com/65218/ad-classics-sydney-opera-house-j%25c3%25b8rn-utzon

- **Architecture as Language and Rhetoric as the Art of Language:** Architecture as language or text is not novel; many branches of semiotics, semantics, and structuralist tendencies in architecture, such as space syntax, are based on this premise. However, diverse approaches to analyzing language or interpreting the meaning of texts lead to an expansion and diversification of such studies. Within this broad spectrum, some studies examine language from a rhetorical perspective. Experts in these studies seek to find correspondences between the elements and relationships of language and those of architecture, extending rhetorical mechanisms to the architectural realm. The origins of this view are familiar; for instance, traditional discussions about decoration and structure in architecture held similar assumptions and approaches. Modern discussions on rhetorical devices such as metaphor and metonymy in architecture are based on this premise. Hattenhauer, adopting a semiotic approach, attempts to explore the connection between architecture and rhetoric. He states: "Since architecture and rhetoric both aim to express allegorical and metaphorical meanings, studying the relationship between these two fields can enhance our understanding and creation of meanings."

Additionally, concepts related to visual rhetoric (form) or spatial rhetoric also fall into this category. From this perspective, rhetoric is referenced in architecture for its rhetorical communication skills and at the level of theorizing and understanding. As a discipline in the study of speech, rhetoric establishes

an interdisciplinary connection with architecture (Hattenhauer,1984, pp. 71-77). Such reliance on other disciplines within the field of architecture is not unprecedented. To advance theoretical discussions in architecture as a profession, reliance has often been placed on different branches of knowledge, such as science, art, or philosophy, which have provided foundational and theoretical frameworks for contemplating architecture.

c) Architectural Design as a Rhetorical Situation:

Researchers have approached the subject through the design concept in the third category of research, where the level of investigation has slightly shifted. Since design refers to a type of action, it establishes a more robust, deeper, and more extensive connection with rhetoric than other disciplines, revealing the meaning of rhetoric in multiple facets. The most significant, comprehensive, and fruitful exploration of the connection between rhetoric and architecture can be observed in design studies. Richard Buchanan, a prominent design scholar, has authored numerous articles and books on rhetoric and design, emphasizing the necessity of linking these two fields; his discussion of design, however, is general and does not explicitly address architectural design. He asserts that the connection between rhetoric and design is profound and longstanding. Although the term design is relatively new, its concept has a historical nature. It has existed since ancient times, allowing the connection between design and rhetoric to be traced throughout history. Buchanan also highlights the involvement of "decision-making and choice," "invention and judgment," "experience and practical wisdom," "synthesizing various knowledge and ideas," and "persuasion" in the realm of design, which are precisely the topics of interest in rhetoric; however, these topics in design have never been coherently and systematically expressed. Buchanan, emphasizing the synthesizing capability of rhetoric, claims that rhetoric can create a "unifying theory of design," a theory that can encompass all types of design, whether industrial, engineering, graphic, architectural, urban design and all significant design discussions articulated in the past seventy years. He also believes that rhetoric and design, both as "synthesizing arts," can unify different aspects of human activity, including "theory and practice," and "if a design theory based on rhetoric is formulated, it can be hoped that the historical separation of theory and practice will be eliminated (Buchanan, 1985). " However, the basis of this possibility is not well elucidated in Buchanan's research in the field of architecture. Generally, it can be said that such a connection between architecture and rhetoric, discussed more by design scholars in recent years, considers the relationship between these two disciplines at a different level. The connection between architecture and rhetoric at this level is not a lateral connection due to these two fields' shared features and issues but rather an intrinsic and genuine connection. The deepest understanding of rhetoric and the most fruitful connection between architecture

and rhetoric result from such a viewpoint. This group of researchers envisions another meaning of rhetoric, which extends far beyond eloquence, oratory, and communication. Although design scholars have occasionally mentioned the characteristics and achievements of such an understanding of rhetoric as a "synthesizing art," the connection between architecture and rhetoric at this level has been less precisely studied and examined. The following efforts will focus on this connection between architecture and rhetoric at this level, first explaining the fundamentals of understanding rhetoric as a synthesizing art and then discussing the implications of such a connection in architecture.

3. Rhetoric as the Art of Synthesis

As previously mentioned, the relationship between architecture and rhetoric at any level depends on a distinct understanding of rhetoric. If rhetoric is understood as communication or a specialized discipline in eloquence, it establishes connections with architecture and yields more profound insights and broader discussions of architectural topics and issues. However, at the third level, rhetoric is not recognized based on shared perceptions but is defined as the "art of synthesis." This section aims to delve into the concept of persuasion, the most prevalent understanding of rhetoric, and the idea of "architectonic," which has been employed in explaining rhetoric, to elucidate the synthesizing capability of rhetoric and subsequently explain the connection between rhetoric and architecture at this level.

Although rhetoric has been named the "art of synthesis" by contemporary thinkers, the focus on the synthesizing and unifying capabilities of rhetoric can also be found in the theories of earlier rhetorical scholars. For instance, Cicero, the great orator of the Roman Republic, speaks of synthesizing "wisdom" and "eloquence" through rhetoric. The core of Cicero's discourse on rhetoric is that "thoughtful deliberation" and "pleasing speech" are mutually dependent. In other words, "expression" and "thought" are inseparable (Dixon, 2010). Therefore, Cicero and Isocrates advocate integrating wisdom and eloquence in the ideal orator. Cicero views these two domains as the realms of theoretical and practical knowledge. In the Encyclopedia of Rhetoric and Communication, under the entry "Architectonic," the synthesizing capability of rhetoric is attributed to Cicero: The new vision of an architectonic art of rhetoric, which can organize not only debates and arguments but all disciplines, owes its conception to Cicero's reflections on rhetoric (Farrell, 1996).

Additionally, Quintilian asserts that "rhetoric should play a significant and unifying role in the educational system." He elaborates on this role extensively in his treatise "Institutio Oratoria." Vico, a rhetoric scholar from the Enlightenment era, distinguishes between the realm of the probable and the realm of the certain, reminding us that "the foundational knowledge that serves as a unifying basis in the realm of the probable is rhetorical knowledge"

(Backman, 1987). Although all these scholars discuss the synthesizing capability of rhetoric, McKeon, a philosopher of modern rhetoric, first systematically articulated rhetoric as the "art of synthesis." By critiquing the comprehensive concept of persuasion in rhetoric, he made room for the inclusion of synthesis in this domain, stating: The traditional meaning of rhetoric, as the art of persuasion, limits its scope and obscures the significant role it can play as an art of synthesis in human knowledge. While McKeon seeks to replace the conventional understandings of rhetoric as communication (persuasion) and eloquence with the "art of synthesis" as a necessity of the "age of technology," this study aims to demonstrate, through an in-depth exploration of the synthesizing capability of rhetoric and its explanation at three levels, that this new metaphor in defining rhetoric, by focusing on its synthesizing capability, encompasses the historical meanings of rhetoric (McKeon, 2005). Thus, it is the most profound and comprehensive understanding of rhetoric.

Different Levels of Synthesis in Rhetoric

The capability of rhetoric to synthesize manifests at various levels. At the first level, rhetoric involves synthesizing speech components to create a cohesive and eloquent discourse. At the second level, rhetoric brings individuals together by emphasizing persuasion and its mechanisms, fostering unity. Drawing on McKeon's understanding of rhetoric as the "architectonic art," rhetoric's capacity to synthesize diverse knowledge becomes evident at the third level. One can establish a novel perspective on the connection between architecture and rhetoric by comprehending rhetoric as the "art of synthesis" across these three levels and integrating these dimensions.

First Level: Rhetoric and the Synthesis of Components: At the primary level, rhetoric is recognized for synthesizing the components of speech. Whether these components are words that combine to form meaningful and coherent sentences or different discourse sections, such as introduction, evidence, argumentation, and conclusion, their proper synthesis results in a cohesive text or speech; additionally, at a broader level, rhetoric considers the synthesis of speech with its context (text and background). Thus, rhetoric fundamentally involves synthesizing components to create a meaningful and impactful whole. It is important to note that synthesis at all these levels co-occurs. While a rhetorician contemplates the juxtaposition of two words, they also consider that each word belongs to a larger context and is part of a greater whole. Every component is part of a whole, and new wholes emerge from combining these components. Therefore, rhetoric operates within an intertwined and hierarchical system, recognizing components and wholes and synthesizing them to create new unities.

In architectural theory, the synthesis of architectural elements is also discussed. This synthesis occurs at various architectural levels, from the

juxtaposition and combination of different materials to the synthesis of architectural elements. Discussions also include the synthesis of mass and space and, at a broader level, the integration of the work with its larger context, such as a street or city. Thus, architecture, like rhetoric, involves identifying components and wholes, synthesizing them, and creating larger unities. Additionally, Kenneth Frampton, in his book "Studies in Tectonic Culture," defines the term "tectonic" as the "art of joints or connections." This aligns with one of Islamic scholars' most essential definitions of rhetoric: the "knowledge of joining and separating." Therefore, it is evident that both rhetoric and architecture focus on the synthesis of components and how they are connected and integrated. In other words, human thought performs different tasks in theory and practice. In the theoretical realm, where the goal is understanding, thought analyzes and breaks down elements and identifies relationships among them. In the practical sphere, where the goal is creation, thought synthesizes components to create a unified whole as a "product," whether speech, poetry, architecture, or urban planning. From this perspective, rhetoric can be seen as explaining the synthesis mechanism of thought in all domains where the goal is to create a "product" (McKeon, 2001).

Second Level: Rhetoric and the Synthesis of Human Perspectives: Rhetoric synthesizes components to create cohesive wholes, aligns individuals with different perspectives, and fosters unity among them. This synthesizing capability of rhetoric, historically associated with "persuasion," has always been integral to rhetoric. The "Dictionary of Critical Theory" defines rhetoric as the "art of persuasive speaking and writing" (Buchanan, 2018). The entry on "persuasion" in the "Encyclopedia of Rhetoric" states that "persuasion and rhetoric are so closely related that they are sometimes used interchangeably." (McKeon, 2005). Thus, persuasion is introduced as the "ever-present principle of rhetoric" (Herrick, 2018). When a rhetorician persuades someone, they effectively align the person with their perspective to prompt action or inaction. To be persuasive, the rhetorician must consider the audience's position and cultural, intellectual, and emotional context. In other words, before delivering their speech, the audience has already influenced the rhetorician. It can be said that, in every act of persuasion, the positions of the audience and the rhetorician converge, and both move from their previous positions to a "shared position," leading to a "shared understanding." Thus, in the event of persuasion, a kind of unity or synthesis is created between the rhetorician and the audience through effective speech. Therefore, rhetoric, besides synthesizing the components of speech, can bring the rhetorician and the audience closer to common ground, aligning them and fostering unity among them. This is why concepts such as "shared understanding" and "shared position," as well as, more broadly, cultural and historical commonalities, gain importance in rhetoric and the process of persuasion (Farelle, 1996).

Similarly, architects, like rhetoricians, must understand the synthesis among people and persuade them. Persuasion is one of the most critical tasks of an architect during architectural practice. Ballard and Koskela, in their article "Rhetoric and Design," emphasize this point: "At the heart of architectural design is a dialogue that includes the conversation of the creator with themselves or others," and they continue that "wherever there is dialogue, there is persuasion, and wherever there is persuasion, there is the domain of rhetoric" (Ballard & Koskela, 2013). Without understanding the importance of persuasion in architecture, architectural works may be created that fail to persuade their audiences. For example, the experience of the city of Shushtar New Town illustrates this point. Despite adhering to all technical, aesthetic, and even functional criteria, the city, which initially received much acclaim from architects for its beauty, eventually became a ruin due to neglecting its audience and context. Therefore, during the conceptualization phase, the negotiation process with the design team or stakeholders, or the final construction, the work of an architect is imbued with persuasion. Thus, at this level of understanding rhetoric, it becomes clear that architecture and rhetoric are about synthesizing and fostering unity among people (the knowledge of persuasion). This knowledge requires a deep understanding of the audience's tastes, history, and culture.

Third Level: Rhetoric and the Synthesis of Knowledge: To better understand the third level of rhetoric's synthesizing capability, it is essential to consider the historical roots and uses of the term "architectonic." This term is both ancient and significant, highlighting the common ground between architecture and rhetoric. As previously mentioned, it shapes one of the comprehensive perceptions of rhetoric in recent times, and it is a term that linguistically encompasses the word architecture, providing an excellent entry point for exploring the connection between these two fields. In dictionaries, the term usually has two meanings: the first in architecture, referring to "anything related to architecture," and the second in philosophy, referring to the "systematization of knowledge." This secondary meaning of architectonic is used in modern rhetoric. James Herrick believes McKeon uses the term architectonic to suggest that rhetoric, as a primary discipline, gives order and structure to other disciplines, knowledge, and arts because rhetoric, among other sciences, studies the method of organizing thought when dealing with diverse subjects (Herrick, 2018). McKeon, relying on this synthesizing capability of rhetoric, constructs his theory of rhetoric and states that sciences and knowledge have become specialized and diversified in the modern era, leading to the emergence of interdisciplinary knowledge (McKeon, 2005).

Furthermore, all sciences compete to take on an architectonic role, which involves organizing and connecting various matters. Humanity has always sought a guiding model to unify diverse knowledge. Throughout

history, humans have consistently sought such an "art of synthesis" to unify different domains of human knowledge. In his pursuit of such unity among sciences, Descartes believed that logical methods used in mathematics and physics could be applied to all fields of human knowledge, thereby bringing about hidden unity among different sciences. Later, Kant, in his "Critique of Pure Reason," speaks of systematic unity among knowledge, referring to architectonics as the art of constructing systems (Magee, 2009, pp. 65-67).

However, McKeon, a philosopher of rhetoric, argues that rhetoric is the foundational knowledge capable of synthesizing all human knowledge and has demonstrated this capability at various historical periods (such as during the Roman Republic and the Renaissance).

Some knowledge is considered theoretical, while others, including practical knowledge, fall into a different category. Rhetoric can synthesize and unify both (theory and practice). McKeon writes in his article "The Uses of Rhetoric in the Age of Technology" that "architectonics unites theory and practice." To explain this synthesizing feature of rhetoric, he uses the metaphor of architecture, stating that the art of architectonics performs the same tasks as architecture: uniting theory and practice, combining rules of composition, proportions, and design with conventions, habits, skills, abilities, and tangible experiences. Architectonics essentially refers to what creates this unity (McKeon, 2005). In other words, he introduces architecture as a guiding model for understanding modern rhetoric. From this perspective, architecture also possesses the power to unify diverse and different components into a single decision, synthesizing them. He says: "Architecture has always been an architectonic art because, in architecture, diverse specializations are employed to create a single product "(McKeon, 2005, pp. 197-205).

Furthermore, according to McKeon, architects and rhetoricians (rhetors) visualize a comprehensive idea and utilize various specialists to bring their visions to life. An architect, whether an architect or a rhetorician, views their art differently than an artisan. The craftsman focuses solely on the form and function of their work. At the same time, the architectonic has a higher-level understanding of the overall relationships among different components and their position, providing a roadmap for all specialists working under them (Backman, 1987). Therefore, considering the architectural metaphor in explaining architectonics, it can be concluded that the art of architectonics, from McKeon's perspective, refers to organizing and synthesizing diverse theoretical and practical knowledge into a coherent and meaningful system. This synthesizing feature in rhetoric implies that rhetoric combines diverse theoretical knowledge in a practical context, manifesting them in a unified decision.

Examining Aristotle's rhetorical triangle also elucidates the synthesis of different knowledge in rhetoric. Aristotle posited that persuasion is achieved

through logos, ethos, and pathos. In other words, the common ground that can unify the audience and the rhetorician is found in the domain of logos (logic or sciences), pathos (emotions), and ethos (ethical and customary commonalities). Thus, rhetoric can be seen as the site where rational, emotional, customary, and cultural knowledge converge. It is clear that architecture similarly synthesizes such knowledge. Architecture encompasses scientific and technical discussions, categorizing it as an engineering discipline, and includes artistic and emotional aspects, categorizing it as an art form.

Additionally, it considers customs and social matters, linking it to social and human sciences. Aristotle's rhetorical triangle (logos, pathos, and ethos) and Vitruvius' three pillars of architecture (firmitas, utilitas, and venustas) illustrate the diverse knowledge of rhetoric and architecture. Every decision in the realm of architecture and rhetoric simultaneously addresses all three mentioned aspects. However, we have often considered these aspects separately in architecture and have struggled to view them as a unified whole. This neglect might be one of the critical reasons for the fragmentation and lack of cohesion in architectural knowledge.

As previously mentioned, architecture, like rhetoric, is inherently a synthesizing knowledge that unifies diverse theoretical and practical knowledge in decisions leading to architectural works. Architecture inherently possesses this synthesizing capability, which is why rhetoric scholars have also used the metaphor of architecture to illustrate this capability in rhetoric. However, the dominance of specialized and fragmented views in the modern era has obscured the understanding of architecture as the art of synthesis. Therefore, just as rhetoric scholars have drawn on architecture to demonstrate rhetoric's synthesizing capability, we can also use rhetoric to understand and explain architecture better.

4. Rhetorical Situations and Architectural Design Situations

A situation in which a rhetorician synthesizes across all the levels above to ultimately create a coherent, impactful, and persuasive product is termed a "rhetorical situation." The rhetorical situation is the most suitable framework for understanding rhetoric as the "art of synthesis." The theory of rhetorical situations is comprehensive within rhetoric, detailing its historical development and the evolution of its concepts. Here, a brief explanation of the features of this situation will demonstrate that the contexts architects encounter are akin to rhetorical situations. Therefore, just as rhetoric exemplifies the "art of synthesis," architectural design also exemplifies this art. Moreover, one can yield benefits for architecture by profoundly examining the rhetorical situation in rhetoric.

A rhetorical situation is characterized as "dynamic" and "in a state of flux," "complex and indeterminate," and "unique, specific, and tangible,"

encompassing necessities, constraints, and audiences with diverse drives and beliefs, aiming to create a "product" or make a "decision" (Lloyd, 1986, p. 6). This closely mirrors the realm of human decision-making and action, where a decision must be made in a complex, multifaceted, and unique situation. Consequently, the appropriate decision in various situations depends on different conditions, and it is unrealistic to expect predetermined, universal rules or instructions to guide the rhetorician. Instead, the rhetorician must be equipped with "arts" to craft a coherent and persuasive product despite changing conditions and situations. Hence, in a rhetorical situation, besides learning diverse knowledge, cultivating the inner faculties of the rhetorician is crucial, perhaps even more so.

The rhetorical situation can provide an appropriate theoretical framework for architects' situations. Like rhetorical situations, architectural design situations fall within the realm of the probable and indeterminate. Defining design problems as "ill-structured problems" directly points to this characteristic of design issues. For this reason, unlike precise sciences like mathematics or chemistry, there are no specific solutions or instructions for creating good architecture; instead, the architect plays an active role in defining and framing the problem. When confronting a design situation, the architect is in a complex, ambiguous, and multilayered position and must first develop a coherent understanding of the situation and "frame" the problem, which is precisely what the rhetorician does in a rhetorical situation (Richard, 1973, pp. 154–161).

Furthermore, the designer must synthesize diverse issues and various knowledge in an indeterminate and ambiguous situation into a unified decision or product. Since architectural design situations also have dynamic and evolving conditions, there are no fixed principles and rules for teaching an architect to handle design situations. Instead, architects must be trained and equipped with art to tackle each unique situation. According to Donald Schön, every design problem is a "unique world," and no two issues are alike. Just as rhetoric scholars emphasize the need for a specific "art" to address rhetorical problems, Schön also stresses the necessity of a particular "art" to handle the unique design tasks (Schon, 1988, pp. 4-10). The training and cultivating of the architect's inner faculties should precede architectural education.

After understanding the similarity between rhetorical situations and architectural design situations and demonstrating that both the architect and the rhetorician are in situations where they must synthesize a coherent product to create a persuasive impact, the question arises: How can the rhetorician (or architect) effectively perform their task in each new, unique, and specific situation that lacks general rules? By deeply exploring the rhetorical situation, we can understand that the rhetorician operates in two capacities, each requiring appropriate skills: sometimes in the capacity of perceiving and recognizing unity

and other times in the capacity of creating and producing it (Gorrell, 2020). In the first capacity, the rhetorician creates coherence and finds commonality among the diverse components of the situation, understanding the situation and framing the problem. The rhetorician synthesizes the elements in the second capacity to create a product. The faculty within humans that enables them to function effectively in these two realms is known as "common sense." Common sense, in collaboration with the faculty of "memory," perceives and recognizes commonalities, and, in collaboration with the faculty of "imagination," creates and synthesizes commonalities. Therefore, common sense, memory, and imagination are among the most critical faculties the rhetorician must strengthen to make decisions and create products in complex and ambiguous situations.

It is evident that architects also find themselves in these two capacities in design situations and need to develop the same faculties to handle such situations effectively. However, in architectural education, there needs to be more emphasis on cultivating the faculty of imagination. Moreover, memory is often discussed not as a cognitive faculty but as a repository for forms, and the faculty of common sense still needs to be addressed.

Conclusion

As demonstrated, understanding rhetoric as the "art of synthesis" establishes a relationship between rhetoric and architecture that goes beyond using rhetorical communication tools in architecture or forming an interdisciplinary connection. Through this understanding, one can show that the various situations architects encounter during their work are analogous to the conditions a rhetoric faces when crafting a speech. Both architects and rhetors operate in the realm of possibilities, aiming to influence and alter the world through decisions and choices. Reaching these decisions requires synthesis and coherence in thought, emotion, and human understanding; hence, rhetoric and architecture are disciplines that create coherence in rhetorical situations. Delving into these situations and topics can be highly insightful for architecture.

The "rhetorical situation" concept is significant because it views this situation holistically, and its components cannot be considered separately. A crucial assumption of the "rhetorical situation" theory is that reducing a complex and dynamic whole to a particular part, aspect, or dimension leads to misunderstanding and distortion. By its very nature, the rhetorical situation safeguards the "whole" and avoids fragmentation, simplification, and superficiality. On the other hand, due to the dominance of narrow, disciplinary perspectives and the separation from professional practice, architecture has encountered issues of incoherence at all levels and layers. As such, "the most pressing issue in contemporary architecture can be identified as the 'problem of incoherence.'"

Repeatedly raising this issue among architectural thinkers, especially in the last half-century, underscores the importance of addressing incoherence in architectural education and theory. In such circumstances, "knowledge of coherence" is needed to address the significant architectural challenges; however, this does not merely involve applying rhetoric to architecture. Instead, it concerns properly integrating two fields of knowledge within a more comprehensive framework.

Examining the term "architectonic" from a rhetorical perspective reveals that architecture's subject matter is not just forms, materials, or even spaces alone. Architecture encompasses knowledge about all these elements and more, yet like rhetoric, it is fundamentally about synthesizing and integrating diverse forms of expertise to create a unified whole. This hidden meaning of architecture is embedded in the term "architectonic," preserving an understanding of architecture that extends from the past to the present.

Therefore, contemporary architecture, which has drifted far from its essence and faces the critical issue of incoherence, must revisit its roots through its connection with rhetoric. Architecture can recognize its previous unity by viewing itself in the mirror of rhetoric. As a conceptual framework that holistically and integrally considers human decision-making, action, and the impact of thought on others, rhetoric can bring architecture closer to unity and coherence.

Considering rhetoric as a comprehensive understanding of coherence enables reconsidering and bridging gaps in architectural theory and education. One can examine how rhetoric can fill the gaps in architectural theories and manifestos, such as functionalism, formalism, and other radical architectural ideologies that focus solely on one aspect of the wide-ranging knowledge encompassed by architecture. The rhetorical triangle of persuasion and the rhetorical situation illustrates the collaborative role of the architect and the user (audience) in creating a work while incorporating theoretical, practical, and technical knowledge in architecture to avoid developing theoretical conflicts. These divisions, such as the ones between functionality and aesthetics, form and meaning, and user and architect, all arise from a requirement for a more equitable focus on all aspects of this triangle and a deficient comprehension of the rhetorical situation in architecture.

Practical Implications:

When architects incorporate rhetorical principles into their practice and education, the results can be transformative. Architects trained to consider the rhetorical aspects of their work can ensure that their designs effectively communicate with a wide range of audiences and stakeholders. By incorporating modules on rhetoric into educational curricula, we can enhance students' capacity to combine intricate information and deliver it

persuasively, empowering the next generation of architects to create more influential designs.

Areas for future investigation:

There is an urgent need for further investigation into the pragmatic uses of rhetorical principles in architecture. Research could delve into specific case studies where rhetorical strategies have been effectively applied in architectural design and analyze the resulting effects. Furthermore, we need to explore the impact of rhetorical training in architectural education on architects' design skills and professional paths. This research is crucial for the future of our field, and we must act now to ensure its success.

Directive:

Architects, educators, and scholars are urged to incorporate rhetorical principles into their work actively. By doing this, individuals can improve their designs' logical consistency and influence, promoting a deeper bond between architecture and its viewers. By incorporating rhetoric as a fundamental aspect of architectural practice and education, inventive approaches to current architectural problems can be generated and the field enhanced.

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Chapter 3

FROM THE NATIONAL STYLE TO THE MODERN STYLE: TRANSFORMATION OF THE ARCHITECTURAL THEORY DURING THE NINETEENTH-CENTURY

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1. Introduction

As many architectural historians admit, the nineteenth-century has no face; meaning that it lacks a certain character which is traditionally called a 'style'. The situation looks even more tragic when it is understood that the age was in fact obsessed with style. The so-called 'style wars' byword of the age points out the ambitious but unsatisfied efforts to solve the style crises during the demise of Classicism. This essay points out the general aspects of the nationalist and regionalist reasons put forth to support an architectural style in the nineteenth century. It also aims to show that the historicist-nationalist context of style changed during the turn of the twentieth-century when the idea of *zeitgeist* started to replace it.

In order to explain the initial argument of this study, which is that the emphasis on national style in the nineteenth-century later changed towards the opposite direction, the writings of three architects will be discussed, two of which represent the search for a modern and national architectural style, namely Heinrich Hübsch and Eugène-Emmanuel Viollet-le-Duc. The third architect-author is Otto Wagner whose ideas about style reveal the faith in a modern paradigm. Firstly, what these architects tried to achieve by arguing about the national aspects of style will be questioned. The analysis of these writings will show the impact of historical thinking on theories of style and how such thinking was finally detached from nationalist doctrines. It will also be questioned here to what degree the national element of style was related by the first two theorists to regionalist considerations to support ethno-centric interpretations of artistic ingenuity, given that the nineteenth-century architect developed in his historical thinking a notion of national genius through which further innovations in architecture should be made.

The interpretation of historical and local means of production took a different course since Gottfried Semper's writings around the mid-century, which became influential both in the German-speaking and English-speaking countries and helped architectural style to free from both the idealistic and the materialistic regionalism. Meanwhile, architectural design gradually gained formal freedom because of the emphasis on modern means of 'assembly' rather than historical 'structure'.

2. The National Element of Style

2. 1. The Beginnings – A General Perspective

Many architects in the nineteenth-century held that national identity was an important factor for the formation of architectural styles, and some even argued for a certain historical style for the roots of national architecture, such as a local Romanesque or Gothic. Although the eighteenth-century architectural theory from Fischer von Erlach (1656-1723) to J.-F. Blondel (1705-1774) and

E.-L. Boullée (1728-1799) reveals the architects' awareness of the national attributes of architecture in their discussion about the relevancy of taste, in the nineteenth-century the architects effectively worked the theme of national elements of style. The analytical approach of the elements of architecture in the eighteenth-century, especially that which was promoted by M.-A. Laugier (1713-1769), and widely proliferated by J.-N.-L. Durand (1760-1834), became in the nineteenth-century an inseparable method for the rational investigations of national architectural styles (Laugier, 1977; Durand, 2000).

The question of style in the nineteenth-century was tied by birth to the issues of flourishing nationalism. On the other hand, the style problem became more complicated towards the second half of the century because of the rapid increase of public and utilitarian buildings in the architectural production. However, the national element of style ceased to play a central role in the debates about the style towards the end of the century when the style began to assume a supra-national character, as in Austrian Secession. However, around the turn of the century, the architectural theory was no more concentrated on creating a contemporary national style with its historical justifications. The modern architects of Europe were pushing the notion of style towards leadership in the technical and artistic innovation, which started the global competition still prevailing today.

In his "Exercise of An Historical Architecture" of 1721, Fischer von Erlach produced probably the first clues of differentiating as well as making connections between architectural styles by historical and national reference (Von Erlach, 1723). However, only after one hundred years architectural theory would start to argue the national or regional appropriateness of historical styles. In the second half of the nineteenth-century, architectural theory included the awareness of the development of material culture besides the so-called historical consciousness. Towards the end of the century, the national element of style developed around this later factor rather than the historicism. Finally, the architects from around the turn of the twentieth-century sought for a modern style which would not be historically debated or dragged back to the endless stylistic debates of the previous generations.

The stylistic debates begun with the extensive research on the Gothic style at the end of the eighteenth-century. Gothic had started as a fancy among the higher classes with buildings like the Temple of Liberty (1741) and Strawberry Hill (1749) in England. But when it started to be associated with the national genius, the origin of the so-called 'Gothic' style became a matter of controversy. The Gothic, which was despised for such a long time by the Academic doctrine as the degeneration of taste, appeared suddenly as the paramount of the development of Roman structure during the Christean era, and its attribution to the genius of a nation became important. Although the famous architect Christopher Wren had attributed it to Muslim architecture in the first half of

the eighteenth-century (Wren, 1750), and his thesis was partially recognized during the mid-nineteenth-century by important names like John Ruskin (1851), in the first decades of the nineteenth-century the main discussion – or quarrel – was about the first appearance of this style either in Britain or France, as it can be seen in the polemic between George D. Whittington and John Milner (Haggitt, 1813). Nevertheless, the discussions and publications on this controversial subject helped the the Gothic style to be associated with Englishness, like in Thomas Rickman's book, *An Attempt to Discriminate the Styles of English Architecture* (1817), although for A. N. Welby Pugin what Gothic represented was nothing but Christianity (Pugin, 1853).

The continental nations also participated in the controversy, until there became a consensus about the dissemination of the Gothic style from France after it made its first appearance in the works of the Abbot Sugar in the Basilica of St Denis around 1144. Interestingly the French were not very enthusiastic about the Gothic revival like the British. This can be explained by the double, or even triple composition of the French national identity, made of Latin and Frank (Germanic) elements with the addition of the intangible Gaul. Quite naturally, the French architects looking for a national style became the first eclecticists. Beginning in the 1830s, the 'romantic-rationalists' L. Vaudoyer, F. Duban, H. Labrouste and L. Duc tried to revive the 'transition style' of the early 1500s when the mixture of the French and Italian tastes started a synthesis, which was interrupted by the Academic Classicism (Van Zanten, 1987). The Germans, on the other hand, were in-between the British zeal for the Gothic and French eclecticism. While Schinkel made mostly unrealized Neo-Gothic designs, architects like Heinrich Hübsch and Friedrich von Gärtner exercized the eclecticist *rundbogenstil*.

2. 2. E.-E. Viollet-Le-Duc and Heinrich Hübsch

Two architectural theorists of the nineteenth-century, Heinrich Hübsch (1795-1863) and Eugène -Emmanuelle Violet-le-Duc (1814-1879) agreed that in the origin of the Western architecture laid the genius of ancient and Christian Greeks. From the point of view of structural analyses, they developed a core concept of style which depended on a pair of opposites, that of between the ancient Greek trabeated system and the "neo-Greek" pendentive domes.[1] Both Romanesque and Gothic styles, being the anti-theses to the ancient Greek style, could be attributed to the Greek genius through their origins in neo-Greek style (Byzantine), and they could simply be equated in value to the ancient Greek style because of their degree of rationality of construction and fulfilment of the need. Still, both men despised the revival of the ancient Greek style as an outdated construction technique. Their purpose was to assume the same artistic genius for their nation, given that the nineteenth-century question of architectural style was one of the key issues of the problem of national identity.

1 Hübsch (1992) used the word "neo-Greek" for this system.

Although the architectural theories of Hübsch and Violet-le-Duc inhered a regionalist, and even racial perspective, it can be said that Violet-le-Duc was more prone to prove that his nation was the heir to the Greek genius of artistic creation. He can be also singled out for the connection he made between the emergence of the national style and the emergence of the faith in national unity in France in the Middle Ages. However, both Violet-le-Duc and Hübsch deduced architectonic principles from the Middle Ages to establish a rational basis for a modern national style. Violet-le-Duc was more concerned with laying out the principles for future architects (especially for students) than Hübsch, so that despite his enormous writings on historical styles, he allowed himself for futuristic designs[2] (Figure 1). One must, of course, keep in mind that Violet-le-Duc was writing in a later time than Hübsch, and therefore had the advantage to speculate on the potential of iron structures, with which Hübsch got interested only after his well-known essay on the question of style.

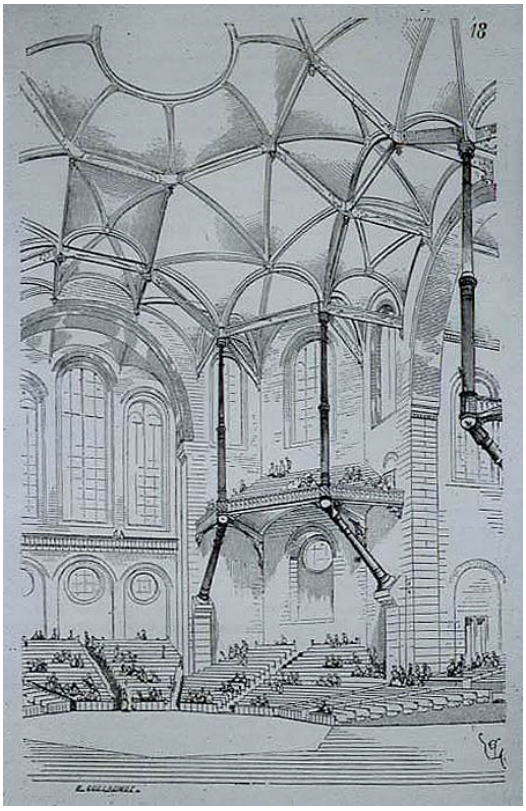

Figure 1. *Eugene Viollet-le-Duc, design for a Concert Hall, dated 1864. Expressing Gothic structural principles in stone, brick and cast iron. Published in Entretiens sur l'Architecture (Viollet-le-Duc, 1987).*

2 "I am not the one of those who despair of the present and look back on the past with regret. The past is past; but we must search into it sincerely and carefully; seeking not to revive it, but to know it thoroughly, that we may turn it to good account" (Viollet-le-Duc, 1987, p. 32).

Violet-le-Duc started his *Lectures on Architecture* with an agenda to disprove the thesis that great art had something to do with the degree of civilization. According to him, every nation had always been somewhat barbarous, and that the Middle Ages was not different from the time when the Greeks were at the peak of their civilization. Violet-le-Duc tried to prove that the ancient Greeks possessed a natural feeling for art and applied in their architecture certain principles, which had no other source but reason.[3] These principles "exercised so powerful an influence that their memory still dwells with us after the lapse of the ages" (Viollet-le-Duc, 1987). According to him, the development of building technique from the Greeks to the Romans and the Byzantines were essential in the formation of the architectural style, but it had to wait for perfection until when the French architects inherited the same instinct, or genius for art in the Middle Ages. The artistic genius, which was in retreat since long time, finally reappeared in France as Gothic architecture. Viollet-le-Duc even thought that the Gothic style recovered the untainted principles of art after many interventions since the time of the ancient Greeks. By so doing, he reversed the earlier Academic notion of historical 'decadence' of architecture and linked the appearance of the national genius to the primitiveness, in which he saw that reason was not sacrificed to any other thing. Eventually, he created a parallelism between the decadence of the Greek Art in the hands of the Romans and the decadence of the French art in the hands of the Academicians of the French Renaissance.

Violet-le-Duc claimed that there was not a Roman nation but a congregation of people of various ethnic backgrounds, and that the Romans were not an artistic people like the Greeks, but administrators, politicians, and above all, constructors. The genius of the Western people, especially the French, combined the artistic genius of the Greeks with the above-mentioned talents of the Romans, which became manifest in the architecture of the Middle Ages.[4] He conceded that the Romanesque was not a style with a unique expression of its own, because he regarded it as the architecture of the monks rather than a nation. With the rise of the spirit of nationality, however, the laymen, the middle-class people created a 'pure' national style as they raised an "intellectual spirit" against the "monastic spirit": "The ecyclopedic spirit, and the application of the exact sciences engaged the attention of enlightened men, and the influence of the monks disappeared for ever from the history of art" (Viollet-le-Duc, 1987).

Unlike the undecided Romanesque style, Gothic was the complete and pure expression of a nation; it was "the awakening of the ancient Gallic spirit," and was to

3 Later he says that "the art of the Iroquois Indians or that of the French in the Middle Ages may not have been barbarous. What is desirable to ascertain is, not whether the Indian or the Frenchman has more or less nearly approached the forms of Greek Art, but whether they have proceeded in the same manner as the Greeks." (Viollet-le-Duc, 1987, p. 57).

4 "If we are Latins in our language, our policy, and our habits of life, we are somewhat Greek in the constitution of our minds and our genius." (Viollet-le-Duc, 1987, p. 63).

be regarded as truly the architecture of the French Middle Ages. The French, having possessed a national unity, created a peculiar architectural style when architecture fell into the hands of the laymen and protested against the "monastic influence," and finally rejected what came with that influence, that is, the architectural influence of the East. As a result, at its commencement, Gothic Architecture was "the first and most rigorous reaction of knowledge, examination, and inquiry into facts against traditions," and "the architecture of the beginning of the thirteenth century is the purest and most exact reflection of the ideas of the nation of that epoch." It should be noted that Violet-le-Duc's position in the architectural milieu of the mid-nineteenth century France was against the Classical doctrines of the Ecole des Beaux-Arts, and one is tempted to associate his emphasis on "monastic influence" with this institution. There is no doubt, however, that the author derived certain lessons from the Middle Ages, such as the uselessness of imitation and the pre-eminence of reason. Violet-le-Duc believed that France had to have a national style, because it always had a feeling for national unity, but it fell into the same mistake of the Italians, who did not have national unity and national style and could only imitate the Romans" (Viollet-le-Duc, 1987).

Although Heinrich Hübsch did not express definite judgements towards German identity and the Middle Ages as Violet-le-Duc did, his 1828 essay "In What Style Should We Build" explained style as a national element in architecture:

"We shall first define the concept of style in its familiar usage – for instance, all Greek monuments are said to be build in the Greek style, all Moorish monuments in the Moorish Style – style means something general. Applicable to all buildings of a nation" (Hübsch, 1992).

Hübsch was looking for the answer of what is the historical German architectural style. Yet, his purpose was not to revive a past style either. Like Violet-le-Duc, Hübsch was searching not forms but principles from the past for the national style in the present.[5] However, the 'formative' principles that Hübsch derived from the past were more bound with historical form than that of Violet-le-Duc, because Hübsch, who considered the style a form of construction resulting from the interaction between reason and the nature of the local materials, was not able to derive a modern formative principle from the present conditions. What Hübsch proposed eventually, was the use of the "technostatic experience" to have better results in national structures. This means that structure is a traditional element depending on the materials at hand, but it can still create a new style if used appropriately to the technical knowledge. In order to find out what architectural styles are made of, Hübsch reduced construction to certain "essential elements," and analysed how these elements were composed in vaulted structures through the progress of

5 "If we wish therefore, to attain a style that has the same qualities as the buildings of other nations that are accepted as beautiful and are much praised by us, then this cannot arise from the past but only from the present state of natural formative factors" (Hübsch, 1992, p. 71).

"technostatic experience". Therefore, like Violet-le-Duc, Hübsch looked for a historical period of which the architectural style is the expression of the local character in its combinations of those essential elements of architecture:

"When examined historically, these architectural elements are indeed of a general character, retaining the same form in different cases. For that reason, the difference between the monuments of one nation and one period lies in the number and manifold combinations of walls, ceilings, piers or columns, doors, windows, roofs, and cornices, according to their purposes" (Hübsch, 1992).

For Hübsch, Architectural styles are made of specific combinations of these elements in specific places, however, these combinations are always subjected to foreign influence during the development of style. Although vaulting is a great technostatic element in Roman architecture, this architecture is "nothing else but a conflict between two heterogeneous modes of construction: the arch and the Greek column." Similarly, the early Byzantine style suffered from the "use of ancient fragments," and "the mechanical copying of their forms led the style into a great muddle." Therefore, Hübsch claimed that the "plainer basilican style of the Western Empire" is a better example of the neo-Greek style in Germany. Moreover, according to Hübsch, the architecture of the Middle Ages revealed the highest level of technostatic experience, and that in these bold constructions Germans surpassed Greeks. In short, like Violet-le-Duc, Hübsch argued for the national purity in architectural style and related the German architectural creation to that of ancient and Christian Greeks. Talking about the church of the Benedictine abbey of Maria Laach near Koblenz, he claimed: "this church is the crowning achievement of the *Rundbogenstil*, as the monuments of the Periclean age were of the Greek style" (Hübsch, 1992).

Hübsch observed national qualities also in the Gothic style (*Spitzbogenstil*), but he preferred the earlier Romanesque (*Rundbogenstil*), because of his conviction that the last stage of a style is always fully completed and therefore offers no further development. He claimed that the *Rundbogenstil* related to *Spitzbogenstil* "as a pre-Raphael painting relates to a post-Raphael one. In the former, the incorrect way of drawing is disturbing; but in the latter, where nothing is left wanting in this respect, we nevertheless look in vain for the moving simplicity of the former." Eventually, Hübsch argued that "the new style must come closest to the *Rundbogenstil* "as this style would have developed without being impeded by the reminiscences of the ancient style." Although he did not mention what was the mistake in the development of the *Rundbogenstil*, Hübsch believed that the new style to be derived from it would not have a historical but natural character. He may have wanted to clean up the alien elements which dragged the national style to "a completely alien past" (Hübsch, 1992). Therefore, once the *Rundbogenstil* is reduced to its non-historical elements, it would provide a fertile soil for a contemporary German style. Interestingly, his method came close to that of the Frenchman J.-N.-L. Durand, who in the *Précis of the Lectures on Architecture* followed a similar

way in simplifying stylistic elements of Classical architecture for a modern and economical public architecture (Durand, 2000).

2.3. 'Materials' of Style

German and French rationalists as well as British Gothicists from the nineteenth-century put a lot of emphasis on materials. From Schinkel to Hübsch, Pugin, Bötticher, Violet-le-Duc and Semper, the nature of materials gained an important place in architectural theory. However, despite the admitted role of materials in the creation of a new style, neither Hübsch nor Violet-le-Duc considered material conditions of architecture apart from the national element of style. History, for them, was still needed for the foundation of a national style. Their arguments usually depended on the regional criteria, such as race, climate and the type and quality of raw materials available.

Parallel to his argument that Greeks used native technology and local materials to build magnificent temples, Violet-le-Duc explained the transformation of the Roman basilica into Romanesque and Gothic structures as the natural result of available sources. Because Christians did not have slaves like Romans, and had smaller economy than the Roman Empire, they had to devise new construction techniques. He also added to this the difference of climate between southern and northern Europe that effected form, especially the roofing (Violle-le-Duc, 1987).

In the second lecture of the first volume of his *Lectures on Architecture* (1863-1872), Violet-le-Duc argued that ancient Greek temple was genuinely a masonry construction, but not the imitation of a primitive timber construction, just like the Gothic churches were not the imitation of the "forest avenues of Gaul and Germany" (Violle-le-Duc, 1987). He wanted to disprove that the architecture of the genius race stemmed from imitation and held the same thesis for the French Middle Ages, whereby he also wanted to refute imitation as a privileged idea in contemporary architecture. However, Violet-le-Duc did not discard imitation altogether, given that there had to be a natural continuity between the production of a race in different phases of history, although he strictly opposed copying ideas alien to the culture and place. He approved imitation of earlier forms by the same people but disagreed with imitation of alien forms even in the same geography. He claimed, "if the Parthenon is in its place at Athens, it is but an absurdity in Edinburgh, where the sun prevails over the mists only some days in the year" (Violle-le-Duc, 1987). John Ruskin had similarly explained the difference of Gothic from the Classical with Nordic sensitivities (Ruskin, 1892).

Viollet-le-Duc's rejection of the imitation of the Classical style cannot be easily justified by climatic and material differences, because that style had many ancient samples also in France. Therefore, it was the ethnic element that shaped the technical aspects to form an architectural style, like in the ancient Greece and medieval France, which mattered for him. Violet-le-Duc simply

praised the simplicity, clearness, and "distinct expression of the purpose" in Greek architecture; while on the other hand, he despised "the so-called classical architecture" which was but a deception (Violle-le-Duc, 1987).

Similarly, Hübsch needed to state that "the principle of early Greek Art was truth in the fullest meaning of the word," and that it was a genuine stone construction (Hübsch, 1992). Hübsch argued extensively about material and climatic conditions of northern and southern Europe and stated that these differences created the different styles of the north. According to Hübsch, the most important element for the germination of an architectural style is the span. Because the type of span between the elements of support is directly related to materials at hand, such as solid marble blocks or fragile sandstone, the nature of materials come even before the climatic conditions. Therefore, arches made of small pieces of stone changed every element of architecture, and as a result, the style itself: "so that it may be said that essentially there are only two original styles: one with straight horizontal stone architraves, the other with curved vaults and arches." Hübsch argued that vaulted architecture was more advanced than Greek post and lintel system from technostatic point of view, and he proved with an illustration than an arcade could be made with lesser material and be more efficient than a colonnade. He also stated that buildings with arcades were as beautiful as buildings with colonnades (Hübsch, 1992) (Figure 2).

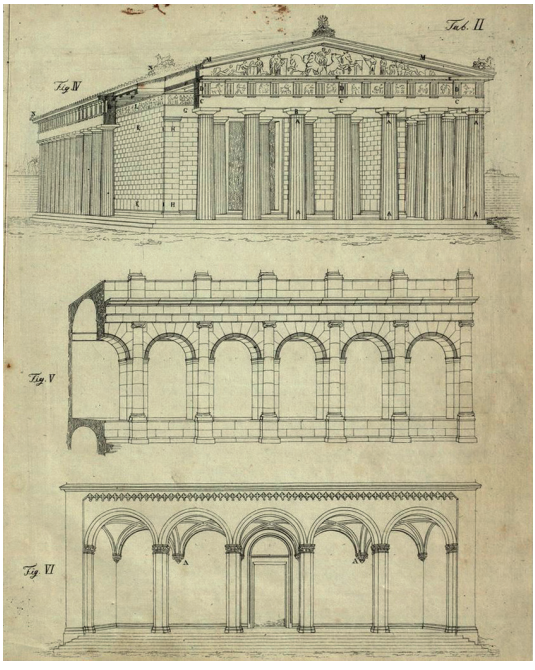

Figure 2. Illustration from "In welchem Style sollen wir bauen?" (1828) by Heinrich Hübsch showing the Greek and Roman elements arriving at the synthesis in the Rundbogenstil (Hübsch, 1992).

Because for Hübsch the most important element of style is the span, he based his argument on the superiority of the vaulted system over the trabeated one because of the larger size of the openings and interior spaces required for contemporary buildings. Therefore, like Violet-le-Duc, Hübsch restricted national style to a certain period in history and to the expression of a certain set of structural elements. His attachment to round arches is due to the structural system of this style which he considered relatively local than the Greek trabeation. His argument about the modern requirement for having larger spans by using less material does not explain, for example, how the new style would be achieved with the same local materials that would surpass Romanesque and Gothic structures (Hübsch, 1992).

Arguments about materials and the locality of style also took place in Wagner's book, *Moderne Architektur* (1895), where he applied the term 'genius loci' to express the specificity of a place (Wagner, 1998). Although Wagner agreed on the earlier criticism of the inappropriateness of ancient styles for Germanic northern countries, he did not locate the local conditions in the center of his arguments.

3. Style and Modern Life: Otto Wagner

Wagner's understanding of local variations of architectural style is also dependent on the materials and climate of a specific place; yet these factors are taken for granted and considered subservient to the mode of expression in modern style, which he associated with the assembly of materials as well as fashion. Wagner referred to fashion as a mode of expression of modern life in connection with the level of cultural cultivation, which makes sense considering the cultural tendency towards the cosmopolitan life-style during the *Belle Epoque*. Although there could be a national element in architecture due to the *genius loci* and therefore to the specifics of a place and a society, he conceded that contemporary architectural styles cannot be very different from each other because of the modern life-style common to modern nations. He stated that "architects in different countries will have to use forms of varying richness to express genius loci," and that "composition should go far enough in the pursuit of the proper mode of expression that place, time, and fashion always appear properly stressed." However, he also added that this is the "natural way in which the national element is woven into art," and that "given the similarity of the modes of expression and styles of living in civilized countries, these differences will never be great," although "they will be determined chiefly by material and climatic conditions" (Wagner, 1988). Therefore, Wagner considered climatic and material conditions as minor factors for the modern style(s), or as two major determinants of local variations. The 'national' element of the modern architecture could only be a slight variation in the mode of expression of modernity. It was clear to him that "a stubborn adherence to historical styles for certain projects or the choice of one such style for certain

nations must be considered an absurdity (Wagner, 1998)." Wagner's ideas in his book give clues about his conception of modern architecture as the artistic assembly of materials with an emphasis on 'cladding'. The diminishment of the value of structural rationalism in Wagner, which was very dear to Hübsch and Viollet-le-Duc, is another step towards redefining (or defying) 'style' in modern terms. Because he proposes no tectonic form for a certain location or nation, style becomes an international mode of technical, artistic, and societal expression.

Hermann Muthesius (1861-1927) dealt with this issue in his book *Style-Architecture and Building-Art* (1902) (Muthesisus, 1994). The title of the book reveals a hidden stratum of the national element of architecture. Muthesius associated the troublesome historical styles of the nineteenth-century with the Greco-Latin 'architecture' (*architektur*) and reserved the German term 'building-art' (*baukunst*) for the contemporary practice in Germany. However, despite the Nordic associations of the term, *baukunst* testifies that the formal character of architecture at this time was beyond the problem of national identity accredited by history and it was increasingly having an existential orientation towards the history in the future. The architects of the continental powers were giving up barrowing elements from past styles and entering into a competition for what is new. As a result of this change, architectural theory started to assume international legitimacy, while it still served the nationalist desires at least in the shape of cultural leadership of the world. Otto Wagner (1841-1918) belonged to this generation, who was eager to accentuate the distinction of modern times ('*unserer zeit*') for the design of artistic objects and built environment.

Wagner wrote his book *Modern Architecture* (1896) (which he later renamed as "*die baukunst unserer zeit*") for his students in Vienna, and throughout the book one can feel his urge to create cities of modern life (Wagner, 1988). In the beginning of the book, Wagner states that many countries in the past benefited from cultivation of art, such as Italy and France, and underlines the necessary state authority behind it, urging the Austrian state to support art in the race of modernism. He criticizes that the funds for creating the modern Vienna are insufficient and compares the situation to that of Paris and Berlin. Wagner's purpose is neither a rational analysis of past styles nor their national attributes. In fact, his problem is not one of a choice, but the very rejection of the choice itself. He is concerned with a spontaneous architectural style, which is supposed to be in a state of becoming, interacting with everything surrounding modern life, never complete. Accordingly, he criticizes efforts of the past for creating a national style, such as Gothic or the so-called old-German style, underlining that the Germans are not the old but modern Germans. Wagner also celebrates internationalism and cultural interaction, because he believes it to be a modern phenomenon. "Unlike earlier civilizations," he states,

"we have, as a consequence of our modern achievements, all the ability and knowledge at our free disposal" (Wagner, 1988). Eventually, he regards the choice of one historical style for a certain nation as "absurdity." The spontaneity of architectural style that Wagner looks for is to be attained by creating "art-forms" from the use of modern technology and materials in the design of the whole environment (Figure 3). In that he adopts Carl Bötticher's concept of the dialectic between the construction and artistic expression (*kernform/ kunstform*) and refers to Gottfried Semper's concept of cladding (*bekleidung*) (Frampton, 1995). Moreover, he further elaborates the notion of fashion as the mode of modern life and establishes a direct link between modern dress, customs, and modern style; a notion to be further developed by Adolf Loos (1870-1933) (Colomina, 1994).

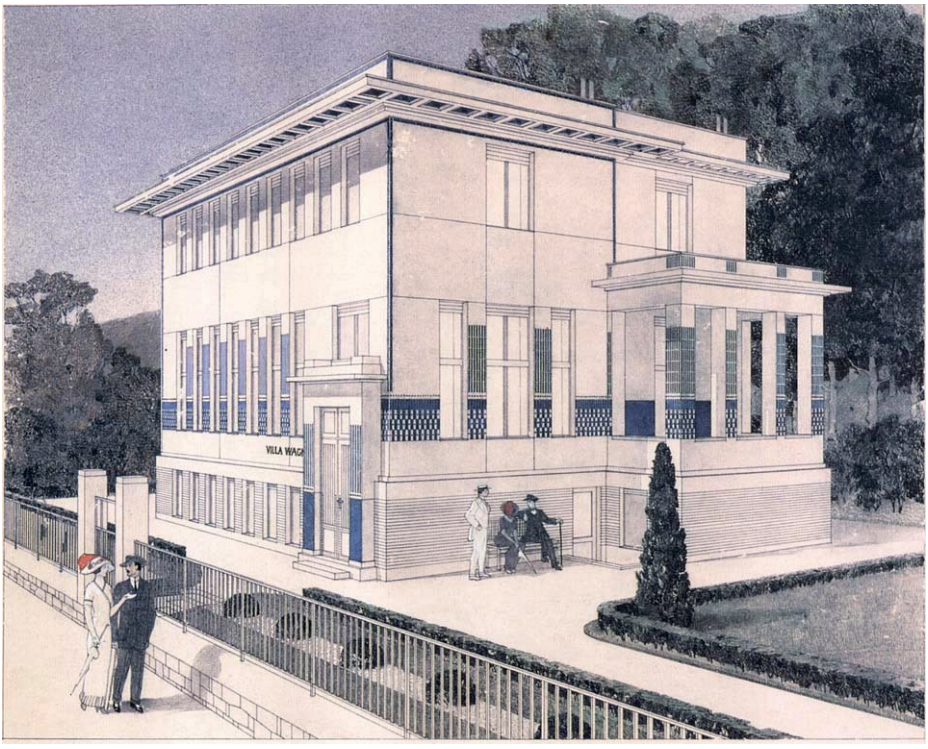

Figure 3. Villa Wagner II, Vienna, c. 1905; designed by Otto Wagner (https://parallel-archive.org/Villa-Wagner-II).

4. Conclusion

Modernism as a stylistic trend in architecture would not be possible if the problem of style with its historicist and nationalistic context would not have been present around the turn of the twentieth-century. Despite the fact that Modernism as a style did not persist for long, style as a 'problem' persisted until

recently. Today, there seems to be a global acceptance of the fact that modern architecture can only be styleless. Although 'style problem' is a nineteenth-century problem, its roots are in the previous century.

The eighteenth-century architectural historiography created the awareness for national architectural style. However, it did not, or could not encourage a curiosity for historical elements of national styles as the nineteenth-century would, due to the Classicist doctrine of architectural history which approached the notion of progress very tentatively. Although Fischer von Erlach's concise introduction of historical/national styles went without leaving an impact on the application of the Baroque style, it reveals the growing awareness of historical change as well as the relativity of styles according to time and place. The architectural theories in the following 'age of reason' introduced the analytical approach and elementary questioning of style, thus contributed to the general adoption of the notion of relativity and consequently, historicism.

Hübsch, and more than him Violet-le-Duc, idealized a pseudo-national epoch and its architectural heritage associated with the genius of the nation, and criticized the Classicist age that intervened since then, lamenting for the resulting interruption of the structural developments, which meant for them the essence of architectural style. In doing so, they extracted from this ideal past of their own certain national elements to establish a theoretical base for a new and even superior national style. Nevertheless, neither Hübsch nor Violet-le-Duc were interested in pure historical revival, and unlike their British contemporaries, their positions were far from the moral associations with the architecture of the Middles Ages. Hübsch's understanding of the national element was purely materialistic, whereas Violet-le-Duc tainted his with the 'timeless' bourgeois values like freedom which resulted in the faith in the nation and reaction to the monastic spirit.

The architect-theorists like Hübsch and Viollet-le-Duc held that a genuine national style has to be born on the national soil. These architects oversimplified regionalism in their discourse to prove the ingenuity and locality of the national style in question. Moreover, they tended to focus on the technical achievements in history. From that point of departure, they isolated certain moments of national style from its origins in the past and its development in history. These selective and simplistic regionalist doctrines attributed certain universal qualities of construction to certain local conditions and denied certain qualities to certain forms so long as they appeared in alien locations.

The end of the nineteenth-century saw a counter-thesis against the earlier belief in the interdependence of architectural style and national identity. Consequently, historical-national styles ceased to be associated with forward-looking ideas and were considered by the leading architects as a burden on modern practice. The leading architects and theorists such as Wagner and

Muthesius understood style as the expression of contemporary life, as well as the material culture. While Muthesius developed the concept '*sachlichkeit*' to point out the new aesthetics that is to be born from the material conditions and replace the 'style-architecture', Wagner reduced stylistic expression to surface treatments whereby aspects of modern construction were represented with an artistic touch in conformity with local taste, and even fashion.

The comparison of the theoretical texts of Hübsch and Wagner shows that at the end of the century, the way the regional conditions are considered had changed. Wagner's emphasis on modern materials and techniques naturally does away with the regionalism of earlier nationalist perspectives. Viollet-le-Duc's position, on the other hand, can be seen in-between, for the fact that technical progress - which was for Hübsch rather an historical phenomenon - was in the core of his nationalist theory also as a contemporary phenomenon. His faith in the rationalism of Gothic style and the French nation is reflected in his progressive design proposals as the enhancement of the potential of masonry structures with metal (skeletal) elements. On the other hand, Wagner's promotion of modern architecture as an artistic expression of *zeitgeist* stands in between the nineteenth-century penchant for national style and the twentieth-century achievement of the so-called International Style. The later generation went further to eliminate the 'stylistic' surface treatment to break decisively with the past, epitomized in Loos' criticism of ornament.

Modernism was born at the end of the nationalist-historicist quest for style. That the modern architecture with its endless potential of individual styles was presented as 'Modernism' or 'International Style' by its heroic masters proves that it carried into its own age the nineteenth-century's legacy of the quest for 'the style'. However, time justified Muthesius and Wagner in their call for essentially non-historicist architecture, in the sense that 'a style' for 'an epoch' was an historical but not a contemporary fact, as modern architecture without style is still with us after it went through many transformations.

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Chapter 4

CONTEMPORARY INTERIOR DESIGN APPROACHES IN LUXURY STORES: A COMPARATIVE ANALYSIS BASED ON THREE CASE STUDIES[1]

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1. INTRODUCTION

The concept of luxury is considered a relative concept varying by societies and even individuals. Nevertheless, it typically refers to a privileged setting, product, commodity, or even a process. Therefore, the concept of luxury can also be considered an indicator of status.

The historical debate on the concept of luxury is indicative of the fact that it is not possible to suggest an absolute definition of luxury (Büttner et al., 2006; Kapferer 2001; Mortelmans, 2005). Berry's "The Idea of Luxury: A Conceptual and Historical Investigation" published in 1994 is perhaps one of the most important studies, which aimed to explain the concept of luxury. Berry differentiated needs from wants and tended to discuss the concept of luxury from the perspective of philosophical framework (Berry, 1994). Based on this distinction, luxury refers to something that is much beyond needs and thus associated with a certain group of people. Luxury can be considered as a phenomenon that symbolizes the search for status with intrinsic concepts of belonging and value (Cristini, 2017).

Previous studies reported that there was an increase in the number of luxury products and stores selling these products (Silverstein & Fiske, 2003; Truong et al. 2009). These products and stores hold an important place in the fashion world as well. These luxury stores, which generally offer products for a specific target audience, provide their customers with privileged purchasing experiences while also reflecting the brand image.

Brand is a notion representative of the unique identity and values of a certain business or product. Along with the products and services offered to customers, the brand stores incorporate certain elements, including the store's atmosphere, customer service, and corporate values. The brand definition determines the store's relationship with its target audience and ensures that customers establish an emotional bond with the brand. Value, which is considered one of the pillars of the brans, is created after this bond is established. The value of a store to customers is not only associated with the quality or price of the products, but also with the factors that help enrich the customer experience. Certain values including customer satisfaction, reliability, innovation, and sustainability improves the brand value of a store. The concept of luxury is embedded in the brand concept, creating the perception of a luxury product, service, or company in the minds of consumers. As a matter of fact, brand is a symbol, which expresses the unique features, values, and image of a product, service, organization, or company, and which inform the customers about the quality, reliability, and uniqueness of a product or service. Accordingly, it is important to use corporate identity and brand elements in the design of luxury stores (Aydın, 2022).

Stores for luxury brands are not merely considered venues of sale but also that of prestige. Therefore, stores reflect the image of brands based on their design and the impression they create. This is because of the fact that the design of luxury stores also has a significant role to play in promoting customer loyalty. Upon literature review there are a number of studies on luxury stores (Debenedetti, 2021; Godey et al., 2009; Joy et al., 2014). Notwithstanding above, there is no comprehensive study to the best knowledge of the authors, which investigated, how the interior designs of these stores, which are updated at regular intervals to meet the demands and needs of the target audience, were handled today; what was preferred for interior items, including furniture, materials, equipment and lighting; and whether there were similarities in design approaches of the interior designs of luxury stores. Accordingly, this study aims to investigate the complex outlook of the interior design approaches of today's luxury stores. Therefore, three luxury stores of international global brands with a strong brand image were selected for the purposes of the study and reviewed in the context of design elements. The data collected through visual analysis were then compared and analyzed.

2. MATERIALS AND METHOD

The main purpose of the study is to develop a framework to understand and explain the interior design approaches of today's luxury stores. Accordingly, three luxury stores were selected against certain criteria and these stores were analyzed with a research design that included "visual analysis" and "comparative analysis" methods, which are considered in the qualitative research classification.

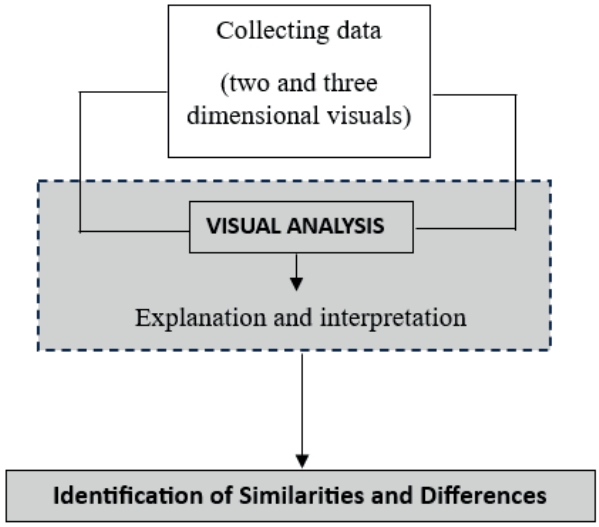
The selection criteria for the three stores determined as the research area are given below:

- The stores selected for their suitability for the purpose of the study should be international global brands with a strong brand image;
- Similar product groups are on sale in stores to make sure an accurate comparison;
- Accessibility of technical drawings of the stores, including plans, sections, elevations, as well as photographs taken from various angles that provide sufficient data; and
- Dated 2023 and later for the suitability to the purposes of the study.

Primarily the visual analysis method was used, and the visual data were explained and interpreted for the analysis of the research area. At this stage, visual data were analyzed through the design elements that have an important place in the design of a store, including location, façade/showcase design, plan layout, finishings, wall units, and freestanding furniture. This was followed by

applying the comparative analysis method. Here, the study data were analyzed by comparing and contrasting. A separate diagram describing this research design, which is dominated by an inductive process, can be seen below (Figure 1).

Figure 1. Introduction to the method



Information about the stores in question are given below.

Louis Vuitton: Louis Vuitton is a French brand accepted as a luxury brand all over the world. It has a history of more than 150 years and has made a name for itself with a variety of luxury products from bags to suitcases, clothing accessories, shoes and jewelry.

Yves Saint Laurent: The brand operates in the luxury industry since 1961 and it is one of the pioneers of the fashion industry with innovative and extraordinary creations and designs combined with art and elegance. Yves Saint Laurent, a luxury French brand, specializes in both men's and women's ready-to-wear along with shoes, accessories, bags, perfumes, and cosmetics.

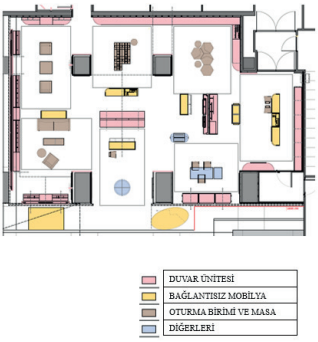
Versace: Versace, an Italian brand, is a luxury brand that has been known globally for the luxury products, including accessories, perfumes, clothing and clothing accessories since 1978. Versace exhibitions and fashion shows attract great attention in the international media.

3. THREE CASE STUDIES: LOUIS VUITTON, YVES SAINT LAURENT, AND VERSACE

Three luxury stores, i.e., Louis Vuitton, Yves Saint Laurent and Versace were determined based on the study inclusion criteria. These stores were

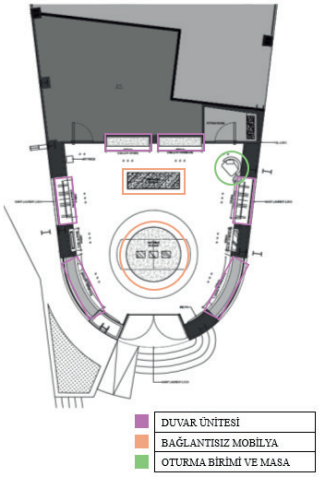
investigated by means of visual analysis based on two- and three-dimensional visuals in the context of location, façade/showcase design, plan layout, finishings, wall units, and freestanding furniture. These initial analyzes and information about the stores are given below in Tables 1, 2, and 3.

Table 1. Visual analysis of the Louis Vuitton store

LOUIS VUITTON		
LOCATION: De Bijenkorf Amsterdam/**CAPACITY**: 235 m²/**FOUNDATION:** 2024		
	Visual	Information
LOCATION		De Bijenkorf, or 'beehive', is the most famous premium store chain in the Netherlands. With its flagship store located in Amsterdam, Louis Vuitton offers luxury shopping experiences since 1870. In addition, the building of the store is a 5-minute walk from Amsterdam Central Station to Bijenkorf. De Bijenkorf is a multi-storey, multi-brand shopping building classified in the department store category. This is an area that can be visited for both shopping and touristic purposes due to its historical value and features mostly the luxury segment brands (URL 1).
FACADE/SHOWCASE DESIGN		The letters L and V, i.e., the initials of the brand, are prominent on the store display. This design, using oak wood, also serves as a separator. Its facade is covered with white metal sheet over oak. White color is dominant. Strip LEDs were placed between the letters to increase brand visibility in order to increase the eye appeal of the facade. The display is connected to the store interior. Due to the visual permeability of the display, the store can be seen partly. Bases are preferred in display cases, where mannequins are placed on top of these bases. The iconic suitcases of Louis Vuitton, which serve as decorative elements, also indicate the brand identity.
PLAN LAYOUT		Free plan type is preferred. Spatial circulation features a fluid and diagonal pattern. The store has a single entrance. Mannequins at the entrance are placed so as to emphasize the intended products. Products are on exhibition by product type and gender. A work of art ambiance is created by placing products in small and odd numbers. The space was separated by product type to accommodate product displays.

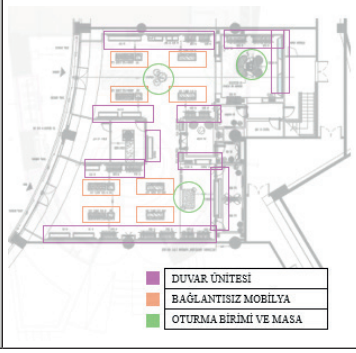
FINISHINGS		The light shades of the wooden backrests in the units are intended to add a spacious atmosphere to the space. In certain places, the gray painted wall on the upper elevations aims to emphasize the wall unit below. Overall, light beige color prevails. The store is illuminated with rail spotlights along certain axes. Wooden laminate flooring was preferred on the floor. Carpets with vibrant patterns are used on the plain wooden covering with an aim to define certain zones. Accordingly, a warm, comfortable, and luxurious environment is created.
WALL UNITS	 	Shelf systems with consoles are fixed on the wall with spigots. The shelf tops are covered with leather and a high-end touch is created by using brass at the edges. Hidden LEDs under the shelves further emphasize the products. Mirrors on the columns add extra depth to the space.
FREESTANDING FURNITURE	 	Island product display elements guide the customers and help form a circulation scheme. The customer circulation axis is defined by freestanding furniture placed at certain points in the store. The use of oak was supported with glass in the central furniture to increase visually permeable appearance. The oak texture in use included grooved, wavy, and flat forms. Glass bell jars are used as retractable exhibition elements with rail mechanisms.

Table 2. Visual analysis of Yves Saint Laurent store

YVES SAINT LAURENT		
LOCATION: Yalıkavak, Bodrum/**CAPACITY**: 90 m2/ **FOUNDATION:** 2023		
	Visual	Information
LOCATION		Located in the heart of the Bodrum Peninsula, Yalıkavak Marina is a prominent destination for luxury shoppers. Yalıkavak Marina Shopping Center offers a shopping experience with more than 100 prestigious brands and boutique shops as the center of luxury retailing in Turkey (URL 2).
FACADE/SHOWCASE DESIGN		Yves Saint Laurent is marked with increased brand visibility by rising like a tower in the marina plan scheme, which has a horizontal architecture. On the facade, which maintains the stone cladding texture of the marina, the facade design features a strikingly dark brand logo and name, contrasting with the light color tone. Close interior volume arouses curiosity among customers.
PLAN LAYOUT		Free plan type is preferred. The store has a single entrance. The glass display cases around the tower were used as wall elements in the store to display the products. The space was separated by product type to accommodate product displays. In the middle section, a large marble table was used as an exhibition element providing a circulation axis around it.

FINISHINGS	 	The continuity of the marina was ensured by providing a stone texture on the walls using a special paint technique. This work also refers to the brand's extensive use of marble. There is a suspended ceiling work on the ceiling in the projection of the marble table in the middle. Strip LED lighting is applied around this ceiling work. Spot LEDs are used to support the spatial lighting. Mosaic flooring, a type of covering specific to the region, is used in the space to maintain the feeling of stone.
WALL UNITS		The iconic marble niches of the Yves Saint Laurent brand are also featured in this store. Shoes are exhibited in a narrow niche created with marble without touching the wall texture. Oak shelves and wooden wall units are used on the facade to add a warm atmosphere to the dense marble texture in use.
FREESTANDING FURNITURE		The freestanding elements used in the middle area feature furniture marked with two contrasting styles. In the middle is a cult marble table in the form of a solid mass, and opposite is an exhibition element that embodies all visual permeability with the use of glass and raised from the ground with a warm wooden texture on its lower base.

Table 3. Visual analysis of the Versace Store

VERSACE		
LOCATION: Doha Mall Vendome, Qatar/**CAPACITY**: 255 m2/**FOUNDATION:** 2023		
	Visual	Information
LOCATION		Located 11 km from the center of Doha, the multifunctional complex houses two five-star hotels and a range of retail stores. Vendome is a flamboyant 1,150,000-square-meter shopping mall inspired by classical French architecture. The four-story, open-concept mall houses 580 high-end and mid-range stores, including all the global fashion brands (URL 3).
FACADE/SHOWCASE DESIGN		The white marble coating on the facade welcomes the user in a subtle fashion. The brand name is highlighted with brass plating. The mannequins in the display are elevated on bases. The glass backrests are illuminated with LEDs, emphasizing the mannequins.
PLAN LAYOUT		There is a free plan layout. The store has a double entrance and provides customers with access along two axes. There is a diagonal circulation scheme from entrance to exit. The entrance axis takes the customer around and ends at the other door. A small and odd number of products are placed in the store.

FINISHINGS	 	The wall coverings continue the facade style using white marble. Grooved and flat marble surfaces add movement to the space. The brand figure among the marbles highlights the identity of the brand. Marble is preferred for floor covering purposes. Marble on the floor is used with the Versace border pattern to remind the customer of the brand identity. A sculptural form unique to the brand is carved on the ceiling and highlighted with lighting details. Rail spots are used in lighting, to maintain the golden dominance of the brand.
WALL UNITS	 	The style of Versace stores, designed with golden-accented marble and ceramics, is continued in this store and the luxury codes of the brand are emphasized. Marble is used on the backrests of all the wall units. The suspension part is designed with a single axis and in flat form, thus preserving balance. The brand image is increased by embossed brand motifs at the ends of the hangers.

FREESTANDING FURNITURE		Glass bell jar furniture with shiny stainless steel wide metal frames offers an appearance contrary to that of gold used in the space.

4. RESULTS

The comparative analysis method was applied as explained above in the next step of the study. At this stage, the data explained and interpreted through visual analysis were tabulated and the three cases were compared and contrasted. The relevant work is given below in Table 4:

Table 4. A comparative analysis of the three cases

	Louis Vuitton	Yves Saint Laurent	Versace
Location	In a touristic area with historical value; Luxury brands in the vicinity.	In the same venue with prestigious brands; In a tourist destination.	In a flamboyant shopping mall; In the same venue with global fashion brands.
Facade/ Showcase	Facade is covered with white metal sheet over oak; Increased brand visibility; Display case is connected to store interiors	Simple facade with stone veneer texture; Increased brand visibility; Display case is connected to store interiors.	Simple facade with white marble covering; Increased brand visibility; Display case is connected to store interiors.
Plan layout	Free plan type; Single entrance; Displaying products by gender; Division by product type; A fluid and diagonal circulation; Small and odd number of products placed in the store.	Free plan type; Single entrance; Division by product type; A circular circulation scheme; Small and odd number of products placed in the store.	Free plan type; Double entrance; Division by product type; Diagonal circulation from entrance to exit; Small and odd number of products placed in the store.

Finishings	Use of rail spots along certain axes in lighting; Despite the gray paint on the walls at the upper levels, beige is dominant in general due to the wall units; Use of wooden laminate flooring and carpet on the floor.	Strip LEDs and spot LEDs in lighting; Special paint technique to create stone texture on the walls; Mosaic covering on the floor.	Golden color rail spots in lighting; Grooved and flat white marble on the walls; Marble flooring with Versace border pattern on the floor covering;
Wall Units	Shelf systems with consoles fixed to the walls with spigots; Leather coated shelf tops and brass plated shelf ends; Hidden LEDs under the shelves.	Marble niches; Oak shelves; Wooden wall units; Glass display cases used as wall elements.	Marble with golden accents on the backs of all wall units; Single axis and straight suspension part; Hangers' ends embossed with brand motifs.
Freestanding furniture	Central furniture made of oak supported by glass; Glass bell jars.	A cult marble table in the form of a solid mass; An exhibition element raised from the ground with a glass top and a warm wood texture on the bottom base.	Glass bell jar furniture with shiny, stainless steel, wide metal frames;

5. CONCLUSION AND DISCUSSION

This study investigated the contemporary interior design approaches in luxury stores and three luxury stores with international brand images, namely Louis Vuitton, Ywes Saint Lorent and Versace, were selected and the interior designs of these stores were explained and interpreted through visual analysis. The study data was compared and analyzed in order to identify possible similarities and differences in the designs of these stores and to understand the design approach of choice in today's luxury stores.

In terms of location, the stores were located in commercial areas where similar luxury stores were also located and where tourist visits were intensive. This was indicative of the fact that although the luxury stores competed, they still preferred to reside in the same location. As a matter of fact, the population of the region, its characteristics, and competitive factors are considered important factors that should be taken into consideration in determining the store locations as suggested by Diamond (2006).

For the facade and showcase designs of the stores, the increased brand visibility and the connection of the storefront with the interior of the store stood out as common characteristics in all the three stores. As Din and Wills (2000) suggested, facade designs also provided important information about the level of market and the quality of the products sold. Nevertheless, the

locations of the stores had also direct effect on the designs of the store facades and showcases.

All three stores featured free plan type. They also had shared characteristics in terms of division by product type and placing a small and odd number of products. The circulation was designed in a fluid and diagonal order in Louis Vuitton and Versace stores, where it had a circular pattern in the Yves Saint Lorent store. As Green (1986) argued, these circulation areas were arranged into an order, which was expected to consist of simple and efficient ways for customer use.

The finishings were different in all the three stores. Warm materials, i.e., wood and carpet, were preferred for the floorings in the Louis Vuitton store. In contrast, Yves Saint Lorent and Versace stores used cold materials such as mosaic and marble. Similarly, on vertical surfaces, beige color was generally dominant as a relatively warm color in the Louis Vuitton store, while the dominance of cold colors was observed in the other two stores. In terms of lighting, rail spotlights stood out in Louis Vuitton and Versace stores, while strip LEDs and spot LEDs were used in the Yves Saint Lorent store. The ceiling design in all the three stores was very functional, although it was an unnoticeable architectural element as suggested by Mesher (2010).

For the wall units, different designs were seen in all the three stores. While the Louis Vuitton store featured leather-covered console shelves, the Yves Saint Lorent store preferred marble niches and oak shelves, where marble was the material of choice on the backs of all the wall units in the Versace store. The use of wall units for product display as a basic method was evident in these stores, as in every store (Mesher, 2010). In this way, the customers are provided with further opportunities to roam.

Carefully planned to highlight the products in the stores and create an environment where customers can easily move around, the freestanding furniture was used in all three stores (Schroeder, 2007). The use of glass bell jars is a common characteristic in this sense.

In conclusion, there is a strong relationship between brand image and spatial designs in the luxury stores in question and the designs further strengthen the brand image. The following factors stand out as contemporary design approaches in luxury stores:

- Gathering under the same roof with strong brands like itself as regards;
- The facade and display case should be designed with a luxurious approach that provides information about the level of market and reflects the brand identity,
- Providing a comfortable circulation axis;

- A small number of products on display;
- Use of surface elements identified with the brand, that reflect and strengthen the brand identity;
- Providing brand experience along with sales experience.

Nevertheless, it should be noted that the above contemporary design approaches in luxury stores may vary by the store location, e.g., in an airport or a shopping mall, and the specifications may change accordingly, and the size of the store may also be subject to certain changes in the context of design depending on the characteristics of the building of the store.

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Chapter 5

THE EFFECTS OF ARCHITECTURAL STRATIFICATION IN HISTORICAL PROCESS ON URBAN IDENTITY FORMATION: STRATONIKEIA ANCIENT CITY – ESKIHISAR VILLAGE*

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Introduction

Ancient City Stratonikeia is located within the boundaries of Eskihisar Village, near Yatağan in Muğla. The city serves as an extraordinary document for understanding architectural stratification and the continuity of change in terms of architecture and urban planning, as it still bears the traces of many civilizations. Structures from the Hellenistic, Roman, Byzantine, Principalities, Ottoman, and Republican periods as the main stages of the region's political and cultural development, coexist and exhibit a rich historical past.

Historical cities are conglomerations of areas formed by different cultures across different time periods, layered side by side and on top of each other. In these areas, layering can occur sometimes by erasing, demolishing, and destroying, and sometimes by adding, relocating, or multiplying. Distinguishing these layers in historical cities is not always easy. Therefore, it is important to read, evaluate, and interpret the layers together.

The theoretical framework of this study, which is built upon the examination of concepts related to the city, historical city, urban identity, and stratification, adopts a mixed research model with an exploratory approach to situational analysis dependent on time and place. This model involves theoretical information obtained from written and digital sources, alongside in situ observations and assessments. The historical origins of Stratonikeia Ancient City - Eskihisar Village, its development up to the present day, and its physical, historical, and social conditions were investigated. Accordingly, the information was combined with on-site observations, documented through plans, and collectively evaluated and interpreted.

Theoretical Framework: The City and Related Concepts

The Concept of the City

Researchers define the city from various perspectives. For example, Park, one of the first urban sociologists, describes the city as a reflection of human essence based on the structure of a society where primitive instincts exist (cited in Serter, 2013). Sjoberg distinguishes between pre-industrial and post-industrial cities, while Pirenne explains the city through the rise of the bourgeoisie. Sociologists like Durkheim, Weber, and Wirth define the concept of the city from sociological, economic, political, and ecological perspectives: Durkheim describes the city by the concepts of division of labour and solidarity, Weber emphasizes the influence of economic and political organization in shaping the city, and Wirth develops an urban theory that includes the ecological, organizational, and socio-psychological characteristics of urban life (cited in Can, 1999 and Keleş, 2002).

Ringas, Christopoulou, and Stefanidakis define cities as collections of places, where past events occurred and different experiences are expressed

in various forms (cited in Ateş, 2022). Lefebvre (1998) sees the city as a time and place, where people from different social groups and professions meet. Karaaslan (2010) views the city from the perspective of distribution-consumption processes, defining it as an economic entity that meets the various needs of individuals and as settlements that embody the socio-cultural changes of their inhabitants.

Karabey (1980) states that for a settlement to be called a city, it must have visual distinctiveness, a certain density of built structures, a specific population density, and activities involving various occupational groups. Today, a city is formed by the complementary integration of geographical, demographic, cultural, historical, social, economic, and political structures (Can, 1999).

It is evident that the concept of the city has evolved in parallel with societal development, acquiring different meanings over time. Therefore, it is a constantly changing and difficult to define concept.

The Image of the City

The concepts related to the city are interconnected, and the city image encompasses many of these concepts. Keleş (1980) defines the city image as the impression left on a person by the design, arrangement, and appearance of structures. Göncü (2007) suggests that these impressions vary by an individual's knowledge, experiences, and encounters. According to Erton (1995), the city is perceived in fragments, and these perceptions come together to form the overall image. One can speak of a city image once these individual perceptions transform into the common intuitions of a specific community (Eyüpoğlu, 2019). Topçu (2011) also states that the city image consists of the lasting, sensory, and intellectual impressions left in the human mind as a result of the interaction between people and the city.

According to Lynch (1960), there are three components of the city image: "identity," "structure," and "meaning." In this definition, identity refers to the unique character of the environment that emerges through the interaction between individuals and their surroundings. Structure is the position of an object in relation to other objects or to the observer. Meaning is the understanding of the non-verbal messages of the environment through the emotional perception of the individual. Lynch (1960) categorizes the elements of the urban image into five components: districts, paths, nodes, edges, and landmarks.

City Identity

Cities are shaped by their historical, cultural, and geographical heritage. The identity, memory, and images of a city are formed during this shaping process. Although city identity is often confused with city image, they are

distinct concepts. Nevertheless, both concepts, like all other city-related concepts, intersect and complement each other: while the urban image represents a mental process formed through observation, city identity encompasses the spatial, cultural, and social phenomena of the city (Topçu, 2011). According to Güvenç (1993), character gains a social dimension, becoming an objective and observable reality—i.e., identity. The perception of this reality from the outside creates images. In this sense, identity is the self-definition of what exists, whereas the image is formed by the external perception of this existence (Süher,Ocakçı and Karabay, 1996; Tepeli, 2015).

Lynch (1960) suggests that city identity is the collection of features that distinguish one city from another. These features include physical elements such as streets, buildings, and squares, as well as elements like people, animals, plants, music, light, colour, and smell, all of which are part of city identity (Arabulan, 2008). Proshansky, Abbe, and Kaminof (1983) also argue that identity is the state of being unique that distinguishes a living being or object from others (cited in Topçu, 2011).

Çöl (1998) states that city identity is shaped by physical, cultural, socio-economic, and historical factors and continuously evolves. Örer (1993) adds that city identity provides information not only visually but also through various sensory means such as auditory, tactile, and olfactory channels. Historical stories, legends, and music are also incorporated into this identity. Both definitions do not contradict but rather complement each other. Tekeli (1991) suggests that city identity encompasses the values and purposes perceived by individuals. Therefore, this identity includes cultural and social values as much as physical structures and, as Süher (2006) notes, is formed over time through its geographical location, cultural level, architecture, and history. Ultimately, the identity of a city is determined by its unique characteristics and how these characteristics are perceived. The collective perceptions form the city's image.

Urban Identity Factors

City identity consists of both tangible and intangible elements. Tangible identity elements include the natural and built environment, while intangible identity elements encompass historical, social, cultural, and economic characteristics (Aslan and Kiper, 2016). Many scholars classify and investigate urban identity factors based on the natural environment, human environment, and built environment, or through socio-economic and cultural accumulation, as well as historical development (Can, 1999; Çöl, 1998; Ocakçı and Southworth, 1995; Tepeli, 2015; Topçu, 2011).

Urban identity factors can be categorized into three main headings, each containing subheadings: physical factors, historical factors, and social factors (Figure 1).

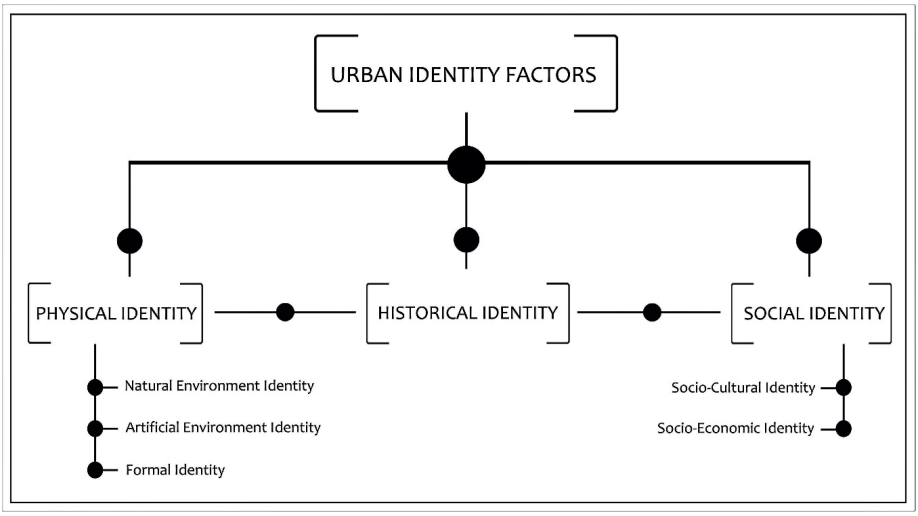

Figure 1. Urban Identity Factors Analysed in the Study (Created by the first author)

Physical Identity

The physical, geographical, human, and functional characteristics of cities are directly or indirectly related to urban identity and contribute to the city's perceptibility (Sargın and Demir, 2018). Ocakçı (1993) and Güngördü (2016) define the physical environment as the environment in which humans exist and perceive physically. In the same context, Süher (2006) also states that the geographical location, cultural level, architecture, and history of the city are factors that influence the formation of urban identity.

Physical identity consists of factors arising from natural and artificial environments. The city's identity becomes apparent, where these factors differentiate and the city becomes unique. Factors that contribute to the emergence of physical identity can be classified under three main headings: natural environment, artificial environment, and formal identity, and consist of various elements specific to the city (Figure 2).

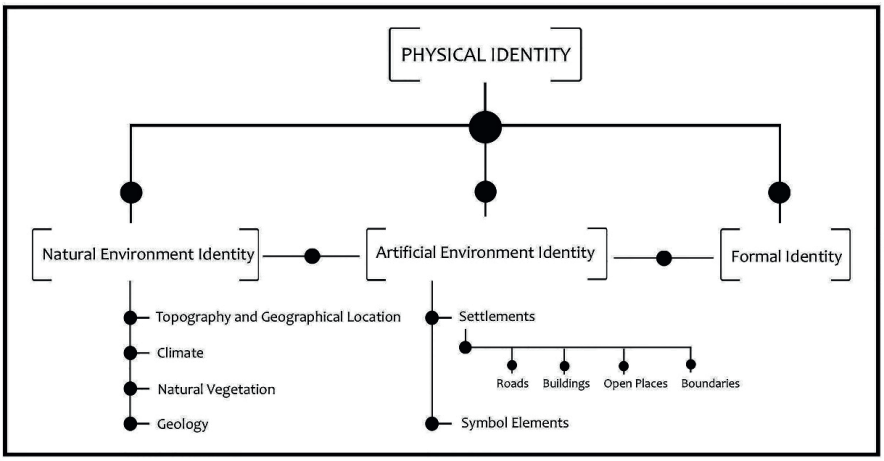

Figure 2. Physical Identity Classification Examined in the Study (created by the 1st author)

Natural environmental identity

Considered as a factor of physical identity, the natural environment shapes the city vis-a-vis its founding process, development, and changing levels of civilization. Scholars define the elements that make up the natural environment as the city's topography, climate, water sources, soil structure, vegetation, and geological structure (Can, 1999; İlgar, 2008; Şahin, 2010).

Topography (mountainous, plain), geography (eastern, western), climate (such as Mediterranean climate), natural vegetation (scrubland or rural areas), and geological structure (determines building materials, building sizes, and city skyline) lend texture and identity to a settlement. Therefore, elements of natural environmental identity can be listed as topography and geographic location, climate, natural vegetation, and geological structure (Figure 2).

Artificial Environmental Identity

In a city, human-made elements such as buildings, roads, squares, and open spaces form the components of artificial identity, which is another physical aspect of the city (Önem and Kılınçaslan, 2005; Ayyıldız and Ertürk, 2017). In this context, artificial environmental identity can be grouped under two headings: settlement (roads, buildings, open spaces, boundaries) and symbolic elements (Figure 2).

Formal Identity

Formal identity is one of the factors of physical identity (Figure 1). In some cities, the form is predetermined at the time of establishment, and practices are carried out within this constraint. Lynch (1960) defines the fundamental elements of evaluating the city and urban form as function, intensity, macro

form, and the relationships between these factors. According to Lynch (1981), for a good urban form to emerge, the city must meet criteria such as vitality, sensory quality, harmony, access, and control.

Historical Identity

Historical identity is one of the factors of urban identity (Figure 1). The naming of cities according to civilizations, religious beliefs, or geographical locations at different periods is also part of their identity (Ünlü, 2017). Throughout history, the development of human civilization has continued by accumulating traces from the past to the future, reflecting changes in needs and possibilities. In other words, all expressions and formations obtained from the past are transferred to the future and constitute historical identities (Demirsoy, 2006; Çelik, 2019).

Social Identity

Social identity, like historical identity, constitutes one of the urban identity factors (Figure 1). People all over the world are members of a group. In order to talk about a society, there must be a common way of life, relational integrity, and collaboration within any group. Social identity can be examined under two main headings: socio-cultural and socio-economic identity.

Socio-Cultural Identity

The accumulation of people's experiences of living together socially and politically over time forms urban culture. Culture is a significant factor in determining the level, quality, and value of urban life, the status of being urban, and the lifestyle in the city. This factor arises from individuals' need to feel belonging to a community and a place. Additionally, culture serves as the foundation for a range of phenomena including worldview, values, lifestyle, and actions (Rapoport, 1989, cited in Topçu, 2004).

Socio-Economic Identity

The economic identities formed by the functions that cities prioritize distinguish them from other cities, leading to different perceptions (Güngördü, 2016). In this context, the designations of cities as agricultural, port, industrial, commercial, financial, tourist, university, exhibition, or energy cities illustrate how their identities are shaped within the framework of these functions.

The Relationship between Historic City, Identity, and Architectural Stratification

Architectural stratification can be defined as the presence of various historical period structures or traces within a city. This process not only shapes the physical fabric and aesthetic characteristics of the city but also signifies the depth of its cultural and social identity.

The Relationship between Historic City and Identity

Historic cities offer a local character and historical identity through both their formal and traditional features (Doratlı, Önal Hoşkara ve Fasli, 2004, cited in Ant, 2018). Lynch (1960) notes that historic cities connect the past, present, and future, ensuring continuity. Thus, a place's identity forms a recognizable spirit over time, intertwined with its historical processes, meanings, identity, and historical values.

Historic cities contain evidence of human relationships within their historical background; their street layout, squares, and sacred areas define their identity. Therefore, they interact with the concept of identity, producing, reinforcing, and enhancing local identity.

The Relationship between Historic City, Identity, and Layering

For urban layering to occur and be observable, the formal fabric must evolve, change, and develop over time due to the influence of social, cultural, and economic needs of different periods, accumulating side by side and on top of each other.

In layering, there is a triple interaction between time, humans, and space. Historic cities establish a relationship with the changes and cycles within the physical structures of time. The past cannot resist change; however, it has the potential to manage change and cycles (Ant, 2018). The relationship established with change and cycles occurs in interaction with individuals, giving rise to the concept of identity (Dobson, 2011). The identity of an area is linked to the mental maps of individuals, familiar points, and the interpretation of the past (Bridge and Watson, 2002).

Layers interact with the character and identity of the city. This interaction often occurs through physical structures, but multi-layered historic cities emerge through the combination of social and physical layers (Özer, 2020). Ward (1968) emphasizes this by stating, "A city without old buildings is like a man without memories" (cited in Dağabakan, 2012, p.7). When the connection between people and places diminishes, the transmission does not occur fully (Dobson, 2011; Ant, 2018). Urban decay, regression, and decay occur when a city fails to convey these traces (Lynch, 1972; Yılmaz Saygın, Kiper ve Güçer, 2004).

Urban layers are formed not only by physical and periodical differences but also by historical and social differences. Therefore, the concept of urban layering is related to the connection with the city's past. The layering of this connection contributes to the accumulation of historical heritage for the future.

The Existing Structures and Significant Remains in Stratonikeia Ancient City

The existing structures and ruins belonging to different cultures and periods in the ancient city of Stratonikeia, which was founded in the 3rd century BC and was named after Stratonike, the wife of the Seleucid Emperor Antiochus I, show that there is a long history of historical stratification. One of the main elements that constitute the identity of the city is this layering. Remnants from successive periods are present in the city, bearing witness to its diverse historical layers.

Hellenistic Period

During the Hellenistic Period, city walls, theatres, gymnasia, bouleuteria, and agoras were constructed, forming the initial elements of the city's identity. Many of the structures built during this period reflect public life and social interactions in the city, and they constitute valuable artefacts for understanding the past in terms of political, sociological, and economic structures, not just through architectural styles.

Roman Period

The existing building remains and traces indicate a significant urban development during the Roman Period in the city. Among the structures from this period are sacred areas, Roman baths, colonnaded streets such as the northern and western colonnaded streets, the northern city gate and fountain, and other monumental buildings. The grandeur of Roman architecture added splendour and magnificence to the identity of Stratonikeia. These structures also indicate that the city was an important center for trade and culture during that period.

Byzantine Period

Excavations initiated in 1977 revealed the settlement pattern of various periods, particularly the Byzantine Period, beneath the soil cover formed due to intense construction activities during the Ottoman Period (Öztaşkın, 2015). During the Byzantine Period, religious structures became prominent in the city, with churches and monasteries being the main elements defining the architectural fabric of the city. Thus, the distinctive features of Byzantine architecture also provided spiritual depth and continuity to the city's identity.

Principalities (*Beylikler*) and Ottoman Era Buildings

Structures from the Principalities Period and subsequent periods, such as the Seljuk bathhouse, Şaban Ağa Mosque, coffeehouse, bakery, village council chamber, tailor shop, butcher, tobacco depot, fountain, and grocery store, which belong to various professions, constitute the 1st Village Square that is still visible today. After the 13th century, only one of the village's three squares and its surrounding limited area were used.

During the Ottoman Period, the name of Stratonikeia was changed to Eskihisar. The mosques, bathhouses, and houses built during this period increased the architectural diversity of the city. The elegant and functional characteristics of Ottoman architecture hold an important place in the city's identity. Particularly, Ottoman civilian architecture reflects the daily life and social structure of the city.

On top of the Roman Bathhouse, there are roads and civilian structures from the 19th and 20th centuries. One of the most monumental of these structures is the Mehmet Eskişar Ağa Mansion, dated 1909, located on the western edge of the road west of the Roman bathhouse. In the construction of this mansion, marble pieces obtained from the ancient structures were used as spolia. Both Latin and Ottoman inscriptions can be found on the structure (Söğüt, 2014).

The Republican Period

In the Republican Period, Eskihisar Village represents the modernized face of Stratonikeia. The new buildings and restoration works carried out during this period preserved the historical texture of the city while meeting the needs of modern life. The innovative architecture of the Republican Period added a contemporary dimension to the city's identity. The juxtaposition of ancient remnants with Ottoman and Republican Period architectural formations should be considered as evidence of a long-term coexistence.

Eskihisar Village, which suffered significant damage in the earthquake of 1957, was relocated to a second new settlement area further north. Later, due to the initiation of coal mining activities in this area, it was moved to its current location, referred to as the third (modern) settlement area. With migration to the second settlement area, the density in the old city center gradually decreased, and the usage area narrowed. However, there are still families living within the ancient city.

Stratonikeia Ancient City excavations

Stratonikeia Ancient City's early research was conducted by Leake in 1800, Bankes in 1817, and Fellows in 1838. These published studies included evaluations of the settlement and inscriptions. In 1862, Tremaux drew the city's first plan. Between 1891 and 1892, Osman Hamdi Bey conducted studies in the city and its surroundings, bringing the findings to the Istanbul Archaeology Museum. The first scientific archaeological excavations began in 1977 at the North City Gate under the leadership of Boysal (1983) and continued in the Gymnasium. These studies surfaced architectural remains and walls covered with a dense layer of soil. Boysal's work, which lasted until 1995, was followed by a team led by Şahin from 2003 to 2006. Since 2008, the excavations have been conducted by Söğüt.

Following the excavation and restoration works carried out since 2008, Stratonikeia has taken on the status of a living village with the intensity of use of the cafes serving visitors to the ancient city. This situation makes the ancient city even more special. In 2015, the city was included in the UNESCO World Heritage Temporary List (Söğüt, 2017).

The Role of Stratonikeia's Stratified Structure in the Formation of Urban Identity

The role of architectural stratification in the formation of the urban identity of Stratonikeia can be categorized into three main headings: physical (natural, artificial, formal), historical, and social (socio-cultural, socio-economic) (Figure 4).

Historical identity

The structures belonging to the Hellenistic, Roman, Byzantine, Principalities, Ottoman, and Republic periods in the city carry historical, cultural, and aesthetic values and serve as documents related to the identity and historical depth of the city. The presence of structures from different periods together emphasizes the historical continuity and depth of Stratonikeia Ancient City, creating a strong sense of historical consciousness in the city's identity.

In addition to structures from the Hellenistic, Roman, and Byzantine periods, buildings from the Principalities, Ottoman, and Republic periods can also be seen in the city's paved square. The monumental plane trees over 200 years old and the structures in their shade serve as real witnesses to the continuity of history, bearing witness to stories from every era.

Physical identity / aesthetic diversity

The convergence of different architectural styles from the Hellenistic, Roman, Byzantine, Principalities, Ottoman, and Republic periods in Stratonikeia Ancient City enhances the city's aesthetic appeal and architectural diversity, making it intriguing for both locals and visitors. The desire for perfection in implementation during the Hellenistic period, the dominance and grandeur of the Roman period, the function-oriented, modest (simpler and less ornate decorations), thrifty (use of salvaged materials) but spiritually atmospheric efforts of the Byzantine period, and the mosques, baths, and houses reflecting the elegant and functional features of Ottoman architecture play a significant role in the city's identity and architectural diversity. Especially civil architecture provides insights into the daily life and social structure of the time.

The walls, which remained intact throughout the Late Classical and Hellenistic periods and retained the same solidity during the Roman Imperial

period, served as a border for Stratonikeia Ancient City. The city spread within these walls, but it did not form a distinct boundary during the Principalities period and beyond, and remnants became partially legible in some areas. Moreover, the past presence of streams and waterways passing through the city significantly influenced the settlement and formed clear boundaries. Today, these streams and waterways can only be seen with their dried-up beds. There are a total of 84 residences in the city, 68 of which are registered. The first village square is still in use today, along with several commercial and civil structures around it after restoration (Figure 5).

During the Republic Period, which represents the modernized face of Stratonikeia, an innovative architecture adds a contemporary dimension to the city's identity, while restoration efforts have preserved its historical fabric while responding to changing needs. As a result, this accumulation, which could serve as a source of inspiration for future societies and enable them to feel their roots, is reflected in the form and aesthetics of the structures.

Cultural identity

The convergence of various cultural influences in Stratonikeia Ancient City enhances the city's cultural richness. Traces from the Hellenistic, Roman, Byzantine, Ottoman, and Republic periods reveal the city's multi-layered cultural structure. The presence of diverse architectural structures, each distinct yet collectively forming a whole, is notable in the city. The juxtaposition of the Bouleuterion with the Abdullah and Celal Eskişar Ağa Mansion dating back to the Ottoman period in 1876 and the Bılla House from the Early Republic period in 1940 exemplifies this cultural richness.

Structures from different periods, spanning from ancient times to the present day, stand side by side or intermingled, demonstrating not only historical but also cultural unity. While remnants and traces from each period may carry individual significance for past and present inhabitants, their unity is palpable and perceptible even today.

The city boasts plane, willow, and cypress trees flourishing in valleys and along waterways thanks to its water sources. The plane trees in the city and squares are well-known, and the plane trees, an important element for the city, continue to exist officially (Figure 3). The olive trees hold a special place and have persisted from ancient civilizations to the present day. In ancient times, olive trees symbolized immortality and abundance due to their ability to live for centuries, and olive branches were featured as symbols on coins. Although olives, olive trees, and olive oil are now more associated with material value, the city's olive trees have been preserved for over a century. Plant and flower motifs adorned garments in ancient times and were also used in figures and decorations adorning many structures and sculptures in the city, especially inspired by olive branches.

On the other hand, the liquidambar trees, locally known as the "daily tree," are still used spiritually. The tradition of burning the resin of the liquidambar tree to spread its incense (smoke) around is a custom passed down from past to present among the residents of the city and its surroundings. In the local dialect, the concept of "daily burning" has been an important part of daily life and ceremonies for Persians, Hebrews, Greeks, and Romans to ward off disease-causing demonic forces, cleanse from evil spirits, and dispel negativity. The local people still practice this ritual in their homes with the same belief.

In conclusion, it's a city that has experienced and continues to experience every period of its history.

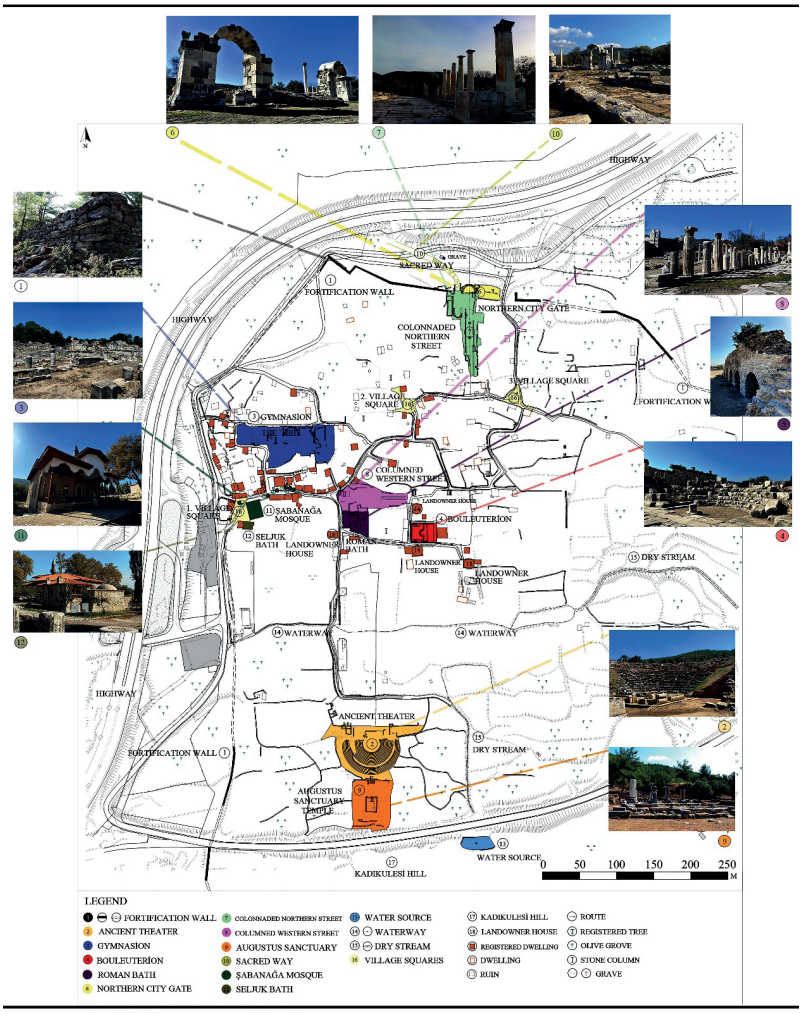

Figure 3. Stratonikeia - Eskihisar City Plan and Photographs (Created by the 1st author, using the Yatağan Municipality, Conservation Development Plan as a base).

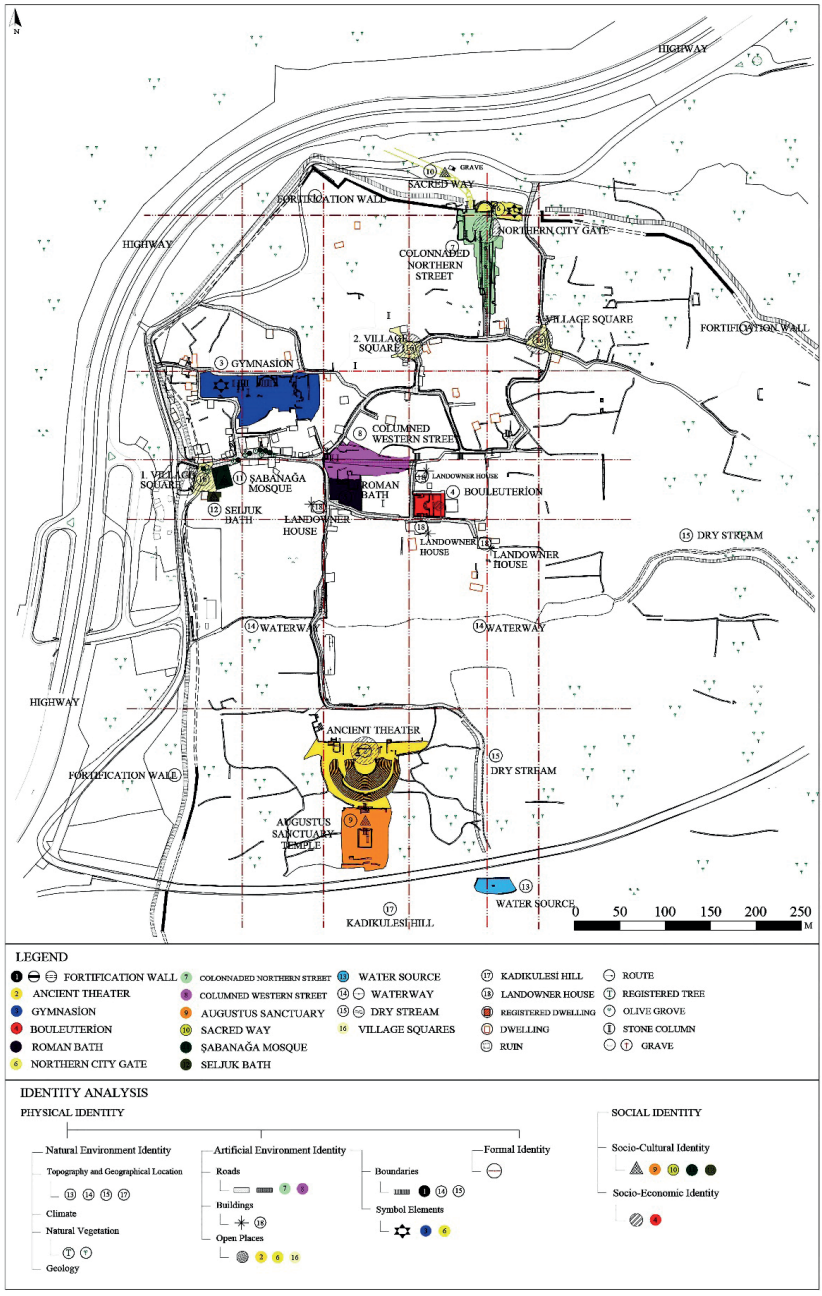

Figure 4. Stratonikeia-Eskihisar City Plan and Identity Analysis (Created by the 1st author, using the Yatağan Municipality, Conservation Development Plan as a base).

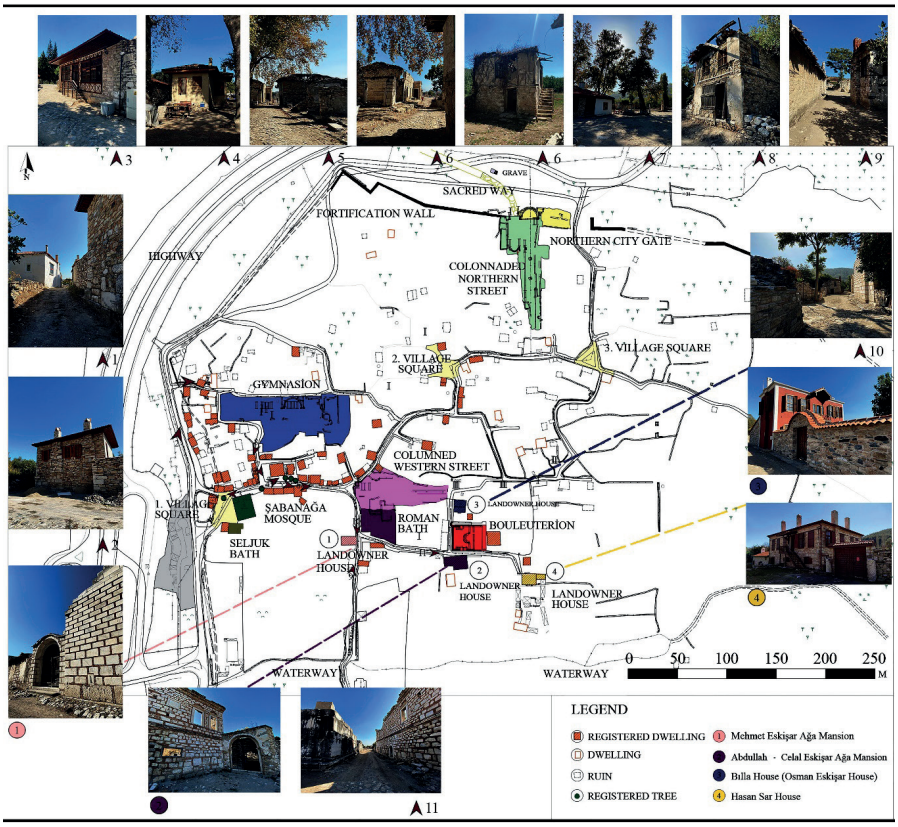

Figure 5. Stratonikeia-Eskihisar City Plan and Buildings (Created by the 1st author, using the Yatağan Municipality, Conservation Development Plan as a base, photographs from the 1st author's archive).

Conclusion

Stratonikeia Ancient City, known today as the Eskihisar village, is an extraordinary example for understanding the impact of architectural stratification on urban identity throughout the historical process. The cultural heritage of the city spans from archaeological traces dating back 5,000 years to architectural legacies of the 19th and 20th centuries, encompassing a wide chronology. Over this period, traces of different architectural styles from various periods have enriched the city's multi-layered physical texture and cultural identity, interacting with the created spaces, nature, and culture. The city's structure, shaped by different dominions, administrations, architectural concepts, and social changes, has reflected the innovations of each period positively or negatively. This stratification preserves the city's connections with the past while providing a perspective for the future. In this regard, the city not only remains a treasury of history but also retains its significance as a vibrant cultural heritage.

However, when evaluating the historical process and experiences of the settlement, both physical and cultural discontinuities have been identified. For instance, the reduction of the three squares, which had reached their highest number, to only one square today has led to a narrowing in terms of identity. The rituals and social events witnessed by these squares have disappeared over time due to historical developments, creating a historical discontinuity in the identity of the settlement.

Although remnants such as the North City Gate, the North and South Columned Streets, the ancient theatre, temple, bouleuteria, and gymnasium have lost their physical functions, preserving them as living witnesses to the historical past is a cultural responsibility.

In conclusion, the magnitude of the impact of architectural stratification on the formation of urban identity throughout the historical process is undeniable. Stratonikeia has undergone physical changes over time due to natural, artificial, and formal factors, while also experiencing historical, social, and cultural transformations. Along with this stratification process, the city's identity has also been affected, transformed, sometimes changed, and constrained, or partially disappeared.

Preserving and perpetuating the acquired identity is important for enriching social life. In addition to tangible cultural heritage, intangible cultural heritage should not be overlooked. Comprehensive preservation and transmission can only be achieved by sustaining both.

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