

Defining Salient Elements of Environment and Memory

Subjective and Objective Landmarks in Ayvalik, Turkey

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Abstract

Several studies have focused on the physical and architectural features of landmarks. Other studies mentioned the cognitive and semantic aspects of landmarks. It can be noted that there is a methodological and/or ontological dichotomy in the determination of landmarks: subjective landmarks and objective landmarks. In addition, even though there are some studies that classify landmarks considering their locations, there is no study that focuses on the placement of landmarks in syntactical spatial configuration. The syntactical location is important especially in historical cities. Landmarks generally exist in the centre (or in integrated areas) of the old city. As the city grows and extends, it employs new centres and landmarks. In time, the people and the perspectives of the people who live in the city, and the focal points of the city may change. If so, what makes a building landmark? Its architectural features? Its function? Within this context, the case study in this paper has two steps. First, people will be interviewed for the subjective landmarks. Then, the objective landmarks of Ayvalik will be determined according to the criteria shown in the literature. In the end, the objective and subjective landmarks will be compared and evaluated.

Introduction

The concept of environmental image elements was first proposed by Kevin Lynch. According to Lynch, five elements are used in the process of forming a mental image of a city: paths, edges, districts, nodes, and landmarks (Lynch, 1960).

Landmarks are objects whose primary feature is uniqueness. If any landmark has a clear form, clearly contrasts with its background, and has a crucial location, then it can be considered important (Lynch, 1960). Some of the well-known landmarks include the Egyptian pyramids or the Pisa Tower. However, landmarks can be local and small in size, such as a statue in a city square (Altman and Chemers, 1980).

This paper investigates the relationship between objective landmarks, which have been determined by some standardised objective criteria, and subjective landmarks, which have been chosen by the local residents of Ayvalik.

One of the objective criteria for being a landmark is location (Raubal and Winter, 2002). To measure the location criterion objectively, we use global integration values in this study.

2. Landmarks as Salient Elements

Several studies have listed the recognisability of buildings. For example, Turkoglu conducted a survey in Istanbul in order to determine the landmarks (Turkoglu, 2002). In another study about

Istanbul, the elements constituting the city image were determined using spatial maps and photographs (Onem and Kilincaslan, 2005). Erem and Erkman explored the landmarks affecting the legibility of holiday villages (Erem and Erkman, 2003).

Ruth C. Dalton and Sonit Bafna (2003) tested the redefinition of spatial image elements in terms of space syntax parameters. They emphasized that axial maps can explain subjective visual image elements in an objective manner. It is an important study in terms of examining the relationships between singular image elements. However, the location of landmarks in terms of spatial configuration is not mentioned. Moreover, the study took the landmarks as three dimensional “physical elements” as Lynch did, and was only interested in the areas from which they can be seen. Landmarks were not evaluated from the user viewpoint; rather they were analyzed rationally. A landmark is a concept related to the human mind, so it is inadequate to deal with them only with respect to their physical existence.

Shokouhi’s study (2003) consists of two parts. The first step measures the most legible settlement among Sheffield Ring Road, Saltaire Village and Runcorn Newtown, using mental maps as an experimental instrument.

In the second step, the parameters that make a settlement more legible from the others are studied. Pathway configuration, the location of significant spatial elements and continuity and salient elements are analyzed. Whether the location of spatial elements influences the remembrance of city axes and forming a “group image” is examined. Important spatial elements were chosen in three cities. The selection was done based on Appleyard’s scale (Appleyard, 1969).

Appleyard carried out a significant study on the recall of buildings in Venezuela, Ciudad Guayana. He decided to narrow down his study at the level of one single building that people defined under animated circumstances and recalled (Appleyard, 1969).

Appleyard suggested four hypotheses about the reasons for one’s recollection of a building or a place:

A physical form that produces an image (Lynch, 1960). Visibility while travelling in the city. An alternative location for personal activities. Cultural role within the society (Appleyard, 1969).

LEGIBILITY			
Author	Strong Aspects	Poor Aspects	Type of Research
Lynch	* Human oriented * Generalisable results	* Not measuring meaning * Landmarks not detailed * Only emphasizing positive attributes	Quantitative Qualitative
Appleyard	* Interviewing people from different social classes * Detailed analysis of buildings recalled	* Analysis in the scale of one single building * No evaluation independent of the users	Quantitative Qualitative
Dalton & Bafna	* Syntactic approach * Objective analysis of visible	* Lack of human-oriented analysis	Quantitative

Table 1
Summary of Lynch, Appleyard, Dalton and Bafna.

While the structural aspects of landmarks are analyzed in these studies, their place in spatial syntax has not been explored. Determining whether the landmarks increase in integrated or segregated spaces would not only add another variable to the definition of landmarks, but also provide objective information about urban character.

3. Case Study

3.1. Location: Ayvalik

Ayvalik is situated on the western shore of Turkey, between the Gulfs of Dikili and Edremit, on the Aegean Sea (Aka, 1944).

Throughout its history, the management system, economic conditions and the socio-cultural features of Ayvalik distinguished it from the other Anatolian towns. The large number of olive groves in the region rendered its people wealthy. Also, an academy was founded in Ayvalik in 1803 (Erim, 1948; Clogg, 1972).

When the ethnic structure of Ayvalik in the nineteenth century is analyzed, it is seen that the majority of its people were Greek. This was true until the Treaty of Lausanne was signed between Greece and the Turkish Republic in 1923, which caused in the Muslim communities living on nearby islands and in Greece to settle in Ayvalik.

The structure of the town seems to become less organic, and takes the form of a grid pattern as it goes down the hills to the coast. Ayvalik has a geometric street structure in the southern part where the wealthy reside.



Figure 1

Spatial pattern of Ayvalik.

3.2. Participants

In June 2008, a survey was conducted in Ayvalik in which 120 questionnaires were distributed and 95 were returned by the participants. Of those returned, 33 were not fully answered, so 62 questionnaires were evaluated.

Of those evaluated, 30.6 % were 21-35 years old and 35.5 % were 36-50 years old, 56.5 % of the participants were male, 50.0 % had a high school education, 41.9 % were college graduates, 32.3 % had lived in the area for 11-20 years, and 48.4 % had lived there for 21 years or longer.

	F	%
Age	15-20	22,6
	21-35	30,6
	36-50	35,5
	51-60	6,5
	61-older	4,8
	Total	62
Sex	Female	43,5
	Male	56,5
	Total	62
Education	Primary School	8,1
	High School	50,0
	College-upper	41,9
	Total	62
How long they have lived in Ayvalik	1-3 years	12,9
	4-10 years	6,5
	11-20 years	32,3
	21-longer	48,4
	Total	62

Table 2
Participants.

3.3. Determination of Subjective Landmarks

3.3.1. Methodology

Appleyard (1969) posed three kinds of questions to the participants to determine “why some buildings are known”:

1. Free Verbal Recall: Which places do you remember best?
2. Free Map Recall: Draw a map that shows the places you mentioned.
3. Free Trip Recall: Describe the route between a and b.

In this study, we used Free Verbal Recall to determine the salient buildings or places. Therefore, the open-ended question was posed in order to obtain the subjective landmarks in Ayvalik:

“Write down the buildings or places that you remember and / or that you think are important in Ayvalik.”

3.3.2. Findings

Using Microsoft Office Excel software, the frequency of the noted buildings / places (ratings) was computed and is shown in a clustered row.

The landmarks with the highest number of citations (13-22) make up the first segment.

Table 3 shows that the Saatli Mosque received the highest rating (22 people), the Tax/Duty Building received the second highest rating (18 people), the Cinarly Mosque and Kiz Meslek High School received the third highest ratings (17 people), and the Town Hall and Denizici Cafe received the fourth highest rating (13 people).

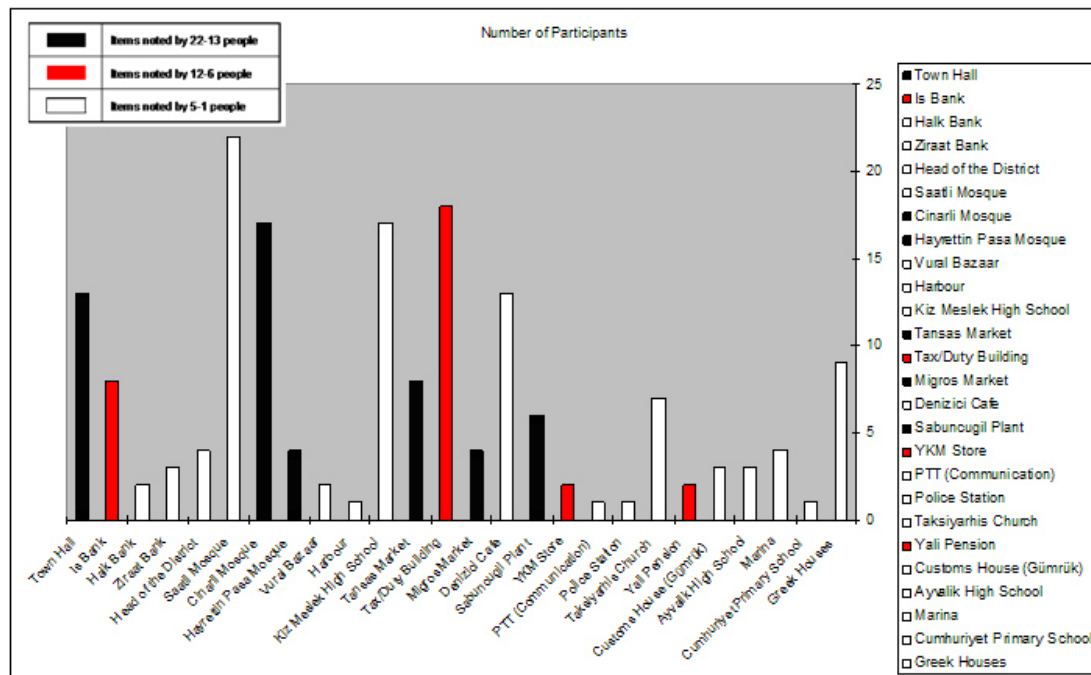


Table 3

Subjective landmarks.

The second segment is made up of landmarks that were identified by 6 to 12 people. Within this segment, we can see the Greek houses (9 people), Is Bank (8 people), Tansas Market (8 people), Taksiyarhis Church (7 people), and the Sabuncugil Plant (6 people) were referenced by a moderate number of people.

The third segment is made up of landmarks that were cited by fewer than five people. In this segment, the Hayrettin Pasa Mosque (4 people), Head of the District (4 people), Migros Market (4 people), Marina (4 people), Ziraat Bank (3 people), Customs House (3 people), Ayvalik High School (3 people), Halk Bank (2 people), Vural Bazaar (2 people), YKM Store (2 people), Yali Pension (2 people), Harbour (1 person), PTT (Communication) (1 person), Police Station (1 person), and the Cumhuriyet Primary School (1 person) were identified.

3.4. Determination of Objective Landmarks

3.4.1. Methodology

Steck and Mellot (2000) divided the landmarks into two categories in their study: global and local. Global landmarks are those that are visible from great distances. Local landmarks are smaller in scale when compared to global landmarks and are only visible when observers approach them.

In this study, this classification will not be used as a criterion to determine objective landmarks because the participants in the questionnaire had lived in Ayvalik for many years. Thus, in this study, a building/place cannot be labelled a landmark just because it is visible from a distance; it will most probably be more than a temporary reference point to those kinds of participants.

Santos-Delgado (2005) listed five features for landmarks:

- Social Landmarks: The places where people interact and socialize (e.g. mosques, parks, and schools).
- Historical Landmarks: Places that have historical value or where an historic event occurred (e.g. monuments and cemeteries).
- Symbolic Landmarks: Places that have a symbolic value (e.g. churches and mosques).

- Economic Landmarks: Places that have an economic value (e.g. plants and harbours).
- Aesthetic Landmarks: places with aesthetic value.

Raubal and Winter (2002) listed three items for the salience of landmarks:

- Visual Salience: facade, form, and colour.
- Semantic Salience: cultural and historical value.
- Structural Salience: location.

Sorrows and Hirtle (1999) separated landmarks into three categories:

- Visual Landmarks: visually salient elements.
- Cognitive Landmarks: meaningful elements.
- Structural Landmarks: elements that are salient because of their location and placement within the greater spatial configuration.

LANDMARKS	
Steck and Mallot	global local
Santos-Delgado	social historical symbolic economic aesthetic
Raubal and Winter	visual salience semantic salience structural salience
Sorrows and Hirtle	visual cognitive structural

Table 4

Summary of Steck & Mallot, Santos-Delgado, Sorrows & Hirtle.

Taking into account the landmark criteria described in these three studies, we identified six factors that can measure the potential for an element to become a landmark, and we named these criteria objective criteria:

1. Social Value
2. Historical Value
3. Symbolic Value
4. Economic Value
5. Aesthetic Value
6. Locational Value

The locational value is important because the configuration of the layout not only affects the movement and circulation of people, but it also helps people to understand the relationship between spaces and to form an image of this relationship. There are several studies that emphasize the importance of spatial layout in human behaviour (Faria and Krafta, 2003; Hillier, 2003).

To determine whether the buildings supply the locational value criterion, we used the global integration values on the axial map of Ayvalik. If any building was on an integrated line, it had a locational value.

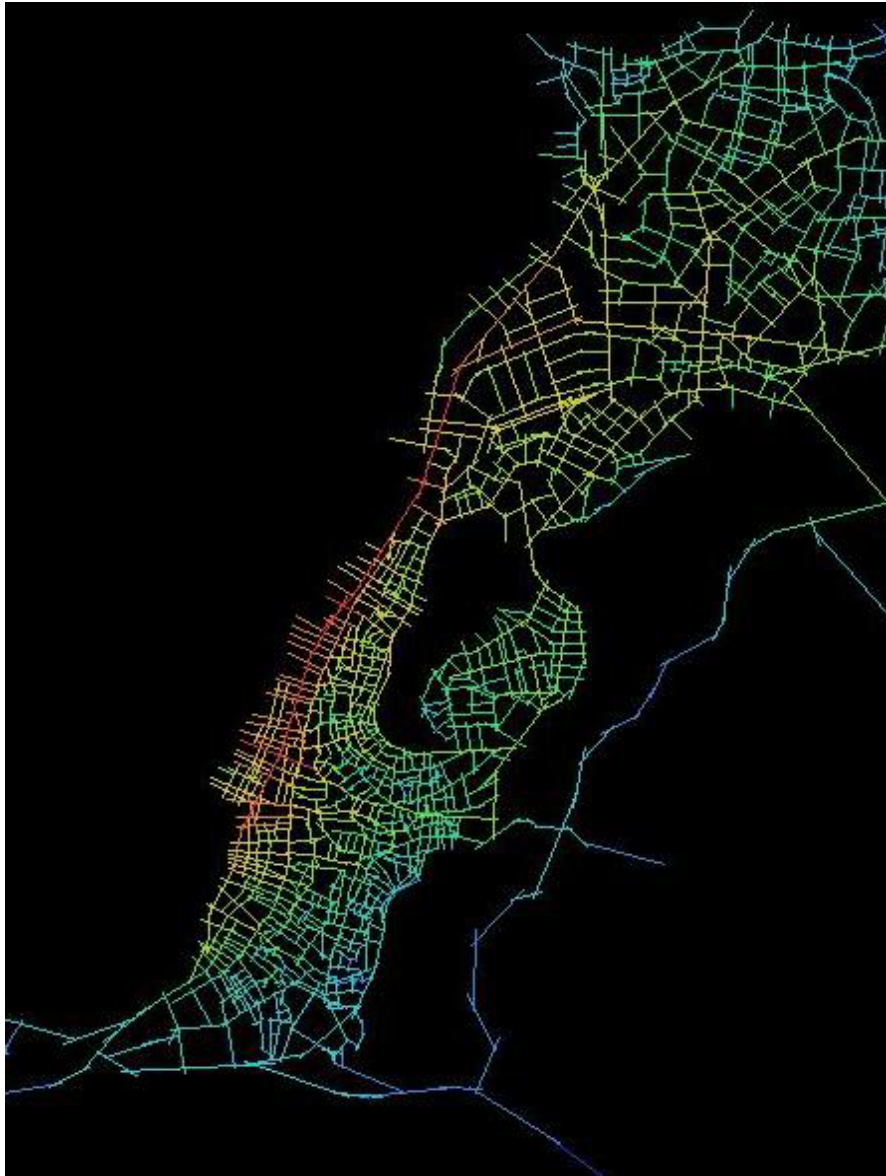


Figure 2
Axial map of Ayvalik.

The red lines are the most integrated areas in the axial map. They are common places that are used by both local people and foreigners. The blue lines are the segregated areas.

It can be concluded that YKM Store and PTT (Communication) are located in the most integrated area, whereas Hayrettin Pasa Mosque is placed in the most segregated area.

- Denizci Cafe received the highest points and has all six objective criteria.
- Town Hall, Kiz Meslek High School, Tax/Duty Building, Sabuncugil Plant, Yali Pension, Customs House, Cumhuriyet Primary School, Ziraat Bank, and Head of the District all received five points. Saatli Mosque, Cinarli Mosque, Hayrettin Pasa Mosque, Police Station, and Taksiyarhis Church each received four points.
- Is Bank, Halk Bank, Vural Bazaar, YKM Store, Tansas Market, and Greek Houses received three points.
- Migros Market, Marina, and PTT (Communication) received two points.
- Ayvalik High School only received 1 point.

Building	Street	Integration Value
Saatli Mosque	Gümrük Street	0.86
Taksiyarhis Church	On the intersection of 9th Street and Mareşal Çakmak Street	0.70
Çınarlı Mosque	Yeni Hamam Street	0.79
Sabuncugil Plant	Atatürk Street	1.04
Police Station	Atatürk Street	0.95
Migros Market	Atatürk Street	0.73
Ayvalık High School	Atatürk Street	0.67
Cumhuriyet Primary School	Cumhuriyet 13th Street	1.01
Hayrettin Paşa Mosque	Şafak Street	0.64
Tax/Duty Building	Atatürk Street	1.02
Kız Meslek High School	Atatürk Street	1.07
Customs House	Balikhane Street	0.93
The Head of the District	Atatürk Street	1.07
Tansaş Market	Atatürk Street	1.04
PTT	Atatürk Street	1.08
Marina	Atatürk Street	0.73
Yalı Pansiyon	Atatürk 3rd Street	1.00
Denizçi Cafe	Belediye Street	0.95
Town Hall	Belediye Street	0.95
Ziraat Bank	Atatürk Street	1.05
İş Bank	Atatürk Street-Cumhuriyet Square	1.05
Halk Bank	Atatürk Street-Cumhuriyet Square	0.95
Vural Bazaar	Atatürk Street-Cumhuriyet Square	0.95
YKM Store	Atatürk Street	1.08

Table 5
Integration values.

	People	Social	Historical	Symbolic	Economical	Aesthetic	Locational	Total Point
Town Hall	13							5
İs Bank	8							3
Halk Bank	2							3
Ziraat Bank	3							5
Head of the District	4							5
Saatli Mosque	22							4
Cinarli Mosque	17							4
Hayrettin Pasa Mosque	4							4
Vural Bazaar	2							3
Kiz Meslek High School	17							5
Tansas Market	8							3
Tax/Duty Building	18							5
Migros Market	4							2
Denizici Cafe	13							6
Sabuncugil Plant	6							5
YKM Store	2							3
PTT (Communication)	1							2
Police Station	1							4
Taksiyarhis Church	7							4
Yali Pension	2							5
Customs House (Gümrük)	3							5
Ayvalik High School	3							1
Marina	4							2
Cumhuriyet Primary School	1							5
Greek Houses	9							3

Table 6
Objective landmarks.

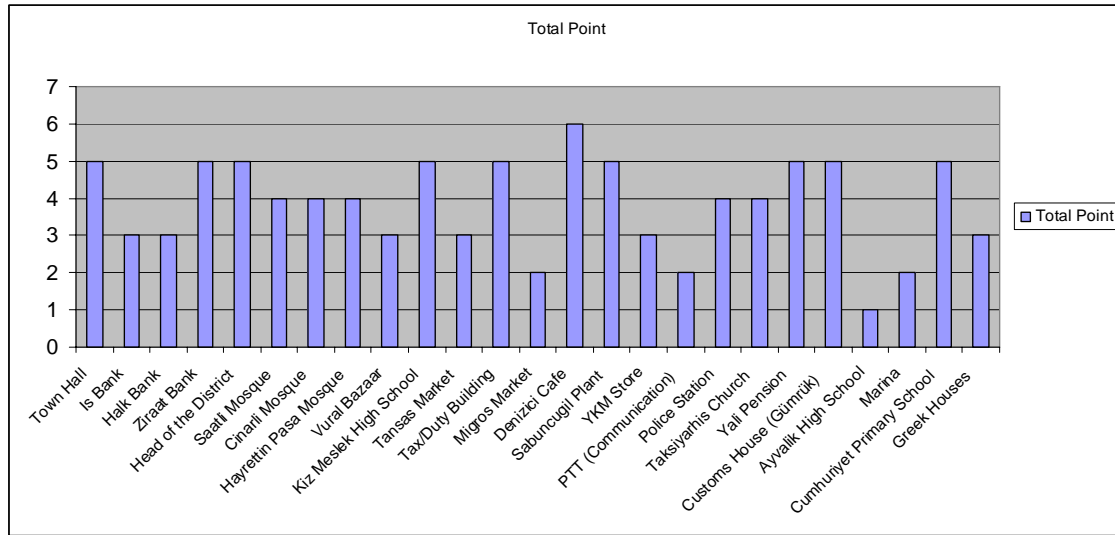


Table 7
Objective landmarks.

3.5. Evaluation of Objective and Subjective Landmarks

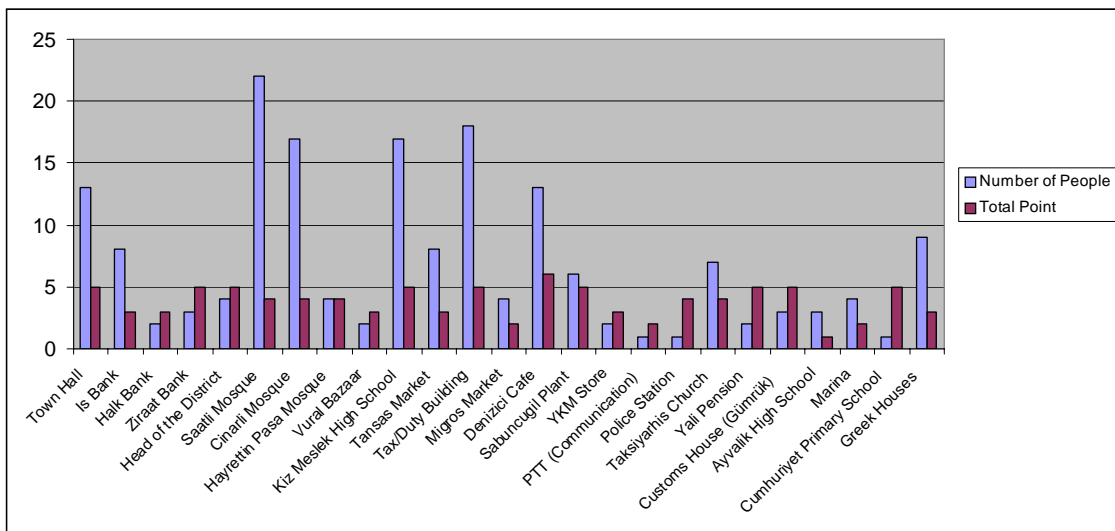


Table 8
Comparison of subjective and objective landmarks.

Although Denizci Cafe supplied all the objective criteria and received six points, only 13 people noted it. In contrast, Saatli Mosque met four objective criteria, and 22 people noted it, giving it the highest rating.

Town Hall, Kiz Meslek High School and Tax/Duty House, which received five points, also received high ratings (13, 17, and 18 people, respectively).

Saatli Mosque and Cinarli Mosque each received four points, and they have high ratings (22 people and 17 people, respectively).

Is Bank, Greek Houses, and Tansas Market each received three points and relatively high ratings (8, 9, and 8 people, respectively).

Migros Market and Marina each received two points and received relatively high ratings (4 people).

Finally, Ayvalik High School only met one of the objective criteria, but received a relatively high rating with three people.

4. Conclusion

Landmark is a vague concept. The content of the description of a landmark is relative because it is based on the viewpoint of the observer. Here, we aimed to distinguish the objective and subjective landmarks of the Ayvalik settlement.

In such a division, it is difficult to determine which buildings/places can be potential objective landmarks. Therefore, the buildings/places that were noted in the answers of the participants were measured in the objective evaluation.

The integration values in the axial map were used as a criterion when grading the buildings for their locational value. Because the buildings that are located in the integrated areas may be more accessible and more often used places, they were deemed to have locational value as an objective criterion.

It is clear that many buildings that got high ratings from both people and high points in the objective evaluation were located in the integrated areas (e.g. Town Hall, Kiz Meslek High School, and Tax/Duty Building). Another interesting result is that YKM Store and PTT (Communication) that are located in the most integrated areas received lower ratings from people and lower points in the objective evaluation.



Figure 3

Left: Subjective landmarks on axial map. Right: Objective landmarks on axial map.

These results indicate that even though location in the spatial configuration is one of the crucial criteria for a building to become a landmark, it is not the sole criterion. In some cases, symbolic,

aesthetic, and historical features may become more important in determining whether a building will become a salient element (Saatli Mosque in this study).

The strongest objective landmark, Denizici Cafe, is not the strongest subjective landmark in this study. However, the strongest subjective landmark, the Saatli Mosque, is not the strongest objective landmark. It can thus be noted that the symbolic value (i.e. the religious aspect of Saatli Mosque) is an important saliency factor in Ayvalik.

Despite the fact that landmarks are difficult to define, it is certain that they have both subjective and objective aspects. Therefore, it is important to address both subjective and objective attributes when defining something as a landmark.

This paper provides a starting point to distinguish the objective and subjective image elements of the environment. The next step is to separate the spatial choices of the local people and the foreigners in Ayvalik. Furthermore, the relationship between spatial (e.g. buildings, places, and landscape elements) and non-spatial elements (e.g. traffic lights, statues, and plant chimneys) can be examined.

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