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Christopher Alexander'ın Örüntü Dili Üzerinden Yer Bağlılığının Analizi: Kuzguncuk Örneği

Analysing Place Attachment through Christopher Alexander's Pattern Language: The Case of Kuzguncuk

ÖZET

Bu çalışma, yer bağlılığının mekânsal temellerini, Christopher Alexander'ın örüntü dili kuramı çerçevesinde incelemekte ve İstanbul'un tarihî yerleşimlerinden Kuzguncuk örneğine odaklanmaktadır. Literatürde yer bağlılığı çoğunlukla duygusal, sosyal ve psikolojik boyutlarıyla ele alınırken, bu araştırma mekânsal organizasyonun insan-mekân ilişkilerindeki belirleyici rolünü ortaya koymayı amaçlamaktadır. Alexander'ın "yaşayan çevre" kavramından hareketle, tekrar eden mekânsal örüntülerin bütüncül bir yapı oluşturarak yer bağlılığını nasıl desteklediği analiz edilmiştir. Araştırma, Kuzguncuk'ta kamusal alanlarda gerçekleştirilen 400 anket çalışması ve mekânsal analizlere dayanmaktadır. Çalışma kapsamında, A Pattern Language eserinde tanımlanan 17 örüntünün alanda varlığı tespit edilmiştir. Bulgular, bu örüntülerin tekil varlıklarından ziyade, birbirleriyle kurdukları ilişkiler aracılığıyla anlam kazandığını ve bütüncül bir mekânsal sistem oluşturduğunu göstermektedir. Bu sistem, gündelik yaşam pratiklerini, sosyal etkileşimi ve mekânsal sürekliliği desteklemektedir. Alexander'ın ortaya koyduğu "bütünlük" (wholeness) kavramı, mekânların "yaşayan" bir nitelik kazanmasında temel bir unsur olarak öne çıkmaktadır. Elde edilen sonuçlar hem kullanıcıların hem de ziyaretçilerin mekânsal özelliklere benzer tepkiler verdiğini ortaya koymakta; bu durum, söz konusu örüntülerin ortak insan deneyimleriyle örtüştüğünü göstermektedir. Ayrıca, zaman içerisinde kademeli ve bağlama duyarlı biçimde gelişen çevrelerin, mekânsal bütünlüğü ve buna bağlı olarak yer bağlılığını daha güçlü biçimde desteklediği anlaşılmaktadır. Sonuç olarak, yer bağlılığının yalnızca duygusal ve sosyal bir olgu değil, aynı zamanda mekânsal olarak üretilen bir süreç olduğu ortaya konulmuştur. Kuzguncuk örneği, bir yerin "yaşayan" niteliğinin, mekânsal örüntülerin birbiriyle kurduğu bütüncül ilişkilerle doğrudan bağlantılı olduğunu göstermekte; bu yaklaşım, sürdürülebilir koruma ve kentsel tasarım çalışmalarına önemli katkılar sunmaktadır.

Anahtar Kelimeler: Yer Bağlılığı, Örüntü Dili, Mekânsal Organizasyon, Kuzguncuk

ABSTRACT

This study investigates the spatial foundations of place attachment through the theoretical framework of Christopher Alexander's pattern language, focusing on the historic neighbourhood of Kuzguncuk in Istanbul. While existing literature largely emphasizes the emotional, social, and psychological dimensions of place attachment, this research highlights the role of spatial organization in shaping human-place relationships. Drawing on Alexander's concept of "living environments," the study examines how recurring spatial patterns contribute to the formation of attachment by creating coherent and integrated environments.

The research is based on spatial analysis and 400 surveys conducted in key public spaces within Kuzguncuk. A total of 17 patterns identified from A Pattern Language were observed in the area. Findings reveal that these patterns do not function independently; rather, their significance lies in their interconnectedness, forming a unified spatial system that supports everyday activities, social interaction, and continuity. The concept of "wholeness," as proposed by Alexander, emerges as a critical factor in understanding how environments gain a sense of life and meaning. Results indicate that both residents and visitors demonstrate similar responses to the spatial qualities of the neighbourhood, suggesting that these patterns correspond to shared human experiences. Moreover, environments shaped through gradual, context-sensitive processes—rather than large-scale interventions—are more likely to sustain spatial coherence and, consequently, stronger place attachment. The study concludes that place attachment should be understood not only as an emotional or social phenomenon but also as a spatially grounded condition. The Kuzguncuk case demonstrates that the "life" of a place is closely linked to the organization and integration of spatial patterns, offering a valuable framework for sustainable urban conservation and design practices.

Keywords: Place Attachment, Pattern Language, Spatial Organization, Kuzguncuk.

1. INTRODUCTION

Recent studies indicate a growing interest in people–place relations, with more than 400 articles published between 1970 and 2010 across 120 journals (Lewicka, 2011, p.207). Tuan’s (1977) well-known definition of place as “humanized space” provides an important starting point for understanding how space acquires meaning through human experience. Place emerges through the interaction of physical form, activities, and human perception; therefore, it can be understood as consisting of physical, functional, and psychological dimensions (Jelley, 2013). Since these dimensions evolve over time, place is inherently dynamic rather than static (Wolf et al., 2014).

The concept of place attachment, broadly defined as the bond between people and meaningful environments, has been widely explored across disciplines (Scannell and Gifford, 2010; Hummon, 1992). These studies emphasize emotional, social, and behavioural aspects of attachment, highlighting its role in shaping individual and collective identities (Altman and Low, 1992). However, in contemporary urban contexts—particularly in globalised cities—these bonds are increasingly disrupted, leading to weakening social relations and experiences of alienation.

While much of the literature has focused on psychological and social dimensions, the spatial basis of place attachment remains less systematically explored. At this point, Christopher Alexander’s work provides a crucial theoretical perspective by emphasizing that the qualities of place are grounded in the spatial organization of the built environment. According to Alexander (1977; 1979), environments that support human life are structured through recurring patterns that respond to fundamental human needs. These patterns are not isolated design solutions but interconnected elements that together form a coherent spatial whole.

In *The Timeless Way of Building*, Alexander (1979) argues that places acquire a sense of “life” when spatial configurations support human activities, emotions, and interactions in an integrated and continuous manner. Therefore, place attachment cannot be fully understood without considering the spatial order that sustains everyday practices. In this sense, attachment emerges not only from individual or social processes, but also from the degree to which environments possess coherence, continuity, and wholeness.

Building on this theoretical framework, this study investigates the spatial roots of place attachment through the lens of Alexander’s pattern language. Using the case of Kuzguncuk—a historic neighbourhood on the Asian side of Istanbul—the research examines how specific spatial patterns contribute to the formation of attachment among residents and visitors. Based on 400 surveys conducted in key public spaces, the study aims to explore whether the presence and interrelation of these patterns generate a coherent and “living” environment, as suggested by Alexander’s theory.

2. CHRISTOPHER ALEXANDER’S PATTERN LANGUAGE

For many years, architects, engineers and urban planners have developed various theories in creation of urban space. One of the architects who contributed positively to the theories of place and place attachment is Christopher Alexander. In his book, ‘A Pattern Language’(1977) Alexander traces the connection between spatial characteristics and place attachment. According to him:

We assumed that the human feeling is mostly the same, mostly the same from person to person, mostly the same in every person. Of course, there is that part of human feeling where we are all different. Each of us has our idiosyncrasies, our unique individual character. This is the part people most often concentrate on when they are talking about feeling, and comparing feeling. But that idiosyncratic part is really only about ten percent of the feeling which we feel. Ninety percent of our feeling is stuff in which we are all the same and we feel the same things. So, from the very beginning, when we made the pattern language, we concentrate on that fact, and concentrated on that part of human experience and feeling where our feeling is all the same (Alexander, 2002, pp.3-4).

There are other theoreticians such as Jack Nasar (1996) and Kevin Lynch (1960) who have emphasized the fact that cities should be designed to influence people's sense of belonging. However, Christopher Alexander presented a structural understanding of the space by evaluating it on functional relations and necessity. In the book, ‘A Pattern Language’ (Alexander et al, 1977) the concept of pattern language was analysed. Alexander after describing how to use the Pattern Language book, presented the patterns in three different scales; urban scale, building scale and construction scale. He is not only an architect but also a mathematician. Therefore, the contribution of his knowledge on mathematics is quite notable in the formation of the ‘pattern-language’ system. In ‘A Pattern Language’, Alexander has described detailed solutions ranging from macro scale to minor details such as, pavements, building textures and materials,

colours, houses, gardens, rooms, buildings, streets, cities and regions. There are 253 pattern languages in the book. These patterns are thought to be applicable with various combinations. Each pattern is itself connected to larger and smaller pattern. Therefore, all patterns are associated with each other. Alexander does not ignore human factor in the forms he has created.

Later on, Alexander was criticized to be modernist with his *A Pattern Language* book (Nair et al., 2009, p.14). The critics have seen this approach very reductionist. However, when it is read carefully, Alexander's patterns vary according to many criteria such as geography, topography, and so on. Therefore, Alexander has not dictated a single formula in his approach but only expresses the possible solutions which might come up. He also has underlined that these patterns can be combined in different ways according to the circumstances.

In order to better understand the pattern languages, it is useful to examine the book 'The Timeless Way of Building' (1979) in detail. With the help of the method described in the pattern languages, it has been argued that a city in which hundreds of people live, lively, peacefully, comfortably and having historical values can be created. Alexander states that there is no other possibility that a living building or a city could be created. In the process of creating living, moving, peaceful and comfortable cities, it is necessary to consider the essential components of the environment. Here the main components mentioned by Alexander are what the buildings or the cities are made of. Every city and every building have a specific form and these are called 'pattern'.

According to David Seamon (2016, p.50) although Alexander has never identified himself as a phenomenologist his work contributed vastly to the phenomenology of wholeness¹; because his efforts to understand and design our environment is very much akin to the phenomenological approach to understand and interpret the world. Seamon (2016, p.54) suggested Alexander's pattern language is a useful tool explore environmental wholeness because, it gives us a myriad of environmental and architectural possibilities which create energetic and living places. Also, throughout his approach new pattern languages for buildings, places and situations can be created out of initial 253 patterns'.

3. THE FINDINGS: PATTERNS, WHOLENESS AND LIVING STRUCTURE IN KUZGUNCUK

The analysis identified 17 patterns from Alexander's *A Pattern Language* within the spatial structure of Kuzguncuk. While these patterns—ranging from small public squares and pedestrian streets to seating elements and architectural details—may also be found in other historic settlements, their significance in this case lies in how they operate collectively rather than individually.

In line with Alexander's argument, the findings indicate that both residents and visitors exhibit similar responses to the spatial characteristics of the neighbourhood. This suggests that these patterns correspond to shared human experiences. However, their importance does not derive from their isolated presence, but from the way they are interconnected.

According to Alexander (1979), a place becomes "alive" when spatial elements form a coherent whole in which each part supports and reinforces others. In Kuzguncuk, the identified patterns function as an integrated system. For example, small public squares are supported by pedestrian streets and pathways, which facilitate accessibility and movement. Similarly, street cafés, individually-owned shops, and seating elements collectively create conditions for social interaction. These relationships demonstrate that patterns operate as a network rather than as discrete elements.

This interconnected structure can be understood as a "field of patterns", where spatial elements overlap and interact to produce a continuous spatial experience. Within this field, transitions between private, semi-public, and public spaces are gradual, allowing for fluid movement and interaction. Such continuity is essential in shaping everyday practices and sustaining social life.

Furthermore, the concept of "wholeness" is central to understanding the spatial qualities of Kuzguncuk. According to Alexander, environments possess life when all elements—ranging from urban layout to

¹ David Seamon (2016, p.51) describes environmental wholeness as 'finding conceptual and practical ways for understanding how things belong together so they can indeed belong, whether one speaks of the parts of a well-made building, the steps in an effective construction process or the elements of a helpful theory.'

architectural details—contribute to a unified structure. In Kuzguncuk, the coexistence of streets, squares, buildings, landscape elements, and small-scale architectural features creates a layered and integrated environment. This layered structure allows users to perceive the neighbourhood as a coherent whole rather than as fragmented parts.

Equally important is the process through which these patterns have emerged. As emphasized in *The Timeless Way of Building* (Alexander, 1979), living environments evolve through incremental and adaptive processes rather than through large-scale, top-down interventions. Kuzguncuk's spatial structure reflects such a process, shaped over time by local practices, gradual transformations, and community actions. This continuity of development reinforces both the physical and experiential coherence of the neighbourhood.

Therefore, the presence of these 17 patterns should not be interpreted as a simple inventory of design features. Instead, they represent a deeper structural coherence that enables Kuzguncuk to function as a “living” environment. This coherence provides a possible explanation for the strong levels of attachment observed among both residents and visitors.

3.1. A Brief Historical Development of Kuzguncuk

Kuzguncuk neighbourhood is a former Bosphorus village and located between Üsküdar and Beylerbeyi in the Asian side of the city (See Figure 1). It is centrally-located; but at the same time it provides a quiet and tranquil atmosphere away from the city's chaos. The neighbourhood's location within the borders of the Bosphorus Front View Zone has enabled it to remain away from proliferating housing, office and shopping centre developments spreading all over Istanbul since 1980s.



Figure 1. Location of Kuzguncuk within the Bosphorus region.

Source: Prepared by the author based on Google Earth imagery

Kuzguncuk is known as the first district where the Jews settled on the Asian side of the city. Although the exact date on which they first settled here is unknown, it is recorded as a Jewish village in the 17th century sources. Kuzguncuk is generally regarded as the last stop before the arrival to the Holy Land by the Jews who could not go to the Holy Land for any reason to die and buried. For this reason, in the 17th century that there was a large Jewish cemetery in the settlement (Uzun, 2001).

The historical urban pattern in Kuzguncuk has been preserved to a great extent. In 1983, owing to its fortunate geographic location within the borders of the Bosphorus Front View Zone, it was only to renew only the existing buildings in the neighbourhood; new development was not allowed. Two or three storey-high houses with gardens are important substitute for the typical high-rise apartment buildings of the middle classes. The unique beauty of the Bosphorus and distinctive landscape has made this neighbourhood even more attractive. The main backbone of the neighbourhood is the Icadiye Street. Formerly a stream was running there; however, it was paved and the stream bed was changed to a new direction (Mills, 2010, p.99). The steep topography on both sides of the Icadiye Street enabled

residents/visitors to view the beauty of the Bosphorus. Therefore, the topography on the one hand created accessibility problems but on the other hand provided the neighbourhood with remarkable vistas.

The first signs of the change appeared in the 1975 when the renowned architect and author Cengiz Bektaş moved his office and house into the neighbourhood. His presence in the neighbourhood has had a positive influence on the local community and the other people from the intellectual circles of the art, architecture and culture. Bektaş was followed by others. Since then, along with the intellectuals who have flocked to Kuzguncuk, the neighbourhood has changed socially and economically. The presence of gentrifiers increased the volume of restoration work; and the consequent increase in property prices.

Kuzguncuk was also chosen as the location of two highly-rated television series in the 1980s and then the 2000s. This caused the neighbourhood to become more popular along with the ongoing gentrification process.

In 1986, the vegetable garden (Bostan) was opened to serve the local community as a recreational area. Since then, a struggle by Kuzguncuk locals has been continuing to save this garden from being re-developed as a school, a hospital, or for other non-recreational uses. Finally in 2014, it was decided and announced that the Bostan would remain as a vegetable garden, and a year later, in 2015 it was opened as an urban agriculture field. Bostan has always been an important gathering place for the local community of Kuzguncuk. It represents certain relinquished social and psychological values and spatial qualities which have been long lost in many neighbourhoods of Istanbul. Therefore, the struggle of Kuzguncuk's inhabitants for many years to maintain the Bostan can be seen as a sign of strong place attachment.

3.2. Research Methodology and Survey Results

In this survey, it is aimed to find out the role of the spatial and social factors in establishing place attachment in the case of Kuzguncuk neighbourhood. The questionnaires were held with the attendance of 400 people at four public places; 1-Icadiye Street (high street), 2-Çınaraltı square (an opening to the bosphorus sea at the end of the Icadiye Street), 3-Bostan (Vegetable Garden) and 4-Kuzguncuk park. The survey was completed in two days, a Sunday and a Monday in July 2016. To obtain an equal distribution of the interviews throughout the day, only ten people were interviewed in every hour. Half of the respondents were chosen from the local people and the other half from the visitors. Likert-type scale was used to measure the answers (1: don't agree, 2: rarely agree, 3: partially agree, 4: agree, 5: fully agree) in relation to the question.

Table 1 shows the demographic structure of the survey participants. As it is observed in the Table, there are 400 participants. 52% of the people who live in Kuzguncuk and participated in the survey are male and 48% are female. When you look at the marital status of the participants, it was confirmed that 27% are singles and 73% are married. We see that single population is less compared to the married ones. 21% of the married have no children. The highest ratio belongs to the category having 2 children with 44%.

The gentrification process of the neighbourhood has been continuing since the 1980s. This is also noticeable in the education figures; 50% of the survey participants hold university and graduate degrees. Forty-eight percent of them work in the private sector. Thirty-three percent of the interviewed either does not have a child or single without child.

We see that 60% of the people who come to Kuzguncuk from the outside and participated in the survey are men and 40% of are women. We conclude that 55% of outsiders are single, 45% are married, and that is, there are more singles than married ones. We see that 50% of visitors have children. And 25% of the remaining people have 1 child and 20% 2 children. This information shows that $\frac{3}{4}$ of the visitors have 1 or 0 child at all. It is seen that 55% of the visitors consist of well-educated university graduates. When you look at the professions, 59% of the visitors work in private sector.

3.2.1. Demographic Structure Analysis of Kuzguncuk Residents

52% of the people who live in Kuzguncuk and participated in the Survey are men and 48% are women. When you look at the marital status of the participants, it was confirmed that 27% are singles and 73% are married. We see that single population is less compared to the married ones. 21% of the married have no children. The highest ratio belongs to the category having 2 children with 44%. When you look at the educational background of the Kuzguncuk residents, it is seen that 43% are university graduate. When you look at the professions, 42% work in private sector and the ratio of pensioners and house wife is 22%. (See Table 1)

3.2.2. Demographic Structure Analysis of ones coming to Kuzguncuk from Outside

We see that 60% of the people who come to Kuzguncuk from the outside and participated in the survey are men and 40% of are women. We conclude that 55% of outsiders are single, 45% are married, and that is, there are more singles than married ones. We see that 50% of visitors have children. And 25% of the remaining people have 1 child and 20% 2 children. This information shows that $\frac{3}{4}$ of the visitors have 1 or 0 child at all. It is seen that 55% of the visitors consist of well-educated university graduates. When you look at the professions, 59% of the visitors work in private sector. (See Table 1)

Comparison of Demographic Structure Analyses of Kuzguncuk Residents and Ones coming to Kuzguncuk from Outside. When marital status of the Kuzguncuk Residents and the ones coming to Kuzguncuk from outside, it can be seen that 55% of outsiders are singles and only 27% of the Kuzguncuk residents are singles. As a result of this survey, it can be concluded that single visitors prefer Kuzguncuk the most. When the number of children of the outside visitors is evaluated, 215 of the Kuzguncuk residents and 50% of the outsiders have no children. We can say that people having no children prefer to come to Kuzguncuk. (See Table 1)

When the educational status of the participants is assessed, 43% of those are the ones who reside in Kuzguncuk and come for a visit and more than half (55%) of them are university graduates. The results show that while primary school graduates in Kuzguncuk are 10%, while that of those from outside are only 3%. There is also a serious difference when you look at secondary school graduates in two categories. While it is 20% in middle school graduates of Kuzguncuk residents, it is only 6% in outsiders. When the employed sector is evaluated, 42% of the Kuzguncuk residents and 59% of the outsiders work in the private sector. While 22% of the residents of Kuzguncuk are pensioners, 22% are housewives, this rate is less than 10% for those who visit Kuzguncuk. (See Table 1)

Table 1. Demographic Structure

		Total number of Participants (400 persons)	Percentage of Participants (%)
Gender	Males	222	55
	Females	178	45
	Total:	400	100
Marital Status	Single	163	40
	Married	237	60
	Total:	400	100
Number of Children	0	101	33
	1	71	24
	2	100	33
	3	26	9
	4 and more	4	1
	Total:	302	100
Educational Background	Primary School	25	6
	Secondary School	52	13
	High School	128	32
	University	150	38
	Post Graduate	45	12
	Total:	400	100
Occupation	Private Sector	201	48
	Public Sector	15	4
	Student	30	8
	Retired	62	16
	Housewife	56	14
	Free Lance	26	7
	Other	8	2
	Total:	400	100

Source: Author's survey, conducted in Kuzguncuk, Istanbul.

Table showing the visit frequency of non-Kuzguncuk Residents		
	N	%
More than once a week (2-5)	47	24
Once a month	43	22
Once a year	34	17
Once in weekday	27	13
Every weekend	25	13
Everyday	21	11
Other	1	5
Total	198	100

Source: Author's survey, conducted in Kuzguncuk, Istanbul.

When the answers given by the participants living in the Kuzguncuk neighbourhood to the question why they prefer to live here, 58% of the respondents prefer to live here because the participant is from Kuzguncuk. It is seen that 34 % of the respondents prefer to live here because they like to live in Kuzguncuk. The participants who preferred Kuzguncuk' s position formed a slice of 4%. These results show that inhabitants of this area love to live in this area, except those who are from Kuzguncuk. (See Table 3)

Table 3. Table showing why people living in Kuzguncuk prefer so

Table showing why people living in Kuzguncuk prefer so		
	N	%
Because I am from Kuzguncuk	108	58
Because I love living in here	62	34
For its location	8	4
Other	7	4
Total	185	100

Source: Author's survey, conducted in Kuzguncuk, Istanbul.

When you look at the table for which place the visitors most love in Kuzguncuk, it is seen that 54% of Kuzguncuk residents and 41% of the outsiders go to Çınaraltı Square. In both categories, Çınaraltı receives the highest ratio. As the Çınaraltı is near by the sea, many people prefer to come here. 23% of the Kuzguncuk residents showed the Bostan as the place they loved the most. The outsiders however, gave a ratio of only 9%. Based on these results, it can be concluded that the fight bided for the Bostan has an influence on the people that live there and thus it is a significant place for the residents. And 32% of the people coming to this area for a visit and walk around said that they loved the cafes on İcadiye Street and they go to these cafes. Only 12% of residents said that they loved to go to these cafes. Concluded from these results is that majority of the customers of those cafes are from outside the area rather than the residents. (See Table 4)

To the question what they love the most in Kuzguncuk, 27% outsiders and 34% of the Residents answered Historical Texture. It is seen that the fact that the area is a peaceful place away from the noise received almost the same ration in both categories (31% of the residents and 32% of the outsiders). During the survey, the participants were asked to give an answer. The other answers apart from the historical texture were preferred less as the first and most loved place was asked. (See Table 4)

When you look at the table below (See Table 4), however, while no difference is seen between the time lived in Kuzguncuk and the attachment, it can be concluded that the residents are more attached compared to the non-residents.

Table 4. Table showing what and which place the visitors love in Kuzguncuk

		Total Participants (400 persons) %	Kuzguncuk Residents (202 persons) %	Incomers to Kuzguncuk (198 persons) %
Which place do you like the most in Kuzguncuk?	Çınaraltı Square	47	54	41
	Cafes	22	12	32
	Bostan	16	23	9
	İcadiye St.	10	6	13
	Parks	3	3	4
	Other	2	2	1
	Total	100	100	100
What do you like the most in	Historical Texture	31	27	34
	Fact that area is a	30	31	32
	View	17	17	17
	Bostan, a meeting place	10	15	5
	Social Relations and	5	5	5
	Landscape elements in	5	4	6
	Other	2	1	1
	Total	100	100	100

Source: Author's survey, conducted in Kuzguncuk, Istanbul.

Table 5. Table showing the ration of Attachment in Kuzguncuk pursuant to Physical and Social Factors

	Do you live in Kuzguncuk?		
	Yes	No	Total
I love Kuzguncuk because of the strong neighbourhood bonds, human relations and social bonds	4,17	3,74	3,96
I love Kuzguncuk because of the physical attributes (historical houses, streets, location, view and building scales)	4,32	4,01	4,17

Source: Author's survey, conducted in Kuzguncuk, Istanbul.

When the Table 5 is examined, it is observed that social bonds and physical characteristics are effective in choosing Kuzguncuk as a place of residence. It can also be said that physical attributes are more effective in preferring Kuzguncuk.

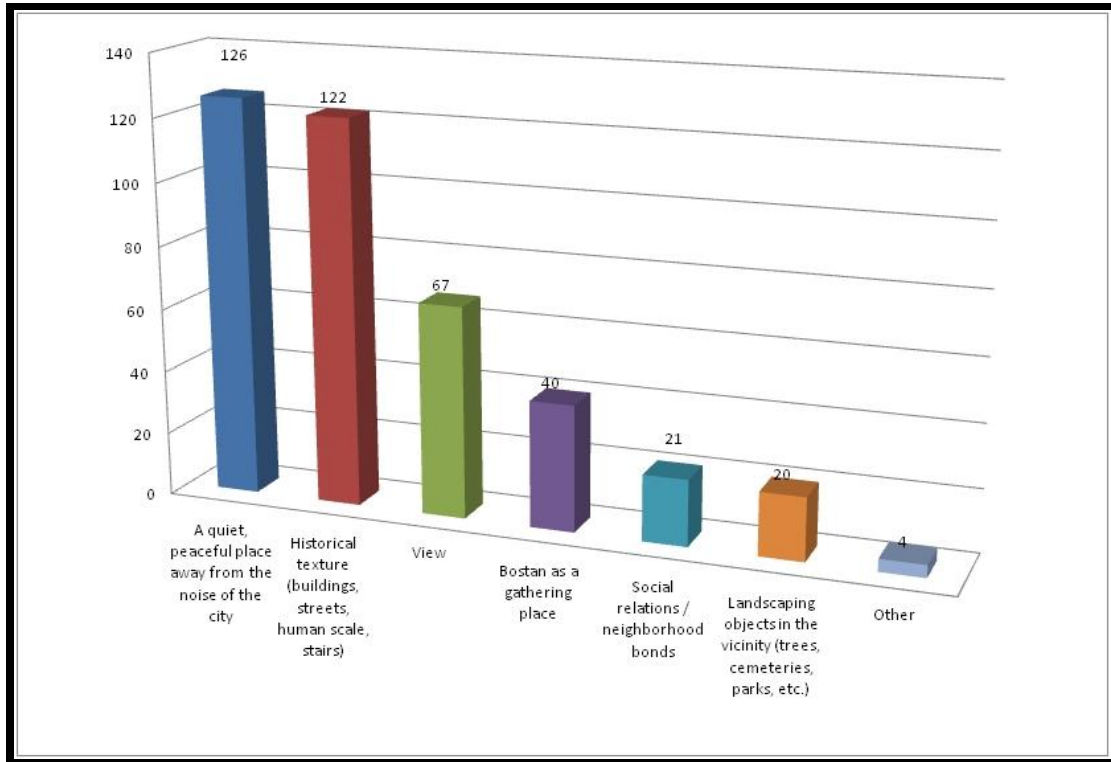


Figure 3. What do you like most in Kuzguncuk?

One of the questions of the survey was targeted to find out the nature of attachment both for the residents and visitors. This showed us that social ties and physical characteristics are both in force in establishing an

emotional attachment to Kuzguncuk. However, physical properties are more effective in. Because the data did not show a normal distribution, the ‘Mann-Whitney U’ test² was used to measure the relationship between two independent samples (See Table 6).

Table 6. Mann-Whitney U- Test

	Kuzguncuk
	Total participants (400 people)
I love Kuzguncuk because of its strong bonds of neighbourhood ties, human relations and social ties .	3,96
I love Kuzguncuk because of its spatial characteristics (historic houses, streets, location, landscape, building scale, etc).	4,17

Source: Author's survey, conducted in Kuzguncuk, Istanbul.

The results of the survey supported the view of Christopher Alexander who claimed the importance of spatial qualities of places against the psychological factors in establishing an attachment to places. In this respect, it can be asserted that the spatial qualities of places are no less important than the emotional ties. Therefore, an analysis towards understanding the roots/causes of place attachment, the spatial qualities of places, that is, the architectural details, urban design issues, etc should be given ample consideration. Taking this view as a starting point, in the next section, Christopher Alexander’s patterns will be sought in Kuzguncuk.

4. THE FINDING ALEXANDER’S PATTERNS IN KUZGUNCUK

As a result of a detailed land-use analysis, 17 out of 253 patterns of Christopher Alexander were detected in Kuzguncuk. These patterns might have been observed in other historic towns of Europe. However, what is unique in this case study is not only the identification of these patterns, but the attempt to understand how they operate together as a system and how they relate to the lived experiences of users.

In line with Alexander’s argument, it appeared that regardless of their individual differences, Kuzguncuk residents and visitors have similar feelings towards certain spatial/physical characteristics of the built environment. This shared response can be explained by the fact that these patterns correspond to common human needs and experiences. However, the significance of these patterns does not lie in their individual presence alone. According to Alexander (1979), a place becomes “alive” only when patterns are combined in such a way that they form a coherent whole. In this sense, the identified 17 patterns in Kuzguncuk should not be interpreted as isolated design features, but as components of a larger spatial structure which continuously reinforces itself.

Each of these patterns contributes to a particular aspect of spatial experience; however, their true effectiveness emerges through their interrelationships. For instance, small public squares are supported by pedestrian streets and paths, which increase accessibility and movement. Similarly, street cafés, individually-owned shops, and seating elements together create conditions for social interaction. These relationships indicate that the patterns are not independent, but function as a network.

In this respect, Kuzguncuk can be understood as a “field of patterns”, where spatial elements overlap, interact, and reinforce one another. This field condition creates a continuous spatial experience, where transitions between private, semi-public, and public spaces are gradual and fluid. Such continuity plays a crucial role in shaping everyday practices and social encounters.

Moreover, according to Alexander’s notion of “wholeness”, environments that possess life are those in which every part is connected to a larger structure and contributes to its integrity. In Kuzguncuk, the coexistence of architectural details (such as doors, windows, ornaments), urban elements (streets, squares), and landscape features (Bostan, trees, views) creates a layered and integrated environment. This layered structure enables users to experience the environment as a unified whole rather than as fragmented parts.

Another important aspect is the process through which these patterns have emerged. As emphasized in ‘The Timeless Way of Building’, living environments are not created through a single act of design, but through gradual and adaptive processes. Kuzguncuk’s historical development, shaped by incremental changes, local practices, and community interventions, reflects this process. The persistence of these patterns over time contributes to the continuity of spatial experience and reinforces the sense of place.

² Mann-Whitney U’ test is a non-parametric measure of the independent sample t-test. It is a parametric test.

Therefore, the presence of these 17 patterns should be interpreted not simply as a checklist of design features, but as evidence of a deeper structural coherence. This coherence may explain why Kuzguncuk is perceived as a “living” environment and why both residents and visitors develop strong emotional and spatial connections to it.

These pattern (and their numbers) are; **61-** Small public squares, **87-** Individually-owned shops, **88-** Street cafes, **100-** Pedestrian Street, **120-** Paths and goals, **237-** Solid doors with glass, **239-** Small panes, **241-** Seat spots, **158-** Open stairs, **177-** Vegetable Garden, **242-** Front door bench, **243-** Sitting wall, **244-** Canvas Roof, **245-** Raised Flowers, **247-** Paving with cracks between the stones, **249-** Ornament, **250-** Warm Colours

Small Public Squares: Alexander (et al, 1977) stated that the ideal size of the small squares that must be within range of 14-22 meters. When examined in Kuzguncuk, Çınaraltı Square is within the range of 13.5-20 meters. This little square is the frequent gathering place for those who reside in the neighbourhood and who come to visit the neighbourhood from outside. The location is one of the most visited spots in Kuzguncuk due to its proximity to the Istanbul Bosphorus.

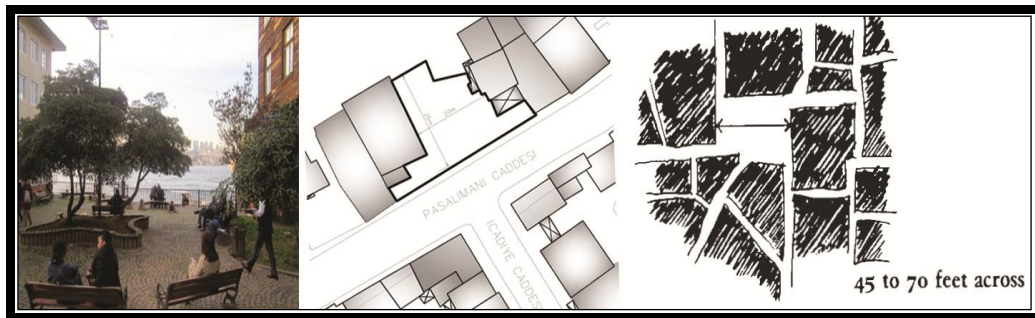


Figure 4. Small Public Squares, Kuzguncuk, Çınaraltı Square

Individually-owned Shops: These shops are never in a chain. They provide daily needs of the people in the area. The sizes of these shops are small and should be no more than 50 square meters. According to the land-use in July 2016, 80% of the 47 small enterprises that existed in the neighbourhood were found to be small businesses lesser than 50 square meters in area.

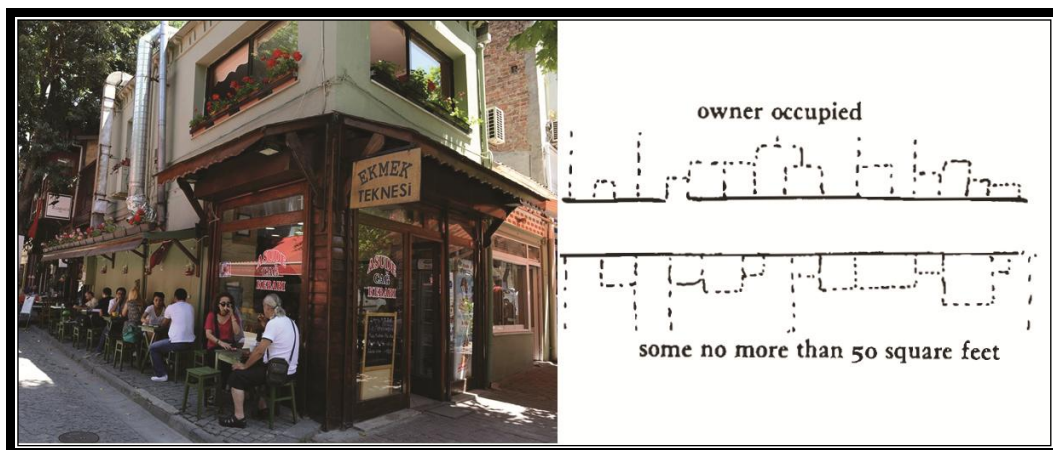


Figure 5. Individually-owned Shops, Perihan Abla Street

Street Cafes: According to Alexander (et al, 1977) street cafes would keep the street life alive. People in street cafes read newspapers, drink something, feel comfortable, meet new people. The most important feature of street cafes is that they offer simple meals. In Kuzguncuk the presence of the walk-in shops contributes to the strong continuity of social relations and neighbourhood ties.



Figure 6. Street Cafe, İnci Çayırılı Street

Pedestrian Street: Alexander said that the streets should be where passengers could pass through and cars could not enter. In Kuzguncuk neighbourhood, it is seen that the number of staircase streets is large because of the steep topography. The staircases have are nicely integrated with historical houses, and attract those who recognize the Kuzguncuk neighbourhood of these streets and come to visit this vicinity.

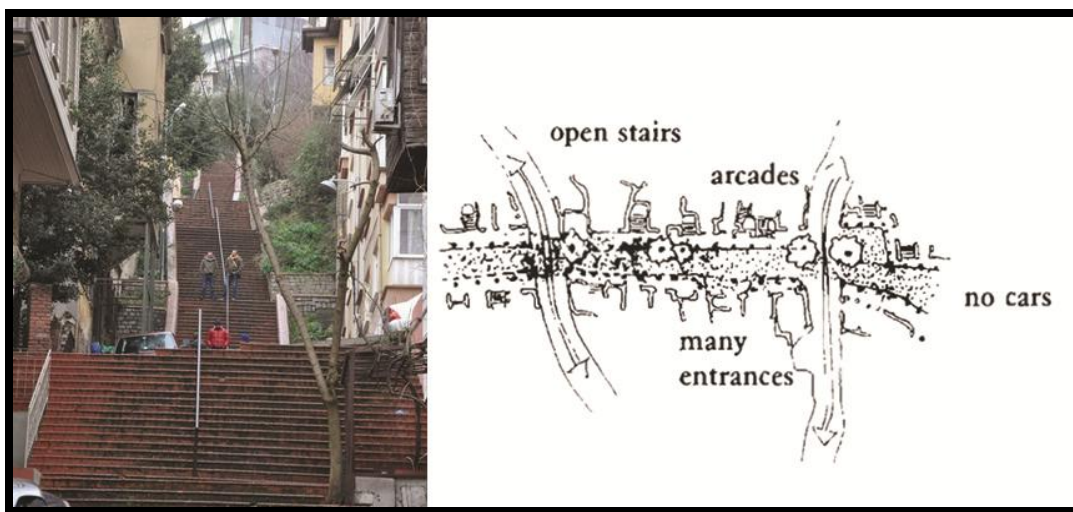


Figure 7. Pedestrian Street, Bereketli Street

Paths and Goals: Alexander underlines that the streets should not be boring areas where people can come and go. Alexander said that it is important to create paths diagonally between the point you are at and the point you want to go to, and that the point to be reached must be seen straight through the point you start at, thinking that people do not want to change course continuously. These pathways may be flat, slightly curled. He stated that the distance between the starting and ending points should not exceed a few hundred meters. Alexander also said that it would be good to make the paths in cobblestone. The cobblestone streets are among the visuals that come to mind when Kuzguncuk is mentioned. There are many examples in the Kuzguncuk area, where people can easily identify the starting and ending point.

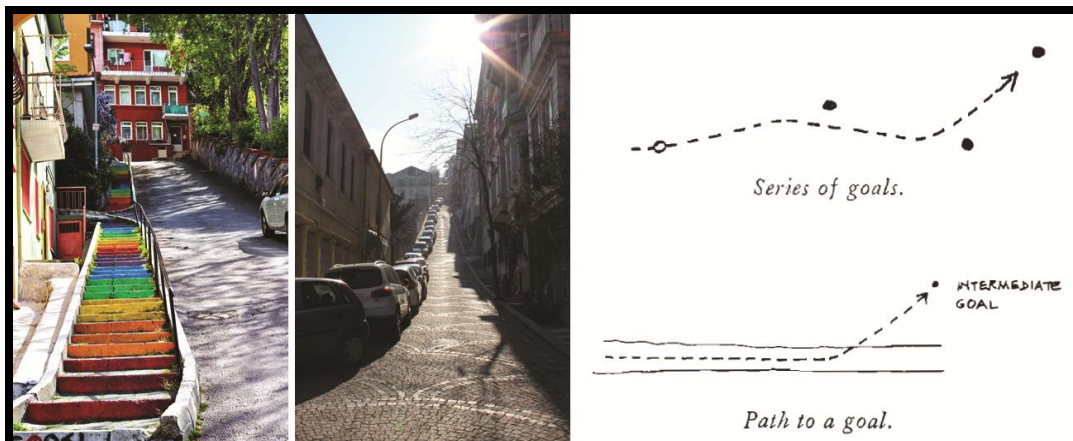


Figure 8. Path and Goals, İnci Çayırılı and Bircan Efendi Street

Open Stairs: In order for people to see each other and socialize there should be open stairways. The doors of the houses are opened to these stairs. People can use the front doors as areas where they can sit and chat. They meet each other more often. On this account, social relations can develop quite well. In the Kuzguncuk neighbourhood, there are many open stairways and slopes besides the streets and roads.



Figure 9. Open Stairs, in Kancabaş Street

Vegetable Garden (Bostan): In this pattern language, Alexander supports the association of organic agriculture and the people. He claims that there must be areas where people can use as greenhouses, and in these houses with gardens, small vegetable gardens should be created. In the Kuzguncuk neighbourhood, 'Bostan' stands out. This is an area with small gardens where residents can plant vegetation or fruits/vegetables. Here people are able to make organic farming safely.



Figure 10. Vegetable Garden

Solid Doors with Glass: Alexander often said that the construction of sturdy doors with glass upper section was an important texture. The tops of such doors can be divided into small sections. These doors should be solid, elegant and comfortable. One of the most important points is the existence of acoustic insulation. In Kuzguncuk, it is possible to see many different kinds of doors that are sturdy and made of glass. These doors are not identical and there is a large variety. Visitors of the neighbourhood take photographs in front of these doors.

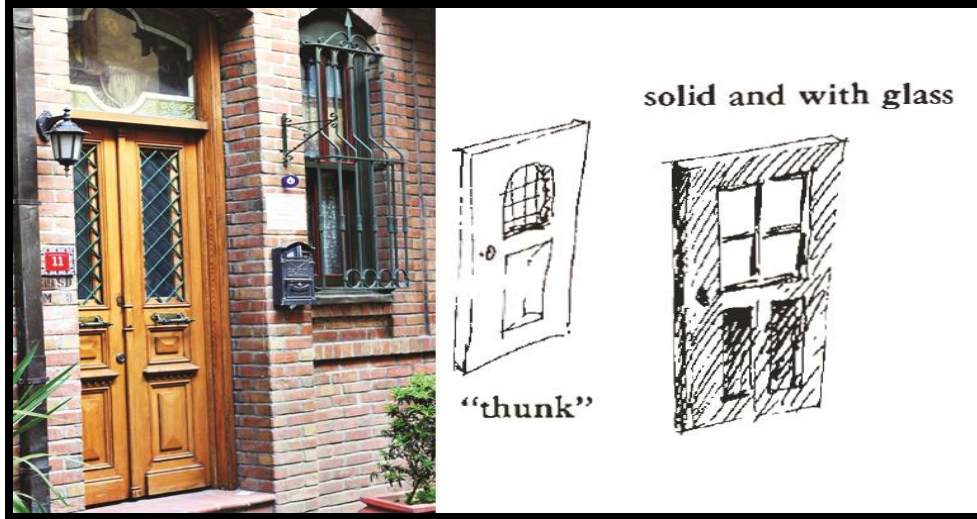


Figure 11. Solid Door with Glass

Small Panes: According to Alexander et al (1977) when windows are divided into glass divisions, people can feel more blend in with nature. The glass sections in the windows indicate that we strengthen our communication with the outside world. In Kuzguncuk, it is possible to see different, glass-partitioned windows, just like doors suitable for this definition.

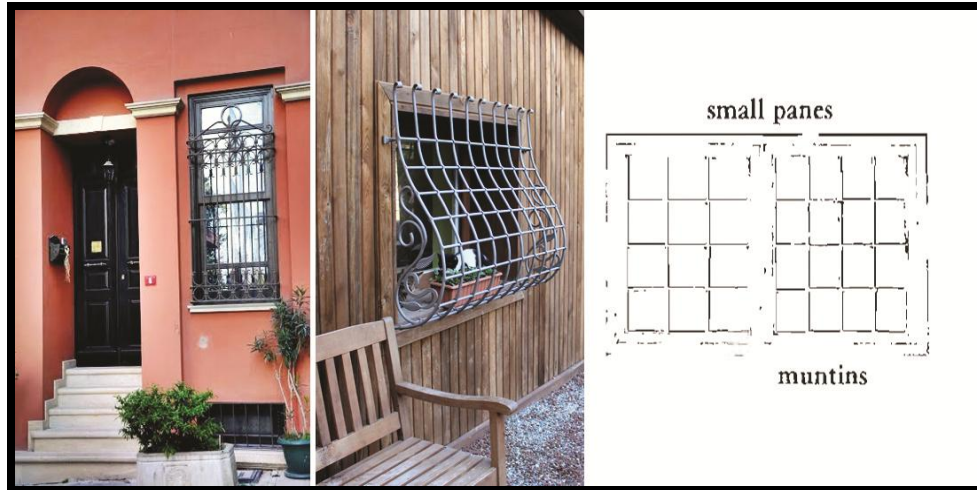


Figure 12. Small Panes

Seat Spots: Outdoor seating elements can become more useful if they were adjusted in view of the landscape and climate (Alexander et al, 1977). The choice of seating elements in public outdoor spaces is very important compared to the fantasy seating elements. The position of the seating elements must also be decided with great care. When we look at the seating elements in the Kuzguncuk district, it is possible to various positions for the seating elements with respect to their location in the area, that is, close to the shore, under the trees, etc.

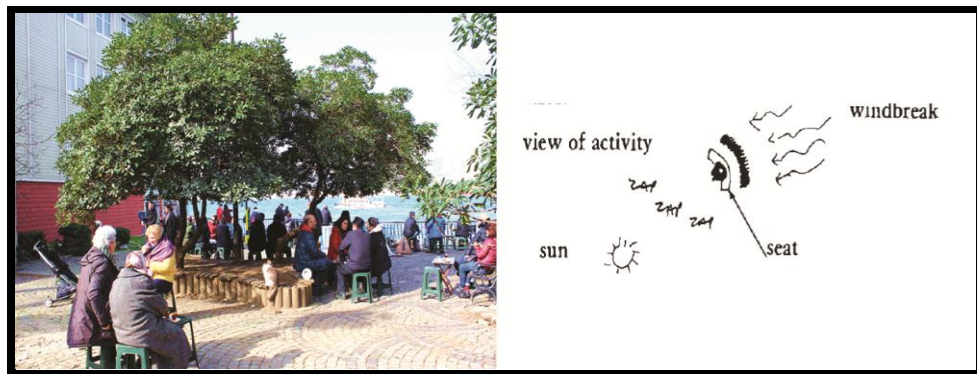


Figure 13. Seat Spots, Çmaraltı Square

Front Door Bench: Alexander (et al, 1977) claim that people love to watch the streets. He stated that the in front of the door’s benches should be arranged so that people can spend time there. In Kuzguncuk, it is possible to find benches in front of the doorways where people can take a breath, sit and chat, watch the street, and socialize.

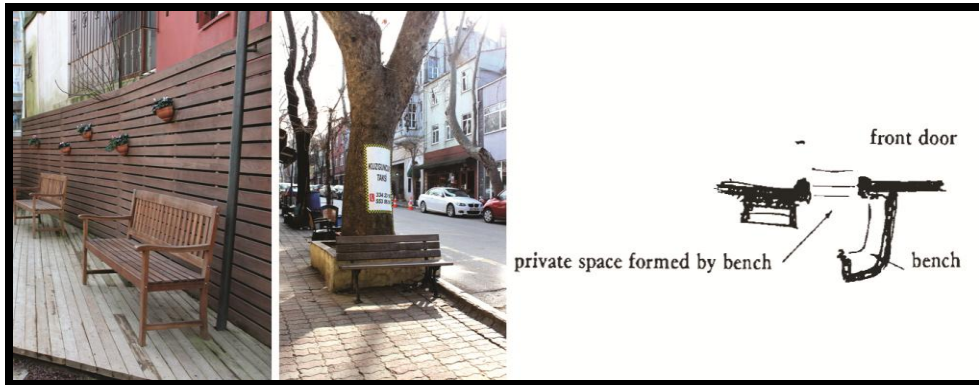


Figure 14. Seat Spots, İcadiye Street

Sitting Wall: Alexander says that in open areas high walls, balustrades or fences can create problems. It is very important to determine the height for such separating elements. Low walls can be transformed into perfect seating elements for people if the balustrades are at right heights. These residential walls serve as a separating feature between the two places and become areas where people can sit on. Such seating elements invite people to sit there. It acts as a separator between the two sites, but also establishes a positive connection between the two sites. It is possible to see such seating elements in the streets of Kuzguncuk. Particularly in places where the balustrades of the existing staircases exist due to the height of elevations, they serve as natural siting elements.

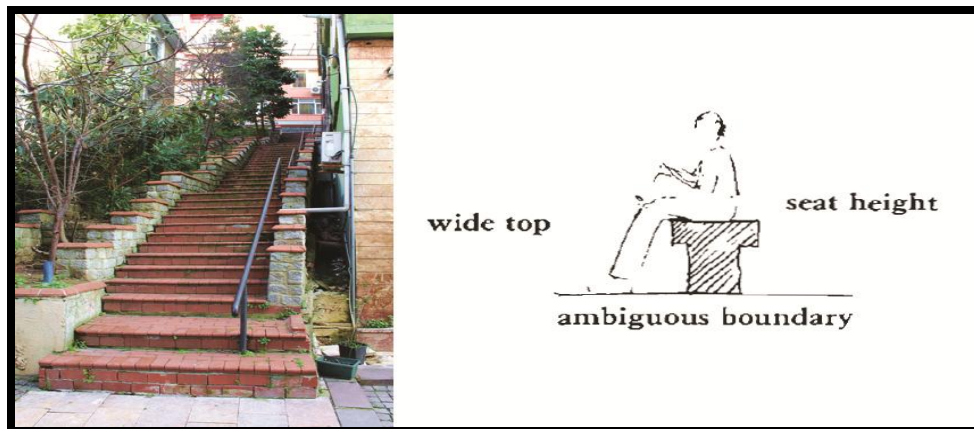


Figure 15. Sitting Wall, Yenigün Street

Canvas Roof: Alexander explained that the canvases have a very special and beautiful appearance. These tents are made of soft, flexible and traditional materials. They have various uses. It is suitable for use as a sunshade, as a curtain, or in a living area such as pergolas in courtyards (Alexander, et al, 1977). In Kuzguncuk neighbourhood canvas roof is especially notable for its use in cafés



Figure 16. Canvas Roof, İcadiye and Perihan Abla Street

Raised Flowers: Alexander stated that the flowers on the borders of the buildings, on the roads, in the open spaces make it look beautiful. However, they need to be protected from traffic, receive plenty of sunshine. Passers-by should be able to see, smell and touch them. In Kuzguncuk, there are small areas created especially for flowers in front of the homes.

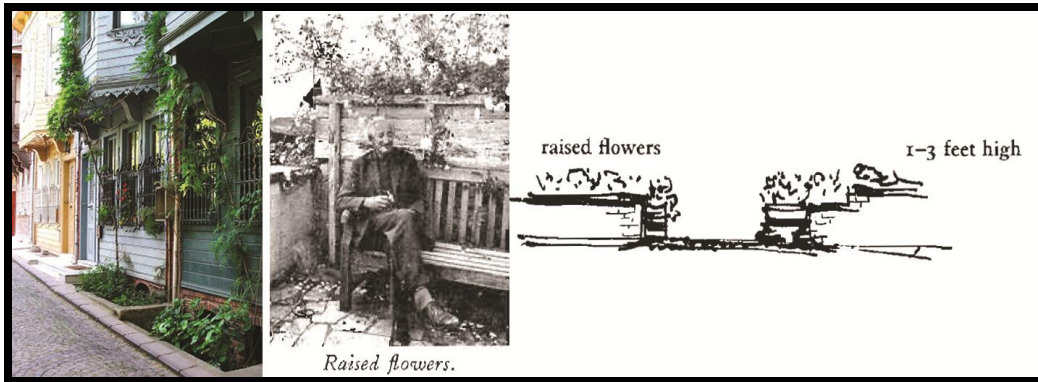


Figure 17. Raised Flowers, Simitci Tahir Street

Paving with Cracks Between the Stones – Cobblestone: Alexander stated that the asphalt and concrete floors can be easily cleaned in open areas, but the roads should be laid with cobblestone pavements to have gaps between the stones; so, when people walk on the surfaces as such, they can feel the land under their feet. In the cracks between the stones, plants and some flower species can grow. The cracks here help to protect ecology, various plant species and insects. And when it rains, the water goes directly to the soil, there is no danger of erosion and the water loss around the roads may be less (Alexander et al, 1977). If we evaluate this texture in Kuzguncuk district, we see that almost all of the alleys are laid with cobblestone pavement.

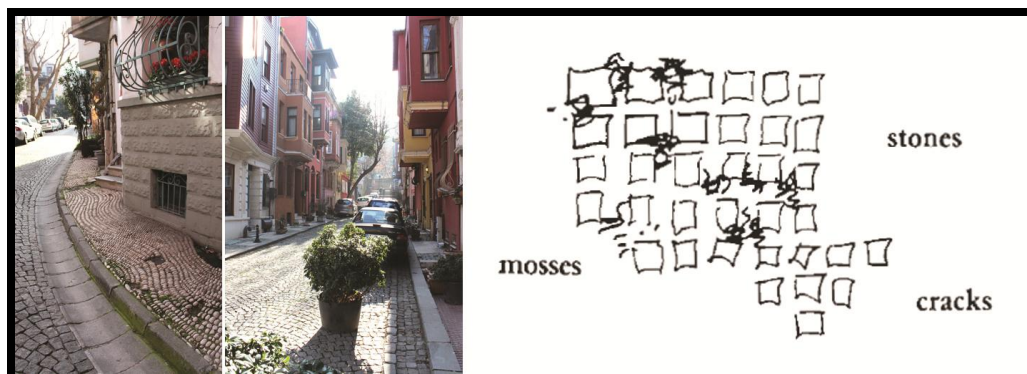


Figure 18. Paving with Cracks between the Stones – Cobblestone, Üryanizade Street

Ornament: Decorations and ornaments are successful when done correctly. Each ornament used for decoration must be a part of the whole. One of the most important points of this process is to determine its boundaries (Alexander et al, 1977). In Kuzguncuk, it is possible to find examples where ornaments for decoration are not extreme.



Figure 19. Ornament, İcadiye Street Greek Orthodox Church-Nail Publish House

Warm Colours: According to Alexander (et al, 1977) warm and bright colours, have great effects on people in terms of emotional aspects. In Kuzguncuk, warm colours are used in historic houses in the streets, and especially the use of wood materials, is a sign that hot colours are used in the district.



Figure 20. Warm Colour, Bereketli Street

5. CONCLUSION

This study set out to examine Christopher Alexander's proposition that the spatial characteristics of environments play a fundamental role in shaping place attachment. The findings support this proposition, while also suggesting that the significance of spatial qualities lies not only in their individual presence but in their organization as an interconnected whole.

In accordance with Alexander's theoretical framework, Kuzguncuk can be understood as a living environment structured through the interaction of multiple patterns across different scales. These patterns, when combined, create a coherent spatial system that supports everyday life, social interaction, and continuity. In this sense, place attachment emerges not merely as an emotional or social bond, but as a response to an environment that possesses structural coherence and spatial integrity.

The results of the survey show that a successful urban design work, together with other factors, can be a powerful source for place attachment in a neighbourhood. In general terms, place attachment refers to emotional commitment to the physical environment in which people live or interact with. One of the most important factors behind people's attachment to place is being able to socialise. The neighbourhood contains at least 17 patterns of Christopher Alexander. Some of these patterns are the design features which were also mentioned by others, such as the presence of short streets, junctions and pedestrian streets to enable socialization and a vital public life (Jacobs, 1961) or the importance of historical context in arousing the feeling of liking (Nasar, 1997). It is very important that there are small squares where people can be socialized, especially those located at the seaside, and where people spend quality time. Such places offer people a good view and socialization. These facilities are supported by the presence of public spaces, recreational areas and neighbourhood parks. Short-cuts are often used to encourage people to meet and communicate with each other without walking long distances. In this sense, the pedestrian paths are areas where more people can talk to each other as they sit. In particular, landmarks carry the feature of being a point of reference. In fact, all the items of the urban structure are an attribute that allows people to get together and socialize.

Moreover, the study highlights the importance of process in the formation of such environments. As suggested in *The Timeless Way of Building* (Alexander, 1979), places that evolve through gradual and context-sensitive processes are more likely to sustain coherence and, consequently, attachment. In contrast, environments lacking such continuity may fail to generate a comparable sense of belonging.

The case of Kuzguncuk demonstrates that the "life" of a place is not an abstract or subjective quality, but a tangible outcome of spatial organization. When patterns are interconnected and form a unified whole, they create environments that not only accommodate human activities but also support lasting relationships between people and place.

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