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Full Length Research Paper

A spatial analysis study: An example of the Virgin Mary House and its close environment

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Selcuk which is one of the most important places of ancient times hosts visitors who come to see the Virgin Mary House which is accepted as sacred for the Christians. In Virgin Mary House which is also accepted as holy for the Muslims a religious ceremony is hold in every 15th of August and these ceremonies attract intense attention. This research, in which the spatial analysis of Virgin Mary House and its close environment which is one of the most important places of culture and belief tourism were done, was discussed in four main parts; definition of the subject, data collection, findings and analysis and evaluation and synthesis. In the fieldworks, the research area which came to the forefront with its religious – touristic properties was analyzed in terms of physical, socio- cultural, visual and sensory aspects by using the original analyzing forms and solutions were offered to increase the spatial potential. The research was also supported with the field observations. As a result of the research, the meeting level of the users' expectations according to either servicing or functionality of the spatial features of Virgin Mary House and its close environment was determined and solutions were offered.

Key words: Selcuk, Virgin Mary House, spatial analysis.

INTRODUCTION

Space, in general, is an environment where people lead their life or a stage where variable activities can be seen (Ozkan and Kucukerbas, 1995). The mission of the designer is to obtain the most suitable space or livable environment which meets every kind of physical and physiological needs of the users (Malkoc, 2008). The expectations of the users from the environment who will use the designed spaces are defined as "user demands" and when the user demands are analyzed it is seen that these demands can be collected in two main titles as "physical user demands" and "psycho – social user demands" (Arcan and Evci, 1992). The features which determine the environmental quality can be summarized according to physical, social and visual interaction (Akçoral, 1996). As quality simply defined as the suitability to expected features (Kavrakoğlu, 1996), it is necessary to put forth the demands and expectations of the users clearly to achieve space quality (Atabek, 2002).

It is appropriate to note that one problem is to state what kind of built form is needed. This principle underlines a fundamental characteristic of the design problem, which is evaluating alternatives at specific and different stages of the design process (Lawrence, 1987). Post-occupancy evaluation studies which examine the harmony between the built -up environment and the user, and discuss the design decisions by analyzing the landscape features of the settlements guide for improvement by displaying the space quality.

As known, Turkey which has unique architectural monuments of different religions has an increased potential for belief and culture tourism. The space quality of these places which are also points of attraction has great importance for the image of Turkey. The Virgin Mary House is one of the most important sacred places for whole of the World. Evaluating the Virgin Mary House's physical, socio-cultural, visual and sensory aspects will reflect its value. Increasing the spatial

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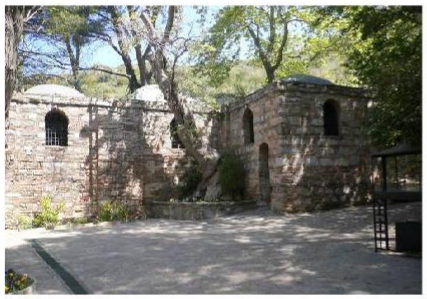
Research Area

The Statue of Virgin Mary



The Church of Mary

The Wish Wall

The Cistern - Pool

The Holly Fountain

Figure 1. Study area.

features of this place will put forward the importance of the religion tolerance. So in this context; this study in which the spatial structure of Virgin Mary House and its close environments was analyzed according to the users' demands was carried out to:

(i) Display the natural and cultural landscape features and the religious importance of the research area and so to make spatial evaluation;
(ii) To determine the existing potential of the space by using the analyzing forms;
(iii) To increase the sustainability of the research area as a religious and touristic space by supporting the attractiveness of the place;
(iv) To be a guide to local authorities; and
(v) To guide these kind of studies in terms of determining the spatial potential of similar spaces.

Study area

The main material of the research is the "Virgin Mary House" and its close environment (Figure 1). Virgin Mary House which is located at 9 km away from Selcuk town on the top of Bulbul Mountain with a height of 420 m is accepted as sacred for Christians. This place is called as "Panaia Capulu" by the Christians and it is thought that apostle St. Jean brought the Holy Mother to Ephesus. In our day, the road that lies from The Door of Magnesia, Ephesos to Bulbul Mountain reaches to Panaia Capulu where, on a small square close to the House of Virgin Mary are found a round cistern and arched walls around the ridge. There is a small cross shaped chapel covered up with a small dome at the end of the road near the cistern pool which is sacred for the Christians. This chapel was built in 6th to 7th Centuries. After it was

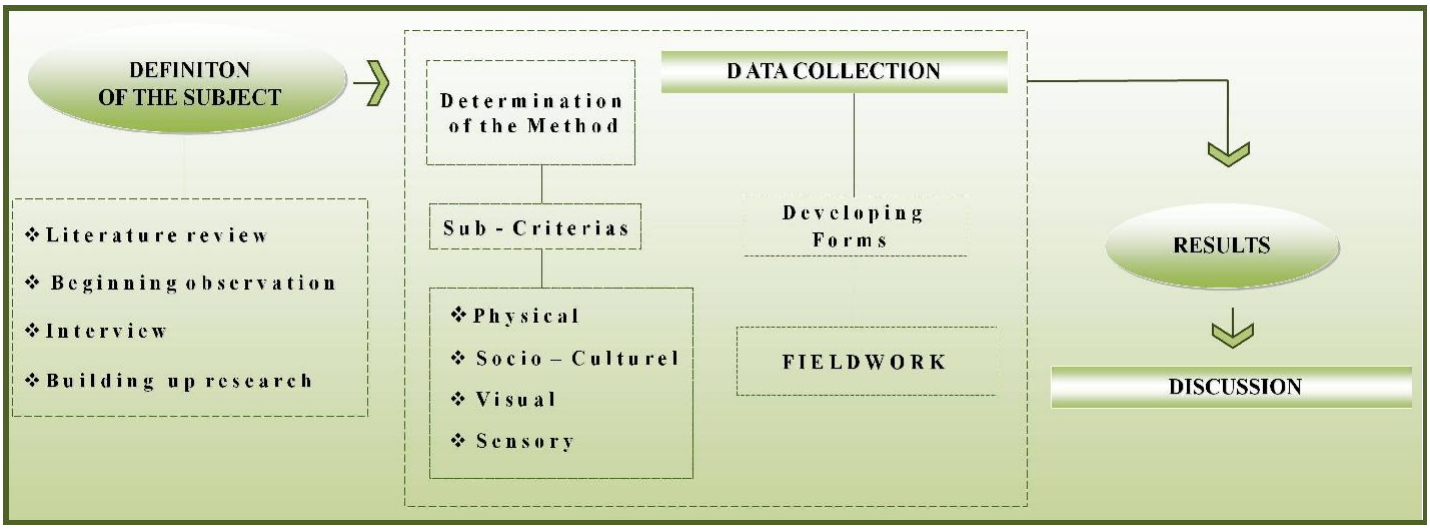


Figure 2. Method flow diagram.

accepted as a sacred pilgrimage centre, a small chapel was built on the ruins of Virgin Mary House (Life in Izmir, 2010).

The belief that the Virgin Mary had spent her last years in a house in the vicinity of Ephesus and that she had died there, focused attention on a nun named Anna Katherina Emmerich who had lived in the late 18th Century (1774 to 1820). The efforts to find the house were greatly influenced by her detailed description of the Virgin Mary's coming to Ephesus, her life and her last home there, and the characteristics of the city although she had never been to Ephesus (Derbent, 1999).

After the visit of Pope Paul VI in 1967, a religious ceremony have been started to be hold in every 15th of August in Virgin Mary House and these ceremonies attract intense attention (Selcuk, Municipality, 2010). Virgin Mary House was accepted as a sacred place in 1967 according to pontificate (TURSAB, 2006).

Besides its religious importance, its being in a grade 1 archaeological and natural site that has the characteristics of a cultural park and its touristic attractiveness were effective in determining the Virgin Mary House and its surroundings as the research area. Literary sources on research area, internet knowledge, photos taken from the research area and the original analyzing forms, notes taken during the discussions with the users and the staffs are the other materials of the research.

METHODS

The research method was developed in four stages; definition of the subject, data collection, results and discussion (Figure 2).

Definition of the subject

In this stage, which the conceptual framework was developed; literary study, surveys as pre-studies, interviews with the users and the staffs were carried out and developing the research was continued.

Data collection

This stage was composed of the determination of research method, the evaluation criteria that was used in this method and developing the analyzing forms and the field surveys. The visual analysis method was used in this spatial evaluation research on Virgin Mary House and its surroundings. In this context; the borders of research area was determined and analyzing forms were developed. The spaces which the authorized bodies gave permission to visit were accepted as the borders of the research area and the researches were carried out in this framework. Following the pre-observations in the research area, the borders of the research area became clear and the sub – criteria which had to be in the analyzing forms were decided. In developing the analyzing forms, besides the personal approaches, it was made use of the references: PPS, (2000), Kilicaslan et al. (2008), Carr et al. (1992), Özkan et al. (2001) and Rubenstian (1992).

Within the scope of analysis, research area was evaluated from "Physical", Socio- cultural", "Visual" and "Sensory" aspects and graded between -2 to +2 in order to have a numeric information about the space. According to this; 0 was accepted as "neutral" or "absence in the space", -2 was evaluated as the "most negative" and +2 was the most positive".

In general evaluation; the maximum positive / negative score of the research area was calculated supposing that every sub criteria had taken +2 or -2. Following the analysis in the research area, total scores of the criteria were proportioned with maximum scores and percentage results were obtained (Tables 1 and 2). In the research, besides the analysis method, interview method was used and in this context, interviews were made with the staffs and the users.

The results stage

This stage can be accepted as the stage that the data were processed and involved processes such as converting the analysis results to findings, unifying knowledge gotten from the interviews with the analysis results.

Table 1. Method of scoring.

	Maximum negative score	Percentage value of the score (-)	Score	Percentage value of the score (+)	Maximum positive score
Physical	- 54				54
Visual	- 16				16
Socio - cultural	- 16				16
Sensory	- 14				14
Average					

Table 2. Evaluation of score interval of spatial analysis.

Evaluation of score interval	Characteristics of the area
-100 / - 51	Very negative (Very inadequate for use)
-50/-1	Negative (Consists factors that obstruct the uses)
0	Neither positive nor negative
1/50	Positive (Consists factors that need to be improved)
51 / 100	Very positive (Very suitable for use)

The discussion stage

It is the stage that the findings obtained from the literature studies, field observations and visual analysis were evaluated, synthesized and interpreted integrally.

This stage which all the data were evaluated in a holistic approach, involved the studies that the data were converted to substantial proposals.

RESULTS

Within the context of spatial analysis, research area was evaluated in terms of “Physical”, “Socio-Cultural”, “Visual” and “Sensory” aspects.

Physical analysis

In the physical analysis part of the study, research area was discussed according to its natural structure, activity, accessibility, plant material and structural material. In “natural structure” analysis, it was seen that the topography contributed highly positive, fauna positive and also hydrologic structure very positive. Research area scored 5 points. When the research area was examined according to the existing activities, it was seen that passive recreational activities were dense and it was very suitable for the group use, on the contrary it did not support the active recreation activities and night use because of its religious space aspect that came to forefront. In terms of activities, research area scored 3 points totally. When the research area was examined according to the accessibility; the accessibility by the public transport vehicles was inadequate and the pedestrian access was very weak. The research area, which was close to the centre of the town was found successful in terms of information – communication – orientation systems though parking areas were partially sufficient. Research area scored 2 points totally according to accessibility. It was designated that the research area was rather sufficient in terms of plant material and the density of the natural vegetation was striking. Area was evaluated as positive according to species selection and plant diversity and was seen very well – kept. Area scored 8 points in terms of plant material.

When the area was examined in terms of the structural material, material selection of the floor covering was found partly adequate and walking security was succeeding. When the lightening elements were examined it was seen that they were adequate in quantity and site selection was proper but they were lacking quality. When the trash – cans were observed, it was seen that there were sufficient number of trash – cans, site selection of the trash cans was proper but the quality of them was weak. When the sitting elements were observed, site selection was found successful and both the quality and the quantity of the sitting elements were inadequate. Research area scored 6 points in terms of structural material (Table 3).

Socio-cultural analysis

It was designated that the spiritual influence of the area, the characteristic of assembling different societies and being a meeting point and the historical- archaeological value of the area were so high. It was seen that the research area which was one of the numerous religion places in Anatolia and had great importance for Christians had been visited densely during the year. So the area, visited by thousands of people every year has

Table 3. Physical analysis.

Criteria	Sub - criteria		-2	-1	0	1	2	P
Natural Structure	Topography						√	5
	Fauna					√		
	Hydrologic structure						√	
Activity	Possibility for active recreational activity				√			3
	Possibility for passive recreational activity					√		
	Possibility of night use				√			
	Suitability for group use						√	
Accessibility	Accessibility level on foot		√					2
	Accessibility level by public service vehicles			√				
	Sufficiency of parking lot					√		
	Sufficiency of information–communication–orientation services						√	
	Closeness to the residential centres						√	
Plant material	Sufficiency						√	8
	Suitability of the species selection						√	
	Variety of species						√	
	Maintenance						√	
Structural material	Floor covering	Walking security					√	6
		Suitability of material selection				√		
	Lightening element	Sufficiency					√	
		Quality		√				
		Suitability of site selection				√		
	Trash cans	Sufficiency					√	
		Quality		√				
		Suitability of site selection				√		
	Sitting elements	Sufficiency		√				
		Quality		√				
		Suitability of site selection				√		
Total point								24

increased in importance under the influence of religion. Besides this, providing different activities together in one place, research area was found adequate for food and beverage, recovery and shopping facilities. Research area scored 12 points totally in terms of socio – cultural aspects (Table 4).

Visual analysis

It was seen that the symbolic elements such as the Church of Mary, the Wish Wall, and the Cistern-Pool etc. made a great contribution to the research area. It was observed that the users showed great interest to these symbolic values and tried to understand the architectural and historical importance. These symbolic elements were seen as the indigenous parts of the area and each of them presented an integrated structure with the rest of the space. It was designated that the plant materials contributed more when compared with the equipment elements. Both natural vegetation and cultivated plants were perennial plants and it was observed that the effect of greenery was very strong. This effect surrounded the religious structure and unified with them. In this context the perceptibility level of the space was adequate. As a result, research area scored 13 points totally in terms of

Table 4. Socio – cultural analysis.

Socio - cultural interaction criteria	-2	-1	0	1	2	P
Spiritual effect of the area on the users					√	
Characteristic of assembling different societies					√	
The historical – archaeological value of the area					√	
Possibility of having different activities together in the same place				√		12
Level of being a meeting point					√	
Opportunity level for food and beverage				√		
Opportunity level for recreation				√		
Opportunity level for shopping				√		
Total point						12

Table 5. Visual analysis.

Visual interaction criteria	-2	-1	0	1	2	P
Perceptibility level of the space from the environment				√		
Visual contribution of structural material to the space				√		
Visual contribution of plant material to the space					√	
Contribution of The Statue of Virgin Mary as a symbolic element					√	13
Contribution of The Church of Mary as a symbolic element					√	
Contribution of The Wish Wall as a symbolic element					√	
Contribution of The Cistern-Pool as a symbolic element					√	
Contribution of The Holy Fountain as a symbolic element				√		
Total point						13

visual analysis (Table 5).

Sensory analysis

When evaluated in terms of sensory aspects, it was determined that the area was natural, clean, attractive, dynamic and unique. The research area which the attractiveness of both the built structure and the plant material were indisputable had its own identity with the contribution of its religious importance. When the area was evaluated generally by means of sensory aspects, it aroused a feeling of quietness and peacefulness. The rolling topography and the agglutinative spatial organization made the space hard to be understood from outside. The plant material with its dense greenery impact also decreased this understandability of the space. The users had to walk around to explore the space. The research area which the spaciousness was decreased with the effect of the plants green texture scored 12 points totally in terms of sensory analysis (Table 6).

DISCUSSION

Virgin Mary House which is accepted as sacred for the Christian sphere is visited by thousands of pilgrims every year. Research area is a part of the historical heritage mainly; Efes which is accepted as one of the most important ancient city of first age, The Cave of the Seven Sleepers where some of the first Christians who run away from the cruelty of The Roman Emperor hidden, Artemisia Temple which is accepted as one of the seven wonders of the world, St. Jean Church which belongs to Byzantium Era and Isa Bey Mosque which belongs to Seljukians. This space where Virgin Mary passed her last years of her life and mentioned frequently in Quran is also accepted as holy by the Muslims.

The region which is accepted as the center of trade and tourism from Ancient times till today is also a part of natural and archaeological site. The research area which possesses historical, natural, archaeological, social and cultural features together in one place deserves to be evaluated as a research subject. The research area which is evaluated with the awareness of all these features is found “very positive (very suitable for use) at a high rate of 72%.

When it is looked at the success percentage of the research area; it is seen that in terms of physical features it is rated 44%, visual features, 75%, socio – cultural features, 81% and sensory features 86% (Table 7). As it is seen in Table 7, general evaluation point of the area is “very positive” at a rate of 72%, while the physical analysis point is “positive” at a rate of 44%. The most

Table 6. Sensory analysis.

Sensory interaction criteria	-2	-1	0	1	2	P
Naturalness					√	
Cleanness – tidiness					√	
Attractiveness					√	
Vividness					√	12
Clearness				√		
Roominess				√		
Originality					√	
Total point						12

Table 7. Success rate of spatial analysis.

	Maximum negative score	Percentage value of the score (-)	Score	Percentage value of the score (+)	Maximum positive score
Physical	- 54	*	+ 24	+ 44	54
Visual	- 16	*	+ 12	+ 75	16
Socio - cultural	- 16	*	+ 13	+ 81	16
Sensory	- 14	*	+ 12	+ 86	14
Average				72	

*Within the scope of analysis study neither of the sub criteria has taken (-) score value. For this reason the column; “Percentage value of the score (-)”was not filled.

important factors for evaluating the physical analysis as “positive” are the lacking quality of lighting, trash-cans and sitting units and the insufficiency of sitting units in number. On the other hand, it is designated that all the other sub-criteria have a very positive contribution on the physical features of the space. In this context, improving the quality of the structural materials is important for both the image of Turkey and the users’ satisfaction. The existence of the symbolic elements in the research area which both increases the attractiveness of the area and contributes in terms of visual features has a spiritual influence on the users. A peaceful atmosphere and simplicity peculiar to spiritual areas are dominant in the area. To this respect, the research area has an indisputable worldwide importance with its characteristic of assembling different religious-cultural and social groups and being a meeting point.

Throughout the research, although the only criteria which was evaluated as "very negative” was “accessibility level on foot”, this disadvantage turned into an advantage by restraining the area to be affected negatively both by the natural and social features. It is hard to reach on foot or by public transportation to the archeologically, historically, naturally important research area located at 420 m height which at this stage balances the density of the users and decreases the human pressure. The sensory features have the most important percentage in the general success of the area at a rate of 86% success level. The reason for the high percentage of sensory features results from the natural and unique features of the space. The attractiveness of the area, the given importance to the cleanness and maintenance and the constant visits because of its symbolic importance for religion thereby the dynamism in the area brings the area to forefront in terms of sensory features. As a result, it is observed that the Virgin Mary House and its close environment are at a level of meeting the expectations of the users and its religious importance increases day by day. At the same time it is determined that Anatolia which hosts different religions and civilizations, protects this value of its own as it deserves and supports the efforts for its improvement.

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