



Architecture, built environment and culture

Dilge Erdener Kildir

Versão final

(Esta versão contém as críticas e sugestões dos elementos do júri.)

Porto – 2020

**INSTITUTO SUPERIOR DE CONTABILIDADE E ADMINISTRAÇÃO DO PORTO
INSTITUTO POLITÉCNICO DO PORTO**



Architecture, built environment and culture

Dilge Erdener Kildir

Master Degree Dissertation

**presented to Instituto de Contabilidade e Administração do Porto
to obtain the Master degree in Intercultural Studies for Business
under the guidance of Sara Cerqueira Pascoal, PhD**

Porto – 2020

**INSTITUTO SUPERIOR DE CONTABILIDADE E ADMINISTRAÇÃO DO PORTO
INSTITUTO POLITÉCNICO DO PORTO**

Abstract

This dissertation is aspired to analyse the interrelationship between architecture and culture briefly. As a starting point, the following questions are asked: “What is the interrelationship between architecture and culture?” and “How does architecture/built environment affect culture and vice versa?” The first chapter starts by explaining the multicultural and multidisciplinary state of architectural theory and practice. Then, the relation among architecture, built environment and culture is expanded with the help of a framework of theoretical ideas. In this respect, the theory of Environment-Behavior Studies (EBS) is introduced. In the second chapter, the EBS, its nature and its interrelationship with some other related theories such as Architectural Phenomenology and Space Syntax are mentioned. The evolution of EBS and its depiction are described. The definition and the practical usage of culture is also explained within this context by providing solid examples from past and present built environments. In the third chapter, explanations regarding culturally responsive environments are made, and the built forms are classified by contemplating Vernacular Architecture Studies (VAS). The evolution of these studies, how they emerged as a reaction towards the Modernist Movement’s deterministic approach, and the outcomes of these movements are elaborated. In this sense, gated community housing estates, mass housing projects and squatter settlements of Istanbul are handled as examples. In the fourth and last chapter, three landmark images which represent the cultural shifts in the modern built environment are chosen and explained, while aiming to demonstrate a link of all the topics that have been handled in the study.

Key Words: Architecture; Culture; Vernacular; Modern

Resumo:

Esta dissertação tem como objetivo analisar brevemente a inter-relação entre arquitetura e cultura. Como ponto de partida, são feitas as seguintes perguntas: “Qual é a inter-relação entre arquitetura e cultura?” e “Como é que a arquitetura / ambiente construído afetam a cultura e vice-versa?” O primeiro capítulo começa por explicar o estado multicultural e multidisciplinar da teoria e prática da arquitetura. Em seguida, a relação entre arquitetura, ambiente construído e cultura é ampliada com a ajuda de um enquadramento teórico. Nesse sentido, é introduzida a teoria Environment-Behavior Studies (EBS). No segundo capítulo, a EBS, sua natureza e a sua inter-relação com algumas outras teorias relacionadas, como a Fenomenologia da Arquitetura e a Sintaxe Espacial, são mencionadas. A evolução da EBS e a sua representação são descritas. A definição e o uso prático da cultura também são explicados neste contexto, fornecendo exemplos sólidos de ambientes construídos do passado e do presente. No terceiro capítulo, são fornecidas explicações a respeito dos ambientes culturalmente responsivos, e classificam-se os ambientes construídos, contemplando os Estudos de Arquitetura Vernácula (EVA). Elabora-se a evolução desses estudos, como eles surgiram como uma reação à abordagem determinística do Movimento Modernista e os resultados desses movimentos. Nesse sentido, conjuntos habitacionais de condomínio fechado, projetos de habitação em massa e favelas de Istambul são tratados como exemplos. No quarto e último capítulo, três imagens marcantes, que representam as mudanças culturais no ambiente construído moderno, são escolhidas e explicadas, com o objetivo de demonstrar uma ligação de todos os tópicos que foram tratados no estudo.

Palavras-chave: Arquitetura; Cultura; Vernacular; Moderno

Dedication

To my lovely family: Neptün, Oktay, Candaş, & Niyazi.

Acknowledgements

I am sincerely thankful to my dear supervisor, Professor Sara Pascoal, who has always been there with her smile and positivity whenever I needed. I feel truly lucky that I got to learn from you and have your valuable contribution to this study, during this long process. I would like to underline that, this feeling of gratitude is not only from me, but also from my family that felt your collateral support from afar. Thank you very much Professora Sara!

I am forever grateful to my family who have always backed me up in every way. I would not become who I am today, without you. Thank you all, for every small detail, from the bottom of my heart. Thank you to my dear husband Niyazi for all the support and kindness through our journey of life.

My special thanks to Ana Campo Grande and Ana Marques for giving me constant courage, and great tips to be able to finish this thesis; and my warm thanks to dear Veronica Nonis who enabled me to reach numerous reference sources.

Thank you all to my dear friends, both from the Master's and from Atelier Susana Camelo, who made Porto my home these past three years.

I am truly thankful to all my inspiring teachers, professors, colleagues and friends throughout my life, who have helped me grow in any way. I would like to thank especially to my beloved uncle Prof. Dr. Mehmet Şener Küçükdoğu for being my first professor of architecture and encouraging me to become an architect since I was a child.

List of Abbreviations

AAP: Associação dos Arquitectos Portugueses / Ordem dos Arquitectos (Portuguese Association of Architects)

CCV: Cooperativa de Vivienda Caciques de Venezuela

EBR: Environment-behavior relations

EBS: Environment-Behavior Studies

ETH: Swiss Federal Institute of Technology

MoMA: The Museum of Modern Art

RIBA: The Royal Institute of British Architects

SSS: International Space Syntax Symposium

SuAT: Architecture and Sustainable Building Technologies

TCKTB: Türkiye Cumhuriyeti Kültür ve Turizm Bakanlığı (Republic of Turkey, Ministry of Culture and Tourism)

TOKİ: Toplu Konut İdaresi Başkanlığı (Housing Development Administration of Turkey)

TÜİK: Türkiye İstatistik Kurumu (Turkish Statistical Institute)

TurkStat: Turkish Statistical Institute

UCL: University College London

UTT: Urban-ThinkTank

VAS: Vernacular Architecture Studies

Table of Contents

List of Abbreviations	vi
Index of figures.....	ix
Introduction.....	1
1. Architectural theory	4
1.1. Defining architecture.....	6
1.2. Architecture, built environment and culture	8
2. Environment-Behavior studies (EBS).....	11
2.1 The nature of EBS and some other related theories	11
2.1.1. Architectural phenomenology	13
2.1.2. Space Syntax theory.....	14
2.2. The evolution of EBS.....	17
2.3. The depiction of EBS.....	19
2.3.1. Question 1: Culture	19
2.3.1.1. Definition of culture within the context of EBS	20
2.3.1.2. The practical usage of culture in EBS.....	21
2.3.2. Question 2: Environment	22
2.3.2.1. Conceptualizations of environment.....	27
2.3.2.2. Evaluation of the environment quality, and the impacts of cultural norms	32
2.3.2.3. Comfort	37
2.3.3. Question 3: Responsiveness.....	41

3. Culturally responsive environments and the “others”	42
3.1. Classifying the built forms	43
3.2. Vernacular Architecture Studies (VAS) and vernacular environments	45
3.3. Gated communities, mass housing projects, and squatter settlements	50
3.3.1. Gated communities in Istanbul	53
3.3.2. Informal settlements and mass housing projects in Istanbul	57
4. Some landmark images of the built environment.....	62
4.1. “Lunch Atop a Skyscraper”, 1932	62
4.2. “The Demolition of Pruitt-Igoe”, 1972	63
4.3. “Torre David”, 2011	66
Conclusion	72
References	74

Index of figures

Figure 1. Three kinds of spatial representations. (UCL Space Syntax - Online Training Platform, n.d.).	15
Figure 2. Space syntax integration pattern of Lisbon (SSS11, n.d.).	16
Figure 3. Strategic visibility analysis of the ground floor gallery of the British Museum.	16
Figure 4. Different settings in space. (Rapoport, 2005, p. 27).	29
Figure 5. Different settings in time. (Rapoport, 2005, p. 28).	29
Figure 6. Model of evaluative process. (Rapoport, 2000, p. 146).	31
Figure 7. Granaries in Sistelo, in Minho region of Portugal (Barros, n.d.).	35
Figure 8. Example of a Doric column and its capital, from the Parthenon in Athens (Codex, 2012).	35
Figure 9. Göreme Valley (TCKTB, n.d.).	37
Figure 10. Dismantling of culture and relating to the built environment. (Rapoport, 2000, p. 149)	40
Figure 11. Distribution of gated communities in Istanbul (Baycan-Levent & Gülümser, 2007, p. 15).	53
Figure 12. A 3D render image from Sinpaş İstanbul Sarayları. ("Sinpaş İstanbul Sarayları", n.d.).	55
Figure 13. View of Çırağan Palace from the Bosphorus, Istanbul (Moonik, 2012).	56
Figure 14. Lunch Atop a Skyscraper, New York. ("Lunch Atop a Skyscraper", 1932).	62
Figure 15. The demolition of the Pruitt-Igoe housing project in April 1972, St. Louis, Missouri. (Balterman / Time & Life Pictures / Getty Images, 1972).	63
Figure 16. The aerial view of the Pruitt-Igoe housing complex, shortly after its completion (Bettmann/Corbis, 1956).	64
Figure 17. Torre David, Caracas. (Baan, 2011)	68
Figure 18 & Figure 19. Torre David, Caracas. (Baan, 2011)	68
Figure 20 & Figure 21. Some images from the proposed development project developed by UTT with Architecture and Sustainable Building Technologies (SuAT) chair at ETH Zürich. ("Projects-Torre David", n.d.).	70

*Architecture has been given clearly defined boundaries.
Architecture, for example, is architecture because it is not painting or sculpture.
The nature of these boundaries therefore needs to be interrogated in a way that
does not deny the specificity of the discipline of architecture, but rather in a way
that attempts to redefine its relationship to other disciplines.*

Leach, 2005.

Introduction

This dissertation is aspired to describe, analyse, and comprehend the interrelationship between architecture and culture in a broad sense. As a starting point, the following questions are asked: “What is the interrelationship between architecture and culture?” and “How does architecture/built environment affect culture and vice versa?”

In order to answer these questions, it is vital to start from understanding the related theories and try to reach a cross-cultural theoretical framework. However, it would be impossible to have comprehensive reviews of both broad theories of culture and architecture in this study, due to practical constraints. Therefore, it seems more appropriate to firstly focus on the architectural theory, while understanding its relationship with culture, and to examine culture within that context. By doing so, it is aimed that the intended topics will be handled concisely enough.

Therefore, the first chapter starts by explaining the architectural theory and by trying to locate it in the right place of our minds, within the scope of the natural and social sciences. Architectural theory is multicultural and multidisciplinary by nature. Mentioning the related approaches to architecture from other related disciplines enables us to understand the social value of architecture more completely. Similarly, the practise of architecture also includes several actors in its practical sense, starting from the initial phases of design process until the implementation of the architectural project. Which means, it is also multicultural and multidisciplinary as a fundamental characteristic.

It is challenging to understand and define architecture since it is a topic that involves several physical and psychological aspects. Thus, different methods which have been proposed to define architecture are mentioned, while asking questions such as the sort of architectural activity, if architecture has fundamental characteristics, if architecture is an artform, and so on. From this starting point, the relation among architecture, built environment and culture is expanded with the help of a framework of theoretical ideas, namely a cross-cultural framework which can be called as architectural anthropology. In this respect, environment-behavior relations (EBR) and the multidisciplinary theory of Environment-Behavior Studies (EBS) are introduced.

In the second chapter, the EBS, its nature and its interrelationship with some other related

theories such as Architectural Phenomenology and Space Syntax are mentioned. The evolution of EBS and its depiction are briefly described as well. To do so, its founder Amos Rapoport's several works are examined, while giving opinions and criticisms from other authors to avoid having a one-sided study overall. The concept and the practical usage of culture is also explained within this context. The built environments, if and how they are affected by culture, and vice-versa is expanded. The related approaches such as environmental determinism, possibilism and probabilism are analyzed. Another point that is handled under this chapter is the conceptualizations of environment, which can be summarised as being the organization of space, time, meaning, and communication; acting as a system of settings; being cultural landscapes; and being composed of fixed, semi-fixed and non-fixed elements. While expanding these, a number of examples are given with intention to help the reader to relate the theoretical ideas with their daily lives, and have a more solid understanding of the interrelationship between culture and the environment. How the environments are evaluated by people from diverse cultures, depending on different factors is exemplified as well. These instances are given from a variety of cultures all around the world, however, the emphasis is given to Turkey and Portugal. Thus, as mentioned in this thesis, we are members of certain cultural groups and therefore we are enculturated within certain frames of social values. By acknowledging and embracing this fact, it is aimed to merge personal experiences and knowledge with other authors' findings, to create an interculturally richer study, while keeping the path of objectivity.

The third chapter begins by the explanations regarding culturally responsive environments, which refers to adaptive environments that can be modified as culture changes. Considering all the information provided in the preceding chapters, and Rapoport's constant focus on the vernacular environments, the built forms are classified by contemplating the Vernacular Architecture Studies. The evolution of these studies, how they emerged as a reaction towards the Modernist Movement's deterministic and "one size fits all" approach, and the outcomes of these movements are elaborated, while giving classifications of different types of built forms and environments. In this sense, gated community housing estates, mass housing projects and squatter settlements, i.e., slums of Istanbul are handled as examples to illustrate their outcomes and learnings.

In the fourth chapter, three landmark images which represent the cultural shifts in the modern

built environment are chosen and explained, while aiming to demonstrate a link of all the topics that have been handled in the study. These cases are explored by giving opinions from different perspectives as well, to remain the intercultural aspect of the study.

As a conscious decision, all the examples and cases which are handled in this thesis are selected from a wide range of sources from different periods of time, not only from the scholar works of well-known authors in the related disciplines, but also from other mass communication mediums such as online news or magazine pages, public advertisements, and exhibitions as timely cultural representations of the societies. This is to underline once more, how architectural styles and built environments are embedded in our cultural milieus, changed over time, while our cultural heritages shape them in return. This selection of sources is also a natural result of the interdisciplinary characters of both architectural and cultural studies. Overall, the thesis is aspired to be coherent, but at the same time a broad and multi-faceted study which could motivate the ones who read it for further explorations.

1. Architectural theory

It is suggested that, in the recent years, the architectural theory has not only been in the radar of architectural researchers, but also of the researchers from other disciplines. Clearly, the opposite interest occurs as well. In 2005, architect and theorist Neil Leach wrote in the preface of his edited book *Rethinking architecture: A reader in cultural theory* that:

There is evidence of a clear shift both in the nature of debates within architecture and in its relationship with other academic disciplines. Not only are architects and architectural theorists becoming more and more receptive to the whole domain of cultural theory, but cultural theorists, philosophers, sociologists and many others are now to be found increasingly engaged with questions of architecture and the built environment. (p. vii)

This explanation suggests that focusing solely on architects and their theoretical or practical works would not be sufficient to have a comprehensive study. Thus, in his edited book, the essays were written by “thinkers from ‘outside’ architecture” (Leach, 2005, p. vii). The author advocates for this approach with the fact that architecture is multidisciplinary and multicultural by its nature, and we would not be able understand the social value of architecture completely, if we had not considered the circumstances under which architecture is practised. Leach (2005) argues that architecture is not an autonomous practise of art despite that it is often considered as such, because “buildings are designed and constructed within a complex web of social and political concerns” (Ibid.). In addition to this, the author asserts that “only an extreme positivist would claim that our reception of the built environment is not mediated by consciousness” (Ibid.).

In this vein, it makes sense to start by locating the architectural theory in the right place in our minds, in the scope of the natural and social sciences.

Professor of architecture Korydon Smith opens his edited book *Introducing architectural theory: Debating a discipline* by underlining that theories in architecture are usually derived from less orderly and more individualistic paradigms, on the contrary to the natural sciences or the social sciences (2012, p. 5). The author argues that the majority of the architectural theories are not principally based on positivistic inquiry. Instead they “commonly stem from a wide range of constructivist, deconstructivist, critical theory, phenomenological, and other paradigms” (Ibid., p. 6).

Smith (2012) expands this idea by summarising the main differences and similarities between natural sciences and social sciences. The author analyses that in scientific theories the focus is usually on the “explanation or prediction of causal relationships”; whether they refer to “an intellectual construct used to understand a set of phenomena” as in natural sciences, or to “human behavior rather than natural phenomena” as in social science theories (Ibid.). In the light of these, it is possible to argue that the concept of architectural theory is immense, hence its difficulty to be outlined, comparing to other disciplines.

Smith (2012), claims that architectural theories can be either scientific, sociological, or ideological, and he identifies at least three main areas that architectural theory contains:

1. Theories of architectural technology: principles of structure, ventilation, drainage, lighting, etc.
2. Theories of architectural history: social phenomena and patterns, linguistic analyses, analyses of physical artifacts, etc.
3. Theories of architectural design: organizational strategies, design methods, spatial concepts, aesthetic judgments, etc. (p. 5)

Considering all these aspects, the author suggests that architectural theory comprises science, history, ideology, sociology, and aesthetic judgment, and he offers the following definition of architectural theory while elaborating his definition as follows:

The evolution of the objective principles and subjective values that guide individual and collective decisions about, and assessments of one’s own and others’, architectural works. (...) The definition consists of three dichotomous pairs. The first pair stems from the notion that architectural theory encompasses a wide range of empirical, cultural, and ideological premises. “Objective principles” refers to scientific theories, such as, structural, lighting, or acoustic phenomena and concepts; “subjective values,” on the other hand, are belief systems and ideologies, such as, aesthetic predilections and political agendas. The second pair illustrates that architectural design decisions may be “individual” or “collective.” “Individuals” include architects, clients, critics, etc.; “collectives” include architectural academies, groups of architects sharing similar beliefs, or groups in society who possess a common cause. The last dichotomous pair points to the tension between self and other, “one’s own” and “others” architectural works. (Smith, 2012, p. 6)

This explanation also supports what has Leach (2005) suggested, i.e., the interdisciplinary and intercultural nature of architecture.

But how do we define architecture itself?

1.1. Defining architecture

It is challenging to understand and define architecture since it is a topic that involves several physical and psychological aspects, as it was mentioned in the previous section. Thus, different methods have been proposed to have comprehensive definitions of architecture.

One approach is starting by asking the right questions. In the Stanford Encyclopedia of Philosophy (Fisher, 2016a), a number of questions are answered to explain what architecture is. For instance, the sort of activity of architecture; if architecture has fundamental characteristics, the sorts of the outputs which architecture creates while also handling the question if architecture is an artform, and if it is one, when is it an artform and what is its difference from the other artforms; if architecture involves all the built structures; and similar questions are handled (What is Architecture? section, para. 1).

In the Encyclopedia, the starting point is to outline the discipline in order to have a good understanding of the main characteristics of architecture. From this basis, British architect Cedric Price is quoted as “Architecture is what architects do” while enriching this approach with the words:

Defining the discipline or practice of architecture may seem a simple empirical affair. Even if we have difficulty assessing what architectural objects or products are, we can point to thousands of architects over several millennia around the world engaged in one or another sets of activities that conventionally have been associated with architectural practice, and generate a long disjunctive claim about what architects do. (Fisher, 2016a, The Sort of Enterprise Architecture Is section, para. 1)

This explanation suggests that even if we could not determine what an architectural object is and what is not, we could see the common features of what architects have been doing so far, for centuries in different parts of the world, within diverse cultures. It is possible to see that this statement involves two main parts: the role of architects through the architectural process, and the natural process of architecture along history.

Correspondingly, these two factors were mentioned in the publication of the initial conference of a respected international forum: the first Holcim Forum on Basic Needs. Concerning the first factor, it was stated that the architect’s creative capability is critical in satisfying the social and cultural needs while complying with the environmental and physical restrictions (Fussler, 2005,

p. 17). Regarding the second point, which is the evolution of architecture throughout history, Portuguese architect Eduardo Souto de Moura noted in the same forum that:

Architecture (...) hasn't changed very much, although it appears quite different nowadays. Since its infancy, in Mesopotamia, the concept of the house has evolved very little. You can change the materials, add or take away glass, but in the end the house is still a sort of second layer of clothing for the fundamental social unit – the family. The hierarchy and organization of the family hasn't changed that much over time and houses haven't either. There are things that have never changed and never will. (...) Such as the stone wall. Stone is one of the ancient and most modern building materials. The stone wall can be structural if it is thick enough; with its thermal mass it can insulate in both cold and hot weather; and it provides good physical protection. (Braun, 2005, p. 110).

Even though the above-mentioned physical aspects, tools and materials are vital in architecture, they have not been the only focus in architectural theory and practice.

In the Stanford Encyclopedia of Philosophy, it is highlighted that “while architectural practice has remained stable in certain respects, change over its history greatly limits common features, perhaps, to a core set of basic tools and rudimentary principles of structural engineering”, which implies that architecture entails engineering as its fundamental aspect. Although this is agreed on, architecture does not only consist of engineering because “architectural ideals, taste, and expertise contribute something over and above engineering facts, rules, and practical knowledge. These further contributions suggest an art or art-like role for architectural practice”. (Fisher, 2016a, The Sort of Enterprise Architecture Is section, para. 2). This idea is expanded in the following sections of the same Encyclopedia. In the section of Socially Constitutive Features of Architecture, it is noted that even though all artforms indicate some level of a social frame, architecture has a notable social nature which is evident in two aspects. The first one is its main target to design shelter and to answer several social needs. Second evidence lies in the practice of architecture being a social proceeding which joins people in interpersonal relations of a social environment (Ibid., Socially Constitutive Features of Architecture section, para. 1).

Similarly, interior design professor Tosun (2019) asserts that the principal difference between architectural design and other design fields is the essentiality to include “man” in the architectural design process (p. 319). He wrote: “In studying different types of built environments, historical or contemporary landscapes, one can not neglect people since they are built by people, and built for people. This makes it necessary to look any city, town, building or

interior with a man-environment relations perspective” (Ibid). In support of this view, in the proceedings of a Research Conference In The Built And Human Environment, Boğaç (2005) stated that the recent research affirm that discussions about the nature of the connection between environment and human behavior is related to architecture, and through such research it is argued that “peoples’ psychological needs, as well as social and cultural values, have an impact on the development of built environments, just as their physical and physiological needs and capacities do” (Boğaç, 2005, p. 313).

In addition, influential architect and university lecturer Brawne (2013) holds the view that “architecture is never simply a matter of piling materials on top of each other to produce buildings but the thoughtful manipulation of those materials on the basis of ideas which are, however, historically changeable” (p. 12). The “thoughtful manipulation of the piling materials” and the aforementioned “further contributions” refer to the distinguishment between architecture and engineering, which are deeply related to (and affected by) culture and historical changes. Thus, including Brawne and the previously mentioned authors themselves, and several other authors mention the interrelationship between architecture & culture, and their affinity with history.

1.2. Architecture, built environment and culture

Brawne (2013) claims that “the design process in architecture and many other fields is in its essence, and particularly its sequence, unchanged. Architecture not only envelops us protectively but is always also part of a culture, of a past that has a present and a future. It is interwoven with our history and has been part of its warp and weft for thousands of years” (pp. 179-180). Similarly, Ettehad et al. (2014) assert that architecture deals with human life, and it demonstrates the culture in each community by interacting with their structural, historical, political, economic and social characteristics (p. 410). Thus, the authors wrote: “architecture is scientific-artistic activities to create space and organize it; crystallization of the culture of a community over time; and clear mirror of the society in different periods” (p. 411).

Another comprehensive and correlative definition of architecture was provided in an article in the Architectural Theory Review Journal. The authors of the article, Memmott & Davidson

(2007), state that architecture is “a selected, arranged and constructed configuration of environmental properties, both natural and artificial, in and around one or more activity spaces or behavioral settings, combined with patterns of behavioral rules and meanings, as well as incorporating cultural constructs of space and time to result in human comfort and quality of lifestyle, all within a wider large-scale system of cultural landscape and settlement” (p. 92). Memmott & Davidson (2007; 2008) give this definition as a wrap-up of the “framework of theoretical ideas”, which they collectively call “architectural anthropology” (p. 92; p. 64). They state that the cross-cultural theoretical framework of architecture must comprehend both the fundamental dynamics of people-environment interactions and the cross-cultural variations of behaviors, values, traditional actions and meanings which are associated with built-environments and physical constructions. In this respect, the authors argue that the multidisciplinary theory of environment-behavior, the “EBS” of Amos Rapoport and others, provides the majority of the fundamental theoretical framework to perceive the characteristics and the diversification of built environments (Ibid. p. 81; Ibid. p. 53). Many other authors from different backgrounds also refer to Professor Rapoport’s works as the basis of this field. For example, a Turkish interior designer and professor Tosun (2019) wrote in a more recent article in the Turkish Online Journal of Design Art and Communication that:

The interest in culture and built environment, as indicated by increasing number of publications, conferences as well as with the courses offered both at graduate and undergraduate levels in various universities, has largely been generated by the pioneer work of Rapoport: "House Form and Culture" (1969). Most of his work was based on vernacular environments: environments which constitute by far the majority of all built environments but also have been ignored in architectural theory and history. (p. 319)

In his article, Tosun (2019) also highlighted why it is crucial to examine the way that the built environments are shaped by means of the characteristics of people. By these characteristics, the author refers to the “sensory capacities: how individuals perceive it, give it meaning, hence choose and use it” (p. 319). In addition, each individual is a member in a particular social group with distinct values and beliefs of a certain subculture and culture, therefore, the way they understand the world and communicate is affected by their social groups (Ibid.). The author suggests that “concerning the relationship between built environment and culture, more specifically the meaning in built environment, one has to consider that these not only change from one place to another but also change over time” (Ibid. p. 326).

In view of all that has been mentioned so far, the EBS and some other related theories will be handled in the next chapter. At this point it is important to note that, even though Rapoport's work from 1969 is aged, it is a crucial source to examine the field. Therefore, as a starting point, his primary work along with more recent ones will be handled in this thesis.

2. Environment-Behavior studies (EBS)

As it was stated in the previous chapters, EBS frames the majority of the interrelationship between the built environment and culture. Therefore, the nature of EBS, its progress, its connection with the other relevant fields, and the critics about them will be examined in this chapter.

2.1 The nature of EBS and some other related theories

As indicated, Professor Amos Rapoport, who was a well-travelled architect, is seen to be the main founder of the field of Environment-Behaviour Studies (EBS).

In his book *Culture, Architecture, and Design* (2005), he aimed to examine a “single, albeit broad and complex topic: the relation between culture and design”, and he pointed out that EBS is remarkably interdisciplinary (p. 14). He explained the term of environmental design as a comprisal of architecture and other relevant design fields, for instance: “urban design, landscape architecture, interior design, and, up to a point, even product design” (p. 1). In this vein, he underlined that “architecture is not a ‘free’ artistic activity but a science-based profession that is concerned with problem-solving”. He added that these problems are not to be “invented” or “defined” by the designers. Instead, they need to be “discovered and identified” in the field of environmental design studies (Ibid.). According to the author, in addition to architecture, several other disciplines may be also linked to EBS directly, i.e., through “ethnographic descriptions and analyses of behavior, built environments, and material culture, their origins, uses, meanings, and so on”, or indirectly “through meaning and through parts of physical anthropology to evolution and its implications for understanding humans” (Ibid., p. 14). Correspondingly, regarding the domain of EBS, he wrote:

This domain clearly covers a very wide range of phenomena, the study of which involves many disciplines. As a result, EBS has been multidisciplinary from the beginning. Also, new domains and disciplines have become relevant, but EBS has, by-and-large, neglected and ignored such developments and stayed with the original fields - psychology, sociology, anthropology, and human geography, with the first two always dominant. (Rapoport, 2008a, p. 278)

According to the author, there were two reasons why most of the new developments were neglected. First of them was the deficiency of science in the fields in which the relevant

developments occurred (Rapoport, 2008a, p. 278). The second reason of the negligence was related to the developments in other relevant fields such as “neuroscience, cognitive neuroscience, cognitive science, evolutionary psychology and ecology, sociobiology, integrative and systems biology, behavioral ecology, ethology, evolutionary and behavioral economics, network theory, the ‘new’ archeology, and so on”. In Rapoport’s view, in these fields, the developments could only become obvious at a more abstract level, which could only be possible with conceptual development and, more importantly, the improvement of explanatory theory (Ibid.). Rapoport asserted that these developments were not enough, and only after their improvements, “new findings, concepts, mechanisms, and fields can be seen to be significant problems to environment-behavior relations (EBR)”. Rapoport, suggested that the development of the field has been prevented from improving due to the lack of those developments in the other fields (Ibid.).

Considering all these arguments from Rapoport, it is possible to say that he was sceptical towards some of the new approaches. He criticized these new paths of related disciplines to EBS:

There were influences from new approaches, mainly from the humanities and post-modern "social sciences" – phenomenology, hermeneutics, semiotics, deconstruction, "home," "place," critical "theory," post-colonial studies, and so on. These were not only not useful but, in my view, highly destructive. (Rapoport, 2008a, p. 281)

On the contrary, while handling the positivist approach of EBS through their “framework of theoretical ideas”, Memmott & Davidson (2007) draw attention to the phenomenological approach, which is a more subjective attitude to understand architecture (p. 89). The authors oppose Rapoport’s idea which dictates that phenomenology is worthless. They state that they disagree with “Rapoport’s repeated rejection of phenomenology as being less useful for theory building than the conventional sciences of psychology, cognitive science, and cognitive neuroscience”, and add that they “humbly suggest that phenomenology nevertheless has a valid contribution to make” (Ibid., 2008, p. 61). Moreover, the authors quote anonymously from their previous personal contacts and argue that Rapoport’s theory has been criticized as being “extremely deterministic and ... [eliminating] the agency of the individual member of society, leaving little if any room for improvisation and innovation” (Ibid., p. 65).

Still, Memmott & Davidson (2008) maintain that this particular issue in Rapoport's theory could be targeted in the developing research to create a more unifying process, by making use of, for example, Space Syntax theory (Ibid.). Moreover, the authors still support some core ideas of Rapoport's theory. Thus, they wrote: "We agree that any definition of 'architecture' should incorporate the activities, settings and meanings, of people in conjunction with the varying degrees of permanency, that is, fixed, semi- and non-fixed elements, of the built fabric specific to its local context" (Ibid., 2007, p. 87).

All in all, when studying the EBR and the related environment-behavior theories, the previously mentioned theories of Architectural Phenomenology and Space Syntax are also valued by numerous authors. Therefore, they will be also explained briefly in the subchapters, as alternative (and sometimes correlative) ways to examine the environment and human interrelationship. Thereafter, the scope of EBS including these main ideas will be examined in the following chapters.

2.1.1. Architectural phenomenology

As stated, when examining the architectural theory, an important number of respective authors and sources do give importance to some other related fields.

One of the examples is the emphasis given to phenomenology. For instance, in the Philosophy of Architecture in Historical Perspective section of Stanford Encyclopedia of Philosophy, it is pointed out that phenomenologists have been interested in architecture and it was not surprising, "given the centrality of experience to architectural judgment and the role of architecture in physically shaping people's experiences" (Fisher, 2016b, Continental Traditions section, para. 2). Brawne (2013) also maintains that the architectural visual outcome "rightly or wrongly, leads to the most immediate judgements" by making the most forthright impression on our senses (p. 12), which are related to the study of phenomenology. Similarly, Seamon, who is a Professor of Architecture, a geographer and an environment-behavior researcher, is particularly interested in phenomenological approach to architecture and environmental design (Seamon, n.d.). When we have a look at Seamon's studies along the years, it is possible to see that his main ideas concerning the relationship between phenomenology and environment-behavior research has not

changed in the negative way; it only got stronger.

According to Seamon (n.d.), we can describe phenomenology as a method that enriches not only emotional but also intellectual sensibilities, resulting with a more complete understanding of environment (p. 20). According to the author, the weakened interest in environment-behavior research, which occurred due to the discomfort caused by the intense positivist attitude of 1970's and 1980's, could be revitalized by a phenomenological approach that requires a process of intuitive consciousness regularly during design (Ibid.). Thus, he had noted in 1987 that:

Today, academic scholars are perhaps too dependent on cerebral, verbal language only, and a thorough phenomenology of environment would explore other modes of expression for understanding place, architecture, and environmental experience. (...) A phenomenology of human-agency-within-socioeconomic-structures would be an invaluable contribution to the human sciences (Seamon, 1987, pp. 18-19).

Moreover, Memmott & Davidson (2007) also drew attention to phenomenology regarding a cross-cultural architectural theory that appraises value and meaning. The authors noted that the built environment is not stagnant concerning its attached values and meanings, as it is highly dependent on the cultural milieu of place and time (p. 89).

2.1.2. Space Syntax theory

Space Syntax is a comprehensive theory and research framework to analyze architectural and urban spaces of all kinds and sizes, based not only on the rigid mathematical and geometrical information concerning the spatial systems, but also on perceptive interpretations about the built environments' social meanings and influence (SSS11, n.d.). In the official website of Space Syntax Network, it is practically summed up as follows: "Space syntax addresses where people are, how they move, how they adapt, how they develop and how they talk about it" (See Figure 1) (UCL Space Syntax - Online Training Platform, n.d.).

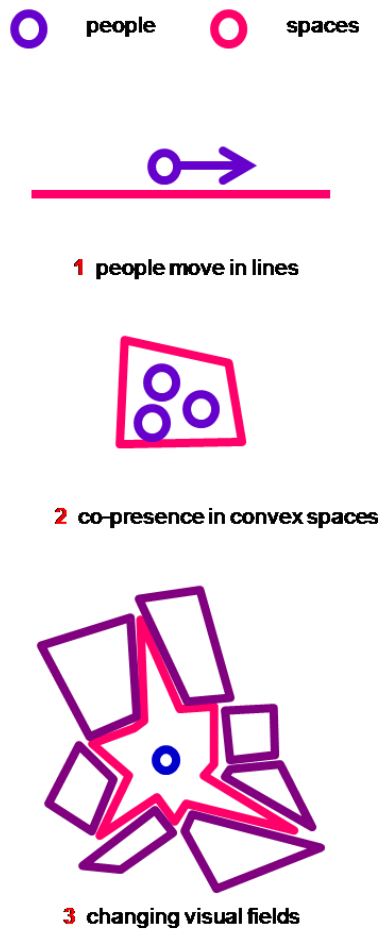


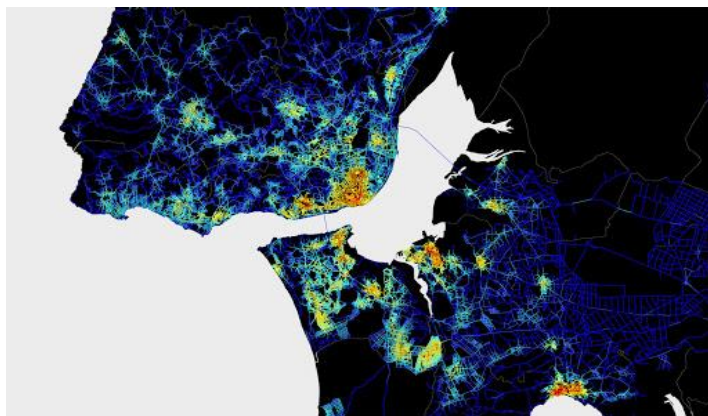
Figure 1. *Three kinds of spatial representations.* (UCL Space Syntax - Online Training Platform, n.d.).

The Space Syntax was laid out in the 1970's by architectural theorist Professor Bill Hillier, Professor Julienne Hanson and their colleagues at the Bartlett School of Architecture, University College London (UCL Space Syntax - Online Training Platform, n.d.). It is a set of techniques with quantitative analysis and geospatial computer technology (See Figures 2 & 3), along with theories mainly based on several syntactic models which include a set of interconnected fundamental principles of space and society, thus it can be observed across a variety of cultures and scales (Ibid.). It is stated that Space Syntax theories address three types of theoretical questions:

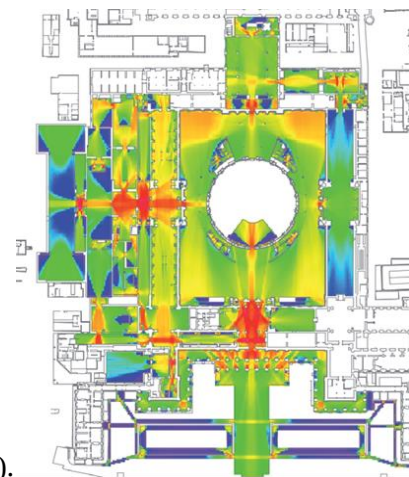
1. How do simple rules generate the spatial form of settlements or building complexes as emergent patterns? What are the implications of this for the study of buildings and cities?

2. How and why do societies structure built environments in particular ways? We can explore this by analysing settlements to find that they acquire a certain structure, and one which reflects a social model.
3. How does the built environment impact on human society and behaviour? We approach this question mainly through the analysis of human behaviour patterns and the implications these have for patterns of co-presence and co-avoidance. (UCL Space Syntax - Online Training Platform n.d.).

It is argued that, thanks to its inclusive but also rigorous aspects, it has become a research system applicable to a range of disciplines and aspects such as spatial cognition and wayfinding, spatial and social segregation, density, land use and value, urban growth, spatial security and criminology, transport planning with traffic flows, risk management, economics, information technology and computer science, and so on, including its usage in the fields of architecture, urban planning, and design (Space Syntax Network, n.d.; SSS11, n.d.; SSS12, n.d.). Today, as the technological improvements increase, the availability of data create more opportunities. Thus, Space Syntax has become a practical tool that is widely used by a vast number of consultancy and professional practices, due to its ability to provide trustworthy estimates of the functional outcomes of architectural and urban design projects, which could be developed from simple visualization tools to prediction, in a way that can change how the designers understand and create spaces (Ibid.). As a summary, in practical sense, it is a design methodology with the primary focus on social aspects and humans.



↑ **Figure 2.** *Space syntax integration pattern of Lisbon (SSS11, n.d.).*



→ **Figure 3.** *Strategic visibility analysis of the ground floor gallery of the British Museum. (Space Syntax Network, n.d.).*

Seamon (2020) asserted in a recent article in memoriam of the late Hillier that, theory of Space Syntax is a rare one, namely one of the few real theories that has been developed in the social and design science fields in the last fifty years (p. 6). The author asserted from a phenomenological perspective that, it is fascinating how space syntax provides an explanatory tool to visualize the way that pathway networks can facilitate or inhibit the movement through a space (p. 7).

According to Memmott & Davidson (2008), the strength of the Space Syntax theory is that its emphasis on the individuals' creative power in architectural changes (p. 54). The authors agree with Hillier's view until a certain point, but still ask: "Despite the validity of these observations, we must ask, is this a sufficient theoretical definition of architecture?" (Ibid.). The reason for their doubts is Hillier's position that downplays most of the so-called vernacular environments into merely buildings, by asserting that the phenotypical variety i.e., differences in the physical characteristics are not surprising within vernacular traditions (Ibid.).

It is agreed that architects and designers tend to experiment with space & form varieties, which may create outcomes that are beyond the regular limits of their own cultural contexts (Memmott & Davidson, 2008, p. 54). However, it is also argued that architects are members of certain cultural groups and correspondingly they are enculturated within certain frames of social values (Ibid.). Moreover, they encode their own social meanings into their designs, and in cases that they fail to do so, it is asserted that the designs would not be recognised by others or valued by the users, even if it is a novel design (Ibid.). Memmott & Davidson (2008) summarised their opinion with the words: "While architects encode socio-cultural meanings into buildings, users decode such meanings from them. Therefore, no matter how much cognitive originality and creativity is brought to bear on a design problem, the process still occurs within a broader cultural context" (Ibid.). Which is another reason why, examining EBS with its intercultural context is crucial.

2.2. The evolution of EBS

In one of his essays from 2008, in which a brief history of EBS was given, Rapoport wrote "after a very promising start during its first decade, the field of environment-behavior studies has not progressed since its inception. At best, it has been on a plateau, stagnated" (2008a, p. 277). He

explained that the origins of EBS dates back to the early 20th century but still it is possible to say that EBS's formal foundation was in the early 1970's, due to the dissatisfaction with the inadequacy of knowledge regarding the interaction between people and environments. Thus, he noted: "Such knowledge seemed essential for design. Without it, attempts to improve the built environment, what is usually called 'design' were likely to fail, since no outcomes could be reliably predicted" (Ibid.).

According to Rapoport (2008a), there were two types of people who took part in the foundation of EBS. The first small group, which also included Rapoport himself, was interested in "founding a scientific discipline of EBR" and "*understanding* the world through basic research aimed at understanding this particular domain" (p. 277). Even though their main interest was not design itself, they presumed that it is not possible to improve design unless there is knowledge and, more importantly, an explanatory theory. On the other side, the more prevailing second group of researchers were interested in "*changing* or improving the world" by "applied research and research application". Rapoport pointed out that, this group believed that design could be directly influenced by research (Ibid.). According to him, both groups agreed that research was fundamental because "one needed to *know*, whether for the sake of understanding or in order to act" (Ibid.). Here, Rapoport (2008a) noted that, besides these groups, there was a third coexisting group, which asserted that the problem of design was not related to the shortage of knowledge or what type of knowledge there was. According to them, it was more related with the "process of using knowledge", and this way of thinking created the field of design methods or design studies. Rapoport criticised that, all these processes of thoughts went in different directions for many years but lately "there are encouraging signs of possible interaction and eventual unification" (p. 281).

Another criticism of divergence between practise and theory was made by the landscape architect Kathryn Moore (2003), in her essay named "Genius Loci: Hidden Truth or Hidden Agenda?". Even though she was focusing on the field of phenomenology and its impacts on the practise of design, it is possible to say that her arguments are relatable to other fields too, as well as EBS. Moore (2003) asserted that:

It has become very chic to use various philosophical and cultural theories to embellish the rhetoric of design criticism and practice, in the hope that making design more ‘theoretical’ will improve its quality and status as a discipline. But without investigating or making explicit the visual, spatial implications of these ideas, the continuing disassociation between practice and theory are simply exacerbated. The gap between what is said and what it is supposed to look like becomes ever wider. (p. 393)

In order to find a solution to this disconnection, the author suggests that “we need to make distinctions”, and she asks the following questions: “How well informed are the designs that we see? Why do things specifically look the way they do? What do they make us feel and why?” (Ibid.).

2.3. The depiction of EBS

In his studies, Rapoport (1987; 2000; 2005; 2008a) examined the domain of EBS and he asked three main questions:

- 1) What bio-social, psychological, and cultural characteristics of human beings (as members of a species, as individuals, and as members of various groups) influence (and, in design, should influence) which characteristics of the built environment?
 - 2) What effects do which aspects of which environments have on which groups of people, under what circumstances, and why?
 - 3) What are the mechanisms of these two-way interactions between people and environments?
- (p. 10; p. 146; p. 10; p. 277).

He summarized these questions with the words: “‘Culture’ is an aspect of question 1, the nature of ‘environment’ is an aspect of question 2, while ‘responsiveness’ has to do with question 3 - the mechanisms that link culture and environment” (Ibid., 1987, p. 10). Throughout his studies, while examining these questions, the author has mentioned “culture” numerous times, referring to its importance in these topics. Nevertheless, he also added that “culture is not the *only* thing involved, which is why the relation between culture (and anthropology) and the built environment needed to be studied within the framework of EBS” (Ibid., 2005, p. 14).

2.3.1. Question 1: Culture

In the first basic question, Rapoport (2008a) addresses “all that we already know, are learning,

and will learn in the future about human beings”, and he maintains that this question undoubtedly includes culture, but it also consists of some other human characteristics which need to be considered in relation to built environments (p. 14). Therefore, he suggests that EBS researchers need to stay updated regarding the research made including the other fields which are concerned with the knowledge of human traits such as the human evolution, biology, psychology, social relations, cultural aspects, and so on (Ibid., p. 11). Moreover, it is also important to understand what is culture within the context of EBS.

2.3.1.1. Definition of culture within the context of EBS

Rapoport (2005), stated that “culture is not a ‘thing’ but an idea, a concept, a *construct*: a label for the many things people think, believe, and do and how they do them” (p. 77). He asserted that culture is a theoretical construct and we only make assumptions about an “unobservable entity based on observables”, thus it has never been, and never will be possible for anyone to see or observe culture itself and we only see its impacts, expressions, or products (Rapoport, 2005, p. 94). Moreover, he added that the culture’s importance in general or in specific cases need to be put forth through empirical research, as its role may differentiate depending on the classifications of different environments, in different contexts, different times, for different groups of people etc. (Ibid., 2008b, p. 20).

When Rapoport aimed to identify culture within the context of EBS, he wrote that the definition should neither be too “tight”, as it is not clear which elements of culture are the vital ones concerning the built environments, nor should be “extremely large” (Rapoport, 1987, p. 10). In a more recent essay from him, namely his “last word on the subject”, he came to the conclusion that, while studying the interactions between culture and environment, we cannot look at countries with a generalizing attitude as a great number of lifestyles and subcultures need to be considered altogether (2008b, pp .24-25). The author asserts that this approach would be even more crucial when aiming to use the cultural variables in application, in other words, culture-specific design (2008b, p. 25).

In addition, Rapoport (1987), argued that, given the substantial amount of complex literature, there were many conflicting definitions of culture (p. 10). Considering that the author wrote

these lines some 30 years ago, there should be many more definitions and approaches now, comparing to his time. Though, he asserted that, if these definitions were seen as complementary rather than contradictory, they do imply what culture is (Ibid.). He quoted from one of his own earlier works to expand this idea:

One defines it as a way of life typical of a group, the second as a system of symbols, meanings, and cognitive schemata transmitted through symbolic codes, the third as a set of adaptive strategies for survival related to ecology, and resources. Increasingly, these three views are seen not as being in conflict but rather as complementary. Thus, designed environments of particular cultures are settings for the kind of people which a particular group sees as normative, and the particular life-style which is significant and typical, distinguishing the group from others. In creating such settings and life styles, an order is expressed, a set of cognitive schemata, symbols, and some vision of an ideal are given form - how ever imperfectly; finally, both the life style and symbolic system may be part of the group's adaptive strategies within their ecological setting. (Rapoport, 1980, as cited in Rapoport, 1987, p. 10)

He wrapped up these complementary ideas by saying that culture is about a group of people with “a set of values and beliefs which embody ideals, and are transmitted to the members of the group through enculturation” (Rapoport, 1987, pp. 10-11). According to the author, these result with a worldview: “the characteristic way of looking at the world and, in the case of design, of shaping the world” (Ibid.).

2.3.1.2. The practical usage of culture in EBS

Surprisingly, Rapoport (2005) argued that the concept of culture is not very handy in EBS or in design; and frankly that it is “essentially useless” (p. 92). However, this sentence needs to be scrutinized. According to the author, there were two reasons for this assertion.

Firstly, the statements about the relation between culture and environment unconditionally assumed that culture and built environments are equal members, and the author did not agree with this. Rapoport believed that culture and built form are both broad domains, but the latter one is a part of the first one. Thus, in 1987 he recorded that “‘culture’ is a very broad concept, the built environment is a small subset of it and architecture an even smaller one. They are not equals. Thus many other subsystems of culture are equally, and frequently even more, important” (p. 12). In 2005, he wrote similar sentences and he continued: “The second, and possibly more important (because it can be addressed), reason why ‘culture’ as such is not useful in either

research or design is that it is impossible to use, either to try to understand how environments arise and are used, or to design environments” (p. 93). By this sentence, Rapoport (2005), implemented that it is impossible to design an environment for a particular culture, as the concept of culture is definitional; “a label as it were, for a vast range of human phenomena”, thus he came to the conclusion that culture is “both *too abstract* and *too general* (or global) to be useful” (Ibid.).

The author has supported this view in his earlier and more recent studies too. In 1987, he wrote that we cannot design for culture, but it is possible to design only some parts of the environments, exclusively for some parts of cultures (Ibid. 1987, p. 11). Similarly, as mentioned above, Rapoport (2008b) wrote in his last essay on the topic that we need to consider various subcultures and their lifestyles, instead of, for instance, considering a whole country (p. 25). The author argues that the numbers of subcultures has ascended due to the revival of cultures in different parts of the world; such as Maoris in New Zealand or Basques, Catalans and Galicians in Spain, and the ongoing increase in migration hence the rise in the number of lifestyle groups (Rapoport, 2008b, p. 25). According to the author, people’s different levels of adjustments to distinct cultures in different countries all around the world, i.e., acculturation, also takes part in this. In the light of these, Rapoport (1987) argued that the existence of numerous groups and subcultures, namely pluralism, complicated the issue of cultural responsiveness (p. 12), which will be handled under the third of the three main questions of EBS, which referred to the mechanisms that link people and environments.

2.3.2. Question 2: Environment

The second question is focused on the effects of environment and habitat selection. Rapoport (2005), asserts that similar environments may have diverse impacts on people depending on their typical features, which is mainly influenced by culture (p. 38). Firstly, the author examines if environment has noteworthy impacts on people or not. He proposes that if these effects are eminent, then design endeavors may need to be enhanced; however, if the effects were insignificant as some social scientists argue, then most of the effort of researchers and designers may be more than enough, and even unnecessary (2008a, p. 14). He disagrees with the idea that

people are placed in environments and then consequently get affected by their habitat. In contrast, the author indicates that “in reality, under most conditions, people choose and select environments, and this process of habitat selection (found in all living organisms) is the most important aspect of the effect of environment on people” (Ibid., p. 14). He also mentioned this idea in his article from 1987, *On the Cultural Responsiveness of Architecture*, with the words:

The major effect of environment on behavior is through habitat selection: people leave unsatisfactory environments for those they regard as better. (...) There is strong evidence that environments which are chosen are inherently supportive, and hence responsive, as opposed to identical environments which are imposed. The fact of having been chosen may be as important as what is chosen. But if one studies choice itself, one finds it also to be highly variable: cultural specificity continues to operate. One chooses particular profiles of environmental quality - but environmental quality is culturally defined. (Rapoport, 1987, p. 13)

It is possible to say that the selection of the environments and the related choices are variable from person to person, and highly dependent on the meanings that are associated with those environments. Alongside Rapoport, Tosun (2019) refers to this topic as the environmental cues and meanings, arguing that “the meanings are in people, not in objects or things” (p. 322), and underlines that “what people want is an important question but why people want these is more important” (p. 325). According to Tosun (2019), people react to environments with respect to the meanings that they associate with the environments, while using the signals which are conveyed through those environments (p. 322). It is indicated that, in the context of environmental behavior research, the preferences of the designers and users vary significantly because designers are likely to react to environments in “perceptual terms (which are their meanings)”, while users tend to react in “associational terms” (Ibid.).

In addition to this, Rapoport (2005) suggests that the environments cannot establish people’s behavior, i.e., their actions, thoughts, feelings etc., however it can be “either facilitating or inhibiting for certain behaviors, cognitive processes, moods, and so on” (p. 14). Even though sometimes behaviors appear to be trailing the environmental changes, Rapoport maintains that these changes are accepted to be the consequences of environments by being “catalysts” as they enable behaviors that had previously been blocked by highly inhibiting environments (Ibid.).

On this issue, Tosun (2019) lists three different approaches and asserts that there is no consensus at theoretical position (p. 320).

According to the author, the traditional view in planning and design has been the “environmental determinism” or “architectural determinism”, which suggests that the human behavior and choices are determined by the physical environment. In other words, the form of cities and buildings can cause considerable changes in people’s manners, psychological conditions, social interactions and so on (Tosun, 2019, p. 320). This view was expressed widely in 1950’s, as Modern Movement intended to improve the lives of people who lived in poor physical conditions, by creating an international style for all the cultures, independent of their geography and location (Boğaç, 2005, p. 313). Modern Movement’s basic decree was “form follows function” by architect Luis H. Sullivan, and the basis for modern architectural design was its abstract classical forms along with the “model of a man”, in which the whole spectrum of human needs was reduced to a number of physical requirements. The movement took the physical basic needs in consideration but not necessarily the psychological needs such as privacy, security, social needs, or symbolic aesthetics (Ibid.).

These fundamental aspects of environmental determinism and Modern Movement have been frankly critiqued¹ by Rapoport (1969) and some of his contemporaries, by indicating that the main argument against any deterministic view would be the fact that there are many factors to consider - not only the physical aspects (p. 45). Rapoport (1969) argued that socio-cultural factors play a primary role in this topic, but they were also not the only thing involved (Ibid., p.60). Thus, he added that “in denying physical or economic determinism, I do not wish to substitute a form of cultural determinism” (Ibid.).

The second view is “possibilism”, which was proposed as a reaction to the first view. It suggests that the physical environment and its organization do not have any effects on people and it only provides possibilities and restrictions to people’s behavior and choices, which are mainly based on the other cultural, social and economic factors (Tosun, 2019, p. 320). In other words, this view suggests that the physical forces do not necessarily shape our actions. In addition, Rapoport (1969) noted that many examples could be found from all over the world which could affirm that also dwellings and settlements were not shaped only by the physical constraints, especially

¹ Hence, we see the emergence of the interest in Vernacular Environment Studies in the second half of the 20th Century, which will be handled in the next chapters of this thesis.

because it is possible to see that the form of the dwelling varies in the areas where physical aspects have not changed (p. 42). For instance, he argued that if a culture has never had round houses, this may well be because of their need to the cosmic orientation, which is related to that society's religion. It would not be easy to orient a round building so they would choose to build rectangular houses instead of the round ones (Ibid. p. 41). Rapoport (1969) maintained that religion influenced the form, plan, spatial arrangements, and the orientation of the house (p. 41). In the current times, it might not be easy for us to relate with that example anymore. Favorably, the author expanded this idea in the forthcoming sections of his book by writing that the modern houses tend to be oriented towards the view of the beach, the sun and the sky etc., and that the "picture window" took the place of religious and symbolic orientation of the past (Ibid., p. 132). He observed that: "A new symbol takes over - health, sun, and sport as an idea. We could say that in the United States the ideal of health becomes a new religion" (Ibid.).

Tosun (2019) argues that the current view is the third approach: "probabilism" (p. 320). It is possible to say that this approach tries to establish a middle ground between the first two. The idea, which is in accordance with Rapoport's aforementioned words from 2005, is that the built environment can be considered as a setting for human activities and that it actually does provide possibilities for choice, although it is not determining in general. Likewise, Memmott & Davidson (2008) point out that Rapoport's argument in EBR posits that "built environments are created to support desired behavior, and that 'activities' can be taken to be specific units of enactments of behavior" (p. 53). This idea can be seen to be based on Rapoport's basic hypothesis from his principal book from 1969, *House, Form and Culture*, where he called the socio-cultural forces as "primary", and the others as "secondary or modifying", and added while focusing on housing that:

... house form is not simply the result of physical forces or any single causal factor, but is the consequence of a whole range of socio-cultural factors seen in their broadest terms. Form is in turn modified by climatic conditions (the physical environment which makes some things impossible and encourages others) and by methods of construction, materials available, and the technology (the tools for achieving the desired environment). (Rapoport, 1969, p. 47)

It is suggested that "some choices are more probable than others in a given setting", which means the physical environment can be more critical under certain circumstances for certain groups of people. For example, it would have more "inhibiting effects" for groups with "reduced

competence” who may be intensely influenced by “inappropriate forms of the built environment” (Tosun, 2019, p. 320). Reduced competence groups refer to people such as elderly, children, handicapped, migrants etc., or for groups who are going through fast cultural changes or whose culture is marginal (Ibid.). Rapoport (2005), elaborated this technical term by writing that people in reduced competence groups cannot deal with unsuitable environments as well as fully competent people do, because unsupportive environments would be more destructive for more vulnerable people who have reached or exceeded their limits of their ability to cope (p. 38). Therefore, the environments effect these people more, as they might not be able to leave or change the unsuitable habitat due to external constraints or their lack of trust on certain social and cultural mechanisms (Ibid.).

Tosun (2019) expands this view by explaining that rapid changes in culture result with “cultural lags”, which refer to the difference of pace between the material and non-material cultural changes (p. 321). He argues that the alterations in material culture, i.e., anything that is tangible and that can be seen on the landscape such as houses, furniture, instruments etc., usually face faster changes than the non-material culture, i.e., anything that is not tangible but takes part in the creation of culture such as language, religion, traditions, superstitions etc. (p. 321). The reason for this difference of speed is that the innovations and new components of material culture are embraced more easily and rapidly than the non-material ones. The author gives an example as follows: “a new material for the roof of a house or a tractor for a peasant is more communicable than a concept like privacy” (Ibid.). According to him, this imbalance between the fastness of changes usually results with inconsistencies between the built environment and the users’ spatial behavior, along with other elements of culture, and consequently with discomfort in the built environments (Ibid.).

Another point that Rapoport (2005) highlights is that the impacts of the environment on people can be direct or indirect: In direct cases, people’s behaviors and moods are affected straightforwardly, while in indirect cases the environment can be considered as “a form of non-verbal communication” (Ibid., p. 12). The author wrote that in the latter case, the environmental cues can be used to illustrate or understand a social situation, and the impacts on people would be based on the definition of that scene (Ibid.).

2.3.2.1. Conceptualizations of environment

In this thought process, Rapoport (1987) conceptualizes environment as “a system of settings within which human life takes place (...) it is a set of relations between people and people, people and things and things and things” (p. 11). Later on, in one of his more recent studies from 2000, it is noted that this conceptualization was to give a description of housing, in pursuance of enabling the cross-cultural studies to be helpful in theory development (p. 147). The author concluded that the conceptualizations of environment could be wrapped up in four points in total:

- 1) The organization of space, time, meaning and communication,
- 2) A system of settings within which systems of activities (including their latent aspects) take place,
- 3) The cultural landscape,
- 4) Composed of fixed, semi-fixed and non-fixed elements. (Rapoport, 2000, pp. 146-147; Rapoport, 2005, p. 24)

The author argues that these four conceptualizations are in an order. According to him, the first one is the most abstract and complex one, hence the need of further dismantling, and the fourth conceptualization is the most concrete and the simplest one (Ibid., 2000, p. 147). Moreover, he asserts that these complementary interpretations are deeply connected with each other (Ibid., 2005, p. 25). He highlighted their correlative nature with these words:

The most fundamental and abstract formulation (the environment as the organization of space, time, meaning, and communication) is expressed physically as cultural landscapes at various scales, from the region, through townscape to the housescape. Cultural landscapes consist of systems of settings, within which systems of activities take place. The cultural landscape, the elements comprising settings and their cues, and the activity systems are made up of fixed and semi-fixed elements, and both are created and occupied by non-fixed elements (mainly people). (Rapoport, 2005, pp. 24-25)

Regarding the first formulation point, as a combination of the concepts of design and environment, Rapoport cites from his own study named *The Meaning of the Built Environment: A Nonverbal Communication Approach* from 1982 and suggests that “the design of the environment is the organization of four things: space, time, meaning and communication” (Rapoport, 1982, as cited in Rapoport, 1987, p. 11). The author sees design as any purposeful alteration of these four elements and their physical expressions (Ibid.). The significance of this point is that it refers to a concept beyond merely space, as it includes time and meaning, which are usually underestimated or seen as some entities to be added to “function” later during the design process (Rapoport, 2005, p. 24). According to the author, time is the most important aspect as we live in time as well as living within spaces, and our activities are organized in time:

day/night, weekday/weekend etc., (Ibid.). He argues that cultural contrasts in the organization of time may cause more complications than space organization. For instance, if our neighbors eat late dinner while we eat early and go to bed early, their late noise may disturb us. Another example can be given with the culture of siesta; closing the banks or shops on other people's working hours may cause issues in the daily life (Ibid.).

In addition, Rapoport emphasizes the importance of meaning in the organisation of the built environment, which is an issue of both the first and fourth conceptualizations of environment. The author wrote that "meaning is the most latent aspect of any activity" which indicates that meaning is not an additional feature to function, in contrast, it is always present but not necessarily apparent, and it is one of the most important aspects that it effects or generates the form of the built environment (2005, p. 48). According to the author, this explains why the *wants* are usually more determinant than *needs* in preferences, and why "irrational" choices are made by the users (Ibid. pp. 48-54).

Rapoport (2005) exemplified this topic by mentioning the advertisements related to housings, which highlight the meanings and images such as views, vegetation, sunsets, recreation, butterflies etc, instead of the dwelling itself (p. 54). Another example that the author gives is from Japanese culture. Rapoport (1969) mentioned that the ritual or religious orientation of the house can be seen in many cultures, such as the Feng Shui system of Chinese culture which also affected Japanese culture (p. 52). The author observed that, due to their culture, amazing views could be neglected and be covered by, for instance, a toilet, because an entrance, kitchen or toilet must not be placed on a north-east or south-west axis (Ibid).

Regarding the second point of the four conceptualizations of environment, Rapoport (2000) considered housing "as a system of settings within which a certain system of activities takes place" (p. 145). He summarised the reason of taking the housing as basis, with the following points:

This is, first, because all cultures and groups possess dwellings of some sort, so that one can compare them and generalize from them. Second, the dwelling is the primary setting for most people, which makes it most important. Third, it comprises the bulk of the built environment even when there are many other building types present. Fourth, it is the most typical product of vernacular design, hence, the one most influenced by culture. It also varies with culture, and the reasons for its extraordinary variability pose an important question, which leads to the role of

culture (Ibid., 2005, pp. 19-20).

For example, Oliver (1975) wrote that in many places with hot arid climates, such as in the Middle East, the vernacular houses were built with mud and straw. The roofs of these houses were usually flat, which served as settings by being used for various activities during the day, and for sleeping at night (p. 241). The most adequate thermal conditions were created to live within that climate thanks to the minimum number of openings they had on the walls, and with the help of the specified materials which have high heat capacity (Ibid.). Generally, most of the daily activities took place outdoors, thus the ventilation deficiency inside the house was not causing a major problem for the dwellers (Ibid.). With this example, it is possible to see the two-way effects of culture and built environment.

Rapoport (2005), underlined that settings are not the same thing with spaces, because one space may contain many settings at the same time or in different times, as it was mentioned in the first conceptualization of environment (p. 27). For instance, a room in a university can become different settings with temporary changes of rules in different times, with the help of timetables scheduling (p. 28). The possible changes in settings at different times and at the same time, are expressed schematically in the Figures 4 & 5.

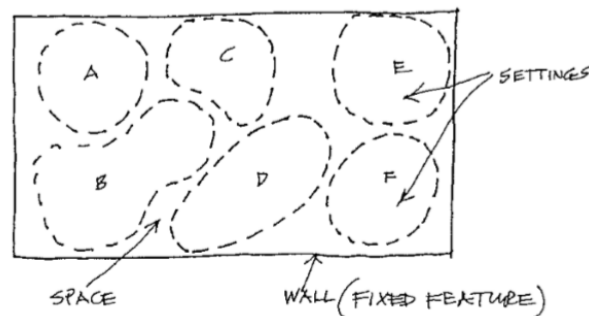


Figure 4. *Different settings in space.* (Rapoport, 2005, p. 27).

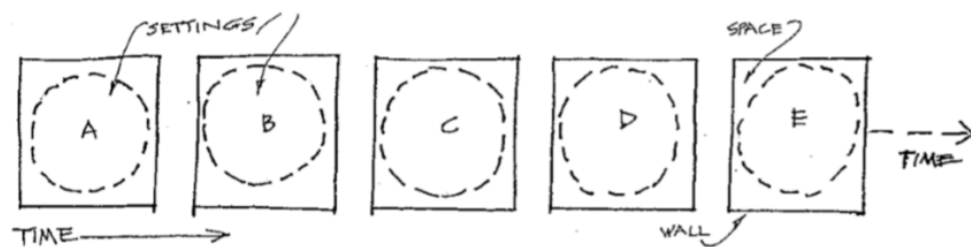


Figure 5. *Different settings in time.* (Rapoport, 2005, p. 28).

As to expanding the concept of cultural landscapes, Rapoport (2005) opposed the main idea of modern movement and argued that “one size does *not* fit everyone”, indicating that in cases when the external constraints are not dominant and people are able to make choices, they might prefer different environments (p. 52). Therefore, it would be useful to conceptualize built environment as cultural landscapes, considering that they are resulted from several individual decisions for long periods of time, like heritage. In the same vein, the author suggested that a house should not only be seen as a structure, but more as an institution or a cultural phenomenon because a house is a scene for a complex set of purposes, and its organization is impacted by the cultural landscape that it exists in (Rapoport, 1969, p. 46). It provides us a shelter as its passive function, but it also creates an environment to be a social unit for our lives (Ibid.).

The last point of the conceptualizations is the simplest one as it is the most explicit conceptualisation of the environments. It explains the cues for describing the environmental meaning, i.e., fixed, semi-fixed and non-fixed elements (Rapoport, 2005, p. 32). Fixed elements are the most permanent elements of the built environment, such as walls, floors, beams, columns, infrastructure, etc. These elements might change during time, but in a relatively slower pace than the other elements (Ibid.). Semi-fixed elements are more mobile than the fixed ones. In the building scale, semi-fixed elements are furniture, decorations, curtains, plants, and so on, while in the urban scale, they are trees, fences, benches, lights, etc. (Ibid.). Non-fixed elements are mostly people, including their activities, clothing, hair styles in addition to animals and vehicles. This conceptualisation also includes social interaction, activity systems and behaviors, indirectly relating the environments with our values, ideals, wants and so on (Ibid.).

Tosun (2019) indicated that in demonstrating meaning and group identity, semi-fixed elements are critical, as we usually abide in the environments that had already been created before we arrived, and for the most part it is not possible to change the fixed architectural elements (p. 327).

Regarding the significance of semi-fixed elements, it would be interesting to examine a study which expands the issues that arise due to the conflicts and wars, which cause involuntary relocation of refugees and the hardship of getting attached to foreign settlements. Unfortunately, it has been a prevalent issue throughout the history, and it is still current. For example, in a study

that analyses the outcomes of the compulsory relocation of Turkish Cypriot refugees from the southern part to the northern part of the island of Cyprus, it is explained that after the ceasefire in 1974, the participants of the related study were relocated into houses which were originally built by Greek Cypriots (Boğaç, 2009). In the questionnaire of the study, many participants expressed that when they had fled from their initial homes during the war, they had had to leave all their belongings and photos behind, which are meaningful semi-fixed elements. Thus, a participant stated: “How can I call a place ‘home’ if I do not have a picture of my childhood on the wall, or of my parents from their past?” (Ibid., p. 273). The participants also mentioned that one the first things they did when they first moved into these foreign houses was related to the family pictures of Greek-Cypriot residents, the initial owners of the house (Ibid.). The new residents removed the previous residents’ photos from the walls and put them in safe places until the day that Greek-Cypriot owners of the house return and visit their homes (Ibid.).

In order to analyse all these reflections and sum up the four conceptualizations of environment, Rapoport aimed to create a model of “evaluative process” based on housing (see Figure 6). He argued that, with small alterations, the model could be applied to other subdomains of environment. The author explained his model and the related figure with the following words:

Environmental quality is evaluated through several of the components of culture ... specifically ideals, images, schemata and meanings, and norms, standards, expectations and rules – part of a *general* model of preference involved in choice and design. *Specific* “filters” and evaluative criteria define variable environmental quality profiles, helping to answer the question of what is a “good” or “better” environment, better for whom, why and how one knows it is better. (Rapoport, 2000, p. 145)

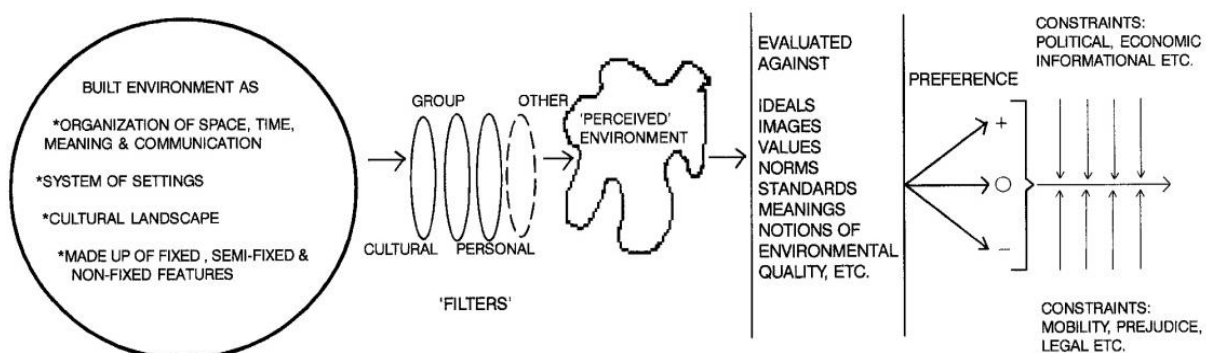


Figure 6. Model of evaluative process. (Rapoport, 2000, p. 146)

As can be observed in the figure, how we perceive the built environment depends on our group or individual filters, such as the outcomes of our enculturation depending on our social group, or our personal experiences and points of views (Rapoport, 2005, p. 53). Then, we evaluate what we perceive based on our notions of environmental quality, physical requirements, norms, standards, our own basic needs and so on.

2.3.2.2. *Evaluation of the environment quality, and the impacts of cultural norms*

Regarding the evaluation of environment quality, Rapoport (2000) expanded that the dissimilarities among groups are usually related to status, and they result from values, ideals, norms, expectations and so on (p. 150). He noted that environmental quality has two main meanings or interpretations, namely “physical-chemical-ecological qualities” and “psychological, bio-social, and cultural qualities” (Rapoport, 2005, p. 57). EBS is focused on the social meaning and psychological features of it, however it is noted that in the aim of making *better* environments, designers should be combining both meanings of the built environment (2000, p. 150). However, as stated, what is better for whom is highly related to culture.

The crucial aspects of *genre de vie*, namely, a lifestyle’s aspects that affect the built environment, are listed as follows: “Some basic needs, Family, Position of women, Privacy, Social intercourse” (Rapoport, 1969, p. 61).

Rapoport (1969) expanded the first aspect by suggesting that, in case we accept shelter as a basic need, the form of the house would vary depending on how the groups define “shelter”, “dwelling” and “need”, along with the interpretations that they give to concepts such as “home”, “privacy” and “territoriality” (p. 61). He wrote:

One could speak of them in terms of the need to breathe, eat, drink, sleep, sit, and love, but this tells us very little; what is important with regard to built form is the culturally defined way in which these needs are handled. It is not whether there will be a window or door, but their form, placement, and orientation which are important; it is not whether one cooks or eats, but where and how. (Rapoport, 1969, p. 61).

Another aspect of basic needs is the density and space standards. It is argued that they cannot be considered without the culture’s role in defining them. For instance, it is indicated that what is seen as a decent level of housing density in Hong Kong is 40-50 times higher than in the United

States (Rapoport, 2005, p. 49).

Rapoport expanded this topic and provided several examples to it. For example, he stated that in case we considered something as basic as breathing, we would realise its complex impact on the built form, mentioning the different levels of acceptance of fresh air and smells (Rapoport, 1969, p. 61). He observed that Eskimos tolerate a significant level of smell concentration inside the igloo, and in addition he noted that the smell of the toilet inside traditional Japanese is highly accepted by Japanese people (Ibid.). The author quoted from architect Bruno Taut's comprehensive study named *Houses and People of Japan*, indicating that Taut was expressing his surprise at "how people with such high aesthetic standards can accept this" (Taut, 1958, p. 38, as cited in Rapoport, 1969, p. 61).

According to Rapoport (1969), in traditional Japanese culture, "poverty" also had a different meaning than it has for the people with Western or American culture. Regarding this, he questioned the relativity of the "empty" house, their simplicity and lack of possessions, with Japanese aesthetics and different space using in the Japanese houses (p. 63). He wrote:

If we compare a traditional Japanese room with a Victorian room or a contemporary American one, can we really conclude that basic needs have changed that much? Sitting is a basic need, yet some cultures rest by squatting, as is common in Asia, others stand on one foot, as do Australian aborigines and some Africans, and it could be shown that the manner of sitting can affect house form and change living habits. Consider, for example, the impact of the introduction of the chair, which would revolutionize living habits and have major social consequences: the need to take off shoes, imposed by the use of mats, would disappear, hence also the special covered space-porch or verandah - where they are taken off and left; the need for shoes which are easily taken off would be eliminated, and also the need for special floors. (Ibid.).

The author argued that the studies on the majority of the primitive and vernacular environments and their unspecialised, undifferentiated spaces show us that, the unity between people's daily lives, work and religion have infused on the other areas of practices, together with the use of spaces (Ibid., pp. 8-9). For instance, it is stated that the simple spatial division in vernacular dwellings in the south of Portugal (in Coastal Alentejo, Lower Alentejo and Algarve), were mostly defined by a large central place with fire where all the occasions of domestic life took place, and this was very common in the oldest rural dwellings. (Ramos, 2010, as cited in Simões et al., 2019). Likewise, this aspect can also be seen when the traditional Turkish houses are examined.

As the Turkish societies were nomadic before they settled down, they lived in tents. This feature is argued to be the origin of the organization of multifunctional rooms, which are the main elements of the Turkish houses, hence their resemblance with the tents where several activities took place (Torus, 2011, p. 107; Türkiye Cumhuriyeti Kültür ve Turizm Bakanlığı [TCKTB], n.d.). The center of the room is always free from fixed elements, and the areas within the room are not rigidly depicted, similar to how it was in the tents (TCKTB, n.d.). In the official webpage of the Ministry of Culture and Tourism of Republic of Turkey, the rooms and their organisations within Turkish houses are described as follows:

The tent, which was the living unit then, has now been replaced by the room. In the room, areas are separated from one another with partitions, or semi-partition levels. The interior of the room has been shaped in dimensions necessitated by human activities. (...) Beds are kept in built-in closets. They are laid out when it is time to go to bed and put away again in the morning. When it is time to eat, the tablecloth, table base and copper tray or wooden tabletop are taken out of the cupboard and put away after dinner. (...) The divans used for seating are placed near the walls. The arrangement for eating and sleeping is the same both in palaces and in tents. (Ibid.).

In the traditional Turkish house, the common gathering places among the rooms, in which most of the daily activities took place are called as *Hayat*² or *Sofa* (Erdoğan et al., 2016, p. 4). They are the other core element of the house, serving as multipurpose halls where the units of multifunctional rooms can be reached from (Ibid.). The way that these basic living units, i.e., rooms with similar characteristics, are situated around *Hayat*, configures the design of this core area and thus the plan of whole house (TCKTB, n.d.).

Returning to the concept of basic needs and the meanings attached to them, Rapoport (1969) compared the traditional Japanese farmhouse where “living, stabling of horses, and rearing of silkworms” occurred in the same space, to our contemporary houses where the variety of the use of space is much limited (p. 9). He suggested that it is possible to see how the separation of work and living, as well as the spiritual and social elements have affected our built environments (Ibid.). In support of these examples from different cultures, Rapoport (1969) agreed that the overall variety between the building types in preindustrial cultures are not too diverse, except for some spiritual/religious buildings, chiefs houses, and granaries which may be considered as sacred in some cultures (Ibid., p. 8).

² The word *Hayat* literally means “life” in Turkish language.

The curious case of granaries was handled by Bernard Rudofsky (1964) in his pioneer exhibition and related book named *Architecture without architects: An introduction to nonpedigreed*³. Rudofsky (1964) explained that in societies in which food was appraised as a sacred gift rather than an industrial product, the architecture of granaries was solemn, even to the extent that untrained people on this topic could confuse them with buildings related to a church. Thus, Rudofsky (1964) called them as “quasi-sacral architecture”, and noted that: “Although small in scale, storehouses achieve monumentality, whether in Iberian Peninsula, in the Sudan or in Japan”. While he described the granaries named *horreos* in Galicia/Spain he wrote: “Such dignity is by no means accidental - most peasants have a religious respect for bread and the stuff that goes into its making” (Ibid.). He mentioned the cultural ties between Galicia and the northern Portugal and noted that the *espigueiros* (see Figure 7) in Portugal are the counterparts of *horreos* (Ibid.). Correspondingly, granaries were also prominent in the major research named *Inquérito à Arquitectura Popular em Portugal*, i.e., the National Survey on Regional Architecture in Portugal, which was conducted in 1950’s by the Portuguese Architects Association (Associação dos Arquitectos Portugueses [AAP], 1961, as cited in Simões et al., 2019). The typical architectural characteristics of *horreos* and *espigueiros* are described as elevated from the floor on pillars, usually made of granite and/or wood depending on their location and topography (Rudofsky, 1964; Simões et al., 2019). Rudofsky (1964) argued that the slabs on top of these pillars, which were acting as rat-guards, were incidentally the predecessors of the “capitals” of Classical Style columns (See Figure 8).



↑ **Figure 7.** Granaries in Sistelo, in Minho region of Portugal (Barros, n.d.).

→ **Figure 8.** Example of a Doric column and its capital, from the Parthenon in Athens (Codex, 2012).

³ The significance of this work will be expanded in the next chapter about Vernacular Architecture Studies (VAS).

Similar to the granaries, the community ovens were also considered as advanced architectural forms in the region of Trás-os-Montes and Alto Douro, which occasionally looked like temples, both for bread making purposes and as a community building (AAP, 1961, as cited in Simões et al., 2019). Differently from the majority of the houses, they were covered by granite slabs for structural reasons and to avoid fires. (Ibid.).

When it comes to the concept of family and its impacts on the organization of the buildings, there may be differences in house forms due to the variety of family structures, even though the concept of family seems very basic and common. For example, the extended family groups may reside in courtyard cluster homes (Rapoport, 1969, p. 63). This is evident in traditional Turkish houses as well. Torus (2011) stated that the traditional extended family order of Turkish families influenced the house, where new rooms or additions could be done modularly when the family expanded, or rooms could be divided in need (p. 107). As the houses were similar with each other in terms of materials and construction types, the wealth of the family was only reflected with the number of the rooms and decoration (TCKTB, n.d.). These aspects also illustrate how the built environments acts as systems of settings and as cultural landscapes, in accordance with the aforementioned conceptualizations of environment.

The cultural position of women also shapes the organization of the dwellings. In this topic, usually Islamic culture is shown as example. Erdoğan et al. (2016) argued that the privacy of woman and family could be seen as the predominant norm of the traditional Turkish society, and this situation has shaped the form of the house and its relationship with its external environment (p. 4). The authors expanded that the visibility from exterior to interior is kept in minimum, and the level of visual contact between the garden (or courtyard) and the public street is important in terms of privacy (Ibid.). Even though there is no solid spatial distinguishment within the house and the entrance for men and women is mutual, there is a visual separation between the common rooms and the private rooms, which enables the adjustable level of contact between the male guests and the females in the house, depending on to the guests' closeness to the family (Ibid.). Likewise, in Estremadura and Ribatejo, regions of Portugal, there are many houses with window seats with shutters or crates, which creates a private place of observation, in which the outside can be seen but cannot be seen from outside (Simões et al., 2019). It is argued that these houses were related to the origins of Arab ancestors' who lived in those regions and their Islamic culture

(Caldas, 1999, as cited in Simões et al., 2019).

Another important aspect is the level and ways of socialising of the people. Erdoğan et al. (2016) wrote that in almost every traditional Turkish house, the gatherings in the garden with neighbors are important, thus, there are specialised guestrooms which are decorated more attentively than the other rooms due to the value given to the guests, neighborhood relationships and hospitality (Erdoğan et al., 2016, p. 4).

Besides the more common instances regarding the need for privacy and social intercourse, the troglodyte villages and underground settlements can be given as examples as well. In his article named *Vernacular Architecture and Environmental Influences*, Professor Mete Turan (1975) mentioned the extraordinary landscape in Göreme valley⁴ in Turkey (see Figure 9) and the natural shelters of isolated 10-20 m. high cones called “fairy chimneys”, which were formed due to the specifics of the material of pumice stone and the erosion caused by the volcanic actions and weather events (p. 234). The author stated that the early Pagan communities and monastic settlers of Christianity in the 5th Century, carved their homes into these cones, not only for the thermophysical properties of the natural thick walls, but also for finding uninterrupted seclusion (Ibid.).

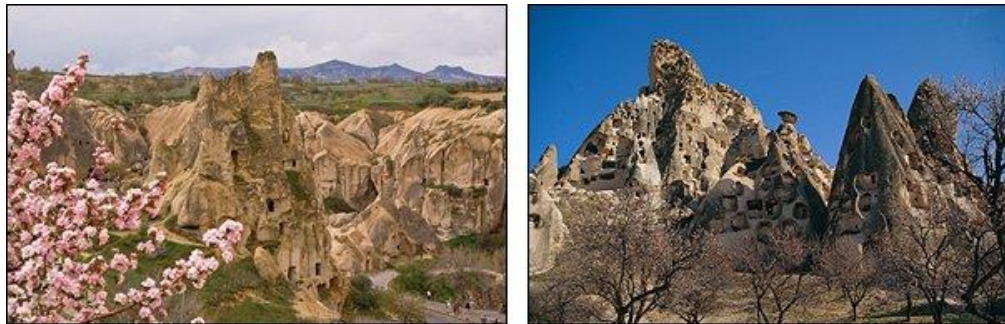


Figure 9. Göreme Valley (TCKTB, n.d.)

2.3.2.3. *Comfort*

Oliver (1986) stated that the concept of comfort is deeply related to intention, culture and context, hence what might be comfortable under certain circumstances, might be uncomfortable in another context. To draw a clearer picture, he gave instances from his daily life, in settings

⁴ Göreme National Park and the Rock Sites of Cappadocia were added as cultural and natural site to the UNESCO World Heritage List in 1985 (UNESCO, n.d.).

such as an office, his back yard and an airplane (p. 93). He explained that when he is working in an office, he sits upon a typing chair which was designed for comfort. However, he would not choose the same chair for relaxing in his back yard (Ibid.). While travelling in an airplane, he says that he feels comfortable in spite of the other seats that are in a proximity, which he would find severely uncomfortable in an office setting (Ibid.). Another example the author gave was concerning the differences of thermal comfort between diverse cultures. He observed that the foreign people who visited the United States in wintertime found the central heating “uncomfortably hot”, whilst the visitors to England complained about the low internal temperatures which were convenient for Britons (Ibid.).

This is also evident in the case of Portugal. It is indicated that Portugal is one of the places where the houses are the coldest and the thermal comfort inside the houses are not adequate when compared to the overall standards of European countries (Tavares, 2019). Considering the Portuguese moderate Mediterranean climate, the fact that building stock has not been designed for a cold weather all year, and the economic constraints that the country has faced, it might seem that the issue is fully explained by these external factors. However, the people’s belief that “it is a legacy from the past” and the cue of “generalized Portuguese cultural aspect of not valuing thermal comfort” are also worth considering (Magalhães, 2016; Tavares, 2019). Different research studies with field works indicated that people in Portugal can tolerate temperatures beyond the conventional comfort conditions, in other words, they feel comfortable in a much broader range of temperatures, and that the ideal temperatures were actually not even desirable in general (Guedes et al., 2009; Matias et al., 2009). These realities might be preventing the public from demanding houses with better thermal conditions, hence the lack of suppliance of better insulated houses in the market in accordance with the climate, and the eventual waste of energy for heating. In my own humble experience, as a foreigner who has been residing in Portugal for four years in total, and an architect who has been working in an interior design office⁵ for two years by now, it was a challenge to get used to living in colder houses than what I was accustomed to. It has also been interesting to witness my friends joining me whilst I constantly complained about the coldness indoors, while a number of our clients preferred, for

⁵ I have been working in Atelier Susana Camelo in Porto since 2018 as an intern of MA Intercultural Studies for Business, and as an architect.

example, to uninstall their existing radiators because they would look unpleasant in their freshly decorated living rooms.

It should be noted that, since the rise of modernism, the mass-produced houses, which are mainly built of reinforced concrete, require the use of air conditioning and artificial acclimatization systems as they are not in harmony with the environment (Torus, 2011, p. 108). This is a universal issue which was handled by several authors and researchers from diverse cultures, such as Simões et al. (2019) from Portugal, and Torus (2011) from Turkey. The authors indicate that this issue occurred due to the perception that vernacular buildings were not efficient in terms of living conditions, and they were associated with poverty and rural environments (Simões et al., 2019). On the other hand, modern building techniques have come to be seen as more valuable and efficient, which caused the suppression of the vernacular culture by the mass culture that consequently turned architecture into a “fast consumption product” (Ibid.). However, it is argued that new concrete buildings lack the sensibility to the environmental, cultural/social values, and influences, which vernacular houses could fulfil (Torus, 2011, p. 108).

As an illustration to this, a recent research was done by architecture students in Portugal, with the use of new software tools. The study has shown that the vernacular buildings could provide environments with adequate thermal and lighting conditions thanks to their bioclimatic design with appropriate materials (Simões et al., 2019). For instance, the measurements made on a vernacular building in Alentejo showed that the internal temperatures were stable and significantly below the external temperatures, hence the thermal comfort inside, during a notably hot heat wave in 2016 (Ibid.).

Returning to the variables of the environmental quality, they are identified in Rapoport's combined diagram about the dismantlings of culture, with their relations to the expressions of the housing i.e., the built environment (See Figure 10). Rapoport (2005) noted that in the diagram, as the arrows got wider, the ease and feasibility of relating the various elements would increase (p. 98).

To sum up, Rapoport (2000) conceptualized environment in general by taking the housing as a starting point in the context of EBS, i.e., the science of EBR, because according to him all the

descriptions and dismantlings of environment could undoubtedly be applied to housing as well (pp. 145-146).

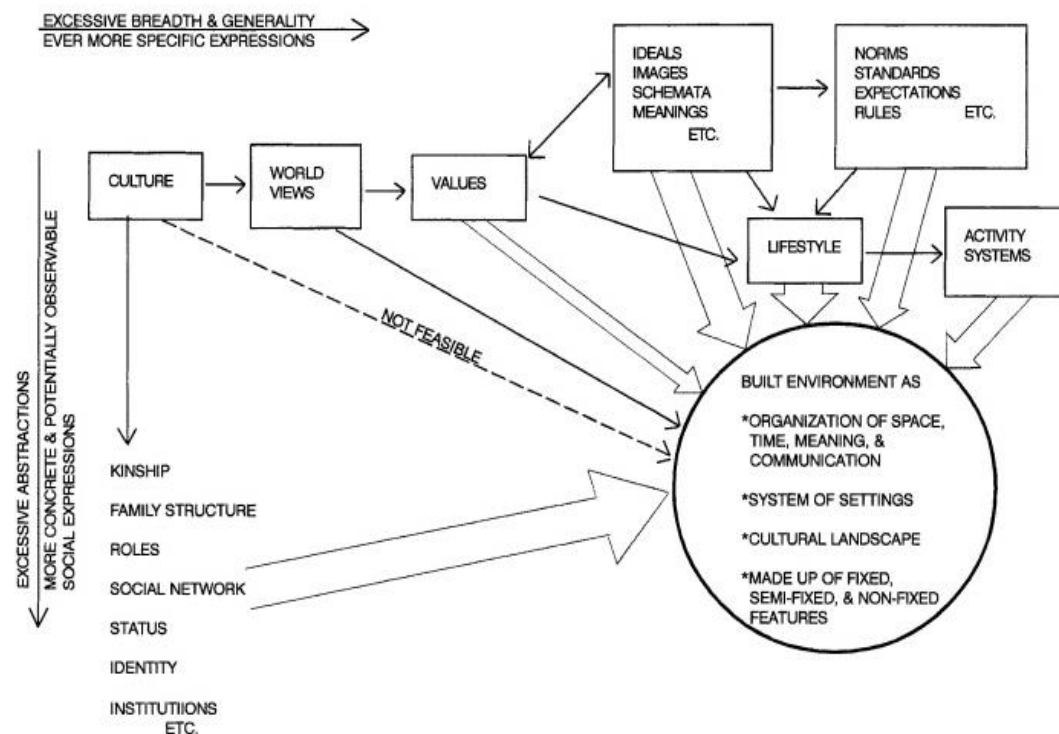


Figure 10. *Dismantling of culture and relating to the built environment.* (Rapoport, 2000, p. 149)

Throughout this process of thought, Rapoport (1969) focused on vernacular environments and initially asked himself the question: “Why study primitive and preindustrial house form in the space age, with its rapid tempo of change?” (p. 12). He underlined that cross-cultural studies and comparisons within this topic would be necessary, as the comparisons of these types of built forms give an insight into the essence of shelter and dwelling, and to the design practises and meaning of basic needs (Ibid.). The author argued that these houses were the straightforward expressions of evolving values, perceptions, images and so on, along with their certain permanent characteristics (Ibid.). Moreover, as stated before, there are various cultures and subcultures existing side-by-side in the cities, hence the need for cross-cultural studies to observe and understand the distinct housing and settlement models in accordance with different ways of life (Ibid). All in all, examining the vernacular environment studies along with the other non-vernacular ones is crucial while studying the built environments, especially from an intercultural point of view. These topics will be handled in the forthcoming chapters of this thesis.

2.3.3. Question 3: Responsiveness

In the third main question of EBS, Rapoport (2005) aims to identify the mechanisms that link people and environments, as he believes that it is crucial to understand these mechanisms to understand the phenomena and to be able to design, in other words, modify them (p. 12). In his essay *On the Cultural Responsiveness of Architecture*, in which he focuses on these mechanisms, he wrote that the mechanisms were extremely important as they make abstract concepts and theories more convincing by showing their link with empirical reality (Rapoport, 1987, p. 10). He argues that there has been a limited amount of research focusing on these mechanisms and he attempts to start listing some of them⁶: Physiology, anatomy, perception, cognition, meaning, affect, evaluation, action and behavior, supportiveness, some of the components of culture (Ibid., 2005, pp. 12-13). Regarding these mechanisms, Rapoport noted two things:

First, some of these mechanisms vary much more with culture than others. For example, whereas perception is largely unaffected by culture, cognition varies significantly with culture, and meaning and evaluation are culturally extremely variable. Second, some of these mechanisms interact and work together, for example, affect, meaning, and evaluation. Also, this list is a first effort and can be expanded or modified. (Ibid., p. 39)

Rapoport (1987) asserted that in the case of professionally designed environments, the communication mechanisms among the users and the environment does not work as well as in the case of vernacular, traditional, popular environments or spontaneous (squatter) settlements (p. 11). In the light of these, types of environments will be expanded in the next chapter.

⁶ The explanations of the mechanisms are listed and explained as:

- *Physiology*: Adaptation, comfort with regard to temperature, humidity, light levels, glare, noise, etc.
- *Anatomy*: Sizes and heights of elements, e.g., ergonomics and anatomical comfort; these two have implications for various handicaps and hence 'universal design.'
- *Perception*: The multi-sensory reception of information from the environment. This is essential; without perceiving the external (and even internal!) environment, nothing else can happen.
- *Cognition*: This concerns the mental processes that intervene between perception (acquisition of information) and knowledge about the environment. There is the anthropological meaning of cognition, which concerns how the world is constructed, categorized into domains and schemata, and named, i.e., how one makes sense of the world. There is also the more common psychological sense of the term, which concerns how we learn about the world, construct mental maps, orient ourselves, and navigate, i.e., how we can operate in the world.
- *Meaning*: This is related to the anthropological aspects of cognition, includes latent aspect, and is most important. It involves images, ideals, status, identity, and many other very important aspects of the environment.
- *Affect*: The emotions, feelings, moods, etc. elicited by the environment, its sensory qualities, its meaning, etc.
- *Evaluation*: This leads to preferences and choices based more on wants (and related to meaning and affect) than on needs. It also includes 'aesthetics,' which is identified with perceptual aspects of environmental quality.
- *Action and Behavior*: The response to cognition, meaning, affect, and evaluation.
- *Supportiveness*: This can be physiological, anatomical, psychological, social, cultural, affective, regarding choice, activity systems, behavior, and so on (Rapoport, 2005, pp. 12-13).

3. Culturally responsive environments and the “others”

It is argued that the coherence between culture and the built environment was more accessible in the traditional environments, as the groups were in smaller scales and more homogeneous (Rapoport, 1987, p. 12). Thus, Rapoport (1987) wrote that “the Modern Movement, rejected this view implicitly by emphasizing ‘universality’ and ignoring context and cultural specificity” (Ibid.). According to the author, in addition to pluralism and large scale, there have been some changes throughout the evolution of the built environments. In Rapoport’s words:

What is new, other than this pluralism and large scale, is that firstly many environments which traditionally were vernacular, popular or ‘spontaneous’ are now designed by professionals who typically have not dealt with them and really do not know how to tackle them (Rapoport, 1987, p. 12).

The author added that in traditional societies, the designers and the clients usually belonged to the same group, which means they shared a common culture. Also, the majority of the clients and users were alike with each other. In time, as modernisation and globalisation affected us more and more, the designers differentiated from users, in terms of culture, in other words, values, lifestyles, and so on (Ibid.).

Tosun (2019) agrees that the built environment has changed due to the universal modern movement in architecture, and he asserts that it is even more problematic when we focus on the meaning of the built environment from the perspectives of man-environment relations and culture (p. 319). He argues that we have lost the identity of spaces and the ability to quickly understand the alterations in models between different buildings with small variations, owing to the fact that today there is the freedom of design, i.e., to design without reference to the existing built environment, culture and architectural history (Ibid., p. 320). He explained this argument as follows:

In traditional architecture each little area, city or town had certain uniqueness to make it different than the next one. Often this uniqueness was sensitive and in harmony with the physical, social and cultural environment. While they were different from one another they were not chaotic. The reason for that was, they varied from one another in a systematic way enabling one to be aware of transitions: what we lack today in our built environment. (Tosun, 2019, p. 320)

In addition, according to the author, in case we accept that the people and environments are shaped by each other, then it is possible to argue that the stress we all feel in the cities today is a result of the fast transformations in the built environments (Ibid.). He also mentions the

“increasing cultural diffusion and enormous commercial ads” and asserts that the consequence of all these elements together are “cultural alienation and breakdown” (Ibid). Similarly, Rapoport (1987) claimed that these circumstances have caused problems, and consequently generated the interest in culture-environment relationships that gave importance to culturally responsive environments (p. 12). By this term, it is referred to “open-ended, flexible and adaptive environments” which can be altered and modified as culture changes. This involves a series of actions and participation, therefore, questioning what parts of the environment should be open-ended (which may vary depending on the particular cultures), who exactly should be adapting them to which people; and at what part of the process it should be done etc. must also be considered while thinking about culturally responsive environments (Ibid., p. 13).

In the light of all of these, Vernacular Architecture Studies gained importance. This movement could be seen as an opposition to the approach which has shifted the architectural image around the globe under the strong influence of industrial forces, i.e., modernism (Zwerger, 2019, p. 14).

In the next subchapters, Vernacular Architecture Studies (will be abbreviated as VAS in this study) and the characteristics of vernacular and some non-vernacular environments will be expanded. To do so, it is needed to understand the types of environments and how they are differentiated from each other.

3.1. Classifying the built forms

Rapoport (1969) listed three different types of built forms, depending on how they are produced: Primitive (Pre-literate), Preindustrial vernacular, and High-style (Modern) (p. 8). He stated that the primitive types include a small number of variations of the building types. Whereas preindustrial vernacular types, which are built by tradesmen, have more types of buildings and more individual variations of the models. Though, the number of the building types in vernacular type is still limited (Ibid.). On the contrary, high style or modern buildings are specialized types, and each building may be a unique, individual creation, which is designed and built by teams of specialists (Ibid.).

Another approach to classify the built forms is focusing on who designs and/or builds them, in other words, who takes the decisions regarding the built environments. Oliver (2003) argued that

the total number of dwellings produced under professional auspices count less than one dwelling in ten (p. 15). In other words, the author indicated that, to a considerably large extent, the dwellings in the world have been built either by the occupants of the houses themselves or by other members of their social group, without external professional intervention (Ibid.). Rapoport (1969) agreed with this by suggesting that, if we consider the buildings that are designed by the architects as high-style, and the primitive and vernacular buildings as folk art, then the modern buildings which are not designed by architects could be called as “masscult” (p. 127). He stated: “While folk art is created by the people when there is community, masscult comes from above to the people when there is a mass-atomized⁷ man” (Rapoport, 1969, p. 127). The author supposed that the modern life popular architecture buildings that represent some specific aspects that we do not see in architect-designed high-style buildings, give a hint about life-styles, and this understanding may clarify their commercial success and acceptance among the public (Ibid.).

Rapoport (1969) maintained that even though most of the people do not build their own houses as much as they did before, the houses they buy comprise the majority of the built environment, and they indicate popular values and ambitions more than the buildings that are designed within the design subculture, i.e., high-style architecture (p. 127). Accordingly, he wrote that “preliterate, vernacular, popular and other such environments” make up most of the built environment and that they are particularly enlightening about cultural responsiveness (the topic of the third main question of EBS), and therefore these must be taken into account when making assumptions about EBR (Rapoport, 1987, p. 11).

Rapoport (1987) suggested that design is almost everything that people build or do to change the appearance of the environment, and that it is not necessarily made by professionals, keeping his focus on culturally responsive environments (p. 11). As indicated before, the author was interested in examining mainly the housing in primitive and preindustrial vernacular environments and explained the reason of his interest by suggesting that the houses in these

⁷ Rapoport did not elaborate the terms “mass-atomized man” or “masscult” in his book, but according to the online Encyclopedia Britannica, *mass society* or *mass culture* concept is used to represent modern society as “homogenized but also disaggregated, because it is composed of atomized individuals”. The term is generally used negatively to imply a “modern condition in which traditional forms of human association have broken down and been replaced by conformist or even totalitarian forms of collective behaviour” (Munro, 2017).

environments were the explicit expressions of differing values, perceptions, and lifestyles (Rapoport, 1969, p. 12).

Memmott & Davidson (2007) proposed that both in vernacular and high-style cultural contexts, there are specific people who have either been granted or undertook the role of “form-maker, creator and guardian of building traditions” (p. 83). The authors question the basis of these people’s authority in the related decision-making processes, and assert that in the case of contemporary, non-vernacular buildings it is concentrated on the “architect’s own ego-driven ability to make the correct and wisest decisions” (p. 83). Oliver (2003) wrote that some people have given the authority and responsibility of the design and construction of their dwellings to the professionals, but far more people still make use of their vernacular traditions to build their own dwellings, by adapting them according to the social and cultural changes (p. 18). He stated: “Traditionally, the sensibility and the know-how, the skills and the competence to build effectively in response to the land, the climate and the resources to hand, have been passed on between generations” (Ibid., p. 16). According to the author, with the help of this know-how and the comprehension of the specific values and needs, built homes generally result with beauty and unity in their designs and forms, are consistent but still genuine with their subtle or profound differences, and are consecutively conveyed to the following generations (Ibid.). The author underlined that by knowing more about the features that shape the dwellings of diverse societies, we may be more competent in creating the adequate living conditions for the future demands in housing that different cultures will be trying to meet all around the world (Oliver, 2003, p. 18). This leads us back to the study of vernacular environments, and the knowledge behind them.

3.2. Vernacular Architecture Studies (VAS) and vernacular environments

Professor of Anthropology of Architecture Marcel Vellinga (2017) stated that the 1960’s and 1970’s were pivotal in the progress of the field of international Vernacular Architecture Studies (VAS), after Bernard Rudofsky’s *Architecture Without Architects* exhibition in the Museum of Modern Art (MoMA) and his associated publication had a great impact in 1964 (p. 13). Professor Zwerger (2019) argued that Rudofsky became well-known with his exhibition, by which he aimed to waken his fellow architects from their shallow, one-dimensional perception of

architecture, and intended to encourage them to think more effectively (p. 17). Vellinga (2017) also mentioned the noticeable increment of academic interest in non-Western vernacular architecture during the 1960's, while noting that it is difficult to verify to what extent Rudofsky's work has actually had impact on the further development of the field of international vernacular architecture studies (p. 21). Subsequently, several other authors published seminal works about "traditional", 'indigenous', and 'primitive' forms of architecture" in addition to Amos Rapoport's and Paul Oliver's studies (Vellinga, 2017, p. 13).

According to Zwerger (2019), Rapoport and Oliver persistently sought to identify the principal aspects of vernacular architecture, which consequently affected many other authors in their use of terminology (p. 14). Oliver (1978), explained the meaning of the term "vernacular" and his use of related terminology as follows:

The etymological roots of the word 'architect', from the Greek *arkhi-* and *tekton*, mean 'chief builder', while 'architecture' is defined as the 'science of building'. The word 'vernacular' derives from the Latin *vernaculus*, meaning 'native', so the definition 'native science of building' is really quite appropriate. In usage however, 'vernacular' generally refers to language or dialect of a people, while architecture is given a qualitative status. (p. 4).

The author expanded that, when the term "vernacular" is applied to architecture, it becomes a part of the usual linguistic metaphor of "architecture as a language of form", as "vernacular" is a linguistic term itself as well (Oliver, 1993, p. 17). Within this context, vernacular architecture can be seen as "the architectural language of the people' with its ethnic, regional and local 'dialects'" (Ibid.).

With a broader and simpler perspective, Zwerger (2019) indicates that the term "vernacular" signifies conventional usage in everyday life, by regular people in a specific region (p. 15). In this sense Oliver (1978) elaborated that, by using the commonly recognized phrase of vernacular architecture, he meant all types of buildings that have been built by "people in tribal, folk, peasant and popular societies where an architect, or specialist designer, is not employed" (1978, p. 4). Moreover, he asserted that vernacular architecture is usually thought of together with popular architecture, however they are unequal terms (Oliver, 1993, p. 17). Therefore, he aimed to make a distinguishment between the vernacular, which is "*of* and *by* the people", and popular architecture, which is "designed *for* the people" anywhere in the built environment, both in rural and urban contexts (Ibid.).

Regarding the possible perception of vernacular architecture being a romantic and charming legacy from antiquity, Oliver (2002) asserted that it is more than that, as it has endured for such long periods of time all over the world (p. 424). This idea was supported by Zwerger (2019), while highlighting that continuity does not necessarily mean stability or invariable repetition, but it means that following the social changes and other influential circumstances in a society, which leads to inherent quality and coherence in the related community (p. 16). The author noted that quality does not simply designate the quality of the building or the material, instead it refers to concepts such as “integrating experience, knowledge about the climate, geography, building materials, treatment of materials, and social solidarity as well as to dependence, cultural embedding, and inhabitants’ well-being” (Ibid.).

Collectively, Rapoport (1969) elaborated the characteristics of vernacular buildings as follows:

“Lack of theoretical or aesthetic pretensions; working *with* the site and micro-climate; respect for other people and *their* houses and hence for the total environment, man-made as well as natural; and working within an idiom with variations within a given order. (...) Another characteristic of vernacular is its additive quality, its unspecialized, open-ended nature, so different from the closed, final form typical of most high-style design. It is this quality which enables vernacular buildings to accept changes and additions which would visually and conceptually destroy a high-style design.” (pp. 5-6).

It is observed by Vellinga (2017) that the mentioned authors who were interested in VAS inevitably had overlaps with each other’s studies, although with small differences (p. 13). For example, according to Vellinga (2017), Oliver had similarities with Rudofsky in terms of defending a more all-encompassing perspective of architecture, even though Oliver was not in the same page with Rudofsky’s aesthetic and romanticist approach to the subject (Ibid.). Moreover, Oliver had correlation with Rapoport in the interest of the cultural representation of architecture, however, Rapoport had a more theoretical, abstract approach while Oliver’s works were more ethnographic and descriptive (Ibid.). Nevertheless, all three of them, and some other contemporary scholars, had a global cross-cultural perspective (Ibid.).

Paul Oliver persistently asserted that the anthropological approach towards architecture would be useful to understand buildings’ design, use, and meaning, starting from his first architecture-related publications in 1960’s until his latest ones including his monumental work; *Encyclopedia of Vernacular Architecture of the World* from 1997 (Vellinga, 2017, p. 10). According to

Vellinga (2017), Oliver's main intention was the increment of architects' recognition of "the cultural embodiment of architecture", as he believed that a deeper realisation of the complex relations among architecture, society, and culture would help us understand why architectural forms are shaped as they are, and that would consequently contribute to a more culturally appropriate contemporary design approach (Ibid.).

From this point of view, Vellinga (2017) argued that the main aspiration of Oliver's approach was not understanding culture as it would be an anthropologists' concern (p. 16). Rather, in Oliver's perspective, culture was an instrument to understand architecture and to be able to inform the related future designs (Ibid.). He focused on how the diverse cultures around the world dwell in distinct forms of architecture, and that we could only comprehend these unique forms if we considered them as intrinsic parts of the societies in which they were produced and built (Ibid., p. 18). Overall, it is stated that Oliver had a significant contribution to the field of international VAS with the words:

As a researcher and author, he has demonstrated the value of a cross-cultural and comparative approach to the study of architecture, urging architects to look beyond the narrowly defined boundaries of the architectural canon to value and engage with non-monumental, non-Western, and non-architect-designed building traditions, and to consider all architecture in its social and cultural context. (Vellinga, 2017, p. 20).

Vellinga (2017), praised Paul Oliver's contribution to the respective field and argued that: "Looking at the scope and content of the field of international vernacular architecture studies today, it can be argued that Oliver's objectives have largely been met" (p. 21). In support of this view, the author underlined the increasing interest in VAS in the recent years, including the application of the vernacular knowledge and architectural tradition within their social and cultural contexts into contemporary design (Ibid). Likewise, the idea that "architecture needs to be studied and understood in its social and cultural context" is generally agreed upon (Ibid.) However, the author also noted that it is harder to verify Oliver's direct impact beyond the scope of VAS, namely in contemporary architectural design or in related fields such as housing and conservation or in the field of anthropology, because his work is usually not mentioned in the regular publications which are related to those subjects (Ibid.). Furthermore, Vellinga (2017) asserted that "the tendency to focus on a restricted number of architect-designed buildings and to treat them as objects of art independent of their social and cultural context is still prevalent" and

that the cooperation between the fields of anthropology and architecture are still rare; architecture and anthropological studies have included each other in their curriculums only a small number of cases (p. 21).

In this respect, Oliver (2002) indicated that the call to the architects and the architectural education, regarding the incorporation of anthropological attitude and the inclusion of VAS in the universities shall not be ignored anymore (p. 424). The author mentioned the hints of future housing with growing demand on land, increasing consumption of water, energy and material resources, and the climate change caused by industrial emissions, will have massive effects on our cultures, hence causing serious and irreversible impacts on our social and domestic lives (p. 424). The author suggested that, the only reasonable and sustainable solution to this global issue, i.e., to the building demands of the new century throughout the world, might be the appropriately acknowledged, supported, and serviced vernacular traditions (Ibid.). The reasoning behind this argument is the reliance on vernacular know-how.

Oliver (1982) expressed that “know-how is the faculty of knowing; cognition, if you prefer”, and that “it has to do with knowledge, with awareness, understanding, even intuition” (p. 110). In the context of vernacular architecture, it involves the knowledge and experience about the buildings, climate, topography, suitability of the site etc, along with the collective wisdom and the norms of the society, thus being convenient for their built and natural environments (Ibid.). The author argued that collectively these skills spill over into the values of the society and create impact on beliefs, rituals and respect for ancestors etc. (Ibid.).

In short, Oliver (1982) focused on the vernacular efficiency and the technology of building performance, and he favored the vernacular builder’s knowhow, asserting that as it became more thorough and specialized, it would lead to technological innovation (pp. 118-119). However, the author also noted that, instead of nurturing romantic notions about the technological qualities of vernacular architecture, we should be conscious about the weaknesses and failures of it as well, in order to learn from and make use of its know-how, and to advance in building technologies (Ibid., p. 119).

Referencing to all that has been mentioned so far, Oliver (1982) indicated that vernacular

architecture and its methods have been under pressure in many societies. Thus, he argued that, due to the modernist trend, namely “the arrogance of those who are wedded to the idea that western building forms and technology are applicable in all climates and to all cultures”, many traditional buildings have been destructed carelessly and censored by architects and planners (p. 125). He stated that, in pursuance of modernity, unsuitable housing has been thoughtlessly imposed on innumerable people and traditional skills declined as western types of buildings reflected wealth and status, while vernacular architecture has been seen as “backward” and “undeveloped” (Ibid.). Unfortunately, this issue is certainly true in the case of Turkey. As cited in the TCKTB’s official website: “the traditional housing pattern is rapidly disappearing and losing its character as new buildings emerge” (TCKTB, n.d.).

In the light of all of these, the effects of modernism on our built environments and its outcomes in high-style and vernacular environments will be examined in the next subchapter.

3.3. Gated communities, mass housing projects, and squatter settlements

As an outcome of the socioeconomic changes in the modernization period, gated communities have become a development trend. They have increased by numbers and grew by their footprint area, thus transforming the urban environment both in developed and developing countries (Akgün & Baycan, 2012, p. 104).

In the proceedings of the first Holcim Forum on Basic Needs, the authors of the second working group explained that gated communities do not create multi-layered, complex and sustainable environments which would be visually rich and economically viable, because they do not pass through the natural phases of urban development (Leston et al., 2005, p. 153). It is suggested that unpredictability, complexity, diversity, and other aspects which create social richness are fundamental characteristics of the successful urban places (Ibid.). The artificial residential developments, such as the gated communities, state-financed mass housing projects and squatter settlements are said to be prohibiting the people from outside, segregate and isolate social classes, and inhibit social interaction (Ibid., pp. 153-154). Thus, from a point of view, it can be said that gated communities are not inhabited only by the rich, but also by poor people who make constructions themselves and create squatter settlements, i.e., slums (Ibid., p.155).

It is also possible to say that the concept of gated community is not recent, even though the popularity of it has increased lately with the idea of building high walls or fences to separate some classes of people from the others aiming to keep violence and social problems “out there” (Leston et al., 2005, p. 150). The gated communities and gated nations seem to be inevitable when the examples from history are considered (Ibid., p. 155). For example, the Roman towns and many other medieval time European cities were fortified with perimeter walls; and in the 20th and the 21st centuries we could still observe the Berlin Wall dividing the city between capitalists and communists, and the wall separating Israelis from the Palestinians (Ibid.). They might be seen as natural responses to a world filled with increasing violence and threat, however, it is also possible to see from history that sooner or later all walls lose their purpose and end up getting knocked down or become tourist attractions (Ibid). So, the gated community walls might disappear one day as well, or they might also endure. The authors Leston et al. (2005) suggested that the reasonable attitude would be opposing the conditions that encourage people to build walls around themselves to live in ghettos or in privileged hideaways and aim to build more sustainable societies which means more equitable and less violent (Ibid.). Overall, urban designers Kuipers & Broekema (2013) summed: “The growing popularity of gated communities is the spatial manifestation of social segregation. People tend to like living with the same kind of people, which is now happening more and more. This will certainly not stimulate a sense of community between social groups, or their mutual understanding, and is perfectly in line with the current social unrests.”

Leston et al. (2005) argued that gated communities might be good for the businesses; however, these types of settlements are criticised for obstructing the sustainable developments of the cities by creating long-term social and urban issues, due to the disruption of the urban fabric, interruptions in the public circulation and in the spatial integration of the cities (pp. 150-151). Still, it is mentioned that there are some positive sides of gated communities, such as the high life standards, available safe playgrounds for children in the fast-paced city life, privacy, etc. (Gün, 2017). Similarly, Akgün & Baycan (2012) stated that “gated communities do not only threaten, but also contribute to the city”, by creating “new job opportunities, secured areas, better infrastructure and utilising inactive lands” (p. 106). Nevertheless, it is also underlined that, even if the job opportunities and better infrastructure can be seen as contributions to the city -or at

least for the zone nearby the respective settlements-, the creation of secured area is a benefit only for the residents of the gated community (Ibid.). In addition, the utilisation of inactive lands in legal terms might be a contribution to the whole city, but the high demand for these settlements increase the urban sprawl affecting the lands of agriculture and natural resources negatively (Ibid.). Moreover, these communities that are settled in the peripheries of the city create traffic congestion (Ibid., p. 105). Taken together, it is possible to say that the advantages for the inhabitants of these communities are far more than the advantages for the overall urban society (Ibid., p. 106).

In view of all that has been mentioned so far, gated communities may be frankly defined as: “A housing settlement type constructed to exclude the ‘other’ in physical, social, economic, class and aesthetic terms” (Derviş et al., 2015, p. 122).

It is argued that, especially in developing countries, the problems of the psychological harm of social inequity and the isolation of living in secluded communities are as serious as, for example, exhaustion of natural resources, because “the security fences around gated communities split the city into isolated neighborhoods and leftover districts that can easily end up as ghettos” (Leston et al., 2005, pp. 150-151). With these facts in mind, Turkey can be examined to expand this topic. The cultural segregation caused by the gated communities with their commercial ads, along with some social housing projects and squatter *gecekondu* settlements can be given as vivid examples from Istanbul. Numerous studies have attempted to explain the history, the reasons and the impacts of them. In addition, the exhibition-cum-book project named *Becoming Istanbul: An encyclopedia*⁸ tackles these issues with texts from many authors of different backgrounds, from as many angles as possible.

⁸ The project was done by the reputable professors of history of art and architecture Bülen Tanju, Uğur Tanyeli and Pelin Derviş, who intended to “contest the clichés and stereotypes concerning modern Istanbul, which were prevalent both in Turkey and abroad” while underlining that it is “neither a statistical handbook of the facts regarding Istanbul, nor is it a compilation of brief historiographical texts”. Still, it is a distinctive and informative work in a humorously inventive way, aiming to undermine the conservatism which leads the recent urban thought on Istanbul longing to recreate a “new traditional city”. The authors intended to dissolve the model of a metropolis that is “non-cosmopolitan, homogenously populated, built without noticeable divergences and designed with a historicist imagination” and they asserted that this ideal is an alarming attitude that damages the newly emerging metropolitan pluralism, in social and architectural means. They wrote: “It is that most architectural city, where all of its inhabitants build, speak of, write, fight for, and destroy architecture on a daily basis” (Derviş et al., 2015, p. 3). The projects’ online database and archive can be reached through the website <http://www.becomingistanbul.org/>.

3.3.1. Gated communities in Istanbul

It is stated that the gated community developments in Turkey and in its big cities, especially in Istanbul, started in the 1980's due to the economic and political changes, namely the neoliberal economy hence the emergence of new social classes (Gün, 2017, p. 42). At the beginning, the target audience for these settlements were the upper-income group, but later on, the gated communities composed of high-density apartments in the outskirts of the city have also emerged, targeting the middle-income group. Recently, as can be observed in the Figure 11, it is possible to see gated housing estates all around Istanbul, notably in the northern part of the city towards the large green areas (Ibid).

In case of Istanbul, it is stated that the spread of the gated communities puts immense pressure on the natural environment and the sustainability of the natural resources and agricultural lands, along with paving the way to social segregation (Akgün & Baycan, 2012, p. 103). In other words, they create a threat on natural and social sustainability due to the demand for nice panoramic views and resistant lands to earthquakes, which urge the urban sprawl towards the northern part of Istanbul where it is rich of forests and other natural resources (Ibid., p. 105). As a proof, Akgün & Baycan (2012) stated that 80 per cent of these settlements were located in naturally rich areas (Ibid.).

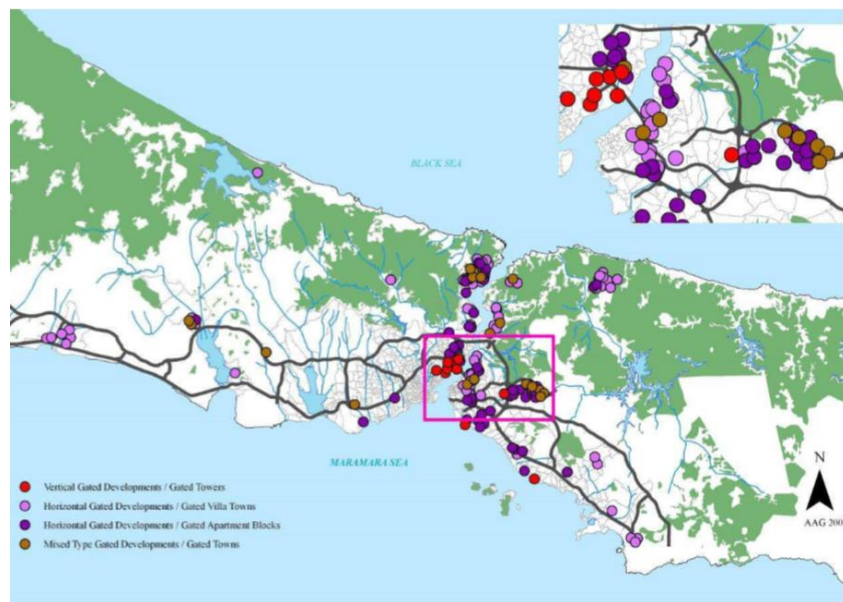


Figure 11. *Distribution of gated communities in Istanbul* (Baycan-Levent & Gülümser, 2007, p. 15).

Akgün & Baycan (2012) indicated that the gated communities are seen as the main driving force of the housing market in Istanbul, not only by addressing the middle- and upper-income social classes but also with their role in shaping the urban transformation of the city (p. 105).

In their study consisting of the physical aspects and social patterns of 161 gated community estates, the authors observed that there were four typologies of gated communities in Istanbul, which have slightly differentiated target groups ranging from middle-class to the urban elite class, and accordingly, have variations in their built forms (Akgün & Baycan, 2012, p. 95). These types were listed as:

1. Gated Towers, which are located in the central business districts and targeted the urban elite class. This type of settlements consist of apartments of high-rise buildings and residences. In Figure 11, these settlements are highlighted with red.
2. Gated Villa Towns, which are horizontal types of gated communities and are located in the peripheries of the city. These settlements were mainly designed for the upper- and upper-middle classes. They were composed of single-unit dwellings. In Figure 11, these settlements are highlighted with light purple.
3. Gated Apartment Blocks, which are located both inner and outer city, are comprised of flats. The target is upper-middle and middle-classes. In Figure 11, these settlements are highlighted with dark purple.
4. Gated Towns, which are mixed type of both horizontal and vertical units. The target profile is also mixed as the dwelling units have more variety. These types are usually located in the peripheries as well. In Figure 11, they are highlighted with brown.

Akgün & Baycan (2012) assert that the increasing mobility of the inhabitants, changing lifestyles with the current public image of buying a house from a gated state as a need or as an investment, and the expanding urban sprawl make gated communities an irrepressible phenomenon (p. 107). Unfortunately, the ongoing trend in the housing developments and the market shows that there are no solid strategies to control the development and the sprawl of the city of Istanbul (Ibid).

Another interesting point that the authors noted was that the gated developments in Istanbul usually use the archetype of American gated communities, therefore they look similar to their

correlative American settlements (Akgün & Baycan, 2012, p. 105). At this point, Rapoport (1969) helps us with his explanation regarding the image of the American house:

“What (then) does ‘house’ mean to Americans? Builders and developers never build houses, they build homes. The dream home is surrounded by trees and grass in either country or suburb, and must be owned, yet Americans rarely stay in it more than 5 years. It is not a real need but a symbol” (p. 132).

Correspondingly, in the *Becoming Istanbul Encyclopedia*, the “ideal home” concept is handled as a myth of 1950s, Istanbul being a symbolic city that creates an image of a dream of “becoming little America” (Akpınar, 2015, p. 216). The author observed that in the current housing market, not only the usage of the contemporary materials is prominent, which create narratives of space-age places that are embellished with English names along with sparkling images that highlight the transparency; but also the cultural elements such as “doorjambs, ornamentations, eaves and blinds” to “evoke the Ottoman era amid fantasies of the old values of the villa or manor” (Akpınar, 2015, pp. 217-218).

An example for this can be seen in the advertisement of a massive housing complex project called *İstanbul Sarayları*, which means the Palaces of Istanbul (See Figure 12). The project is inspired by the most important Ottoman palaces and traditional manors of Istanbul, claiming to provide “palatial lifestyle that reaches back hundreds of years in its most modern form” (See Figure 13) (“Sinpaş İstanbul Sarayları”, n.d.). The landscape design of the project seems to be representing the Bosphorus with the use of specific elements, such as the typical pink redbud trees and an artificial lake that insinuates the Strait of Istanbul.



Figure 12. A 3D render image from *Sinpaş İstanbul Sarayları*. (“Sinpaş İstanbul Sarayları”, n.d.). The land area of the project is 125.000 m², located in Küçükçekmece, Istanbul (European side), Turkey.



Figure 13. View of Çırağan Palace from the Bosphorus, Istanbul (Moonik, 2012).
It was one of the inspirations of the *Sinpaş İstanbul Sarayları* project.

Akpınar (2015) argued that the luxurious standardisation strengthened by the built-in equipment and identical home textiles in these gated communities, are “symbolic transmissions of cultural homogenisation and social identification”, mainly conducted through the kitchen and bathrooms (p. 218). The author overall concluded that, this is a representation of the interfusion and disintegration among the different parts of the society. She wrote: “In this context, the spatialisation of the “ideal home” in a manner that sharpens social privileges is actually a visualisation, a mirror held up to the processes of hybridisation and fragmentation of other spaces in the city” (Ibid.).

As a summary, in today’s globalizing Istanbul, the advertisements motivate the consumers to long for the ideal home, with a different and elite lifestyle in luxurious standards, and consequently segregate the society into two social groups: “those who succeed in becoming part of globalisation and those who can’t” (Ibid.). Similarly, Gün (2017) stated that the cultural signs and images have become advertisement materials for the real estate developers (p. 43). Regarding these advertisements, it is argued that:

The reality of the city is perceived as the image it reflects. The city is how it is presented now, rather than what it actually is. Each building, each project reflects the ideologies behind them. Thus, in the context of created images and ideologies, the appearance of the city constantly renews itself. (Dereli, 2015, p. 8)

According to the author, the advertisements do not produce dreams, they only reproduce the gap between the viewer’s reality and his/her desires (Ibid.).

When we consider this phenomenon from a broader perspective, gated communities are spread all around the world while their characteristics differ depending on the reasons that they were developed, such as security, ethnicity and prestige, determined by the sociocultural states of the respective society (Akgün & Baycan, 2010, as cited in Akgün & Baycan, 2012, p. 88). As mentioned previously, the gated communities in Istanbul are mainly developed to provide prestigious living areas (Akgün & Baycan, 2012, pp. 92-93). This overall situation of the developments and their commercial ads are in support of Rapoport's words from 1969, which highlights the importance of values and images when it comes to people's choices regarding their houses: "Modern man may still have his own myths, and the forms of houses, while very different in their specifics, may be due to motivations not inherently different from those of the past, and still primarily socio-cultural" (p. 127).

3.3.2. Informal settlements and mass housing projects in Istanbul

Like other megacities in developing and underdeveloped countries, Istanbul has a fast-growing population with the highest density rate in Turkey⁹ (Kuipers & Broekema, 2013). The first wave of mass migration to Istanbul occurred after the Second World War, when the unemployment rates increased in the rural areas and the opportunities grew especially in Istanbul due to industrialisation (Ibid.). People migrating from the same villages built *gecekondu* houses for themselves and settled within the same neighborhoods with each other in Istanbul as well, right outside the historical peninsula's city walls (Ibid.). After some time, when the personal vehicles became more common in public, richer people started getting further from the crowded city center to the suburbs, consequently in the form of gated communities. Which is why, the authors saw gated communities as "a way of 'formal sprawl'" (Kuipers & Broekema (2013). The following change in the city was with the introduction of mass housing projects under the

⁹ According to Turkish Statistical Institute (TurkStat) data of 2019, the population of Turkey exceeded 83 million with a growth rate of 13,9 per thousand a year. 93 percent of the population lived in the cities while the rest lived in the rural areas. In Istanbul, the population exceeded 15 million with a density rate around 3000 people per square kilometres. The second most populated city was the capital Ankara, with around 5,5 million people. (Türkiye İstatistik Kurumu [TUIK], n.d.).

government-funded entity named TOKI (Housing Development Administration of Turkey) in 1980's (Ibid.).

The word *gecekondu* literally means “perched overnight”, referring to their state of being erected only in one night and improved afterwards. People started constructing their houses this way due to a loophole in the regulations: the illegal buildings were prohibited, however, the existing housings were not allowed to be demolished (Kuipers & Broekema, 2013). Rather than trying to solve this issue by providing suitable housing for immigrants, the local governments implemented basic infrastructures like water and electricity, built roads, and even issued title deeds in exchange of votes, which turned the informal sprawl to formal city (Ibid.). Thus, more than half of the building stock in Istanbul said to be having informal origins (Ibid.). The urban designers Kuipers & Broekema (2013) called this process as; “informality as strategy” (Ibid.).

In correspondence with these, and the previously mentioned arguments on vernacular buildings comprising the majority of the built environments, Oliver (2000a) highlighted: “not only does vernacular architecture constitute the majority of all domestic buildings, it is likely to remain so for most, if not all, of the twenty-first century” (p. 397). The author specified squatter homes as pervasive elements in the modern vernacular environments (Oliver, 1982, p. 121). He noted that many people do not see these shanty settlements, e.g., *barriadas* of Peru, *favelas* of Brazil or *gecekondus* of Turkey as vernacular architecture, but more as degeneration of skills and traditions (Ibid., p. 123).

However, these informal settlements result from changes within the culture of these societies, which means they are not imposed by external agencies. Therefore, they fit into Oliver's aforementioned definition of vernacular buildings, that is “*of and by the people*” (Oliver, 1993, p. 17). Moreover, Oliver (1982) argued that these settlements might be the courses of emerging new vernaculars and the procurement of new know-how, as successive waves of migrants learn to handle the urban city life (Ibid.). Concentrating on the building systems and materials of these self-made houses, Oliver (1982) elaborated that urban life requires labour throughout the year, therefore there is not enough time for building and maintenance, which means “shanty settlement dwellers cannot dig materials from the land or cut withies from saplings, as they might have done in the villages” (Ibid.). Instead, they gain a new know-how; gathering waste materials from

the city to create their houses and the related necessary elements with these materials (Ibid.). The author anticipated that sooner or later, neater solutions to these issues might emerge, and this new know-how will be augmented and be transferred to the following generations (Ibid.). Regarding this, Oliver (1982) mentioned the general disappointment in the use of modern materials in these new vernacular environments, such as corrugated iron or concrete (pp. 120-123). He argued that this was the new know-how of the settler: “The vernacular builder is a wise one who chooses to use concrete blocks, if by doing so he saves his time and effort for earning money to support his family” (Ibid., p. 123).

This aspect was also handled from an anthropological point of view, in the *Encyclopedia of Becoming Istanbul*. Usta (2015), suggested that *gecekondu* function as “rehabilitation centres where people from rural areas are urbanized in the process of industrialisation” (p. 124). The author expanded that, for a villager who has newly arrived in the city, the confinement in an apartment block and becoming isolated from the nature would create a cultural shock and hardship, which usually cause internal and external harm (Ibid.). However, the organization of *gecekondu* has factors that can ease a migrant’s life in its early stages. For instance, being surrounded by people from similar regions, and the existence of certain possibilities such as raising chickens or growing vegetables in their limited gardens enable keeping in touch with nature and provide the economic advantage of producing some part of their food (Ibid.). These aspects help villagers to live a life similar to the one in the village, and prevents a consequent psychological and social predicament by helping the people by not suddenly confronting the urban reality (Ibid.). Naturally, these situations are usually prevalent for the first-generation migrants, thus, the following generations progressively assimilate within the urbanisation process and after some point *gecekondu* does not meet their requirements (Ibid.). Eventually, these transformations can be seen as changes in the spatial configuration as well; the first-generation migrant refurbishes the promptly built house, and as they build an additional floor on top, they raise their social stature by renting that floor out to someone who migrates to the city after them (Ibid.).

Kuipers & Broekema (2013) argued that, despite the failed governmental “strategy” of tolerating the informal settlements without suggesting an alternative way, these settlements created many

lively, diverse neighborhoods. However, they are vulnerable to earthquakes with high densities and poor constructions, and lack public green areas which lead people who can afford to move to a gated community or a TOKI project consisting of modernist mass housing blocks (Ibid.). The authors underline that in many other countries, the mass housing projects which were provided as solutions to the housing demands are already seen as failures (Ibid.).

Regarding this issue, Oliver (2000b) indicated that these kinds of high-rise developments which were built after the Second World War were not designed with respect to cultural differentiations, thus caused fiascos such as in the case of Pruitt-Igoe¹⁰ project, and eventually got demolished (p. 383). The author argued that even though the motivations and justifications behind these projects might be charitable, e.g., for rehousing the low-income people who are believed to be living in deficient shelters, for upgrading the urban squatter settlements, or for supplying emergency housing for the victims of disasters, and so on, all these instances mean external interventions (Ibid.). The author explained his point of view with these words:

Mass housing, low-cost housing, community architecture, participatory building – however termed, and at whatever scale, the external ‘solution of the housing problem’ means intervention: intervention by the design decisions of those beyond and outside a culture, intervention through introduced technologies, intervention by builders, contractors, services engineers. (...) “The ethics of intervention and their relevance to vernacular architecture are therefore of paramount importance in the vital issues of the ethics of the built environment in the twenty-first century. (Oliver, 2000a, p. 399)

In short, Oliver (2000a) indicated that even the architects design responsible projects, the overall process will still be unsuccessful if they neglect the culture, i.e., values, traditional customs, building skills, experience, and collective wisdom of the people whom the buildings are designed for (p. 408).

In the light of all of these, Rapoport (1987) came to the conclusion that: “for design to become more culturally responsive, changes are essential in what architecture does, what design is seen to be and what theory is understood to be” (p. 14). This view is supported by Memmott & Davidson (2008), who wrote that a theory of architecture must take into account the historical, socioeconomic and political conditions which have had impact on the changeovers of the built environment. The authors believed that analysing the moments of cultural change in architecture

¹⁰ The story of Pruitt-Igoe will be expanded in the subsequent chapter of this thesis.

would create favourable sets of conditions for the architect and the social scientist to enact a shared and useful dialogue (p. 60). Nevertheless, as stated before, taking individual steps to create culturally responsive designs would not be sufficient. In this vein, Rapoport (1987) wrote that even if we achieve responsive, open-ended and good design, i.e., culture-specific design, along with “enlightened individuals”, these alone will not be sufficient as they will remain solitary cases without the complementary changes at the public and at the institutional level (p. 14). In his own words: “The conclusion is that for designed environments to become culturally responsive one needs to change the professional culture” (Ibid.).

4. Some landmark images of the built environment

Regarding all the information that has been provided so far, particularly the vernacular and non-vernacular environments and culturally responsive environments, in conjunction with Memmott & Davidson's idea of examining the moments of the cultural changes in architecture and Rapoport's argument on the importance of the changes in professional culture at public and institutional levels, it would be a wrap-up to give some solid examples from the modernised world. Therefore, three iconic photographs are chosen among the most influential ones with relation to the built environment. The main photographs are named as *Lunch Atop a Skyscraper* (See Figure 14), *The Demolition of Pruitt-Igoe* (See Figure 15), and *Torre David* (See Figure 17).

4.1. "Lunch Atop a Skyscraper", 1932



Figure 14. *Lunch Atop a Skyscraper*, New York. ("Lunch Atop a Skyscraper", 1932).¹¹

¹¹ The photographer is unknown, but it is guessed to be Charles C. Ebbets. The architect of the building is Raymond Hood.

The first example is one of the most beloved images of the built environment, taken in New York on the 69th floor of 30 Rockefeller Plaza in 1932 (Keskeys, n.d.). The photograph, which was actually a part of an advertisement for the building, is an ageless symbol of New York's unstoppable architectural ambition and illustrates the skyscraper boom of the early 1900's along with the bravery of ironworkers. With this iconic image, high-rise typology was brought to a mass audience, which both were consequences of modernism and the technological improvements. In addition, the people who were constructing the skyscrapers were highlighted, and the pride for the city became linked with them (Ibid.).

4.2. "The Demolition of Pruitt-Igoe", 1972



Figure 15. The demolition of the Pruitt-Igoe housing project in April 1972, St. Louis, Missouri.¹² (Balterman / Time & Life Pictures / Getty Images, 1972).

It is one of the most worldwide-famous photographs of a demolition (Keskeys, n.d.). It shows the moment when the gigantic multi-unit social housing project Pruitt-Igoe started being demolished in 1972 (Ibid.). It is said that this image has not only represented the demolition of an

¹² Photograph by Lee Balterman/Time & Life Pictures/Getty Images. Architect of the building complex was Minoru Yamasaki.

unsuccessful project, but it has also eternalized a myth that has been used for criticising Modernist architecture, denouncing public assistance programs and disgracing the residents in public housings (“The Pruitt-Igoe myth”, n.d.). In other words, it became “-rightly or wrongly- an enduring symbol of architectural failure” (Keskeys, n.d.).

As can be seen in the Figure 16, Pruitt-Igoe was a public housing complex of 33 buildings with 11 floors, which was federally financed and built by the Public Housing Administration for the middle-class people between the years 1954 and 1956 (Marshall, 2015). It was aimed to be a solution for the overcrowded inner city of St. Louis. However soon after it was built, it became an economic and racial ghetto in which only poor, black residents inhabited (Marshall, 2015; “The Pruitt-Igoe myth”, n.d.). The people who moved there were mainly the immigrants from countryside, whose first homes in St Louis had been appallingly overcrowded slums (Moore, 2012). Soon, the population of the housing complex started decreasing rapidly due to the government policies that offered funds only for the construction of the building but not for the maintenance costs, which became a burden on the poor tenants (Ibid.). In addition, the expected population growth in St. Louis turned out to be inaccurate and the population declined in time (Moore, 2012). Thus, the housing estate became unhealthy and dangerous with the increasing crime and violence. Consequently, only twenty years after they were built, the buildings were destroyed by controlled implosion (Moore, 2012).



Figure 16. *The aerial view of the Pruitt-Igoe housing complex, shortly after its completion (Bettmann/Corbis, 1956).*

Charles Jencks, who was a cultural theorist, landscape designer and architectural historian, explained the failure of the Pruitt-Igoe by accusing its design of neglecting the residents' needs, by stating that "it was designed in a purist language at odds with the architectural codes of the inhabitants" (As cited in Moore, 2001). In addition, Jencks notably asserted that "Modern architecture died in St Louis, Missouri on July 15, 1972, at 3.32pm (or thereabouts)." at the time when postmodern architecture¹³ started to replace modern architecture (As cited in Moore, 2012).

Moore (2012) stated that if the architect of Pruitt-Igoe, Yamasaki, was in agreement with Le Corbusier and other modernists, which means he believed that "rational architecture could make people behave better", Pruitt-Igoe seemed to attest the opposite, hence its end became an archetype for the fall-down of similar projects. On the other hand, the author also argued that the fiasco of Pruitt-Igoe was not solely the fault of its architect nor its design, and he asserted that the impacts of architecture alone is usually not as critical as people believed (Ibid.). He wrote:

If it was vain of modernist architects to think they could change people for the better, there is also vanity in their critics to think that design alone can change them for the worse. (...) The effects of architecture alone are rarely as significant as people think: it can certainly affect your sense of wellbeing for better or worse, and it can aid or hinder the larger forces that it serves. But politics, economics, and such things as the presence or absence of prejudice are what really change people's lives. (Moore, 2012).

The documentary film *The Pruitt-Igoe Myth: an Urban History*¹⁴, directed by Chad Freidrichs in 2011, handles the biased story of the Pruitt-Igoe from another perspective stating that "the Pruitt-Igoe Myth has, at its heart, the experiences of its residents, adding a human face to a subject that has become so depersonalized" ("The Pruitt-Igoe myth", n.d.). It is argued that the classic

¹³ Postmodernism started in the late 1970's as a reaction to Modernism, focusing on its elitist and exclusive image, along with the failures of modernist building methods and the alienating housing estates. Practically it was the rediscovery and implementation of the meanings from classical architecture into the modern structures. It is an eclectic, colourful style of art and architecture that continues in some form today. (The Royal Institute of British Architects [RIBA], n.d.) Later on, starting from the 1980's, postmodernism has also been criticised. For instance, the Critical Regionalism concept by Kenneth Frampton, which opposed both the "reductive Functionalism of Late Modern architecture and the superficial aesthetics of the newly acclaimed Postmodern architecture", supported an approach that is inspired by the circumstances in which the design practise is rooted (Szacka & Patteeuw, 2019). It is stated that Frampton defended this approach by referring to works of some architects such as Álvaro Siza or Jørn Utzon, seeing it as an attempt for a form of cultural economic and political independence within globalising trends. It is argued that this concept was to "define the elements of topography, climate, light and tectonics fundamental to the art of building" which are equally valid today (Ibid.).

¹⁴ The documentary film can be watched via its official website: <http://www.pruitt-igoe.com/watch-now.html>

structure of Pruitt-Igoe narrative has been “the quick, unexamined transition from hope to disillusionment” (“The Pruitt-Igoe myth”, n.d.). However, it is a story of a city and its residents, therefore, it should be analysed by starting from its milieu, i.e., the dominant culture of its time which emphasized homogeneity and “hygiene” in the households, political life, and neighborhood configurations (Ibid.). In other words, it is argued that the story of Pruitt-Igoe should question the legislation which prioritised the creation of such large-scale public housing projects but failed to fund it, while mentioning the way in which public housing was used as a tool for social segregation and an excuse for the clearance of working-class (Ibid.).

The documentary film is based on the archival clips and interviews of the former residents in which they expressed their memories of joy when they moved in, mentioning not only the infrastructure of the buildings such as plumbing, heating and electricity, but also the "warmth of community". As cited in Moore's (2012) article: an interviewee said, "When I moved in, it was one of the most exciting days of my life," while another one stated that his/her memories of Pruitt-Igoe were some of the best they had. Another one called her flat as a "poor man's penthouse". They remembered it as "a wonderful building with so many different smells of cooking" and "so many kids to play with" (As cited in Moore, 2012). That is to say, Yamasaki's design may not have been necessarily alienating, which was in accordance with the modern movement's principle with a neat plan in which vehicles and pedestrians were separated, offering generous open spaces between the housing blocks and flats oriented to catch daylight and views (Ibid.).

All in all, it is concluded that the changes in the cities are inevitable. Therefore, when that happens, society, architects, developers and public officials must all remember the complex lessons of Pruitt-Igoe, in order to be able to solve the future housing issues cooperatively (“The Pruitt-Igoe myth”, n.d.).

4.3. “Torre David”, 2011

The third example is an image of a half-finished skyscraper in the city center of Caracas-Venezuela that represents an unignorable reality regarding the urban development in the cities and the existence of slums, which also justifies the necessity of the collaboration between the

communities, architects and the private organizations along with governmental institutions. The particular photo which was chosen (Figure 17), and the other images (see Figures 18 & 19) from the project of Urban-ThinkTank (UTT), which included exhibitions, a book, a short film¹⁵ and lectures, won the Golden Lion prize at the 2012 Venice Biennale of Architecture ("Torre David, Venice Biennale 2012 - UTT, Iwan Baan", n.d.). The photos are praised to be illustrating "the value of documenting accidental and imperfect architecture as well as the pristine structures we are accustomed to seeing. They told a story about a building and its inhabitants in a way rarely seen before" (Keskeys, n.d.).

The abandoned 45-storey corporate office tower, which was officially named as *Centro Financiero Confinanzas* but publicly called as the *Tower of David* with reference to its investor, became the tallest, "vertical slum" by the extra-legal occupation of thousands of squatters, starting from 2007 (Munoz, 2014).

Its construction had stopped in 1994, due to the sudden death of its investor and the national banking crisis which had seriously damaged Venezuelan economy ("Projects-Torre David", n.d.; Vocativ, 2013). After the crisis, the government took over the tower, and it remained abandoned for 13 years, when the squatters arrived due to the massive shortage of housing in Caracas. Through the next 4 years, the country continued trying to cope with the housing problem and the government of Hugo Chávez, with their socialist revolution, encouraged unsettled squatters to "construct makeshift homes in more than 150 vacant buildings across the capital" (Munoz, 2014). In 2014, the Venezuelan government decided to end the occupation by relocating the inhabitants to a new social housing project called Zamora City beyond the periphery of Caracas, with the intention of reconvertng the tower into a commercial center (Munoz, 2014; "Projects-Torre David", n.d.). Since the evacuations, the building remains empty. Different proposals have been discussed on what to do with the building, without a final decision. In 2018, a massive earthquake hit Caracas, causing the last five stories of the Torre de David to tilt 25 degrees (Valencia, 2018). Today, the building remains abandoned and it is at risk of possible collapse (Ibid.).

¹⁵ The short film can be reached through UTT's website <http://u-tt.com/film/torre-david-film/>

Figure 17. *Torre David*, Caracas.¹⁶ (Baan, 2011)



Figure 18 & Figure 19. *Torre David*, Caracas. (Baan, 2011)

¹⁶ The photographer is Iwan Baan. The architect of the building is Enrique Gómez.

Within the period of occupancy of 7-8 years, the occupants established a new ecosystem in the concrete shell by merging informal adaptation with the formal structure, which had not had any infrastructure such as running water, electricity or elevators ("Publications-Torre David: Informal Vertical Communities", n.d.). They developed an internal self-sufficient organisation to provide for their daily needs, with such as, grocery shops, a gym, a church, and even a motorcycle-taxi shuttle service until the 10th floor by taking usage of the empty parking lot and vehicle ramps (Etherington, 2012; Ibid.).

In an article focusing on the social structure of the system, it is stated that the mototaxis were an item of the public life in Venezuela (Gómez, 2014, p. 217). There were community leaders and floor coordinators in the tower, who decided the allocation of the "spaces", as they were named by the residents, depending on different factors such as the age and physical conditions of each family. For example, as the access to the building was difficult due to lack of staircases, the lower floors were given to elder people and to the families with small children (Ibid.). Besides, the organization named "Cooperativa de Vivienda Caciques de Venezuela" (CCV), which was established in 2009, was setting criteria regarding the admission of new occupants for the building, and governing the norms including the fees of the maintenances and usage of the public areas while acting as a mediator between the outside world and other and the residences of the tower (Ibid., pp. 217-226).

It is stated that, on the contrary of the general belief of the public, the social structure and the normative system developed inside the tower was not completely different from outside, and they were not rejecting the traditional values. Conversely, they were in alignment with the values of the overall society and the official legal system despite the acknowledgement that "their presence in the building might have occurred in contravention of the official legal system" (Gómez, 2014, pp. 227-228-237). It is said that, due to the difficulties that the occupants experienced -such as the motivation for the initial occupation being the exceptional necessity and not free choice, and starting to live in a physical space full of challenges- functioned as a catalyst for group members to act collaboratively to develop their own set of rules inside (Ibid. p. 237). In addition, it is argued that the fact of having "pre-existent set of values", e.g., most of the community members belonging to the same evangelical church and having a pastor who had

major influence on the CCV and the residents together, helped social cohesion and cooperation within the tower while promoting the law-abiding behavior (Ibid.). Eventually, this well-organized social order of this informal community caught the attention of social scientists, architects, and urban planners, and UTT (Ibid., p. 217).

According to the UTT researchers, “the community was neither a den of criminality, nor a romantic utopia. Rather, Torre David was a building that possessed the complexity of a city” (Frearson, 2014). The photographer of the project, Iwan Baan, also described it as a whole city, which was built by the 3000 residents living back then, via inventing their own construction techniques to create “*a sort of architecture without architects*” (Etherington, 2012).

In the same manner with the authors of Vernacular Architecture Studies, namely Rapoport, Oliver, and Rudofsky, the UTT researchers and Baan saw the informal settlements as a potential for innovation and experimentation, i.e., an occurrence to discover and learn from, with the aim of using the practise of design to create “a more equitable and sustainable future” (“Publications-Torre David: Informal Vertical Communities”, n.d.).

Thus, they proposed a project (See Figures 20 & 21), hoping that it could become a model of urban intervention, by retrofitting the tower to generate its own power with the installation of related technologies and an efficient water system which would improve the conditions of the residents (Gómez, 2014, p. 218). However, unsurprisingly, their proposal faced opposition in Venezuela due to the remarkably polarized political environment and the negative impression regarding the occupation of the tower (Ibid.).

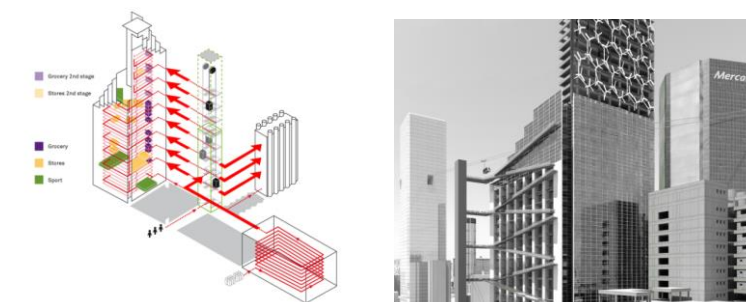


Figure 20 & Figure 21. Some images from the proposed development project developed by UTT with Architecture and Sustainable Building Technologies (SuAT) chair at ETH Zürich. (“Projects-Torre David”, n.d.).

The project of UTT gives a hint from inside the building, by means of the analysis of the social and physical organization of the fluctuating community, who would normally be living in city's slums. They created a home and a new identity for themselves, by adaptively using the existing structure according to their urgent needs (Gómez, 2014, p. 218).

All in all, the case of Torre David is argued to have become a symbol of the systemic failures of the Venezuelan government while highlighting the resilience of temporary communities inside the unfinished building (Keskeys, n.d.). Some saw it as a monument to a failed banking system, some said that it represented the country's hopes and failures (Munoz, 2014; Vocativ, 2013), while some thought that the solutions were incredibly innovative and resourceful (Ekshikaa, n.d.), and some saw that there was something to learn from it, as the UTT researchers did. In the end, as Zwerger (2019) stated in his article about vernacular architecture, it is the dwellers who give an identity to a house which provides physical shelter to themselves, and it is not possible to consider them -the dwelling and the people who live there- separately (p. 15).

Even though the case of Torre David does not represent the best usage of the built environment -at least in terms of the policies that caused the whole process, the occupants' legitimacy or the physical conditions of the building itself- it is still possible to see that humans are adaptive, and they can convert an existing, neglected place into a shelter for themselves by taking strength from their cultures, based on their own primary needs. Making use of the existing cultural patterns and daily items of Venezuela, such as the common religion and the mototaxis, the bond within the community flourished and the residents' quality of life improved. These slight improvements may not be adequate for most of us, however, as stated before, in case of inhibiting environments and under such circumstances, the opportunity of choice becomes limited. Moreover, the level of basic needs, the perception of the quality of an environment and the meanings attached are highly dependent on culture, as well as the existing opportunities.

Conclusion

The aim of this thesis was to understand the interrelationship between the built environment and culture. To do so, the questions “What is the interrelationship between architecture and culture?” and “How does architecture/built environment affect culture and vice versa?” were asked. To be able to answer these questions, it was crucial to start from the architectural theory, and try to define architecture and culture within that context. This framework of cross-cultural theories led us to explore the Environment-Behavior Studies. EBS was expanded in terms of its scope, evolution and depiction, while giving references to some other related theories such as Architectural Phenomenology and Space Syntax theory. EBS was further elaborated step by step, following the general structure of its founder Amos Rapoport’s main works. In the meantime, several examples were given to illustrate how the theoretical ideas correspond to people’s daily lives in practice. In the constant seek of the traces of culture within architecture and vice-versa, culturally responsive environments are explained as well, which could be defined as adaptive environments that can be developed and changed according to the cultural shifts. In this path, it was realised that the historical moments and their consequences were highly determinant on our built environments and our socio-cultural states. Therefore, the Modern Movement and its outcomes in the shape of new building types and new social classes were examined, as well as their effects on the cities and the citizens. In correlation with Rapoport’s repetitive emphasis on the dwellings of vernacular environments for representing the core of cultures, the emergence of Vernacular Architecture Studies was handled as well, along with the reasons for its emergence as a reaction to Modern Movement. While exemplifying these topics, instances from all over the world was given, however with more precedence to the examples from Portugal and Turkey as we could also interpret them from our perspectives. Still, it was aimed to keep an objective narrative throughout the thesis, by giving opinions from several authors, both with supportive and contrasting ideas towards the respective phenomenon. Similarly, in the last chapter, three different landmark images of the cultural shifts in built environment were handled as illustrations of complex occasions. These instances proved the need for intercultural and interdisciplinary approaches to environment and culture relations, as they have several layers and multiple sides.

As a conscious decision, all the examples and cases which were handled in this thesis were selected from a wide range of sources from different periods of time; not only from the scholar

works of well-known authors in the related disciplines, but also from other mass communication mediums such as online news or magazine pages, public advertisements, and exhibitions as timely cultural representations of the societies. This was done to highlight once more, how architectural styles and built environments are embedded in our cultural milieus, while our cultural heritages shape them in return, by constantly changing over time.

Overall, the thesis was aspired to be coherent, but at the same time a broad and multi-faceted study which could motivate the ones who read it to seek further explorations. It is hoped that the consistency of the thesis has been achieved through keeping a logical sequence, having clear links between the topics, and by giving brief explanations where necessary but not going too deep into all the subjects - except for the EBS which was the base theory that was examined.

In order to limit the scope of the study, the research had been stopped at a certain point, however, this does not limit the future opportunities for further explorations within this topic. An example to this could be including the story of the social housing project Vila d'Este in Portugal, Vila Nova de Gaia, and its social and physical rehabilitation project with the collaboration of several stakeholders such as the residents, local communities, public entities, universities and municipalities. In the future research works, the recent success of Vila d'Este might be compared to the failure of Pruitt-Igoe, as both social housing projects were densely populated, and both of them faced issues due to social and physical degeneration in time.

All in all, it is possible to conclude that culture and built environment are highly related to each other; they shape and are shaped by one another. Therefore, in order to have sustainable and culturally responsive environments, it is needed to give importance to the understanding of culture; respecting each society's values, limits, customs, beliefs and goals, as well as the physical determinants of each place. However, these understandings cannot be grasped through narrow points of views, nor can be successful unless the designers, the public and the other decisive entities collaborate with each other. Therefore, interdisciplinary and inclusive approaches should be encouraged. Moreover, giving importance and insights to other related fields in education, especially in architectural and anthropological curriculums should become prevalent.

References

- Akgün, A. A., & Baycan, T. (2012). *The Town Planning Review*, 83(1), 87-109. <https://www.jstor.org/stable/41349082>
- Akpınar, I. Y., (2015). My ideal home. In Derviş, P., Tanju B., & Tanyeli, U. (Eds.). *Becoming Istanbul: An Encyclopedia* (pp. 216-218). Istanbul: SALT/Garanti Kültür A.Ş. (Original work published 2008). <https://saltonline.org/tr/1148/becoming-istanbul?books>
- Baan, I. (2011). [Torre David] [Photograph]. *Iwan Baan*. <https://iwan.com/portfolio/venice-biennale-2012-utt-iwan-baan-torre-david/#9856>
- Balterman, L. / Time & Life Pictures / Getty Images (1972). [The second stage of demolition of the Pruitt-Igoe complex] [Photograph]. *The Guardian*. <https://www.theguardian.com/cities/2015/apr/22/pruitt-igoe-high-rise-urban-america-history-cities>
- Barros, F. C. (n.d.). [Granaries in Sistelo] [Photograph]. Simões, R.N., Cabral, I., Barros, F. C., Carlos, G., Correia, M., Marques, B., & Guedes, M. C. (2019) Vernacular architecture in Portugal. In Sayigh, A. (Ed.), *Sustainable vernacular architecture: How the past can enrich the future* (pp. 55-92). Springer. <https://doi.org/10.1007/978-3-030-06185-2>
- Baycan-Levent T. & Gülümser, A. A. (2007). Gated communities in Istanbul: The new walls of the city. *EURODIV paper in the third conference "Diversity in cities: Visible and invisible walls"*. FEEM (Fondazione Eni Enrico Mattei).
- Bettmann / Corbis. (1956). [The Pruitt-Igoe public housing complex in St Louis in 1956] [Photograph]. *The Guardian*. <https://www.theguardian.com/cities/2015/apr/22/pruitt-igoe-high-rise-urban-america-history-cities>
- Boğaç, C. (2005). Should architecture mean anything? Explorations into approaches to study environmental meaning in architecture. In *5th International Postgraduate Research Conference in the Built and Human Environment* (pp. 312-320). The University of Salford: Research Institute for the Built and Human Environment (BuHu).

- Boğaç, C. (2009). Place attachment in a foreign settlement. *Journal of Environmental Psychology*, 29(2), 267-278. DOI: <https://doi.org/10.1016/j.jenvp.2009.01.001>
- Braun, L. (2005). Harmony between the natural and the man-made. In Schwarz, E. (Ed.), *Proceedings of the first Holcim Forum for sustainable construction 2004: Basic needs*. (pp. 104-119). Zurich: Stäubli Verlag. Retrieved 12 May 2019 from <https://www.lafargeholcim-foundation.org/media/publications/basic-needs-first-forum-holcim-forum-2004-in-zurich?backTo=/media/publications/all-publications>
- Brawne, M. (2003). *Architectural thought: The design process and the expectant eye*. Architectural Press. Great Britain: Architectural Press.
- Codex. (2012). [Parthénon. Chapiteau représentatif de l'ordre dorique] [Photograph]. *Wikimedia Commons*. <https://commons.wikimedia.org/wiki/File:Chapiteau-Parthenon.jpg>
- Dereli, A. (2015). Advertisement. In Derviş, P., Tanju B., & Tanyeli, U. (Eds.). *Becoming Istanbul: An Encyclopedia* (pp. 8-10). Istanbul: SALT/Garanti Kültür A.Ş. (Original work published 2008). <https://saltonline.org/tr/1148/becoming-istanbul?books>
- Derviş, P., Tanju B., & Tanyeli, U. (Eds.). (2015). *Becoming Istanbul: An encyclopedia*. Istanbul: SALT/Garanti Kültür A.Ş. (Original work published 2008). <https://saltonline.org/tr/1148/becoming-istanbul?books>
- Ekshikaa, S. (n.d.). The Story of the Tower of David: The World's tallest slum in Venezuela. *Arch2O*. Retrieved 12 December 2020, from <https://www.arch2o.com/the-story-of-the-tower-of-david-the-worlds-tallest-slum-in-venezuela/>
- Erdoğan, N., Müştak S., & Kaplan, S. (2016). *International Journal of Contemporary Architecture "The New ARCH"*, 3(2), 1-7. DOI: 10.14621/tna.20160201
- Etherington, R. (2012, September 6). Iwan Baan on "architecture without architects". *Dezeen*. <https://www.dezeen.com/2012/09/06/iwan-baan-on-torre-david/>

- Ettehad, S., Azeri, A. R. K., & Kari, G. (2014). The role of culture in promoting architectural identity. *European Online Journal of Natural and Social Sciences*, 3(4: *Special Issue on Architecture, Urbanism, and Civil Engineering*), 410–418. Retrieved from https://www.researchgate.net/publication/272174216_The_Role_of_Culture_in_Promoting_Architectural_Identity
- Fisher, S. (2016a). Philosophy of architecture. *The Stanford Encyclopedia of Philosophy* (Winter2016 ed.). E. N. Zalta (Ed.). Metaphysics Research Lab, Stanford University. Retrieved August 02, 2020 from <https://plato.stanford.edu/entries/architecture/>
- Fisher, S. (2016b). Philosophy of architecture in historical perspective - Supplement to Philosophy of architecture. *The Stanford Encyclopedia of Philosophy* (Winter2016 ed.). E. N. Zalta (Ed.). Metaphysics Research Lab, Stanford University. Retrieved August 02, 2020 from <https://plato.stanford.edu/entries/architecture/perspective.html>
- Frearson, A. (2014, July 24). "Extra-legal occupation" of Venezuela's Torre David tower ends in forced evictions. *Dezeen*. <https://www.dezeen.com/2014/07/24/torre-david-mass-eviction-urban-think-tank-response/>
- Fussler, C. (2005). Good architecture and good policies. In Schwarz, E. (Ed.), *Proceedings of the first Holcim Forum for sustainable construction 2004: Basic needs*. (pp. 16-23). Zurich: Stäubli Verlag. Retrieved 12 May 2019 from <https://www.lafargeholcim-foundation.org/media/publications/basic-needs-first-forum-holcim-forum-2004-in-zurich?backTo=/media/publications/all-publications>
- Gómez, M. (2014). The Tower of David: Social Order in a Vertical Community. *FIU Law Review*, 10(1), 215-238. DOI: 10.25148/lawrev.10.1.13
- Guedes, M. C., Matias, L., & Santos, C. P. (2009). Thermal comfort criteria and building design: Field work in Portugal. *Renewable Energy*, 1-5. DOI:10.1016/j.renene.2009.03.004

- Gün, A. (2017). Using imitation as a design parameter in gated communities: The case of Istanbul. In Arabacıoğlu, B. C., & Arabacıoğlu, P. (Eds.). *Proceedings of the 3rd International Conference on New Trends in Architecture and Interior Design*. (pp. 41-53). Helsinki: ICNTAD Secretariat. <https://icntadconference.com/wp-content/uploads/2018/08/ICNTAD2017-PROCEEDING-BOOKS.pdf>
- Keskeys, P. (n.d.). 10 photographs that changed architecture: These iconic images cause us to rethink the way we view our built environment. *Architizer*. <https://architizer.com/blog/inspiration/collections/photographs-that-changed-architecture/>
- Kuipers, S., & Broekema, H. (2013, December 16). Failed policy, successful architecture: Selfmade city Istanbul. *FA Failed Architecture*. <https://failedarchitecture.com/failed-policy-successful-architecture-self-made-city-istanbul/>
- Leach, N. (Ed.). (2005). *Rethinking architecture: A reader in cultural theory*. London and New York: Routledge. (Original work published in 1997)
- Leston E., Santos, A. N., Osman, A., & Somol, R.E. (2005). The social walls of gated communities. In Schwarz, E. (Ed.), *Proceedings of the first Holcim Forum for sustainable construction 2004: Basic needs*. (pp. 150-155). Zurich: Stäubli Verlag. Retrieved 12 May 2019 from <https://www.lafargeholcim-foundation.org/media/publications/basic-needs-first-forum-holcim-forum-2004-in-zurich?backTo=/media/publications/all-publications>
- Lunch Atop a Skyscraper* [Photograph]. (1932). 100 photos: The most influential images of all time. *TIME*. <http://100photos.time.com/>
- Magalhães, S. M. C. (2016). *The relationship between heating energy use, indoor temperature and heating energy demand under reference conditions in residential buildings*. [Doctoral dissertation, Faculty of Engineering of the University of Porto]. Retrieved from <https://repositorio-aberto.up.pt/bitstream/10216/84427/2/138199.pdf>
- Marshall, C. (2015, April 22). Pruitt-Igoe: The troubled high-rise that came to define urban America – a history of cities in 50 buildings, day 21. *The Guardian*. <https://www.theguardian.com/cities/2015/apr/22/pruitt-igoe-high-rise-urban-america-history-cities>

- Matias, L., Almeida, S., Pina Santos, C., Rebelo, M., & Correia Guedes, M. (2009). Adaptive thermal comfort for buildings in Portugal based on occupants' thermal perception. *Proceedings of the PLEA (Passive and Low Energy Architecture) 2009 Conference "Architecture Energy and the Occupant's Perspective"*.
<https://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.626.2778&rep=rep1&type=pdf>
- Memmott, P., & Davidson, J. (2007). 'Architecture': exploring the treatise. *Architectural Theory Review*, 12(1), 78–96. Retrieved from <https://doi.org/10.1080/13264820701553112>
- Memmott, P., & Davidson, J. (2008). On theory: Exploring a cross-cultural theory of architecture. *Traditional Dwellings and Settlements Review*, 19(2), 51–68. Retrieved from <http://iaste.org/tdsr/spring2008/>
- Moonik. (2012). [View of Çırağan Palace from the Bosphorus, Istanbul, Turkey] [Photograph]. *Wikimedia Commons*.
https://commons.wikimedia.org/wiki/File:%C3%87%C4%B1ra%C4%9Fan_Palace_from_the_Bosphorus,_Istanbul,_Turkey_001.jpg
- Moore, K. (2003). Genius Loci: Hidden truth or hidden agenda?. In Smith, K. (Ed.). (2012). *Introducing architectural theory: Debating a discipline*. (pp. 387-394). New York: Routledge.
- Moore, R. (2001, November 20). Minoru Yamasaki. *Prospect*.
<https://www.prospectmagazine.co.uk/essays/minoruyamasaki>
- Moore, R. (2012, February 26). Pruitt-Igoe: Death of the American urban dream. *The Guardian*.
<https://www.theguardian.com/artanddesign/2012/feb/26/pruitt-igoe-myth-film-review>
- Munoz, B. (2014, December 10). *Emptying the Tower of David, the World's Tallest Ghetto*.
<https://www.vocativ.com/world/venezuela-world/tower-of-david-evictions/?page=all>
- Munro, A. (2017, June 29). Mass society. *Encyclopedia Britannica*. Retrieved December 12, 2020, from <https://www.britannica.com/topic/mass-society>
- Oliver, P. (1978). Why study vernacular architecture? In Oliver, P. (2006). *Built to meet need: Cultural issues in vernacular architecture*. (pp. 3-16). Oxford: Elsevier.

- Oliver, P. (1982). Vernacular know-how. In Oliver, P. (2006). *Built to meet need: Cultural issues in vernacular architecture*. (pp. 109-127). Oxford: Elsevier.
- Oliver, P. (1986). Tout confort: Culture and comfort. In Oliver, P. (2006). *Built to meet need: Cultural issues in vernacular architecture*. (pp. 87-105). Oxford: Elsevier.
- Oliver, P. (1993). The importance of the study of vernacular architecture. In Oliver, P. (2006). *Built to meet need: Cultural issues in vernacular architecture*. (pp. 17-26). Oxford: Elsevier.
- Oliver, P. (2000a). Ethics and vernacular architecture. In Oliver, P. (2006). *Built to meet need: Cultural issues in vernacular architecture*. (pp. 395-409). Oxford: Elsevier.
- Oliver, P. (2000b). Tradition by itself ... In Oliver, P. (2006). *Built to meet need: Cultural issues in vernacular architecture*. (pp. 383-393). Oxford: Elsevier.
- Oliver, P. (2002). Necessity and sustainability: The impending crisis. In Oliver, P. (2006). *Built to meet need: Cultural issues in vernacular architecture*. (pp. 411-425). Oxford: Elsevier.
- Oliver, P. (2003). *Dwellings: The vernacular house world wide*. London: Phaidon. (Original work published 1987).
- Projects - Torre David*. (n.d). Urban ThinkTank (UTT). <http://u-tt.com/project/torre-david/>
- Publications - Torre David: Informal Vertical Communities*. (n.d). Urban ThinkTank (UTT). <http://u-tt.com/publication/torre-david-informal-vertical-communities/>
- Rapoport, A. (1969). *House Form and Culture*. (P. L. Wagner, Ed.). Englewood Cliffs, New Jersey: Prentice-Hall.
- Rapoport, A. (1987). On the cultural responsiveness of architecture. *Journal of Architectural Education* (1984-), 41(1), 10-15. DOI: 10.2307/1424903
- Rapoport, A. (2000). Theory, Culture and Housing. *Housing, Theory and Society*, 17(4), 145-165. DOI: 10.1080/140360900300108573
- Rapoport, A. (2005). *Culture, architecture, and design*. Chicago: Locke Science Publishing Company.

- Rapoport, A. (2008a). Environment-Behavior studies: Past, present, and future. *Journal of Architectural and Planning Research*, 25(4), 276–281. Retrieved from <https://www.jstor.org/stable/43030843>
- Rapoport, A. (2008b). Some further thoughts on culture and environment. *Archnet-IJAR, International Journal of Architectural Research*, 2(1), 16-39. DOI: 10.26687/archnet-ijar.v2i1.58
- RIBA (The Royal Institute of British Architects). (n.d.). *Postmodernism in architecture*. <https://www.architecture.com/explore-architecture/postmodernism>
- Rudofsky, B. (1964). *Architecture without architects: An introduction to nonpedigreed architecture*. New York, NY: The Museum of Modern Art (MoMA). https://www.moma.org/documents/moma_catalogue_3459_300062280.pdf
- Seamon, D. (1987). Phenomenology and environment-behavior research. In E. H. Zube & G. T. Moore (Eds.), *Advances in environment, behavior and design* (pp. 3–27). New York, NY: Plenum. https://doi.org/10.1007/978-1-4899-5345-2_1
- Seamon, D. (2020). In memoriam: Bill Hillier (1937-2019). *Environmental & Architectural Phenomenology*, 31(1), 6–9. Kansas State University Architecture Department. <https://newprairiepress.org/eap/vol31/iss1/1/>
- Seamon, D. (n.d.). *Phenomenology, place, environment, and architecture: A review of the literature*. Kansas State University. Retrieved from <https://ksu.academia.edu/DavidSeamon>
- Simões, R.N., Cabral, I., Barros, F. C., Carlos, G., Correia, M., Marques, B., & Guedes, M. C. (2019) Vernacular architecture in Portugal. In Sayigh, A. (Ed.), *Sustainable vernacular architecture: How the past can enrich the future* (pp. 55-92). Springer. <https://doi.org/10.1007/978-3-030-06185-2>
- Sinpaş İstanbul Sarayları*. (n.d.). Realtyproject. Retrieved 24 December 2020, from <http://www.realtyproject.com/sinpas-istanbul-saraylari-en>
- Smith, K. (Ed.). (2012). *Introducing architectural theory: Debating a discipline*. New York, NY: Routledge.

Space Syntax Network. (n.d.). <https://www.spacesyntax.net/>

SSS11 (11th International Space Syntax Symposium, Lisbon). (n.d.).
<http://www.11ssslisbon.pt/about-space-syntax/>

SSS12 (12th International Space Syntax Symposium, Beijing). (n.d.).
<http://www.12sssbeijing.com/about/>

Szacka, L., & Patteeuw, V. (2019, November 22). Critical Regionalism for our time. *The Architectural Review*. <https://www.architectural-review.com/essays/critical-regionalism-for-our-time>

Tavares, R. (2019, February 4). É com certeza uma fria casa portuguesa. *Público*. Retrieved December 10, 2020 from <https://www.publico.pt/2019/02/04/sociedade/opiniao/certeza-fria-casa-portuguesa-1860570>

The Pruitt-Igoe myth. (n.d.). <http://www.pruitt-igoe.com/about.html>

Torre David, Venice Biennale 2011 - UTT, Iwan Baan: "Torre David/Gran Horizonte". Iwan Baan. Retrieved 2 December 2020, from <https://iwan.com/portfolio/venice-biennale-2012-utt-iwan-baan-torre-david/#9856>

Torus, B. (2011). Learning from vernacular Turkish house: Designing mass-customized houses in Mardin. *Intercultural Understanding*, 1, 105-112.

Tosun, V. (2019). Environmental cues: A methodology for studying meaning in built environment. *The Turkish Online Journal of Design Art and Communication*, 9(2), 318-333. Retrieved from <https://dergipark.org.tr/en/pub/tojdac/issue/44330/547828>

TUIK (Türkiye İstatistik Kurumu / Turkish Statistical Institute). (n.d.). Retrieved 21 December 2020, from <https://www.tuik.gov.tr/>

Turan, M. (1975). Vernacular architecture and environmental influences: An analytic and a comparative study. *M.E.T.U. Journal of the Faculty of Architecture*, 1(2), 227-246.
http://jfa.arch.metu.edu.tr/archive/0258-5316/1975/cilt01/sayi_2/227-246.pdf

- Türkiye Cumhuriyeti Kültür ve Turizm Bakanlığı (TCKTB) (Republic of Turkey, Ministry of Culture and Tourism). (n.d.). [Göreme Milli Parkı ve Kapadokya] [Photograph]. *Göreme Milli Parkı ve Kapadokya (Nevşehir)*. <http://www.kulturvarliklari.gov.tr/TR-44433/goreme-milli-parki-ve-kapadokya-nevsehir.html>
- Türkiye Cumhuriyeti Kültür ve Turizm Bakanlığı (TCKTB) (Republic of Turkey, Ministry of Culture and Tourism). (n.d.). *Turkish houses*. Retrieved 24 December 2020, from <https://www.ktb.gov.tr/EN-117798/turkish-houses.html>
- UCL Space Syntax - Online Training Platform (n.d.). <https://www.spacesyntax.online/>
- UNESCO, (n.d.). *Göreme National Park and the Rock Sites of Cappadocia*. Retrieved 24 December 2020, from <http://whc.unesco.org/en/list/357/>
- Usta, B. (2015). Gecekondü. In Derviş, P., Tanju B., & Tanyeli, U. (Eds.). *Becoming Istanbul: An Encyclopedia* (pp. 124-126). Istanbul: SALT/Garanti Kültür A.Ş. (Original work published 2008). <https://saltonline.org/tr/1148/becoming-istanbul?books>
- Valencia, N. (2018, August 27). Last Floors of the Infamous Torre de David Have Tilted Following an Earthquake. *ArchDaily*. Retrieved December 10, 2020 from <https://www.archdaily.com/900858/last-floors-of-the-infamous-torre-de-david-have-tilted-following-an-earthquake>
- Vellinga, M. (2017). A Conversation with architects: Paul Oliver and the anthropology of shelter. *Architectural Theory Review*, 21(1), 9-26. DOI: 10.1080/13264826.2016.1256332
- Vocativ. (2013, August 1). *The world's tallest slum: Caracas' notorious Tower of David* [Video]. Youtube. Retrieved from http://www.youtube.com/watch?v=v1p9jIQW0k#t=211&ab_channel=Vocativ
- Zwerger, K. (2019). Vernacular architecture: A term denoting and transporting diverse content. *Built Heritage* 3, 14-25. <https://doi.org/10.1186/BF03545716>