



## Analysis of Vernacular Architecture Studies in Turkey

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### ABSTRACT

The definition of vernacular architecture varies in recent decades. Some scholars figure the term as examples of old, rural, vernacular, pre-industrial buildings, some define it as common building of any sort. Turkey is a very rich and unique geography in terms of vernacular architecture and recognizing the diversity that the subject has reached, the studies increase and vary. The main interest of this paper is to explore the continuities and changes in vernacular architecture studies in Turkey. The research uses a quantitative method by analysing postgraduate theses written in the universities. The theses, which are open to access in the Higher Education Council Thesis Centre are scrutinised according to their subject matter, scope, content, methodology and case studies. The aim is to identify and categorize the approaches on vernacular architecture in Turkey and thus to develop an academic self-assessment by creating a data-based ground for theoretical discussions in the field.

**Keywords:** vernacular architecture, vernacular heritage, traditional architecture, post-graduate theses.

### 1. INTRODUCTION

What is vernacular architecture? It is clear that the answer of this question vary and there is yet no agreement on its definition. The conventional understanding of the term 'vernacular' is equivalent to the word 'native' meaning one belonging to the land in which he/she was born. However, the synonyms of the word are varied; anonymous, popular, indigenous, primitive, spontaneous, every day and shared are parts of these expressions (Lawrence, 2013). While some scholars figure the term as examples of old, rural, vernacular, pre-industrial buildings, some define it as common building of any sort. It can be asserted that vernacular architecture has turned into an umbrella concept that includes many variable comprehensions.

G. Pagano, B. Rudofsky, P. Oliver, D. Upton, A. Rapaport, the pioneering scholars, conducted many researches about vernacular architecture of various geographies and brought the term into question in terms of scope, content and methodology as a scientific field of study. While the studies included generally informal, rural and craftsmanship buildings dating to the pre-industrial age at the beginning of the 20th century, the interest enlarged through local and ordinary buildings being examples of common culture after the second half of the same century (Lawrence, 1983; Wells, 1986). With these new insights, architectural products belonging to primitive, local cultures in many geographies of the world have entered the field of study. Not only the buildings, but also the whole physical environment with tangible and intangible components have become subjects of the studies. By the last quarter of the century, 'sustainability', 'learning from vernacular', 'ecological architecture' has become the new concepts of the field and continue to dominate in discourse today (Vellinga, 2013).

In Turkish, the term 'vernacular' is often used equivalent to the word 'traditional' defined as 'cultural relics, habits, knowledge, customs and behaviours, which have the power of sanction and are respected and transmitted from generation to generation due to their old age in a community' in the online dictionary of Turkish Language Society. Hasol (1995),



one of the notables of architecture in Turkey, defines the term in his architectural dictionary as 'anonymous architecture of indigenous people that is realized by using local vernacular techniques and forms with the materials provided in their own environment'. He adds that 'houses are often built by their owners with local materials in accordance with building traditions and climatic conditions, which is also called folk architecture'. In addition, Sözen and Tanyeli (2007) define it as 'any kind of construction technique that is specific to the pre-industrial age'. Still in Turkey the term is accepted as equivalent with 'architecture without architect', 'regional architecture', 'folk architecture', 'folk building art', 'anonymous architecture' in many publications.

The study of vernacular architecture in Turkey owns its origins to the idea of 'Turkish House' mainly started around 1920s. Historians and architects concentrated on defining and understanding what 'Turkish House' is both as an architectural and cultural artefact. While some scholars proclaimed the inadequacies and dichotomies in the interpretation of Turkish House as an umbrella concept for all Anatolia, the idea is commonly accepted and the studies continued to focus mainly on typology, architectural elements, use of materials and construction techniques of Turkish Houses. In time the studies grew as a part of larger academic concern for documenting and understanding various vernacular examples from various regions of Anatolia. By now, studies on rural areas are also covered within the scope of vernacular architecture. There are also bibliographic studies in the literature that bring all these studies together (Tanyeli and Sözen, 1984; Kahya, 1998).

All along a remarkable number of scholars have concerned with the varying trends, approaches and understandings in the field of vernacular architecture. For example, Eyüce (2005) categorises the vernacular studies into two, one of first is more descriptive concentrating on the formal characters and physical explanations of vernacular buildings while the other emphasizes and highlights socio-cultural factors and space-culture relations. Likewise, Asadpour (2020) recently asserts that previous approaches have limited the analysis of vernacular buildings to aesthetic and formal features whereas in recent years socio-cultural or anthropological attitudes seek interpretation, not description and in the future, these issues will be more critical to researchers than previously. On the other hand, Vellinga (2006) develops a critical approach to those positioning vernacular as old or outside what is new and draws attention to dynamic character of vernacular, which may help to open new horizons for vernacular studies.

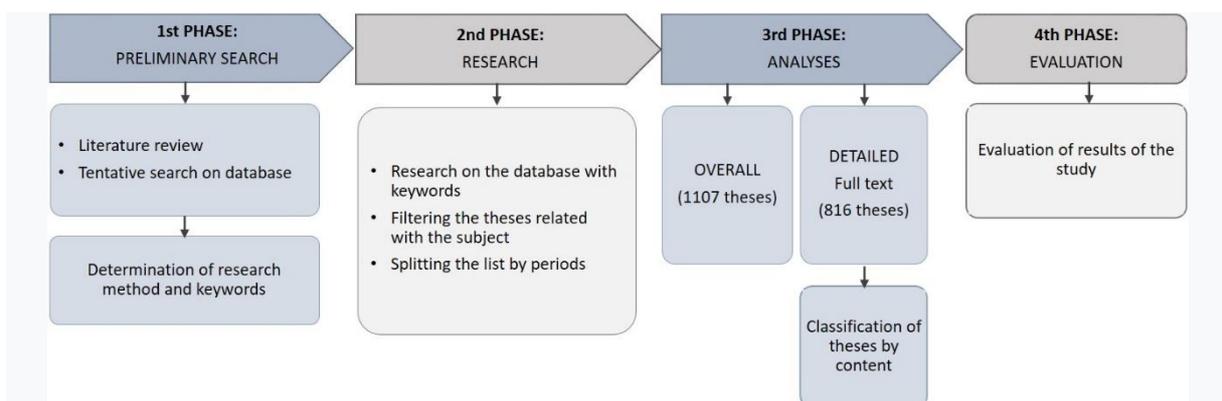
In parallel with the ongoing debates on vernacular architecture, the conservation of it has grown as a separate and specific field of academic concern. In many relevant documents shared by ICOMOS, it is stated that vernacular buildings are recognized by a manner of building shared by the community. They have a recognisable, local or regional character responsive to the environment and culture. Thus, it is necessary to establish principles for the care and protection of built vernacular heritage (ICOMOS, 1999). Following these declarations and principles, the studies in Turkey expanded and became diversified including debates of heritage conservation.

Let the debates on the interpretation and conservation of vernacular architecture continue, the aim of this study is to enlighten the vernacular studies in Turkey by making a data-based analysis. The research focuses basically on the studies about vernacular houses and housing settlements, which constitute the most significant component of the field. Postgraduate theses in Turkey are analysed in terms of their scope, purpose, content, methodology and distribution of case study areas. The results are digitized and interpreted in the light of ongoing approaches and understandings in the field. The discussions on the current interpretation of vernacular architecture in Turkey can only be based on qualitative assumptions because there is yet no scientific and quantitative analysis about the studies. Depending on this lack, the research aims to find the answers to following questions: How is vernacular architecture commonly conceptualized in academic studies in Turkey? To what extent academic studies include vernacular architecture of Turkey? How and in what

direction have the studies progressed? Which subjects, contents and methods are included in the field? Which geographical regions are subject to studies? It is anticipated that the answers to these questions will constitute a quantitative scientific basis for the ongoing discussions about vernacular architecture and help to open new horizons for future studies.

## 2. METHODOLOGY

The research consists of four phases, which of first includes preliminary works as literature review and determination of keywords (Fig. 1). The second phase is to search the database with determined keywords and to filter the list of studies accordingly. The third phase includes the examination of the theses in detail and the last stage consists of evaluation of the results obtained.



**Figure 1.** Phases of the study

The research is limited to 'post-graduate theses' which may be regarded as the ground on which scientific knowledge is processed in a healthy and objective way. In addition, depending on the wide frame of the term 'vernacular', the study is limited to 'houses' and 'housing settlements' that have widespread and significant examples in Turkey and accepted as the efficient sampling area for data analysis.

All postgraduate theses completed with scientific approval at universities in Turkey are archived in the National Thesis Centre of the Council of Higher Education which is open to researchers via the 'https://tez.yok.gov.tr' search engine with the permission of the thesis author. On this basis, this database is chosen as the access tool to be used in the study. The subject is studied with a wide range of terms and concepts, such as Turkish House, local architecture, rural architecture, anonymous architecture, folk architecture, sustainable / ecologic architecture etc. Besides, the subject also comes up within the frame of heritage, conservation, restoration, historical environment etc. Thus, the keywords are determined in a large frame as follows: Vernacular, Vernacular, Rural, Conservation, Renovation, Restoration, Historical, Culture, Cultural, Site, Urban, Folk, Local, Regional, Folklore, Village, Management.

The second phase of the study is the research on database with determined keywords. The result list consists of 1107 theses related to vernacular housing, of which 816 theses have full text access. In the third stage all studies are digitised according to thesis type, date and case study area and those with full texts are analysed in detail according to their subject and scope.

## 3. RESEARCH FINDINGS

### 3.1 Overall Review

A total of 1107 postgraduate studies related to 'vernacular architecture' are attained and examined in the research. Among these, full texts of 816 theses are open to access, while 291 of them have only the abstracts. The oldest study is written in 1979 and the research

is presented as limited by this date. In order to compile the data on the theses between 1979 and 2020 and to reveal the differences along this period, the theses are examined by dividing the time interval back from 2020 into ten-year periods (Table 1).

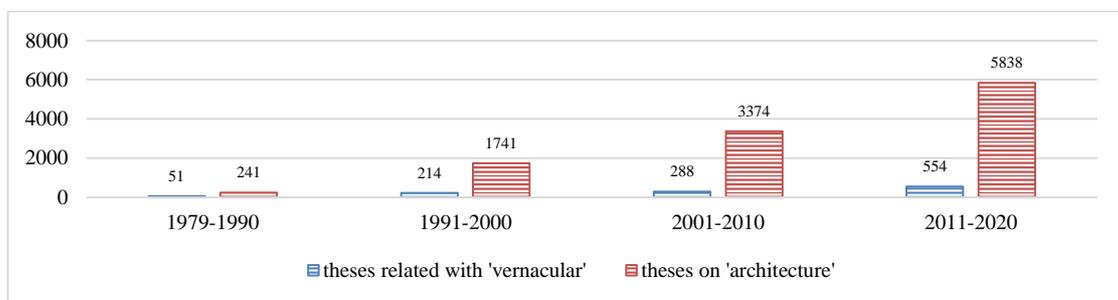
**Table 1.** The number of theses according to years and accessibility

Periods	Theses with full text	Theses with abstract only	Total
1979-1990	22	29	51
1991-2000	60	154	214
2001-2010	198	90	288
2011-2020	536	18	554
<b>Total</b>	<b>816</b>	<b>291</b>	<b>1107</b>

Table 2 shows the number of post-graduate theses in 'architecture' and the ones related to vernacular architecture. According to the table, there are 11.194 theses written in this period in the field of architecture and the ratio of theses related to vernacular architecture is only 9.89% in total. Despite the significant increase in the number of theses on the subject periodically, the ratio of these theses among the field of architecture is gradually decreasing (Fig. 2).

**Table 2.** The number of theses in the field of architecture and on vernacular architecture

Periods	Theses on subject of 'Architecture'	Theses related with 'Vernacular'	Ratio
1979-1990	241	51	21,16%
1991-2000	1741	214	12,29%
2001-2010	3374	288	8,54%
2011-2020	5838	554	9,49%
<b>Total</b>	<b>11194</b>	<b>1107</b>	<b>9,89%</b>



**Figure 2:** The change in the number of theses by years

The number of the studies distributed according to the academic degrees are shown in Table 3. The ratio of master and doctoral theses are quiet the same in all periods and in total with percentage of 89 – 11, respectively.

**Table 3:** Number of the theses distributed by academic degrees

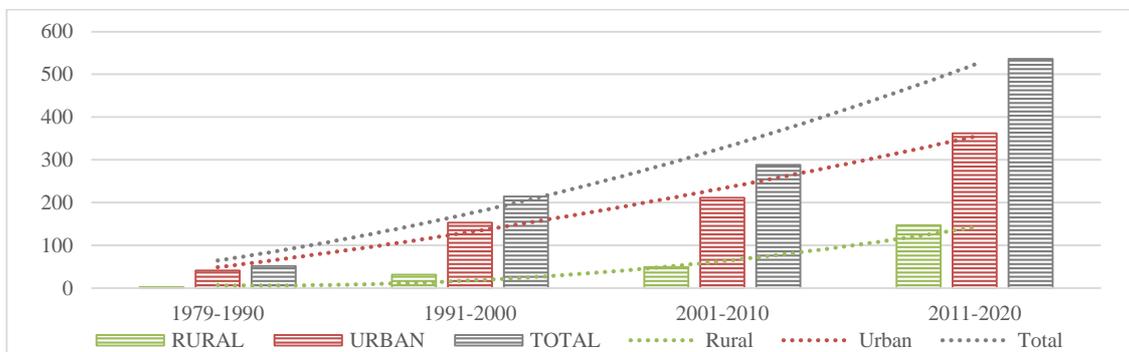
	1979-1990		1991-2000		2001-2010		2011-2020		Total	
<b>Master thesis</b>	42	82%	184	86%	258	89%	500	90%	984	89%
<b>Doctoral thesis</b>	9	18%	29	14%	28	10%	53	10%	119	11%
<b>Proficiency in Art</b>	0	0%	1	0%	2	1%	1	0%	4	0%
<b>Total</b>	<b>51</b>		<b>214</b>		<b>288</b>		<b>554</b>		<b>1107</b>	

All 1107 theses are also examined through the case studies and it is found out that in 94% of the total, there is at least one housing settlement subject to the research. The case

study areas are analysed according to their locations and the type of the settlement being either rural or urban. The urban-rural distinction is handled with different aspects in different disciplines, and in this context, Turkish statistical Institute [TUIK] is still working on the definition of 'rural' based on the statistical office of the European Union [EUROSTAT] norms formulated on population density in the urban-rural distinction (Urban-rural definition revision). In addition, the fact that many towns and village settlements were transformed into neighborhood status with the law numbered 6360 made it difficult to carry out inventory studies on rural settlements. In this study, considering the current uncertainties and regarding that evaluation by the characteristics of the settlements requires a comprehensive research, the city and district centers are considered as 'urban' and those outside are considered as 'rural'. Accordingly, 82% of the theses between 1979-1990 have case studies in urban areas (Table 4). With the decrease in the last 30 years, this rate is 71% in the general average. Studies on rural areas, on the other hand, have increased especially in the last ten years, in conjunction with related studies in literature due to fact that the rural heritage is under threat today. There are 232 studies on rural settlements taking up 21% of the overall total (Fig. 3). The rate of thesis that includes both types of settlements is 2%.

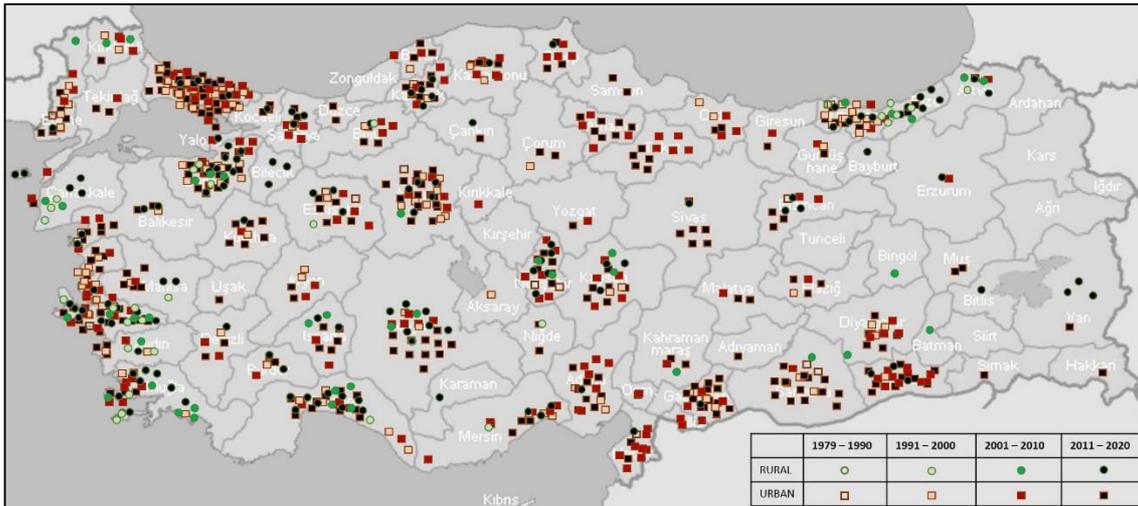
**Table 4.** Type of settlements studied and their distribution by years

Type of Settlement	1979-1990		1991-2000		2001-2010		2011-2020		Total	
Urban	41	80%	153	71%	211	73%	362	68%	782	71%
Rural	2	4%	31	14%	49	17%	147	27%	232	21%
Both	3	6%	4	2%	9	3%	9	2%	25	2%
None	5	10%	26	12%	19	7%	18	3%	68	6%
<b>Total</b>	<b>51</b>		<b>214</b>		<b>288</b>		<b>536</b>		<b>1107</b>	



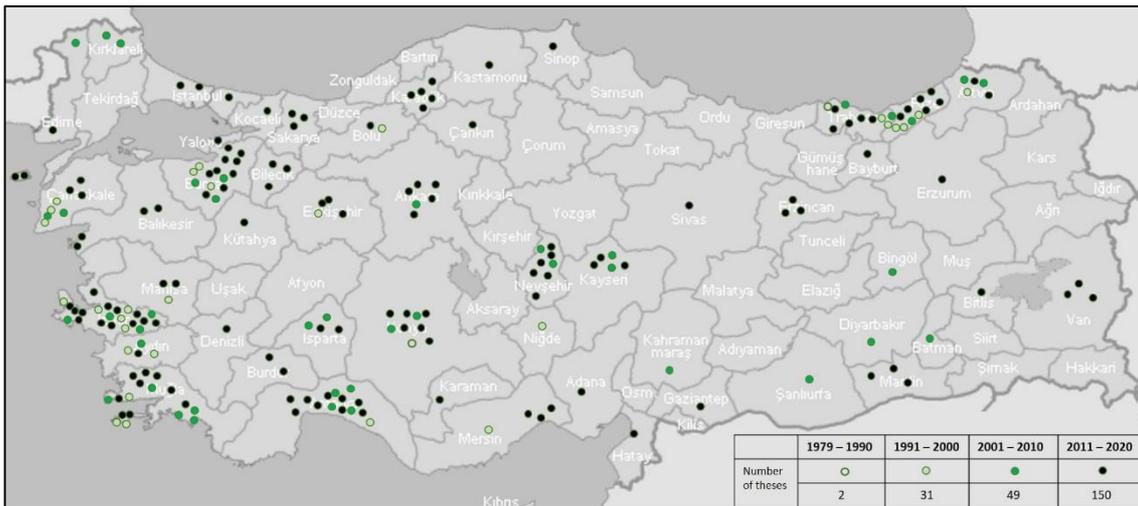
**Figure 3.** The periodical change in the type of the settlements studied

The locations of the settlements selected as the study area in the theses are shown on the map of Turkey in Figure 4. The most studied province is Istanbul with total number of 65, of which 95% is urban. Apart from Istanbul, the number of studies in big cities such as Izmir, Ankara, Bursa, Trabzon and Antalya is higher than in other provinces. In addition, the Eastern Black Sea, Erzincan Kemaliye, Karabük Safranbolu, Sakarya Taraklı, Bursa Mudanya districts also stand out with the number of researches. It's clearly seen that the researches are concentrated in certain provinces, whereas there are very few studies especially in the Eastern Anatolia Region.



**Figure 4.** Locations of case studies on map of Turkey (*symbols are placed approximately*)

Likewise, the locations of the study areas of all the theses on rural settlements are concentrated in the provinces of Bursa, İzmir, Muğla, Antalya and the Eastern Black Sea region (Fig. 5), whereas the studies in the Eastern and South Eastern Regions are limited in number.



**Figure 5.** Locations of rural case studies on map of Turkey

There are also 40 studies conducted abroad. Three of these theses were completed between 2001-2010, 37 of them were completed between 2011-2020. Iran comes to the fore with being subject to 13 theses and Iraq comes second with 7 studies. In addition to African and Middle Eastern countries, studies conducted in overseas countries such as Japan, Colombia and Cambodia are also noteworthy.

### 3.2 Detailed Review

Overall review above is held on 1107 theses that are related to vernacular architecture. In the next stage of the study, 816 theses reached in full texts are classified according to their scope and subjects to be evaluated in detail.

Eyüce (2005) states that there are two different approaches in studies on vernacular architecture. According to the author, a significant part of the studies focuses on the effect of tangible features on architectural formation, while in the other point of view, the effects of culture and tradition are emphasized. On the other hand, Kâhya (1998) has compiled vernacular studies under seven main headings in his bibliography: 'General topics, Plan

types, Materials, Tent-House-Mansion, Architectural Elements, Decorations, House-related belief-ceremony-life'. In this classification, the physical features are gathered under different headings while the cultural issues are mentioned as a separate topic, in a similar way with Eyüce's approach. However, many of the publications in the bibliography are repeated under different topics as all are associated with each other in terms of the main scope.

In ICOMOS Charter (1999), it is emphasised that vernacular heritage should be treated as a whole, with not only 'the physical form and fabric of buildings' but with 'the traditions and the intangible associations which attach to them'. In addition, the 'guidelines in practice' for the protection of vernacular are put forward in terms of documentation, interventions, construction techniques, skills and adaptation. The charter indicates the meaning and heritage values of vernacular and on the other hand, the need to understand, document and protect it.

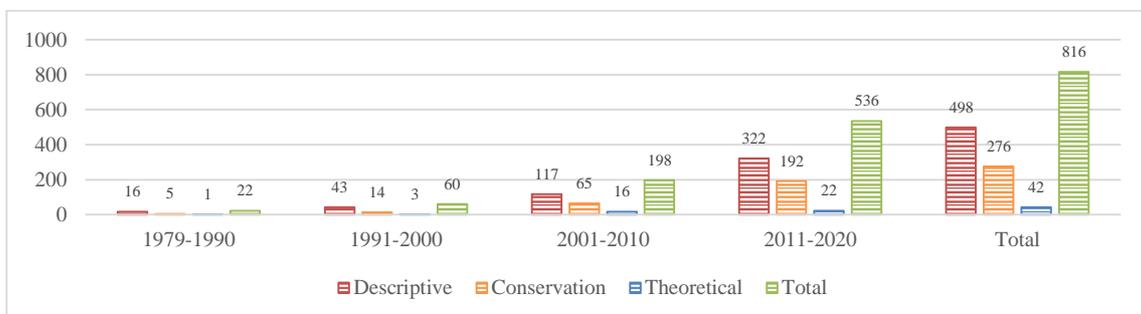
The literature review shows that vernacular studies present a large spectrum of aspects in terms of the aim, scope and methods, regarding the comprehensive concept of the term. However, the studies deal with the subject mainly on three ways: Defining the existing physical and cultural features; seeking conservation possibilities and developing approaches; conceptualizing the framework of 'vernacular'. In this direction the theses with full texts are classified according to their content and main scope, under three headings: Descriptive studies, Conservation studies, Theoretical studies.

Descriptive studies include the theses that focus on either the recording of a single building and/or a vernacular settlement or an architectural feature. Conservation studies are the theses which bring the concept of 'conservation' to the forefront within a wide variety of scopes and methods. Theoretical studies cover the theses that has the conceptual framework of vernacular and do not only differ from other studies in terms of content but also the way they deal with the subject, their scope and methods.

The numerical data of the classification is shown in Table 5 and Figure 6. The percentages reveal that there has been rise in conservation studies to a small extend.

**Table 5.** Number of theses classified according to subjects

	1979-1990		1991-2000		2001-2010		2011-2020		Total	
<b>Descriptive Studies</b>	16	<b>72,73%</b>	43	<b>71,67%</b>	117	<b>59,09%</b>	322	<b>60,07%</b>	<b>498</b>	<b>61,03%</b>
<b>Conservation studies</b>	5	<b>22,73%</b>	14	<b>23,33%</b>	65	<b>32,83%</b>	192	<b>35,82%</b>	<b>276</b>	<b>33,82%</b>
<b>Theoretical studies</b>	1	<b>4,55%</b>	3	<b>5,00%</b>	16	<b>8,08%</b>	22	<b>4,10%</b>	<b>42</b>	<b>5,15%</b>
<b>Total</b>	<b>22</b>		<b>60</b>		<b>198</b>		<b>536</b>		<b>816</b>	



**Figure 6.** The numerical change of studies classified according to subjects

The numerical distribution of the theses according to their subjects and settlement type of case studies is shown in Table 6. The percentage of the urban case studies is 69,61% in total and has a similar rate in all subjects. The rural case studies cover 24,39% in total, however the percentage of theoretical studies in rural areas is only 7,14%.

**Table 6.** Percentages of type of settlement / subject of the study

Subject	Total #	Urban		Rural		Both		None	
		number	%	number	%	number	%	number	%
<b>Descriptive</b>	<b>498</b>	338	67,87%	140	28,11%	10	2,01%	10	2,01%
<b>Conservation</b>	<b>276</b>	203	73,55%	56	20,29%	7	2,54%	10	3,62%
<b>Theoretical</b>	<b>42</b>	27	64,29%	3	7,14%	0	0,00%	12	28,57%
<b>Total</b>	<b>816</b>	<b>568</b>	<b>69,61%</b>	<b>199</b>	<b>24,39%</b>	<b>17</b>	<b>24,39%</b>	<b>32</b>	<b>3,92%</b>

Table 7 shows the percentage of subjects of the studies among the type of settlements. It is clearly seen that 70,35% of rural studies consist of descriptive theses, while theoretical ones cover only 1,51%.

**Table 7.** Percentages of subject of the study / type of settlement

Type of the settlement (Case Study)	Total	Descriptive		Conservation		Theoretical	
		number	%	number	%	number	%
<b>Urban</b>	<b>568</b>	338	59,51%	203	35,74%	27	4,75%
<b>Rural</b>	<b>199</b>	140	70,35%	56	28,14%	3	1,51%
<b>Both</b>	<b>17</b>	10	58,82%	7	41,18%	0	0,00%
<b>None</b>	<b>32</b>	10	31,25%	10	31,25%	12	37,50%
<b>Total</b>	<b>816</b>	<b>498</b>	<b>61,03%</b>	<b>276</b>	<b>33,82%</b>	<b>42</b>	<b>5,15%</b>

### 3.2.1 Descriptive studies

These theses focus on recording and documenting vernacular buildings, sites or specific architectural elements. In the document titled 'Principles for the Documentation of the Registration of Monuments, Building Ensembles and Sites' prepared by ICOMOS in 1996, documentation is defined as 'the acquisition of information describing the physical form, condition and functions of monuments, assemblages and sites at a given time' highlighted as a necessary step. However, it is stated that these records, which contain tangible and intangible evidence, contribute to the revealing and understanding of heritage values as a part of documentation studies. In this context, 'documentation' studies have an important place in studies on vernacular heritage and it is seen that this concern comes to the fore in the postgraduate theses examined.

Among 816 theses, there are 498 descriptive studies with a high percentage of %61,03 in total (Table 8). They consist of documentation of architectural qualities of a building or a settlement in means of typology, construction techniques, material, fabric and spatial characteristics. These studies contribute significantly to the preservation of vernacular dwellings, which have a large place in the cultural heritage of Anatolia, its transfer to the future and the creation of a cultural inventory.

**Table 8.** Numerical data of the descriptive studies

		1979-1990	1991-2000	2001-2010	2011-2020	Total	Rate over 816	Rate over 498
Number of theses with full text		22	60	198	536	816		
Subject of the theses	Vernacular site	13	29	82	179	303	37,13%	60,84%
	Single building	0	4	23	87	114	13,97%	22,89%
	Architectural features	3	10	12	56	81	9,93%	16,27%
	Total number of descriptive studies	16	43	117	322	498	61,03%	

Considering the geographical locations of the settlements subject to descriptive studies, it is seen that 72% of these are conducted in urban areas and 28% in rural areas.

**Table 9.** Numerical data of the type of the settlements in documentation

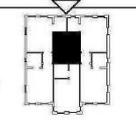
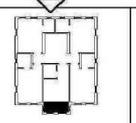
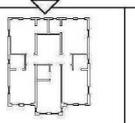
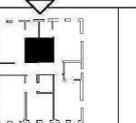
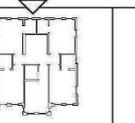
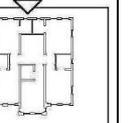
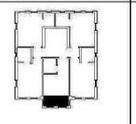
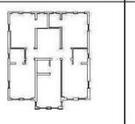
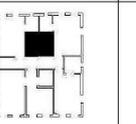
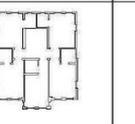
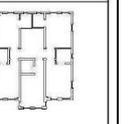
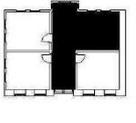
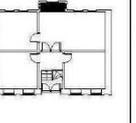
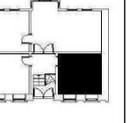
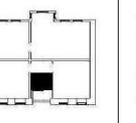
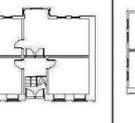
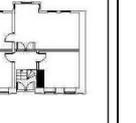
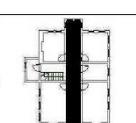
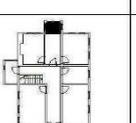
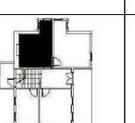
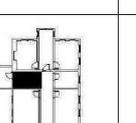
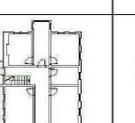
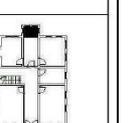
Descriptive Studies	Total number of theses	Urban		Rural		Both		None	
		Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage
	498	338	59,51%	140	70,35%	10	58,82%	10	31,25%

- *Documentation of a vernacular site:*

The theses that consist of the documentation of a vernacular settlement are examined under this title. There are 303 theses and constitute 37.13% of all and 60.84% of the descriptive studies. The contents of the studies show a great deal of similarity; including first general explanations about the location of the settlement, its history, monumental structures found in the settlement and then detailed recordings of civil architecture. In almost all of the studies, suggestions for conservation are also presented mostly in the 'result and evaluation' section and in a few theses discussed in more detail.

Fabric analyses are mostly about 'registration status, originality status, usage status, function, number of floors, construction system and roof type' of the buildings in the studied settlement. In some theses, the analyses cover different titles such as 'occupancy-space, positions of the buildings in the lot, natural environmental elements'. However, there are no significant differences in methodology and techniques, depending on the characteristics of the settlements, whether they are urban or rural. In addition, it is seen that the approaches used in the studies to define and comprehend the vernacular environment, the analysis methods and their scopes do not differ in the examined time intervals, besides do not reflect the conceptual/theoretical changes in the field.

In addition to the analyses of the settlement, determinations at building scale are also included in theses. In this context, there are studies on creating an inventory of civil architecture examples with building catalogues including pictures and/or drawings of the plan schemes (Fig. 7). It is seen that almost all typology studies are based on the 'sofa-based approach' developed by Eldem (1954), regardless of the local characteristics and without any intention to generate new approaches.

ÖRNEK NO	PLAN ELEMANLARI					
	Sofa	Şahnişin	Mutfak	Merdiven	Köşkoda	Banyo-wc
17						
18						
19						
20						

**Figure 7.** Example of plan analyses of buildings in a settlement (Şahin, 2010:60)



20 of the theses examined within the scope of fabric documentation are doctoral studies and 283 are master's studies. 111 theses are conducted in rural settlements and 190 are in urban areas concentrating in certain provinces but a few number of studies in the Eastern and Southeastern Regions.

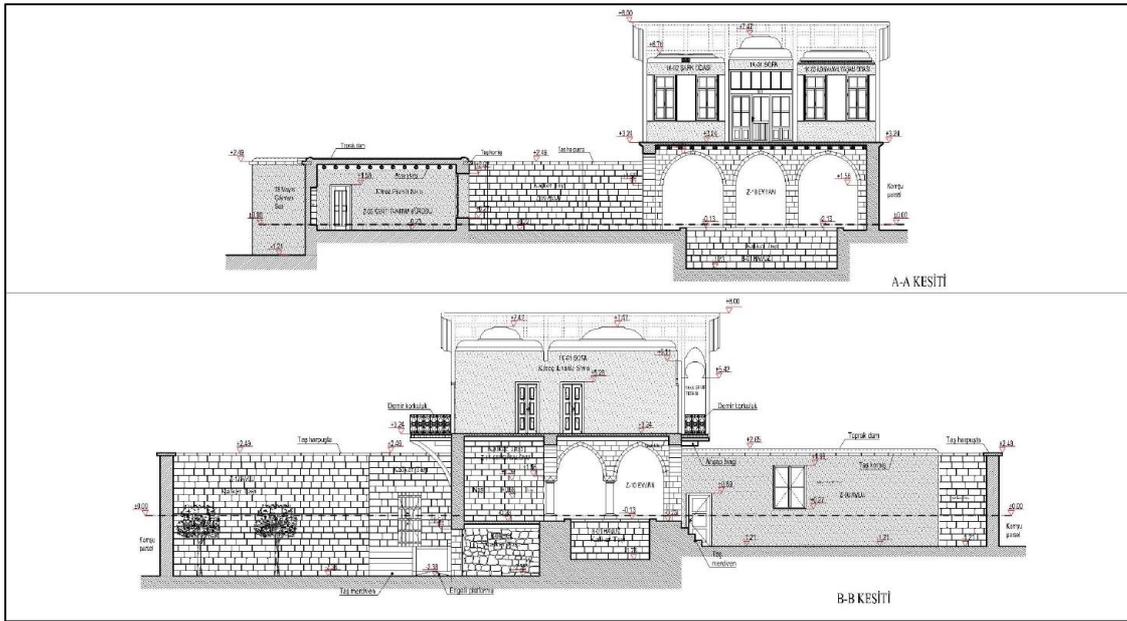
The morphological analysis of vernacular settlements with the 'space syntax' is a newly developing methodology used in theses that aim to investigate the formation rules in the context of architectural language and to transfer them to the future. These methods are used at settlement scale (building-plot relations, street pattern, parcel dimensions, green areas, etc.) as well as the single buildings (analysing the setup of the space). Of the 12 theses using the space syntax method, 7 of them date between 2001-2010, while 5 studies date between 2011-2020.

The methods developed in the field of environmental physics are also used in some theses. There are four theses that cover the measurement of heat and sound performances and/or making simulations in computer environment without damaging the historical structure. Two theses analyse the threats in vernacular settlements with the risk analysis method. In addition, two theses used GIS applications with the aim of digitizing the information in vernacular settlements. Apart from these, three theses have the aim of creating a future-oriented design guide for a specific case area.

- *Documentation of a single building:*

These studies constitute the survey - restitution - restoration projects of a single building. Details such as plan typology, material information, construction system of buildings are conveyed, supported by drawings and photographs (Fig. 8). Almost all also include information about the settlements where the building is located. While these studies provide documentation of the current situation of a single building, they also address the issues of structure, materials, space and re-functioning for the preservation of the buildings. For this reason, the phenomenon of 'conservation' comes to the fore in all, beside the concern of 'documentation'.

In these theses, in which conservation and repair works of a single building are handled, it is seen that mostly conventional surveying techniques are continued in the examined process and the significant change in the technical context is that the hand drawings made in the 80s and early 90s are replaced by computer aided drawings in the following periods. Digital documentation techniques such as laser scanning, photogrammetry, 3-d modelling have not been subject to studies enough, yet.



**Figure 8.** Example of a restoration project of a single building (Görmez Eren, 2019:186)

These theses are 114 in total and there is only one doctoral study among. 99 of the selected buildings are located in urban areas and 14 of them are located in rural areas.

- *Documentation of specific architectural features:*

Theses compiled under this title are studies that focus on certain physical features or architectural elements of the vernacular buildings. There are 81 theses under this title and the contents are diversified in subjects such as decorative elements, space, structure and materials. Studies mostly involve research and inventory creation on a single architectural element in a particular region or researching and comparing a certain element in different regions.

In the studies, construction materials such as wood, soil, rock, brick, iron and steel etc. examples that examine from different perspectives and investigate them at the material scale or in the context of construction systems come to the fore. There are also studies dealing with windows, doors and ornamentations (Fig. 9). The scopes of the theses reveal that only the traditional techniques, natural materials and pre-industrial dwellings are considered as 'vernacular' depending on prevalent perspectives.

PENCERE ÖZELLİKLERİ ANALİZ TABLOSU		YAPI NO:	53
		ADA/PARSEL:	104 / 417
			
PENCERE NO :	12		
CEPHE YÖNÜ :	G		
ONARIM DURUMU :	VAR		
DUVAR BOŞLUĞU (EN X BOY)	60 cm x 130 cm		
KASA (EN X BOY X DERİNLİK)	14 cm x 130 cm x cm		
Ö			
L			
Ç			
Ü			
DENİZLİK (EN X BOY X DERİNLİK)			
Dış Denizlik:	16 cm x 60 cm x 2 cm		

**Figure 9.** An example of the studies on architectural features (Arat, 2019: 295)

In addition, there are spatial studies that focus on the development of the general plan setup in the houses or the local characteristics of a particular space such as kitchen, washing area etc. Courtyards are one of the most studied spatial features and discussed



in theses in terms of the regional characteristics, climatic qualities, usage patterns. Cupboards, bathing cubicles and stairs are other architectural features that take place in studies. Also, the phenomenon of space and light is discussed in two theses.

### 3.2.2 Conservation studies

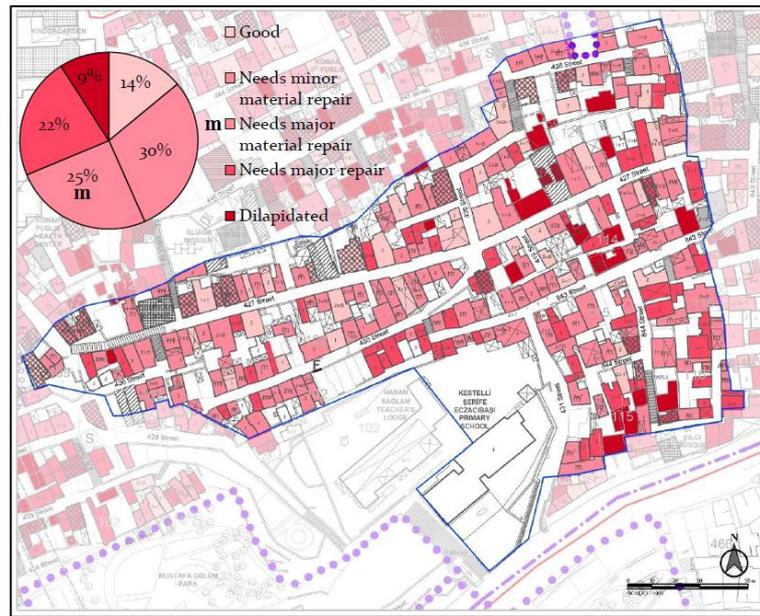
Recognition of vernacular buildings as architectural heritage, brought the idea that its conservation and transmission to future is supposed to be a necessary consciousness or even a duty (Erder, 2018). In the international documents, vernacular architecture is accepted as the expression of the culture of a society and it is emphasized that the main aim should be to preserve the vernacular examples against the uniformity growing in the world and transfer them to the future (ICOMOS, 1999). Similarly, the issue of conservation is an inherent concern also in the examined theses and the phenomenon is mainly encountered in 4 ways;

- 1- Conservation as an inherent concern
- 2- Developing a conservation proposal
- 3- Researching the conservation problems
- 4- Examining the concept of conservation together with the contemporary concepts

In all the theses, conservation of vernacular buildings or settlements emerges indisputably as a strong concern. However, depending on the main scope of the theses some tackle with the subject in deep while some include general recommendations. In descriptive studies, the issue of conservation appears to be either in the 1<sup>st</sup> way as an inherent concern or in the 2<sup>nd</sup> way developing a proposal. In the theses after documenting the vernacular architecture of a certain settlement, the question of 'how to preserve' is asked, analyses such as determination of authenticity, deteriorations and changes are held and finally some principles are stated for its preservation. In a few of these studies, the social dimension of conservation is also emphasized by the results of questionnaires conducted among inhabitants.

The theses in which the phenomenon of conservation emerges as the primary concern are those that deal with the subject in the 3<sup>rd</sup> and 4<sup>th</sup> ways. The number of these theses is 276 constituting 33.82% of the total (Table 5).

A total of 26 theses are examined within the 3<sup>rd</sup> scope, which of eight research the change and development of a vernacular settlement in the historical process and examine the conservation studies/problems. Five theses, evaluate conservation approaches and problems in a vernacular settlement (Fig. 10). The other five develop a conservation proposal by making settlement analysis at the urban scale; while the other three evaluate the restoration and repair applications carried out in a settlement. Two of them investigate the effect of the conservation works that took place in a vernacular settlement and the last two are the theses that examine urban renewal projects.



**Figure 10.** Sample of studies that focus on conservation problems of a settlement (Gökçınar Balkan, 2018: 145)

Why and how vernacular architecture should be conserved is a multi-dimensional and comprehensive issue in the literature. It is discussed with various concepts and phenomena such as tourism, sustainability, climate-ecology, re-functioning-adaptation, old-new relationship, intangible values, cultural landscape, multi-layered, which are frequently encountered in both the literature and theses that are classified in the 4<sup>th</sup> way. As shown in Table 10, these concepts are intensively discussed in theses more after 2001, parallel with their emergence in international documents. They are often intertwined in theses, however sustainability, climate-ecology and the old-new relationship concepts are the most frequently discussed ones.

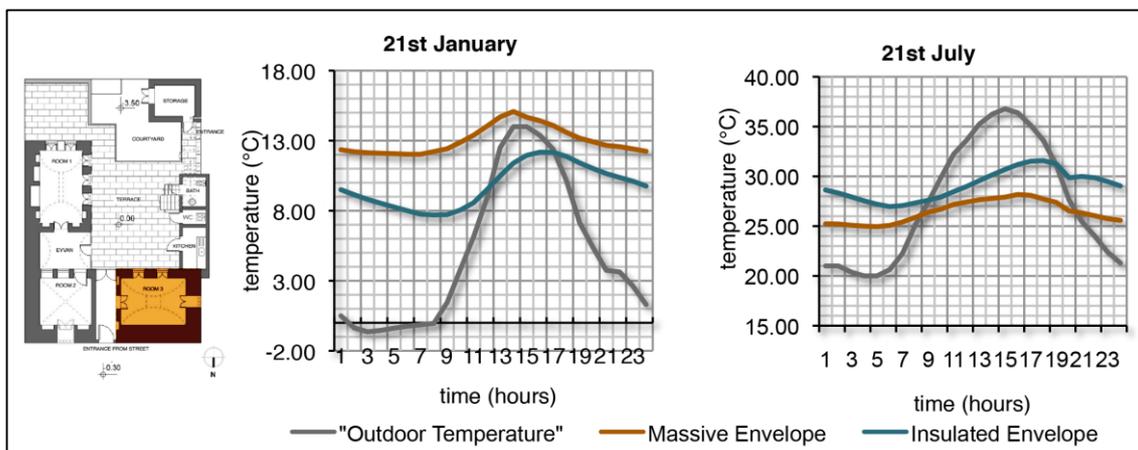
**Table 10:** Contemporary concepts considered together with the phenomenon of conservation

Period	1979-1990	1991-2000	2001-2010	2011-2020	Total	Ratio
<b>Total number of theses examined</b>	<b>22</b>	<b>60</b>	<b>198</b>	<b>536</b>	<b>816</b>	
<b>Sustainability-Ecology</b>	0	0	11	55	<b>66</b>	<b>8,09%</b>
<b>Old-new relation</b>	2	6	19	35	<b>62</b>	<b>7,60%</b>
<b>Tourism</b>	1	2	9	20	<b>32</b>	<b>3,92%</b>
<b>Intangible heritage</b>	0	3	7	19	<b>29</b>	<b>3,55%</b>
<b>Cultural Landscape</b>	0	0	0	10	<b>10</b>	<b>%1,2</b>
<b>Management</b>	0	0	0	8	<b>8</b>	<b>%1</b>
<b>Multi-layered</b>	0	0	1	4	<b>5</b>	<b>%0,6</b>

- *Sustainability-Ecology:*

Sustainability has been a frequently encountered concept in the field of vernacular architecture by the second half of the 20th century. The concept is most clearly defined as a form of development that meets current needs without compromising the future so that future generations can meet their own needs. Based on this definition, human-nature-environment relations are handled together with physical components such as climate, ecology, topography, building materials and intangible components as culture and life. A total of 66 theses focus on the concept of sustainability, with a rise in the last ten years (Table 10). 27 theses consider and analyse vernacular architecture as examples that are compatible with nature, environment and people, that use minimum energy resources. In

these studies, cultural sustainability, sustainability in vernacular building construction systems or materials are some subtitles encountered. While some of these are content to analyse the vernacular examples in terms of the design parameters of sustainable architecture, some of them interpret the results in terms of preserving the vernacular. In almost all theses in this group, vernacular architecture is assumed as 'sustainable' examples. 22 of the theses on the concept of sustainability deal with vernacular architecture mostly in terms of 'ecological sustainability', focusing on the climatic data of the case study areas. Making thermal performance analyses of buildings, producing energy efficient solutions, researching passive energy systems, etc. are the sub-titles of these thesis (Fig. 11). These methods are offered as a suggestion for the preservation of vernacular architecture, while some consider material structure as essence in order to understand ecological sustainability. Apart from these, the concept of sustainability is studied together with other related concepts such as intangible heritage and tourism. Accordingly, the concept of sustainable tourism is presented as an ideal tool for the preservation of vernacular heritage. Similarly, the sustainability of intangible cultural heritage is also expressed as a necessity in terms of transmitting the vernacular values to future.



**Figure 11.** A sample of studies on energy efficiency of vernacular houses (Sözen, 2019: 86)

- *Old-new relation, adaptation:*

In a total of 62 theses, the issue of how to use vernacular buildings today and how to transfer them to the future are discussed in the context of adapting the old to the new within two topics: contemporary designs using local data and conservation by re-functioning. In 34 theses, the main scope is to collect local data by analysing the formation parameters of vernacular structures and settlements and generate methods to apply them to contemporary designs. Four theses use analyses on construction materials and systems while in the remaining 27, studies are carried out on the subject of re-functioning. They examine either contemporary design possibilities on a vernacular building or research the existing problems of the examples that are already re-functioned.

- *Tourism:*

Tourism is considered as another important tool for the conservation of vernacular architecture and appears in many theses, with a total number of 32 (Table 10). The subject is mainly investigated in four different ways: examining the potentials of re-use for tourism purposes; examining the vernacular settlements transformed under the effects of tourism; analysing vernacular textures in order to create a cultural route and increase awareness; exploring the potentials of vernacular architecture through the concept of sustainable tourism.



- *Intangible:*

The understanding of vernacular architectural examples as cultural assets has led to the necessity of working with the cultural components of buildings and settlements. Hence, concept of intangible values has become the main subject of studies on the semantic world of the physical environment. A total of 29 theses focus on intangible values as life in vernacular-rural houses and settlements, changes in life, folkloric values, vineyard-weaving, etc. within this concept. A few of them are directly aimed at documenting tangible and intangible heritage values on a vernacular settlement. In all of these theses, the emphasis is placed on the continuity and sustainability of intangible values with the built environment.

- *Multi-layered, heritage management and cultural landscape:*

The geography of Anatolia, contain rich cultural heritage areas that these concepts bring initiatives and shows its reflection on the field, especially after 2010. Ten theses on cultural landscape either consider the concept as a reference concept in rural area analysis or benefit from the expansions of the concept within the conservation strategies of a settlement. The concept of heritage management is handled as an integrated method in eight theses that deal with the preservation of a vernacular settlement and its transfer to the future. Multi-layered settlements are discussed in five theses within the framework of the vernacular texture and archaeological heritage in a specific region.

### 3.2.3 Theoretical studies

Among 816 theses examined in detail, 42 theses deal with vernacular architecture apart from the approaches focused on descriptive and conservation studies. Although these theses cannot be gathered under a specific title, it's possible to identify three general tendencies. The first is to theoretically examine and discuss the concept of 'vernacular architecture', its scope, content and expansions. For example, in a doctoral thesis the author discusses the trends and changes in the definition of vernacular architecture and develops criteria for which structures can be examined within the scope of this concept in Turkey's geography. In one thesis the author discusses the concept of 'architecture without architect' over a rural region. Another example is the thesis that deals with the concept based on 'discourse and power' in Turkey through discussions on examples. The second trend emerges as the handling of vernacular architecture in the light of a contemporary concept or phenomenon. Concepts such as living structure, alienation, urban identity, urban image, other(isation) etc. are discussed over the analyses of vernacular buildings and settlement. The third trend is to analyse the effects, changes and/or pressures of historical periods, social / economic changes on vernacular heritage. Subjects like the effects of the industrial revolution on the vernacular architecture on some districts in Istanbul or the effects of the social change and transformation in the 19th century on civil architecture in Bursa can be given as examples.

## 4. EVALUATION

In Turkey the studies on vernacular architecture started around 20<sup>th</sup> century under the concept of 'Turkish House' and these studies mainly focused on the high craft vernacular houses in urban settlements. The results of this research show that the concern has expanded to include more ordinary buildings both in urban and rural areas. It is clear that the studies on rural settlements have increased significantly in the last ten years (Table 4). However, the distribution of the sample areas on map show that the eastern part of Turkey has not been the subject of studies as much as the western part (Fig. 4).

The concept of 'vernacular architecture' in the theses has developed in parallel with Hasol's (1995) definition of the term: a kind of anonymous architecture that the public realizes by using local vernacular techniques and forms with the material provided in their own environment. However, it is observed that the theses give priority to the buildings built with natural construction materials but the buildings using modern materials are not



included although they are built by native users. This attitude calls up that the understanding of 'vernacular architecture' is limited to pre-industrial buildings and settlements.

Understanding, describing and recording the vernacular examples is the prominent aim of the studies; %61,3 of the total theses are classified as descriptive (Table 5). Considering the richness and diversity of vernacular architectures in Anatolia, the prominence of this purpose can be interpreted as a natural result and even a necessity. These theses include typological studies, analyses of vernacular fabric, construction materials and architectural elements. Typological studies mainly use the methodology of Eldem's definition of Turkish House and try to understand the vernacular with its relation to topography, climate and users' needs. Analyses of vernacular fabric stay descriptive, showing the relation of spaces with each other and mapping the various changes on the fabric. Likewise studies on construction materials and architectural elements document examples from various regions of Anatolia. Although more advanced and computerized technologies are common in the field almost all the theses use old, conventional documentation technologies, which calls to mind the difficulty of reaching these technologies.

There is no clear distinction between the rural and urban studies in means of the methodologies used. Considering that the rural studies were introduced to the field more later than the urban studies, it is expected that new methodologies original to the rural areas are invented. Since the rural settlements response to different requirements than the urban areas different methodologies can be developed for these studies.

It can be stated that all the theses are handled within a high awareness of conservation. The sample vernacular areas subject to theses are conceptualized as places either to be preserved and transmitted to future or correct examples from which to learn. In this context 'sustainability' is the most common term studied with conservation. Vernacular examples are presented as sustainable ones in terms of nature-human-environment relations. They are approved as ecologically positive and it is generally stated that it is possible to transfer the vernacular to the future by ensuring the continuity of these sustainable parameters. However, the methodology of transferring the sustainable parameters to future seems to be an open field to the studied.

Turkey is a geography that is very rich in cultural heritage stocks, but develops and transforms rapidly and often uncontrollably. Its architectural heritage is under various threats. In this context, addressing the subject of vernacular architecture under themes such as 'tourism', 'adaptation of the old to the new', 'heritage management', 'multi-layered' and 'cultural landscape' can be seen as both a geographical necessity and an effort to catch up with contemporary heritage and conservation approaches. It is observed that these subjects have only recently begun to be studied in theses and they need to be developed scientifically. However, some of the topics discussed in the scientific field of vernacular architecture and architectural heritage conservation are not yet included in the theses; risk management and disaster management can be expressed as important but incomplete fields of study.

Studying on the intangible cultural values of vernacular settlements in Turkey is still an open field for development. The number of theses on this subject is both very few and the method of study remains mainly at the level of description. It is thought that new methods and holistic approaches should be developed, including other scientific disciplines, in order to comprehend vernacular architectures with the world of meaning behind their concrete existence.

Theoretical studies that seek new approaches or evaluate the conceptual ground of the field in Turkey are very few in number (Table 5). Theses about the theoretical background of vernacular architecture subject the current problems mostly in the conservation area.



Whereas interpretation of vernacular is in tight relation with its conservation and this may be the subject of future theses.

## 5. CONCLUSION

Remembering the beginning questions of the study, it can be stated that the concept of vernacular architecture in academic studies is formally limited to buildings and settlements produced with natural building materials in pre-industrial urban or rural areas. The main interest is to recognize, describe and record the physical vernacular environments, which is a conventional approach commonly accepted from the beginning of the field. Whereas there are new debates that seek new interpretations of vernacular architecture which position it out of being old and built of natural materials. Future studies may make place for such new interpretations of vernacular architecture in Turkey.

In the theses, vernacular architecture is studied in close relation with the aim of its conservation. Conservation of the vernacular is considered rather as the transfer of the tangible existence of the built architecture. In this context contemporary discourses and approaches are reflected in the studies mainly in the last ten years. However, the understanding of architecture has evolved from the approach of analysing the concrete to understanding the concrete and the intangible together. It is thought that the studies should be developed in terms of aim, content and methodology in this context.

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