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Comparative perception analysis in special-qualified heritage landscapes

Esra ÖZHANCI[1]
[1] eozhanci@nevsehir.edu.tr • Department of Landscape Architecture, Engineering and Architecture Faculty, Nevsehir Hacı Bektas Veli University, Nevsehir, Turkey

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Abstract
There is a wide variety of landscapes and there are many different landscape characteristics that constitute them. Rare and unique landscapes exhibit an even more distinctive profile in terms of their characteristics. The aim of this study; is to evaluate the Göreme (Nevşehir) region, which is on the UNESCO heritage list and has an extraordinary landscape with its landforms, natural and cultural history and all its beauties, in terms of landscape perception and to reveal the perceptual effect of cultural heritage values. In the study, the participant assessment was performed with 12 pieces of landscape scenes taken from the area and The Affect Grid (AG) and The Scenic Beauty Estimation (SBE) Methods were implemented. While the results revealed the effectiveness of The Affect Grid Method and the data obtained, they also ensured that the visual values of the district could be analysed. Examples of rock-carved and masonry house combinations that received high scores in the impact analysis were the images exhibiting the typical residential structure of the region. In addition, when looking at the general distribution, related results were obtained from SBE and AG analyses. Furthermore, the scenic beauty, pleasure, and arousal scoring which are the sensational elements based on The Affect Grid Method showed parallelism as M=6,67, M=6,06, M=6,00 on average. There is statistically a very important relationship between the pleasure dimension, arousal dimension and scenic beauty scores($p<0,001$). The findings obtained point out the basic critiques for similar studies to be carried out in the field of perception in similar areas.

Keywords
Visual quality assessment, User perception, Heritage landscapes, Landscape management, Effect grid.

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1. Introduction

The term "landscape" can generally be defined as an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors (European Landscape Convention, 2000). On the other hand, the landscape visual quality assessment, is a research method for the analysis of the landscape in terms of perception, which can also be defined as "the cognition structure that is created by the object that is already observed," which the thing observed creates in the person.

In addition, the European Landscape Convention defines landscape as "a human perceived space, which is the result of action and interaction of natural and/or human factors."

Perception emphasis once again reveals that the field of landscape perception is a concept that is at the center of landscape assessment. As a matter of fact, many preference studies have been carried out regarding perception for many years and efforts have been made to put the results of this interaction on a digital basis.

Perception is a way of experience. Landscape experience is a perceptual experience as expressed in the definition; perceiving is a prerequisite for most experiences (Jacobs, 2006). However, the dimension of pleasure is an important part of the process, since the concept of beauty defines the aesthetic pleasure and the emotions that an object causes in the mind.

Our perspective of the landscape today is different from other cultures as well as from our ancestors. This situation arises from the dynamic structure of the earth and human beings living in interaction with it, which includes constant change and transformation. The importance of researching human perception stems mainly from this. Environmental perceptions trigger approaches and turn them into behaviors. While this process sometimes gains importance in "preferability", sometimes it represents sensitivities that determine environmental attitudes and behaviors.

Scenic beauty assessment is a part of the environmental psychology field that has been studied for more than half a century (Shafer, 1970; Zube, 1974; Daniel & Boster, 1976; Daniel & Vining, 1983; Dearden, 1981; Zube, 1984; Kaplan & Kaplan, 1989). Landscape perception assessments include a sociological, cultural, and historical frameworks with psychology as a significant influence.

When the visual quality assessment studies are examined; it is seen that the focus is especially centered around the concepts of beauty-ugliness (Ulrich, 1986; Lindemann-Matthies et al., 2010; Junge et al., 2015; Wang et al., 2016; Zhao et al., 2017) or the factors affecting the landscape perception (Kaplan & Kaplan, 1989; Tveit et al., 2006) and elements (Arriaza et al., 2004; Hunziker et al., 2008) are sought in the scenic beauty based on the same values. In the assessments carried out, several judgements could be passed on the typical areas such as water-based landscapes, mountain landscapes, rural landscapes, and urban landscapes in terms of perception and choice (Bulut & Yilmaz, 2009; Özhanci et al., 2014; Kalivoda et al., 2014).

While the beauty of the landscape is important both in terms of protection and sustainability, it also reveals the value of nature (Gosal & Ziv, 2020; Fassoulas et al., 2012). Apart from this, it is an important area in terms of tourism value and expectations and feelings of tourists (Williams, 2012; Ruban, 2018). High visual quality contributes greatly to successful destination development and management, as it makes people feel happier and healthier. Experimental studies on natural beauty shed light on and support the management of geological values (Ribe, 1982).

Landscape beauty evaluations are made by two methods as objective and subjective evaluation (Lothian, 1999). Objective assessment is carried out by experts' assessment of landscape characteristics. On the other hand, subjective evaluation is a method based on revealing the preference and perception of the non-expert public (Tveit et al., 2013). In studies conducted for this purpose, photographs that replace landscape are used becauseit has been revealed that these colored photographs cause perceptions and preferences equivalent to real landscapes

(Daniel, 2001). Many researchers have conducted landscape beauty assessment studies using photographic representations of the landscape (Arriaza et al., 2004; Tveit, 2009; Mo et al., 2021; Othman, 2015).

In the studies on the subject, the biophysical properties of the landscape were discussed. Water, naturalness, vegetation, color diversity, contrast, landform size, uniqueness, etc. Biophysical landscape features are the features investigated in the assessments (Arriaza et al., 2004; Migo´n, 2018; Gosal & Ziv, 2020). In some studies, the effects of personal factors such as age, gender, and education on natural beauty ratings were investigated, and it was concluded that these factors make a significant difference (Tveit, 2009; Kalivoda et al., 2014); however, some other studies have shown the opposite (Gruehn, 2010; López-Martínez, 2017; Chen et al., 2015).

The visual quality assessment is a multi-directional method in terms of approach and sampling. When the number and diversity of the ecosystems available in these landscapes are taken into account, the importance of why the quality assessment studies become apparent. It is not possible to say that there is only one typical landscape with which people are familiar. Those landscapes, which come to the fore with those rare characteristics, are protected by international and national institutions through marking while taking the attention of the people from every culture and environment.

In studies that consider the evolutionary landscape, preferences are considered as emotional responses. We can have positive or negative emotional states about landscapes (Jacobs, 2006). Feelings are not only the accompaniments of emotion. The capacity to have feelings is a biological phenomenon, which we are never without, not while we are awake and not while we are asleep and dreaming (Karmanov, 1999).

In this context, The Affect Grid Method is an emotional impact model built on eight emotional concepts. This method, which is an effective method in the field of impact assessment, is a scale designed as a rapid tool in order to assess the impact changing from dormancy to arousal, from non-pleasure to pleasure. The Affect Grid is a potentially suitable method for any study that requires passing judgments on an objective or subjective type of impact. The Affect Grid is a tool that is short, easy to complete, and therefore can be used rapidly and repeatedly since it is a single-item scale (Russell et al., 1989).

The Affect Grid is potentially suitable for any work that requires descriptive or subjective judgments of impact (Garcia-Crespo et al., 2010). The method is used to obtain social and perceptual judgments in many different fields (Heath et al., 2000; Eich et al., 1994; Wong & Domroes, 2005). He et al. (2017) investigated the effects of music on creative thinking using Test for Creative Thinking-Drawing Production and the Affect Grid Methods. Colomo-Palacios et al. (2011) used the impact grid on developers and users in the field of requirements engineering. Heath et al. (2000), in their study on high-rise buildings that affect the urban landscape, aimed to obtain results with 60 psychology student participants by using The Affect Grid Method. Lin et al. (2018) used The Affect Grid Method with 50 participants to evaluate the effects of building height and lake width on preferences for these landscapes, using various visual scenarios.

The European Convention on Landscapes clearly points out the importance of public/userperceptions, which should be an inevitable part of the planning and management of an area. "The identification, description, and assessment of landscapes constitute the preliminary phase of any landscape policy. This involves an analysis of morphological, archaeological, historical, cultural, and natural characteristics and their interrelations, as well as an analysis of changes. The perception of the landscape by the public should also be analyzed from the viewpoint of both its historical development and its recent significance." (European Landscape Convention, 2000).

1.1. Characteristic of the study area

The history of the Cappadocia Region, which means "Land of Beautiful

Horses", dates back to 7000 BC. Hittites, Phrygians, Assyrians, Persians, Romans, Seljuks and Ottomans ruled in the region, respectively. After the 3rd century, Cappadocia became one of the important centers of Christianity. It came under Seljuk rule in the 11th and 12th centuries (Anonymous, 2021).

The Cappadocia region which is known all around the world is included among these outstanding landscapes. Goreme Historical National Park, which has geological, recreational, and landscape values (it was annunciated as National Park in 1986) is a valuable resource that has been on the world cultural and natural heritage list of UNESCO since 1985 and is being visited by many domestic and foreign tourists. According to the official numbers (TÜİK, 2019), the museum and archeological sites of Cappadocia, one of the most important tourism centers of Turkey, were visited by 2.522.378 tourists within the period of January-August of 2019. Within this period, Goreme Outdoor Museum was the most visited place by 933.495 tourists.

The protection, management, and observation of Goreme National Park and Rock Sites of Cappadocia are under the responsibility of the national and local administrations. Cultural and Natural Heritage Preservation Boards of Nevsehir and Kayseri provinces prepare regional assessments and protection plans as well as ensuring legal protection and restoration.

However, in recent days, important legal and administrative arrangements have been made regarding the future of the region. The decision of the Council of Ministers dated October 30, 1986 and numbered as 86/11135 on the proclamation of Goreme as a national park was decided to be repealed due to the existence of many protection statuses in the entire Cappadocia region and the occurrence of confusion of authority. In the previous process, Law No. 7174 dated 23/5/2019 on the Cappadocia Area was enacted. In this Law, issues such as protection, survival, development, presentation, transfer to next generations, planning, management, and control of historical, cultural values, geological/geomorphological texture, and natural resource values of the Cappadocia area are included. Then, the Cappadocia Area Presidency was established for the same purpose and scope in accordance with the Presidential Decree About the Cappadocia Area Presidency (1/6 / 2019-30791).

In the Cappadocia Region, there is a multi-part mentality for management and planning. The prominent problems at this point are the non-completion of the Conservation Purpose Zoning Plans, the non-availability of the tourism management plan, the incompatibility of the lower and upper-scale plans as a result of the fact that the area planning is not made in an integrated manner and the absence of unity of language in the restoration works (Bilgili, 2018).

There are landscapes around the world, which were formed and developed depending on geological and geographical characteristics within historical patterns, lack of green areas due to the mentioned features of the region where they are located, but reveals a distinguishing natural and physical appearance. The most typical examples of such landscapes are located in the Cappadocia region (Central Anatolian/Turkey) which is specified as the underground and rock cities (Karaguler & Korgavus, 2014).

Cappadocia is an extraordinary model of a traditional human settlement that has become defenseless under the combined impacts of natural erosion and, more recently, tourism (UNESCO World Heritage Convention, 2019). This district which attracts tourists from all around the world comes to the fore in terms of the facts/numbers in tourism of Turkey. While the meaning of tourism in the world is now changing into alternative types such as cultural tourism and geo-tourism instead of sea-sand-sun, such a valuable and rich area can't be ignored with its cultural and natural values. A culture and nature-based tourist profile undoubtedly exhibits discrepancies also in terms of the expectations and contributions. Tourism contributes to the sustainability of these valuable landscapes by adding motivation to the residents of the district for the protection of the localness and values as well as many positive or negative socio-eco-

nomic factors accompanying.

Within the badlands' topography, diverse geographical formations occur depending on the severity of the erosion. The most characteristic one of these geographical formations is the fairy chimneys which were formed with the regression of the slopes on the valley slopes between the pediment plains (Öztürk, 2019). In places such as Uchisar, Ortahisar, Goreme, Urgup, and Cemil village settlements which are located in Nevsehir district, carved rock structures are the characteristic architectural feature of the region. The harmony with this character is observed also in the masonry structures associated or not associated with the carved rock spaces. The rocky spaces developed horizontally and vertically inside the fairy chimneys, on the slopes, and under the ground by means of its easily processable tuff structure. In many structures having diverse functions in the region, three types of construction systems reflecting the architectural character of the region were observed. These are defined as the carved rock structures, the masonry structures, and the mixed structures which include the carved rock and masonry structures together (Bilgili, 2018).

In Cappadocia Region, the most characteristic surface features of the world developed depending on volcanism, tectonism and external forces. The most important geological element in the region is the Cappadocia Volcanic Area with the length of approximately 250-300 km and extending in the NE-SW direction, which is one of the Neogene-Quaternary volcanic belts (Dirik, 2009).

The Cappadocia region, which is located within the Central Anatolia Volcanic Province is an interesting area since it includes interesting geomorphological elements arising on the Mio-Pliocene ignimbrites and tuffs depending on the physical and chemical decomposition processes (Öztürk et al., 2019). The settlement also started within the ignimbrite when the people settled in the region and became acquainted with the space. The most important characteristic of the ignimbrite for the region is that it can be easily carved. The natural structure was started to be used as the most beautiful settlement area since the first ages of history, and the cave architecture (underground settlement) has started to appear in the rich and unseen parts of the world. The ignimbrites in the region are easily affected by the water absorption-drying, daily-seasonal heat change, and consequential surface weathering and water and wind erosion due to their lithological characteristics (Gürler, 2007; Karameşe, 2014).

Besides their lithological, petrographical and structural characteristics, the tectonic uplifts that occurred during the Quaternary Era, the climatic oscillations and the oscillations that occurred at the level of Kizilirmak affected the development of the area and accordingly the fairy chimneys and the formation of the present appearance of the region (Öztürk et al., 2019).

1.2. Research hypothesis

When the literature was examined, no visual perception or impact study performed for Cappadocia or a heritage landscape area that is similar in terms of natural and cultural conditions could be found. Based on the fact that the visual assessment should be dealt with diversely in such a different and valuable heritage area, we considered dealing with it especially with its sensational impact dimension as well as the visual value / scenic value. Furthermore, we examined the effectiveness of the method in this kind of visual assessment by using The Affect Grid Method (Russell et al., 1989).

In this study, The Affect Grid and The Scenic Beauty Assessments were jointly applied and the relation, harmonization, and contrasts were revealed. The purpose of this study is to assess Urgup-Goreme (Nevsehir) region having an outstanding landscape characteristic with its landforms, natural and cultural history and all treasures in terms of landscape perception and to reveal the perceptional impact and value of the cultural heritage with the data obtained through the determination of the scenic value-quality. In this way, it is aimed at determining the sustainable area usage of the basic perceptional factors within the area and their role in the planning.

For these purposes, it is possible to list the hypothesis and targets of the research as follows:

1. Since the Goreme region is unique in terms of visual landscape values, it should be evaluated in detail. Evaluation of touristic destinations in terms of visual quality and characteristics is an internationally and locally important field of study. Of course, these evaluations should make it possible to analyze the elements that provide the natural and cultural formation and transformation of the region over time, with different aspects.

2. Analysis of these elements is essential for sustainable area planning and management, which is also included in The European Convention on Landscapes. As stated in this convention, the sustainability of extraordinary landscapes should be prioritized, as stated in the statement that "...the areas defined as ordinary as well as extraordinary beauty in degraded areas as well as high quality are an important part of the quality of life...".

3. The results obtained will give certain clues about the visual areas (typical rock appearance, rock appearance in the street, characteristic streets, rock/masonry combinations, etc.) and elements that are effective in the region.

4. The usability of The Affect Grid Method should be tested to increase the detail of data in the context of emotional impact. Questions such as "What kind of a picture do the visual components of the current landscape character reveal in mood, and what kind of a graphic does such an unusual landscape reveal in the dimension of arousal/enjoyment?" should be answered.

2. Material and method

2.1. Material

Goreme National Park and Cappadocia , together with Derinkuyu and Kaymakli Underground Cities, Karain, Karlik, Yesiloz and Soganli villages constitute a World Heritage Area of UNESCO (Figure 1).

2.2. Method

Due to the unique qualities of the landscape, the analysis was carried out in need of taking different approaches.

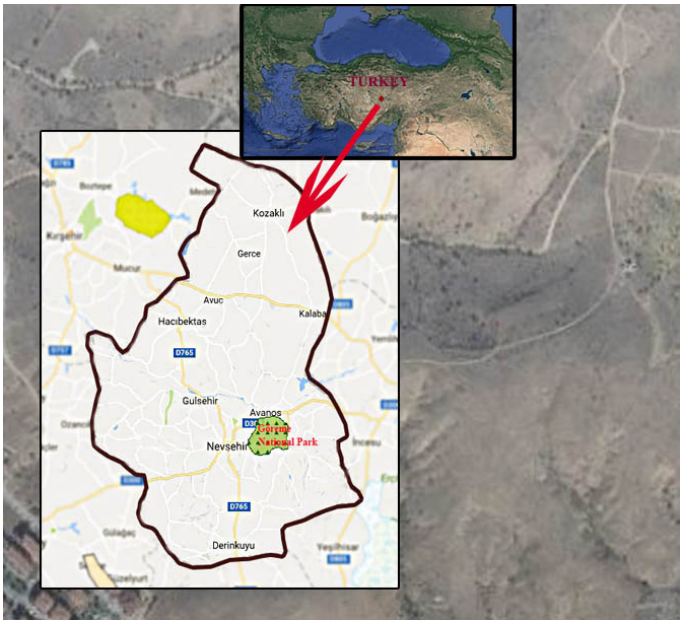

Figure 1. *The location of Goreme National Park in Nevsehir, Turkey.*

The effects of the joy and arousal dimensions on perception were determined by the impact assessment. In this way, the relationship between emotional reactions and preference was determined.

In the study, the Impact Assessment (The Affect Grid Method-Russell et al., 1989) was applied principally and then the Scenic Beauty Estimation (SBE-Daniel & Boster, 1976) was performed.

Photographing process (Stimuli)

First of all, the elements determining the main character of Goreme Historical National Park were examined and the prominent landscape elements were determined in order to ensure the effectiveness of representation in this context. Within the photography process, the photographs were taken by targeting these factors. Examples representing the district landscape such as the following were selected;

1. The general appearance of the rock formations: The volcanic formations representing the most typical and known panoramic structure of the area and the image of the natural and cultural landscape located together.

2. The singular appearance of the rock formations within the street integrity: Singular and plural images of volcanic formations from a close perspective and the image of the purely symbolic landscape.

3. Characteristic street views representing the culture: The appearance of masonry architecture and accompanying natural and cultural elements in harmony with the rock spaces, in which the influence of rock formations is largely eliminated.

4. Carved rock and masonry house combinations: The focus is on the combination of rock-carved and masonry houses that have been developed and integrated from the past to the present, including various cultural elements in their surroundings.

No aesthetic concern was taken into consideration while photographing; care was taken not to include any human, animal, or other activities in the photographs and in the photographs it was intended to represent only typical elements to the extent possible. A digital camera was used for taking the pictures. Photographs were taken during the hours from 12: 00 until 15: 00 when daylight could be sufficient during the August-September 2018 period. Among the many images taken, a total of 12 photographs that could be sufficient for representation were selected and subjected to assessment (Figure 2).

2.2.1. Impact assessment

The method is an impact model in which the eight emotional concepts are evenly distributed over a rectangular coordinate system. In the model; there are 9 points of squares on the 9 x 9 grid, which changes from sleep to arousal on the vertical axis and from unpleasure to pleasure on the horizontal axis. When the axis is rotated 45°, four more concepts are added in two extra dimensions. These are excitement-depression and relaxation-stress pairs. Each frame represents two points corresponding to the dimension of pleasure and the dimension of arousal; this means that participants answer two questions about emotions at the same time as they mark a square of the network (Figure 3).

2.2.2. Scenic beauty assessment

The visual value of the scene was estimated through the assessment of participants. The method is fundamentally based on the Scenic Beauty Assessment method of Daniel & Boster (1976). The images chosen in line with the purpose of the study were scored depending on the preference and additionally, it was ensured that they are characterized with 9 adjectives determined.

2.2.3. Participants and assessment

Considering that there is a suitable sampling group at the point of evaluation of the images, it was preferred that the participants were students of the Landscape Architecture Department. The evaluation process

Figure 2. *The images used in the evaluation.*

was carried out with 90 students from different cities (30 different cities) of the country studying at Nevşehir Hacı Bektaş Veli University. All the students were between 18-24 years old, 47 were male and 43 were female.

Participants were asked to read the explanatory part of The Affect Grid, which is included in the entry of the form, after filling in the section of personal information. Participants first read the instructions given to them to understand the issue. Then, they were asked to mark the place where they deemed appropriate on the 9-point scale to answer: "Please rate how you feel right now."

They were also asked to evaluate the images on a 10-point scale (1-the lowest, 10-the highest) to determine the landscape value. Finally, the participants were asked to characterize the landscapes in the image with one or more of the expressions they deemed appropriate as "artistic, aesthetic, ancient, extraordinary, harmonious, peaceful, interesting, natural, stunning, complicating".

2.2.4. Statistical analysis

IBM SPSS Statistics Version 19 was used for the statistical analyses. Since the data related to the scenic beauty, pleasure, and arousal shows normal distribution (Tabachnick & Fidell, 2013), the Pearson Correlation test was applied for the relations between the scores taken by the images.

3. Results and discussions

3.1.Impact assessment

According to the results obtained, image J has high scores at the arousal dimension (M=6,99) and image L has high scores at the pleasure dimension (M=7,02). Table 1 includes pleasure and arousal score averages.

Figure 4 shows the excitement-depression and relaxation-stress preference congestions of the images. Whereas congestion at the excitement dimension is observed in the images receiving a high score (>=6) in the pleasure dimension, congestion in the depression dimension is observed in the images taking low scores (<=6).

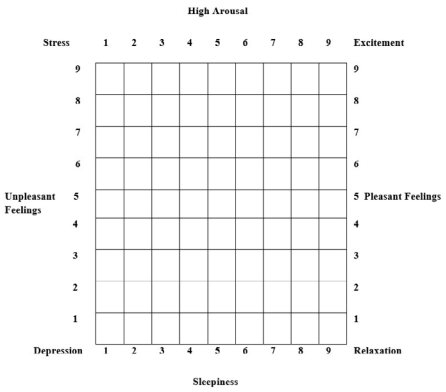

Figure 3. *The Affect Grid (Russel, 1989).*

Table 1. *Average scores and standard deviations in the dimension of pleasure and arousal of images.*

	Pleasure dimension		Arousal dimension		
	Mean	Std. Deviation	Mean	Std. Deviation	N
Scene A	6.56	1.980	6.59	2.012	90
Scene B	6.40	1.970	6.37	1.900	90
Scene C	5.93	2.135	5.69	2.016	90
Scene D	6.61	1.971	6.65	1.093	90
Scene E	4.74	1.998	5.11	2.115	90
Scene F	6.05	2.247	6.04	1.912	90
Scene G	6.69	1.719	5.95	1.719	90
Scene H	5.57	1.785	5.52	1.998	90
Scene I	4.81	2.019	4.73	2.116	90
Scene J	6.80	1.977	6.99	1.941	90
Scene K	5.50	2.017	5.48	1.914	90
Scene L	7.02	1.927	6.56	2.082	90

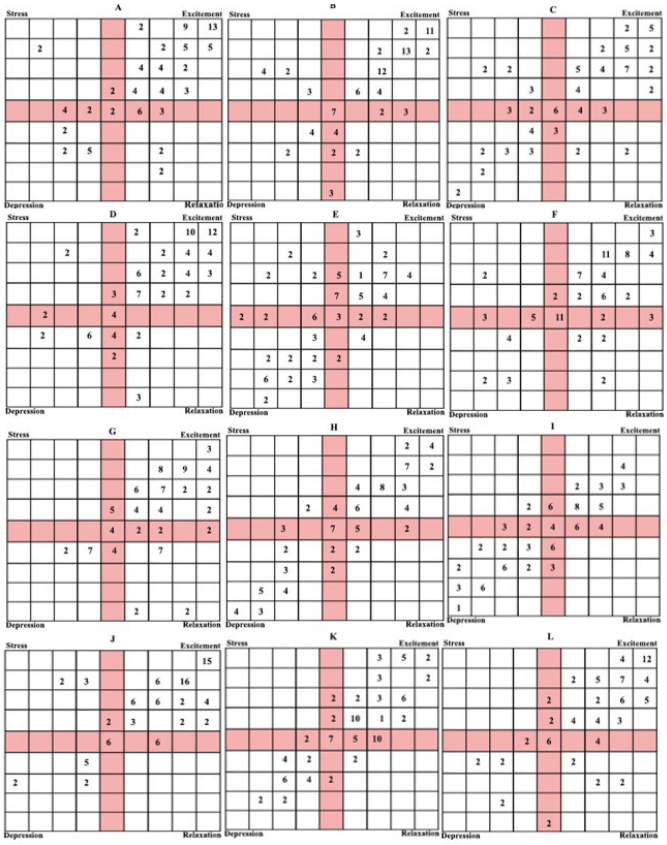

Figure 4. *The excitement-depression and relaxation-stress preference congestions of the images.*

3.2. The Affect Grid and scenic beauty relations

When the scenic beauty scores of the images were examined (Table 2), the highest score average was M=8,12 (image J) and the lowest score average was M=5,24 (image E).

Similar results were obtained in The Affect Grid Method scoring. In other words, both assessment methods show parallelism in terms of scenic perception. Furthermore, the scenic beauty, pleasure, and arousal scores which are the sensational elements based on The Affect Grid Method showed parallelism as M=6,67, M=6,06, M=6,00 on average.

As a matter of fact, according to the One Way Variance Analysis (ANOVA), which is applied for the relations between the scores taken from the dimensions concerning the scenic beauty, pleasure and arousal; there is statistically a very important relationship between the pleasure dimension, arousal dimension and scenic beauty scores($p<0,001$) (Table 3 and Table 4).

The percentages arising in the section of characterization of the images used in the analysis are given in Table 5.

The proportional distribution of the adjectives chosen by the participants for each image subjected to the assessment is given in Table 6.

In most of the images, harmony (5 images) and naturalness (4 images) came to the fore, and for images D and J, the adjective of artistic was preferred more. In these two images, the combination of rock carving and masonry house stands out more.

Emotional studies focus on four different dimensions: emotional stimuli, emotional physical response, emotional experience, and interactions between emotion and cognition (Jacobs, 2006). What we focused on were the emotional and cognitive relationships that emerged as a result of the landscape experience.

Images J and L, which are examples of rock carving and masonry house combinations, show the typical residential structure of the region. The living spaces opened by carving the natural rocks were expanded with new structures from the appropriate building spaces with further human intervention. These new units are complemented by color, texture, and masses. In the landscape dominated by vertical cliffs, the perception of space by masses in the horizontal axis is supported. In addition, when the fragmentary structure in the image is examined, the abundance of detail is noteworthy. This is both an important factor in the

Table 2. *Average scores and standard deviations of images in the evaluation of landscape beauty.*

	Scene A	Scene B	Scene C	Scene D	Scene E	Scene F	Scene G	Scene H	Scene I	Scene J	Scene K	Scene L
Mean	7.24	6.88	6.07	7.40	5.24	7.14	6.65	5.84	5.40	8.12	6.57	7.51
Std. Deviation	2.208	1.872	1.893	2.113	2.032	1.801	1.787	2.001	1.714	1.770	1.826	2.001
N	90	90	90	90	90	90	90	90	90	90	90	90

Table 3. *ANOVA test of images as the result of analysis between groups and within groups (pleasure).*

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1647,751	8	205,969	79,799	,000
Within Groups	2578,518	999	2,581		
Total	4226,270	1007			

Table 4. *ANOVA test of images as the result of analysis between groups and within groups (arousal).*

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1185,341	8	148,168	48,676	,000
Within Groups	3040,929	999	3,044		
Total	4226,270	1007			

Table 5. *Adjective scores attributed to images.*

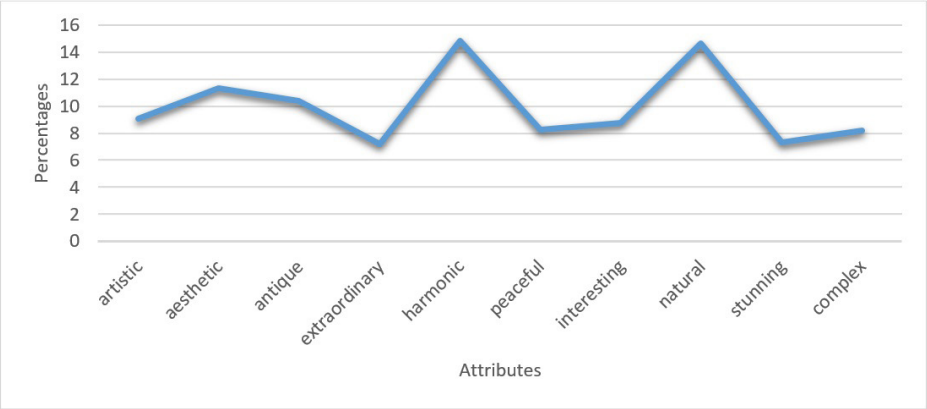

Table 6. *Distribution of adjective scores attributed to images per each image.*

	Scene A Responses		Scene B Responses		Scene C Responses		Scene D Responses		Scene E Responses		Scene F Responses	
	N	Percent (%)	N	Percent (%)	N	Percent (%)	N	Percent (%)	N	Percent (%)	N	Percent (%)
artistic	21	9,10	15	6,61	16	7,31	34	14,98	8	3,88	20	8,85
aesthetic	17	7,40	16	7,05	30	13,70	29	12,78	3	1,46	35	15,49
antique	30	13,0	27	11,89	34	15,53	22	9,69	22	10,68	10	4,42
extraordinary	15	6,50	20	8,81	13	5,94	24	10,57	19	9,22	15	6,64
harmonic	19	8,30	33	14,54	20	9,13	16	7,05	40	19,42	25	11,06
peaceful	30	13,0	24	10,57	5	2,28	12	5,29	12	5,83	33	14,60
interesting	13	5,70	19	8,37	19	8,68	28	12,33	34	16,50	16	7,08
natural	48	20,90	42	18,50	43	19,63	28	12,33	25	12,14	40	17,70
stunning	26	11,30	19	8,37	24	10,96	21	9,25	11	5,34	9	3,98
complex	11	4,80	12	5,29	15	6,85	13	5,73	32	15,53	23	10,18
Total	230	100,0	227	100,0	219	100,0	227	100,0	206	100,0	226	100,0
	Scene G Responses		**Scene H Responses**		**Scene I Responses**		**Scene J Responses**		**Scene K Responses**		**Scene L Responses**	
	N	Percent (%)	N	Percent (%)	N	Percent (%)	N	Percent (%)	N	Percent (%)	N	Percent (%)
artistic	23	10,09	21	10,24	12	5,33	36	15,58	24	10,39	23	10,27
aesthetic	28	12,28	32	15,61	16	7,11	33	14,29	30	12,99	32	14,29
antique	22	9,65	22	10,73	25	11,11	21	9,09	22	9,52	21	9,38
extraordinary	19	8,33	16	7,80	23	10,22	12	5,19	18	7,79	9	4,02
harmonic	39	17,11	32	15,61	41	18,22	23	9,96	40	17,32	43	19,20
peaceful	23	10,09	12	5,85	16	7,11	22	9,52	10	4,33	24	10,71
interesting	16	7,02	18	8,78	19	8,44	21	9,09	14	6,06	22	9,82
natural	26	11,40	23	11,22	31	13,78	31	13,42	33	14,29	16	7,14
stunning	14	6,14	9	4,39	14	6,22	22	9,52	10	4,33	22	9,82
complex	18	7,89	20	9,76	28	12,44	10	4,33	30	12,99	12	5,36
Total	228	100,0	205	100,0	225	100,0	231	100,0	231	100,0	224	100,0

arousal dimension but also has a high value in terms of observation.

While the emotional framework created by the images in the mind combines pleasure and excitement in the positive dimension, it brings together negative enjoyment and depressive emotions in the negative dimension. Famous gardens built throughout the history (gardens belonging to rulers, bureaucrats, rich people, etc.) have always been associated with pleasure and entertainment and equipped for these purposes.

In addition, the prospect-refuge theory by Appleton suggests that people experience pleasure and satisfaction with landscapes that meet their biological needs (Kaymaz, 2012). So this is actually a result of a biological need process.

Images with low scores in the evaluations were irregular and complex units where human intervention could be felt. As a matter of fact, studies have shown that man-made negative elements affect preference negatively. It should not be overlooked that the interventions felt in such a landscape intertwined with such people, human life, and human activities should be proportionate and oriented towards a style.

In both evaluations (SBE-The Affect Grid), the mean scores, the highest and the lowest scores were close, and this was statistically determined. When the sensation dimension is assessed, the heart-warming landscapes also have high scenic value. According to Gregory (1998); it is not the outside world that is experienced, but the mental

structure we build on stimuli organized by concepts that are processed by the senses and stored in the mind.

The perceived naturalness of the landscape increased the value of the landscape as a prominent factor in many studies (Gobster et al., 2007; Kaplan et al., 2006). According to the results; harmony and naturalness were the most preferred adjectives.

Contrary to what was expected, adjectives such as "extraordinary" and "stunning" have not been expressed many times. These landscapes, which are rare in terms of natural and cultural aspects, have not been perceived as unusual in the eyes of the viewer. On the contrary, it was perceived as natural and harmonious. Therefore, the perception of naturalness for landscapes should not be considered together with the usual, typical, or common concepts. This landscape, whose focus is on the rocks and shaped by human intervention in detail, is perceived primarily as harmonious and natural. It is seen that landscape characteristics such as water and vegetation are a sign of harmony and naturalness (Gobster et al., 2007; Kaplan et al., 2006), while rock formations and typical structuring of the local area have the same effect.

As a matter of fact, the studies showed that positive man-made elements increase the attractiveness of the landscape (Bulut & Yılmaz, 2009; Yao et al., 2012) and contributed positively to the perception of landscape beauty.

It should not be denied that the artistic feature that stands out in some images should be evaluated from a separate window. In this special landscape, which is a work of art with its formation and existence process, using the support of arts and works, which is one of the basic elements of the existence of societies, will be a clue for an important cultural benefit and sustainability. According to Karmanov's (1999) definition of the excerpt from the dictionary: "Beauty is the quality that delights the mind or the senses, and the harmony of form or color is associated with features such as the perfection of art, accuracy, and originality."

Since the existence of humanity, individuals have developed common behavior and practice methods within the smallest geographical units in which they live. They take and process water, soil, plants, animals and other cultural components on this plane of life. One of the best examples of this type of life development is undoubtedly the Cappadocia region. The region has been shaped by all natural physical processes and has created different open and closed landscapes. The people of the region have lived in these areas both in natural spaces and in artificial but harmonious spaces they have added. Various combinations have emerged in this landscape, which people sustain by living in and around it.

The density of the rock-cut cells, churches, cave villages and underground cities of the Cappadocia region, which has a settlement type carved from extinct volcanic rocks, has made the region one of the most striking and largest cave-dwelling complexes in the world. In particular, geological formations and cave-house constructions are the main protection and attraction elements. Reaching the judgment of harmony, naturalness and partly artistic in the images, and the typical construction images of the region in terms of landscape quality, are also indicators of the correct formation of the human/space association with thousands of years of history.

4. Conclusions

Undoubtedly, the legal and administrative situation in the region will affect Goreme's present as well as its future. As far as its status is concerned, for more than 30 years the area has had the legal status of a National Park, and the problems related to the general legal framework are a reality. From time to time, uncontrolled and illegal structuring in the region both damages the natural and cultural structure and causes public reactions and disputes.
In terms of the content of the institution and the concept, Cappadocia Area Presidency is a necessary management approach for the region. It can be expected that a proper and specific control mechanism will produce more efficient results. The short and long-term implications of the new arrangements performed will be seen in the future.

Within the framework of the findings and data obtained, the results and suggestions can be listed as follows;

Emotional dimensions and criteria are directly related to landscape preference. Landscape preference measurement based on emotions contains harmonious results. Especially the pleasure and accompanying excitement are effective parameters. It should be handled with different studies.

The rock carving and masonry house combinations existing in the region are the prominent values of the region due to their partial richness. These values should be preserved with their existing structures and specificities.

The value of positive elements of human origin in the region is an important point to be emphasized. The source of human-made positive elements has been influential architectural elements and their environment. Masonry structures created with architectural techniques compatible with rock-carved structures that exist for centuries in the region are unique values. Therefore, these cultural elements, which will inevitably continue to exist for the future generations, should be protected with their sustainable qualities within the framework of the requirements of the concept of conservation.

The existence and effectiveness of human-made negative elements (sometimes a trash bin, sometimes an indiscriminate element with no color and proportion matching) should be prevented, and integrity should be preserved in terms of perceptual influence.

Due to its aesthetic features and nature with artistic forms, it is inevitable for the region to be the focus of artistic activities and traditional elements. It is known that the manufacturing and sales units of many small-scale enterprises still carry on producing local arts. However, it will be beneficial to make art and artistic perception effective with visually compatible mass approaches.

Of course, it is not easy to maintain and protect such a multi-component area with many stakeholders. Undoubtedly, as it is understood from the fact that it is a mixed protection area, it is an area that is affected by human beings and to a certain extent protected by human beings. The process should continue as it has always been and lived with its dynamics, rather than isolating and dehumanizing the region. Abandoned spaces are disappearing faster. However, due to the high tourism potential, many new and uncontrolled structuring initiatives that have emerged in recent years are being stopped by the boards and administrations with penalties and interventions.

Within the framework of perception and preference studies, concepts such as natural landscape, naturalness, and naturalness of landscape have been included with water and vegetation elements at the most, while a different approach is needed for the heritage area which is the subject of the study. Natural formations and their complementary man-made elements integrated into those formations have a positive effect on the perception of the landscape.

The rare values found in Goreme show parallelism with the arousal and pleasure dimensions, and the experience of these remarkable landscapes has brought joyful sensations. Besides, landscape beauty scores and pleasure and arousal scores showed parallelism. Efficient results were obtained with The Affect Grid Method.

Undoubtedly, the region is a unique resource with its values, and with the complementary studies in the field of perception, the current position of the landscape and its future position within the changing and transforming landscapes tomorrow should be analyzed.

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