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USER-PLACE INTERACTION IN PLACE-INDEPENDENT SPACES-
A CASE OF CARAVAN FROM TURKEY

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ÖZET

Özgüner Atak, Ebru, Yerden Bağımsız Mekanlarda Kullanıcı - Yer Etkileşimi: Türkiye'deki Karavanlar Konusu, Başkent Üniversitesi, Sosyal Bilimler Enstitüsü, İç Mimarlık ve Çevre Tasarımı Doktora Programı, 2024.

Bu tez, karavanlara özel olarak odaklanarak yerden bağımsız mekanlarda kullanıcı-mekân etkileşimini araştırmayı amaçlamaktadır. Çalışma, karavanlarda yaşayan bireylerin düşüncelerini, deneyimlerini ve tercihlerini, mekanla ve içindeki mobilyalarla olan ilişkilerini anlamayı amaçlamaktadır. Araştırma, bu kullanıcı-mekân etkileşiminin anlamsal, fiziksel ve psikososyal boyutlarını keşfederek karavanlarda özgürlük ve mekânsal aidiyet duygusuna katkıda bulunan faktörleri belirlemeyi amaçlamaktadır.

Konut, yalnızca fiziki bir yapı değil, aynı zamanda barınmayı sağlayan, kişinin yaşamını kurmasını ve sürdürmesini kolaylaştıran toplumsal bir varlıktır. Bu nedenle karavanlarda kullanıcı-mekân etkileşimini incelemek, bu mekanlarda olumlu bir yaşam deneyimini teşvik eden tasarım öğelerine dair içgörü kazanmak açısından çok önemlidir.

Araştırmada karavanlarda yaşayan bireylerden veri toplamak amacıyla görüşme ve gözlemleri içeren nitel araştırma yöntemleri kullanılacaktır. Bu veriler, kullanıcı-yer etkileşimiyle ilgili ortak temaları ve kalıpları belirlemek için tematik analiz kullanılarak analiz edilecektir. Bulgular, konut ve tasarım konusundaki mevcut literatüre katkıda bulunacak ve yerden bağımsız yaşam alanlarının sunduğu benzersiz zorluklara ve fırsatlara dair içgörü sağlayacak.

Araştırma, karavan tasarımları üzerinde çalışan tasarımcı ve mimarlara pratik öneriler sağlamanın yanı sıra, karavan kullanmayı düşünen veya halihazırda karavanda yaşayan bireylere de fikir sunmayı amaçlıyor. Karavanlarda kullanıcı-mekân etkileşimini anlayarak, yalnızca sakinlerin fonksiyonel ihtiyaçlarını karşılamakla kalmayıp aynı zamanda genel refahlarını ve aidiyet duygularını da artıran yaşam alanları yaratmak mümkündür.

Sonuç olarak bu tez, özellikle karavanlara odaklanarak yerden bağımsız mekanlarda kullanıcı-mekân etkileşimini keşfetmeyi amaçlamaktadır. Çalışma, karavanlarda yaşayan bireylerin düşünce, deneyim ve tercihlerinin yanı sıra mekân ve mobilyalarla olan ilişkilerini

inceleyerek özgürlük ve mekânsal aidiyet duygusuna katkıda bulunan faktörlerin belirlenmesini amaçlamaktadır. Bulgular, tasarımcılara, mimarlara ve karavanlarda yaşayan bireylere değerli bilgiler sağlayacak ve sonuçta yerden bağımsız yaşam alanları için daha kapsayıcı ve kullanıcı merkezli tasarımların geliştirilmesine katkıda bulunacaktır.

Anahtar kelimeler: Karavan, Bağlılık, Kullanıcı-Yer Etkileşimi, Yerden Bağımsızlık, Mekansal Aidiyet

ABSTRACT

Özgüner Atak, Ebru, User - Place Interaction in Ground - Independent Spaces: A Case of Caravan From Turkey, Başkent University, Institute of Social Sciences, Interior Architecture and Environmental Design PhD Program, 2024.

This thesis aims to investigate the user-place interaction in ground-independent spaces, with a specific focus on caravans. The study seeks to understand the thoughts, experiences, and preferences of individuals living in caravans, as well as their relationship with the space and the furniture within it. By exploring the semantic, physical, and psychosocial dimensions of this user-place interaction, the research aims to identify the factors that contribute to a sense of freedom and spatial belonging in caravans.

Housing is not merely a physical structure but also a social existence that provides shelter and facilitates the establishment and maintenance of one's life. Therefore, it is crucial to examine the user-place interaction in caravans to gain insights into the design elements that foster a positive living experience in these spaces.

The study will employ qualitative research methods, including interviews and observations, to gather data from individuals living in caravans. These data will be analyzed using thematic analysis to identify common themes and patterns related to the user-place interaction. The findings will contribute to the existing literature on housing and design, providing insights into the unique challenges and opportunities presented by ground-independent living spaces.

The research aims to provide practical recommendations for designers and architects working on caravan designs, as well as insights for individuals considering or currently living in caravans. By understanding the user-place interaction in caravans, it is possible to create living spaces that not only meet the functional needs of the residents but also enhance their overall well-being and sense of belonging.

In conclusion, this thesis seeks to explore the user-place interaction in ground-independent spaces, specifically focusing on caravans. By examining the thoughts, experiences, and preferences of individuals living in caravans, as well as their relationship with the space and furniture, the study aims to identify the factors that contribute to a sense of freedom and

spatial belonging. The findings will provide valuable insights for designers, architects, and individuals living in caravans, ultimately contributing to the development of more inclusive and user-centered designs for ground-independent living spaces.

Key Words: Caravan, Attachment, User-Place Interaction, Ground-Independence, Spatial Belonging

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1. INTRODUCTION

In recent years, building designs that can carry flexible and practical applications suitable for natural life, the world we live on, and the healthy life of people have become important. In addition, today's people, unlike in the past, need a life that is fonder of freedom, and this thesis will examine spaces independent of place that meet all these criteria. Ground-independent spaces have emerged with many different purposes and uses for many years, with primitive and technological solutions. Moving and independent spaces are an architectural phenomenon that has existed in history from the time of nomadic life to the present (Balkaza, 2008).

Within the scope of these spaces, which are still used for different purposes today, the caravan, which is one of the places independent from the ground, will be examined. At this point, different systems, different materials and many types of relocatable architectural structures used for other purposes will be examined according to the material of the building, construction system, detail solutions and function, as well as the sense of belonging of the person and the identity of the place.

An active lifestyle, influenced by the cultures left behind by historically known nomadic societies, constitutes the common denominator of today's "modern/urban nomad" segment. Housing is the most basic human pursuit and part of existence. Throughout history, the design has been designed around the residence. As Canbolat said, "The need to be safe, have ownership and identity has begun to be met with today's lifestyles as being yourself, differentiating and embracing this difference in your life and feeling yourself complete" (Canbolat, 2019). In today's living conditions, acting with individual needs or desires is increasing. Individuals who are on the move for short or long periods of time have common needs, even if they travel for different reasons. Among these needs, the "sense of belonging" of the individual is the most important. At this point, even if there is a place independent of the place, every kind of design in this place, which is the user's home after all, is the most important element that keeps this place in interaction with the user and provides personal identity and spatial belonging.

The concept of housing encompasses both the physical structure that provides shelter and the social existence it facilitates for individuals (Lawrence, 1995; Oliver, 1987; Rapoport, 1969). It serves as a place where people can establish and maintain their lives. On the other hand, the term "attachment to place" refers to the emotional bond between individuals and specific locations (Low & Altman, 1992; Hidalgo & Hernández, 2001; Lewicka, 2011). It captures the connection and sense of belonging that people feel towards certain places. In contrast, the "perception of home" goes beyond the physical structure of a house. It encompasses individuals' subjective perceptions and feelings about their home, encompassing the meaning and significance it holds for them (Dovey, 1985; Kent, 1995; Lawrence, 1995; Swenson, 1998).

Therefore, in this thesis, there will be an investigation of user-place interaction in place-independent spaces such as caravans. Moreover, in this study, the thoughts of people living in caravans and their relations with the space will be discussed. The furniture preferred by these people and their spatial feelings will be examined. This examination, which will be in semantic, physical, and psychosocial dimensions, will cover the examination of the factors necessary for people not to renounce their freedom and to ensure their spatial belonging.

1.1. The Aim of the Study

In the general evaluation of the architectural structure; is a static object. This study aims to examine the validity and accuracy of this approach, as well as the examination of the movement phenomenon, which is the product of societies that have a strong historical reference to the architectural structure, have adopted various lifestyles, and have started to become evident in architecture as a result of changing life conditions with technology, material, and environmental data today. It is the examination of the place of the caravan, which has started to become popular recently, in human life.

The concept of movement has been a part of life since the existence of human beings. In the same way, when we look at the present from history, this concept emerges as an important concept in the architectural environment. Mobility and the resulting displacement have affected people and the architectural structures they use in many ways. This study aims to examine how and in what situations place-independent spaces were used in history, and how they can be adapted to today's use. This research aimed to emphasize the

importance of design as well as the convenience and benefits provided by the use of relocatable structures for various purposes in our daily lives, the use of the right material, the right construction system, and the correct use of all these data.

At the same time, with this study, which aims to make an analysis about the sense of belonging of caravan users and the spatial identity of the caravan, it is aimed to strengthen the place of the caravan in human life, which can be said to be one of the main places of the future.

The aims of this study are;

1. Investigation of whether the caravan spaces have a place identity,
2. Examining the sense of belonging of caravan users,

Moreover, this study is not without its limitations, as the data collection process relied on the participation of caravans and caravan users in Ankara, Denizli, and through online platforms. Consequently, the findings may not be easily generalizable to a broader population. Nonetheless, this research provides a unique and valuable contribution to the existing literature on caravan living and camping practices. The initial intention was to enhance data collection efforts by attending additional caravan fairs; however, unforeseen circumstances led to the cancellation of two fairs in Ankara and Istanbul during the field trip. Despite these challenges, the study successfully attended two fairs and gathered sufficient data to fulfill its research objectives.

1.2. Scope of the Study

Determination of the concepts of motion and displacement. The importance of these concepts in human life, their becoming a necessity, the examination of architectural products that emerged as a result of the effects of these requirements on architectural structures, and examining their features and design criteria. and the diversity of these architectural products are within the scope of the study.

The fact that the desire for individuality and dynamism, which has increased today especially because of Covid-19, is also reflected in the places where people live cannot be

ignored. For these reasons, the popularity of caravans has increased considerably. This study will be a thesis that includes the thoughts and preferences of people living in caravans in Turkey. The field trip dates of the study were selected according to the dates of the caravan fairs and there were two caravan fairs in Turkey in winter, therefore, some of the participants were collected via these fairs.

1.3. Method of Study

This study utilizes a mixed-methods approach, combining qualitative and quantitative research methods. The quantitative method allows for the systematic measurement of variables and hypothesis testing, while the qualitative method enables a more in-depth exploration of concepts and experiences. Additionally, the study adopts the umbrella concept of "qualitative research" as a method, which involves the use of qualitative data gathering techniques such as observation, interviews, and document analysis.

It aims to uncover perceptions and events in a natural environment, taking a realistic and holistic approach. The study aligns with the six key characteristics of qualitative research identified by Yıldırım (1999), which include sensitivity to the natural environment, the participant role of the researcher, a holistic approach, the revelation of perceptions, research design flexibility, and inductive analysis.

1.4. Previous Research

In the research of “Kısıtlı Mekan-Mobilya Çözümlerinde Çağdaş Yaklaşımlar”, the writer Sinan Savaş describes the physical, anthropometric, sensory and psychosocial dimensions of limited spaces. In this study, it is explained the limited spaces such as caravans and an original thesis topic has been created based on the thoughts of caravan and caravan users. In addition, in the same study, multi-functional furniture that can be used in limited areas was described and contributed to the emergence of this thesis.

In the research of “Göçebe Yaşam Biçimleri ve Mekansal Aidiyet İlişkisinin Mobilya Tasarımı Özelinde İncelenmesi” the writer Tülay Canpolat states the examining the relationship between nomadic lifestyles and spatial belonging in the context of furniture

design. That mentions about nomadic lifestyles and place attachment subjects contributed to this study well.

Moreover, in the study "Tiny House - When Size Matters" writers Joshua Wotton, Henry Skates and Leigh Shutter state the relationship between space size and human needs implemented in housing, based on Maslow's hierarchy. This thesis is based on the same hierarchy in which caravans are examined.

As a result, the subject examined in this thesis is an original and promising subject that is nourished by previous studies and has become even more popular, especially after Covid-19.

Table 1.1. Table of the chapter

INTRODUCTION	
The Aim of the Study	1. Investigation of whether the caravan spaces have a place identity, 2. Examining the sense of belonging of caravan users,
Scope of the Study	Thoughts and preferences of people living in caravans in Turkey
Method of Study	Qualitative and quantitative research methods
Previous Research	The originality of the study and some of the relations between previous research.

2. GROUND FREE SPACES

Movement and mobility are indispensable concepts in our lives, and we are always intertwined. Ground-independent spaces are building types that have taken place in human life since the existence of human beings. These types of structures can be used in many different areas in terms of their physical properties. Within the scope of the study, these different areas will be explored and explained with examples. In the continuation, examples of caravans, which are used as independent places from the ground, will be examined.

After examining the types of spaces independent of the place, the design criteria and evaluation criteria of these types of spaces will be examined. At this point, in addition to the general design criteria, the requirements arising from special mobility situations will be discussed.

This study, which will be one of the independent space organizations, will focus on the caravan user's sense of belonging and the identity of the space.

2.1. History of Ground-Free Spaces

“Nomadism has been the most common way of life among Turks throughout history. Since then, the shelters created have become an integral part of life and production. Tents, which are the most suitable type of shelter for this nomadic lifestyle, have been widely used from history to the present.

The tent is still used as a shelter to this day. However, it differs from the previous examples in terms of the method of construction and the materials that make it up. While tents were used as permanent shelters at first, they became more common in tourism and for a short period of time” (Balkaza, 2008).

Relocatable architectural structures, compared to static structures; In line with the changes in social life, they allow groups of people in different lifestyles to meet different needs in different places at certain time intervals. Cem İleri explains his thoughts on the diversity of mobile architecture as follows: 'Is the urban program mobilizing, or does being mobile become a program? Portable designs have existed for centuries; they are in a hybrid category between automobiles and buildings. They have a dizzying variety, from nomadic

tents to temporary structures. Historians may not be able to decide which category of civilization they belong to, just as biologists have not decided which category insect-eating plants belong to. Architecture has perceived all inputs as a threat to its static structure, and has limited its relationship with them to precaution and fortification' (İleri, 2000).

Prof. Gürel's comment on the subject in his book *Uzay Organizasyonlarında Yeni Gelişmeler* is explained as follows: 'The structures that are implemented today and that will be implemented for a while are actually 'temporary structures', the further they move away from their temporary nature, the more they will be destroyed for the future. power will become an obstacle. The architecture and urbanism of our age requires a spatial, indeterminate structural order that can respond to all kinds of dynamism, transformations and developments' (Gürel, 1968).

Traditional building groups such as tents or dormitories have proven to be reliable. In this period, when it can be said that housing will have a reactive, interactive, ever- changing and adaptable appearance, ecologically renewable resources, recycled materials and life-cycle-based building expenditures become as important as building restrictions imposed by planning controls in sensitive and historical areas.

Movable structures can realize many opportunities that static structures cannot offer. It can be placed in urban or rural areas; it can change place at any time. It does not have to have a long lifespan to cause damage, so it has little or no long-term environmental impact. Its realistic presence on a given ground and the fact that the dramatic setup and destruction processes take place in a limited time frame also bring an element of event-based excitement and performance.

Relocation is a factor, as is lighting, security or accessibility regulations. In other words, the ability to relocate is portability as a reinforcement element. As an adaptable feature to all structures, construction methods and production techniques can reduce work on site, construction time and transportation costs with the use of lightweight prefabricated materials.

Special methods developed for use in dismountable structures have been transferred to permanent construction operations. Materials that have entered the market for use in permanent structures are used in temporary structures. For this reason, studies in these areas

in terms of design, production, construction and operation have potential benefits in all sectors (Şentürk, 2005).

2.2. User-Space Interaction in Caravans

In order to understand the user-space interaction, it is necessary to examine the perception of motion in places independent of ground such as caravans and the state of being unstable as a different concept from ordinary buildings.

The word “Movement” in Architecture is given in the dictionary with the following main and side meanings;

1. The displacement of an object, its movement in space; motion.
2. The displacement of something, a vehicle, a person, a community, migration.
3. Vitality, mobility in something, in a place, in water or in this form.
4. The act of going out.
5. The depiction of a certain stance that is not still in a human or animal figure.
6. It is the whole of the recesses and protrusions on the facade of a building” (Kaya, 2005).

The root of the word “housing”, which means shelter or house, has the verb to be put and this verb; It is frequently used among Turkish people in the form of migrating – landing. It can be stated that this dual verb, which expresses mobility and stagnation in a sense, also indicates nomadism and settled urban life in Turkish culture” (Gündoğmuş, 2005).

Frederick Engels said the following on the concept of motion. “Movement is the mode of existence of matter. Never, nowhere, inert matter has neither been nor can be. Motion in universe space, mechanical motion of smaller masses on each celestial body; molecular vibration in the form of heat, electric or magnetic flux; chemical dispersion and composition, organic life: every single atom of matter in the universe participates at any given moment in any of these forms of motion, or in many at the same time. Every stillness, every balance, is only relative, but has meaning in relation to water or this particular form of movement. An object may be in a mechanically restless state, for example, in a state of

mechanical equilibrium on the earth. This in no way prevents it from participating in the motion of the earth, the entire solar system, nor does it prevent the smallest physical particles from undergoing vibrations conditioned by its heat, nor does it prevent its atoms from performing a chemical process. Inert matter is as inconceivable as motion without matter” (Ekmekçi, 2005).

2.3. Sense of Spatial Belonging-Relation of Space Independent from Place

As Tuan (1977) explains the terms "space" and "place" are familiar concepts that play fundamental roles in our understanding of the world. While they share some similarities, they also possess distinct characteristics that help us differentiate between them. A place is a specific location within space, but it holds a deeper significance as it provides a sense of security and familiarity. On the other hand, space represents the freedom and openness that comes with unbounded areas. Through human interaction and the efforts of engineers and architects, space can be transformed into a place that holds meaning and purpose. We have origins and connections to specific places, and we create spaces that serve our needs and desires. A place can be as small as a corner of a room or as vast as the entire world, and it holds significance and value in our lives (Tuan, 1996).

The main factor in making an individual feel safe is the feeling of "familiarity". For a familiar place, person or thing, it must have gained meaning and be embraced within us. The combination of all these elements creates a sense of belonging. In order for the individual to feel safe, he/she must feel himself/herself and be a part of that.

According to Tuan (1996), the term "place" carries two distinct yet interconnected meanings in everyday usage. Firstly, it refers to one's social position and characteristic lifestyle, encompassing elements such as one's occupation, living arrangements, and preferred social activities. Secondly, it denotes spatial location, serving as a socio-economic indicator or reference point. Our sense of self and our existence in the world are deeply intertwined with the concept of place. Personal identity, community identity, and national identity are all closely linked to our attachment to specific places (Tuan, 1996).

The attachment to home and community involves embodied, emotional, and spatial dimensions that influence social behavior and hold symbolic meanings. Research by Allen (2000), Clapham (2005), Douglas (1991), and Mallett (2004) highlights that individuals

residing in RV parks or utilizing independent spaces as homes or offices develop a strong emotional connection and sense of belonging to these spaces. This emotional connection fosters a sense of attachment and belonging, similar to that experienced in traditional residential settings (Newton, 2008).

Ilgin and Hacıhasanoğlu (2006) clearly state in their research that the most important factor in the formation of sovereignty is that people can create a sovereign region by owning the area around them. In the same study, it was shown that in the behavior model related to the sovereignty area, three factors such as ownership, protected area and belonging to the place are necessary for the ownership of the space. "Owning happens when a person gives the place or object parts of his or her identity. Possessions are an element of the self. The spaces, on the other hand, gain privacy with the coming together of the owned and form the sovereignty area of the individual" (Canbolat, 2019).

The first portable structures led people to see the need for belonging and comfort as a necessity; When these feelings and agricultural culture were combined, the foundations of settled life were laid. Mobile space creates a sense of place for the user, so it can be defined as "mobile residence", although the ability to move and use it temporarily is one of the preferred reasons. (Ari, 2019). Although some purposes played a role in the creation of mobile housing, it can be said that the need for freedom of the people affected the most. Without being fixed in a certain place, the human being, who still needs a certain sense of belonging, has created an independent space like a caravan.

The concept of freedom has long been a topic of scholarly discussion and disagreement (Berlin, 1969; Hirschmann, 2002). It encompasses various aspects, including freedom of movement, speech, and political and religious freedoms. In the context of tourism, freedom is closely intertwined with the idea of mobility. The notion of "freedom of movement" is often used metaphorically in tourism literature to promote the idea of vacations as a means of personal liberation and validation (Caruana & Crane, 2011). However, it is important to recognize that mobility rights are not evenly distributed, and the ability to travel freely can be limited for some while others enjoy unrestricted mobility (Adey, 2006; Priya & Cresswell, 2008; Skeggs, 2004). Popular idioms such as "getting away from it all," "escaping oppression," and "venturing off the beaten path" are often employed in movies and books like *Into the Wild* (1996; 2007) to convey dominant narratives about freedom.

The car has long been associated with notions of freedom, often depicted through exoticized, masculinized, and individualized representations. Films like *Thelma and Louise* (1991) and literature such as Kerouac's *On the Road* (1957) have encapsulated the car's connection to autonomy and independence (Cresswell, 1993; Ganser, 2009). In the field of leisure and tourism studies, freedom is often portrayed through extraordinary acts of adventure, typically undertaken in remote locations and from a predominantly masculine perspective (Kane & Tucker, 2004) (Franklin & Crang, 2001; Hannam, Butler & Paris, 2014).

Being able to establish their home or business life in caravans has been a way for many people to realize the excitement of embarking on this adventure to some extent. It can be said that while people can still do their daily work, they may be feeding their desire for freedom in this way, thanks to the places that are independent of the ground.

2.4. Spatial Components in Moving Space Organization

The mechanization that came with the industrial revolution has a great effect on the spread of mobile architecture and relocatable structures. 20th century at the beginning of the movement, various currents that advocated the relationship between man and his environment emerged. "Representatives of the Futurism movement, one of these movements, believed that the relations between man and machine required a new environment" (Deviren, 2001).

Çolak determined that, Sant'Elia, one of the futurists, published his manifesto called 'Messaggio' in 1914. This text was added by Marinetti and turned into a manifesto of Futurist architecture. Concerning mechanization and movement, the manifesto states: "The problem is not finding new profiles, new door and window frames, and replacements for columns, cantilever caryatids and gargoyles. Nor is it a problem to bare the facade, paint or slate it, or find formal differences between new and old buildings. The problem is to create the Futurist house according to a solid plan, to build it with the help of all scientific and technical possibilities, to meet every need of the individual's life style and soul, to reject everything (tradition, style, aesthetics, proportion) that is strangely cumbersome and foreign to everyone; to create a new harmony from new forms, new lines, profiles and volumes, to create architecture whose reason for existence lies only in the special conditions of

contemporary life and whose aesthetic values are in perfect harmony. The futurist city must be created and built: it must be like a dynamic, vast, turbulent, lively and noble construction site, while the futurist dwelling must resemble a machine' (Çolak, 2005). Therefore, all of these components are essentials for futurist architecture and place-independent spaces such as caravans are the important way to this idea.

While some of the individuals who adopt the lifestyle on the move meet their needs completely where they go, some of them carry the solutions they may need during their movement. Designers develop innovative solutions to the problems posed by this lifestyle. In Canbolat's study there are some components when the features that these products must meet are considered within the framework of the on-the-go lifestyle, in design;

- Lightness,
- Flexibility,
- Reconfigurability,
- Modularity (Detachable, add-removable)
- Size Reduction, Size Enlargement
- Storability,
- Portability,
- Multifunctionality,
- Minimum material usage,
- Durability,
- The concepts of customizability come to the fore.

2.4.1. Flexibility

The concept of flexibility can be understood in two ways, as stated by Groák (1992). First, it refers to the inherent adaptability of a space, allowing for different social uses. Second, it pertains to the physical arrangements of a space, enabling various configurations. In this study, the notion of flexibility will be explored across semantic, physical, and psychosocial dimensions.

In the early 1980s, James Stirling expressed his dissatisfaction with the prevailing architecture, describing it as monotonous, devoid of meaning, and lacking commitment. He yearned for a more engaging and dynamic approach to design. This sentiment reflects the desire for increased flexibility and movement in architecture during that period.

Today, despite the point that technology has reached and the opportunities it provides, buildings are built without taking into account that the demands may change over time, that their function may be transformed, that they may be relocated or that they may need to be completely removed. Buildings that can respond to changes and adapt to their environment seem to be costly, but the cost of a building that can keep up with the changes that occur over time and provide flexibility to the user is lower than the others, as its permanence, usefulness, and therefore its duration of use are higher.

In human life changing with developing technology; In architecture, it has become one of the most sought-after features for the building to be changeable, transformable, to keep up with external conditions, and to respond to rapidly changing needs. Movement and change are happening much faster today, and architecture has to respond at the same speed. At the same time, it is extremely important for the structures to keep up with the physical forces and changing environmental conditions. For this reason, there is a need for interactive architectural spaces that can be changed, adaptable, dynamic, adaptable to the environment and needs. Movable structures offer flexible, democratic, and free spaces to the user compared to static structures (Kronenburg R., 1995).

According to extensive studies about interchangeability in architectural design structures, Özçelik & Kaprol's study demonstrates that these structures are expansivity, segmentation, multifunctionality and functional change. The expansivity is as the expansion of the space depending on the needs of the user, or the addition of an additional adjacent space next to the main space, with the movement and displacement (flexibility) of the interior reinforcement elements and the non-bearing outer shell in the space with limited expandability. That is to say that in a small place the expansivity is a key role as well as the segmentation which means space rearrangement of units. Ayanoğlu mentioned that in their study and it is "We can see that the interior spaces in a house are separated from each other by the users by assigning different functions to these spaces. Users have some activity needs in order to sustain their lives, and when they turn these activities into action, they may need

different spaces, which may cause the spaces within the house to assume different roles” (Ayanoğlu, 2010).

As the second key factor for flexibility in design there is segmentation which means in Ayanoğlu’s study; “We can see that the interior spaces in a house are separated from each other by the users by assigning different functions to these spaces. Users have some activity needs in order to sustain their lives, and when they turn these activities into action, they may need different spaces, which can be seen to cause the spaces in the house to assume different roles.” (Ayanoğlu, 2010). Also, Arcan and Evci (1992) consider this as a function chart and showed the actions that can take place in a house in a function chart (Figure 2.1).

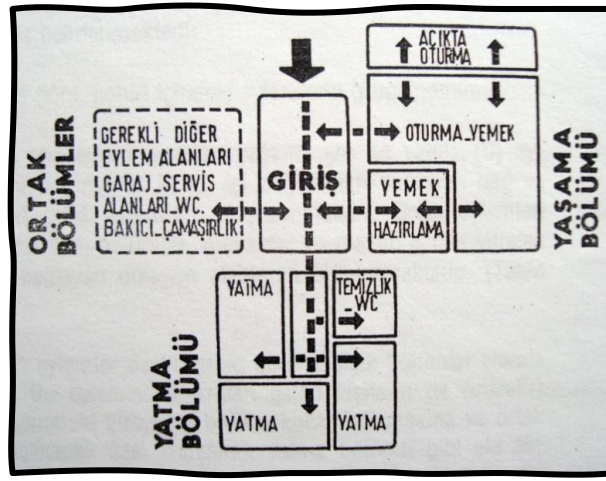


Figure 2. 1. Function chart in a residence

2.4.2. Functionality

According to Özçelik & Kaprol’s study the third component for interchangeability in design is multifunctionality which occurs when the furniture used in the narrow dwelling meets the new emerging need by increasing its dimensions without changing its function and basic form in case of need creates an opportunity to reorganize the space. This need is a key design criterion that saves lives in very narrow spaces such as caravans. For example, while a table can be folded and hung on the wall, the bed can have another function when its function is over. Undesirable dead spaces may arise in the caravan due to limited space or the equipment elements that must be used. The functionalization of these dead spaces or the functionalization of the housing elements, which must be used as stairs, also creates the possibility of rearranging the space. For example, a mandatory design element such as a

ladder can be folded or move to other side after using that function, or it can be used in another function.

Another fundamental design issue for interchangeability in architecture is functional change which means a design criterion originating from furniture designs that serve a complete purpose that combines many functions. Bayram stated that, “Compact furniture, which is mostly preferred in small living spaces, is furniture that is placed in a certain order within itself and serves a complete purpose, combining many functions” (Bayram, 2011). For example, a furniture that was developed from a sofa bed and has a different combination of sitting and sleeping functions is a multifunctional design (Figure 2.2). Although it serves as a triple seat in daily use, it turns into a bunk bed when needed. While this seating element provides a function transition to the lying element, it not only transforms itself but also transforms its function from a resting place into a sleeping place in the place it is in. With the additions added to the furniture, it also has a ladder used to climb to the upper bed of the bunk bed and railings that prevent falling on both the upper bed and the lower bed in its own design. In this way, it provides user safety in both functions.

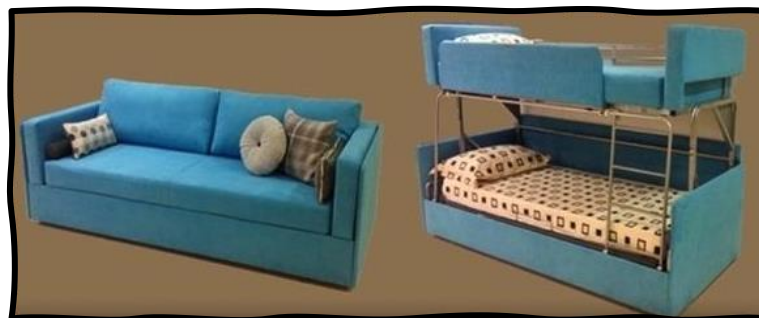


Figure 2. 2. The sofa that can be a bunk bed

Alex Thaller's manifesto is a new air architecture. The buildings he designed in 1960 consist of blown chambers. ISO's floating containers are both theoretical and tangible in terms of multi-functionality, being between land and sea, and building block solution technique. The MDU (mobile dwelling unit) of LOT\EK architecture studio establishes a link between water mobile and the real world, bringing standardization and portability before us (Çolak, 2005) (Figure 2.3).

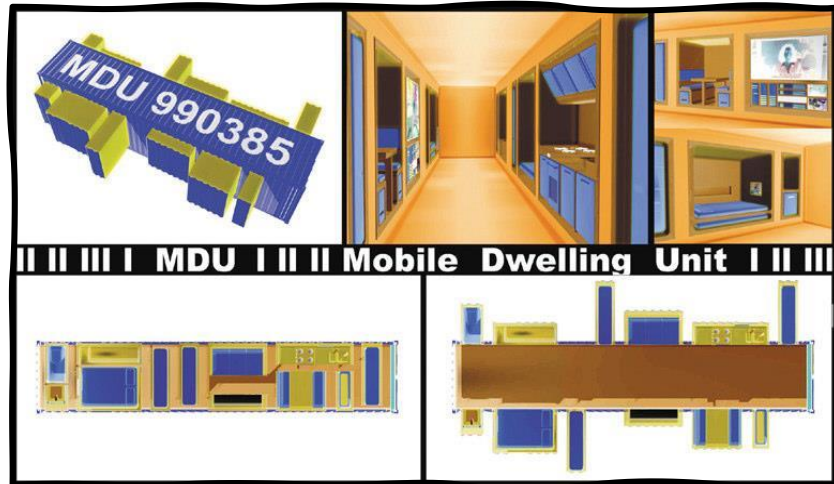


Figure 2. 3. MDU (mobile dwelling unit)

2.4.3. Changeability

In 20th century the world population, which was about one billion at the beginning, increased to three billion in the 1960s and reached six billion in 2000. Besides the very rapid increase of the population; people's demands for more equal and more comfortable shelters and their expectations from architecture are increasing. For this reason, new structures must be very flexible, changeable according to needs, and be able to accommodate much more population than today. For this purpose, theorists such as Nicolas Schoffer, Yona Friedman and the Archigram group have developed theories and plans for the cities and structures of the future (Çolak, 2005) (Figure 2.4).

According to Sedat Gürel, the Archigram group is characterized by several key themes. These include the integration of change and adaptability concepts into architectural design, recognizing the notion of the "temporary" in the architectural process as an ongoing cycle of renewal. The group also emphasizes the potential of advanced technology to address societal issues comprehensively. Aesthetic creativity is regarded as a paramount objective, and urban planning incorporates terms such as "people mass" and "individuals silo." Additionally, Archigram explores the creation of innovative communication, distribution, and food networks that push the boundaries of conventional approaches (Kaya, 2005).

According to Peter Cook, the architectural thought and approach of the Archigram group revolve around the concept of "throwable buildings" and the movement of the environment. They are interested in creating structures that can be easily moved from one

place to another, and their architectural ideas are not limited to fixed built forms. The group's approach is characterized by the plug-in architectural concept, which originated with the Cabin House idea in 1962. This concept evolved into the Plug-in City project in 1964, where Cabin Houses were attached to a concrete megastructure (Figure 2.5). The Plug-in City project was influenced by Buckminster Fuller's ideas, such as the Dymaxion Bathroom and Dymaxion Deployment Unit, and the concept of infrastructure was incorporated into the project (Kronenburg, 2002).

Kaya added, “The philosophy of Archigram coincides with the aims of the emergence of the concept of mobile architecture” and this desire for mobility emerges in people at least in their own home, that is, in places where they can mobilize, like a caravan.

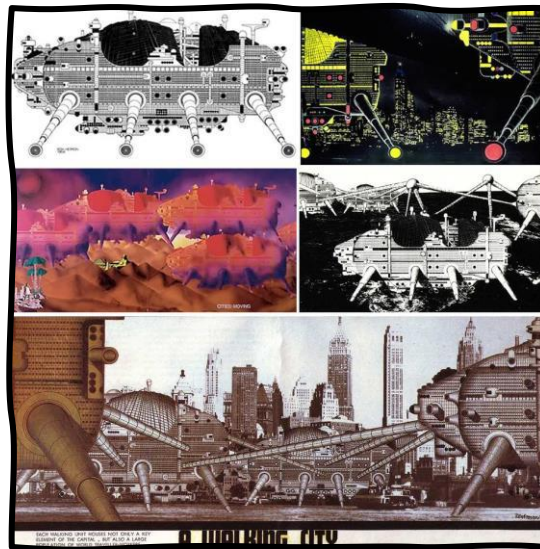


Figure 2. 4. Archigram ‘Walking City’

In Kaya's study, he stated, "The basic philosophy in Peter Cook's 'Plug in City' design is change, so each piece that makes up the city has a certain lifespan. It is a basic structure with a lifespan of 40 years, it carries movement systems that change every twenty years and houses that change or relocate every fifteen years. This change is accomplished by cranes suspended above the city and able to move on rails. 'Plug in City' proposes a 'consumable city' where elements that have been industrialized like television or automobiles are attached to an industrial conveyor system and renewed when they wear out" (Kaya, 2005). As it can be understood from here, it can be said that people have a passion for movement and a desire not to be fixed both physically and mentally. If we consider the most

basic building block, we can explain this idea as the concepts of 'home' or 'workplace' being independent of the ground and in motion. In other words, in the larger picture, there is no mention of a movement consisting of replacing architectural elements consumed over time as in 'Plug in City' (Figure 2.5); what is mentioned is also the movement and displacement of the city itself, as in the utopias of 'Instan City' and 'Walking City' (Rock, 2005) (Figure 2.4).

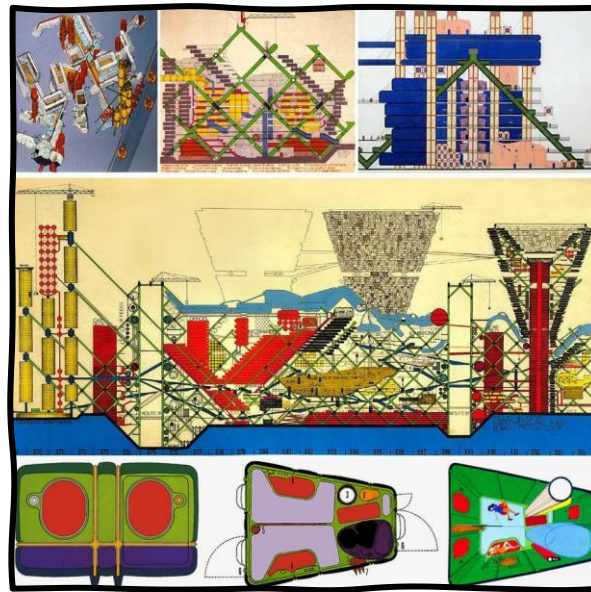


Figure 2. 5. Archigram'Plug in City'

In his 1913 manifesto, Sant'Elia mentions: "People did not believe for a long time that monumental static large buildings could be built with objects that were slightly temporary. Modern cities should be designed and built from active, mobile and ubiquitous dynamic and modern (just like a giant machine) buildings" (Çolak, 2005). In other words, it is still continuing to adapt the idea of space-independent space ownership, which continues to grow, to our lives in a constantly changing and constantly moving way.

The effect of industrialization, the development of technology, the acceleration and increase in production has changed the interaction and relationship of people with space. In today's world, where the stability of the buildings and the benefits of stability are far behind, the buildings have started to be more temporary and in motion with lighter materials. As Balkaza mentioned in his work, "If we compare the structures of the past with the structures of the future, we can easily distinguish this change. While talking about the stability, eternity,

immutability, permanence and weight that are dominant in the building features of the past, in the designs and structures of the future; We see that there are features such as mobility, finitude, changeability, transience, lightness, breaking from the ground. (Balkaza, 2008)” Perhaps, thanks to all these changes, we are closer to the movement as individuals and as a society. At least when we look at the structures, it can be said that we are in a less heavy and less stable period.

As Balakaza states, “The 21st century has hosted many proposals and designs in which the relationship of buildings with the ground is redefined. These designs are also a reflection of a worldview. Le Corbusier, while describing the Domino House, which is the expression of the idea of free plan and mass production, states that the house will no longer be 'a thick-walled object that shows that it defies centuries and where wealth is exhibited with its splendor' (Balkaza, 2008). The house will no longer be an object where the belief in family and lineage has been cultivated since the past, and it will no longer need to be deeply rooted in the soil with its foundations and built with 'durable' materials (Le Corbusier, 2001). As can be understood from this foresighted statement of Le Corbusier, fixed and heavy structures, which are actually a materialist thought, are a thing of the past. Now, architecture is experiencing a new era with more changeable, more flexible and lightweight functions.

Multifunctional spaces; They are spaces designed by arranging at least two of the functions required in the basic living environment, working environment or social environment to work together. These spaces, which have more than one function, are mostly living spaces. The simplest description of life in restricted spaces is restricted residences that contain many functions. Sitting, sleeping, cooking, eating, working, chatting, watching television, listening to music and even meeting the need for toilet can be listed as a essential function list of living spaces in a restricted space. However, in the historical process, the concept of limited space has been examined with an industrial approach in narrow spaces such as caravans and boats before residences. At the same time, the mobility of the space adds an additional function such as providing transportation.

“Volkswagen Transporter caravans, whose design has continued uninterruptedly since 1949, are remembered as an icon. Designed using the popular Beetle mechanics, it is a functional and versatile vehicle as well as a fun and friendly look. It has been used in many functions such as cargo, vehicle, and caravan from past to present (Figure 2.6). Inside the vehicle there is a Westfalia version kitchen, a bed, a sunroof for ventilation and cabinets.

Other necessary materials were added depending on the user's request. VW buses, which are used as holiday and tour vehicles by thousands of families and groups, are still produced today and are used for the same functions” (Nappo, 2010). Therefore since 1949 there has a need for movement of a house, a dynamic design and maybe VW buses lead this issue and now there are much more designs for this architectural concept.



Figure 2. 6. Volkswagen- Transporter (Volkswagen, Westfalia- 1960- Germany)

In conclusion of this chapter, the rich history of nomadic lifestyles and traditional shelter designs, such as tents, has laid the foundation for the development of modern mobile architecture and flexible living spaces. The fusion of movement and stability in architectural design reflects a balance between adaptability and functionality, catering to the evolving needs of a growing global population. The concept of flexibility in design, championed by architectural theorists and practitioners, underscores the importance of creating versatile and multifunctional spaces that can accommodate diverse uses and inhabitants. As society continues to urbanize and demand more equitable and comfortable living environments, the need for innovative and adaptable structures becomes increasingly apparent. The mechanization of architecture, driven by the industrial revolution, has spurred advancements in mobile and relocatable structures, paving the way for visionary concepts of future cities and structures.

Consequently, by understanding the interplay between space and place, architects and designers can create meaningful and purposeful environments that resonate with human

experiences and aspirations. The future of architecture lies in embracing flexibility, adaptability, and sustainability to meet the dynamic challenges of an ever-changing world.

Table 2.1. Table of the chapter

GROUND FREE SPACES	
History of Ground-Free Spaces	From nomadic times until now
User-Space Interaction in Caravans	Movement and housing terms
Sense of Spatial Belonging-Relation of Space Independent from Place	Space, place, familiarity and independent of the ground terms
Spatial Components in Moving Space Organization	- differences between new and old buildings - Flexibility - Functionality - Changeability

3. LOCATION-INDEPENDENT MOBILE SPACES AND CULTURE

Space can be defined as a closed or semi-closed space with certain boundaries. This space creates in various forms and functions, providing the necessary opportunities for people to live in. It is seen that the human cannot be considered separately from the place in the previous definitions of space, and that the definitions of space and human existence carry inseparable traces (Sever, 2020).

Spaces can be examined under different sub-headings according to their functions, and when they are classified according to their mobility, mobile and semi-moving spaces can be mentioned. Moving spaces are spaces such as boats, airplanes, caravans, and house-boating that can continuously increase or decrease, make linear, circular, or oscillating movements, and can also perform travel or transportation functions from one place to another. These places, from past to present, have been developed for the purpose of relocation in various civilizations, and then for a living while relocating, and have reached today's diversity and technological equipment (Doğan, 2020).

Location-independent mobile spaces encompass various modes of transportation, including trains like the Orient Express. This iconic train offers a unique travel experience, allowing passengers to not only journey from Paris to Istanbul but also stay in luxurious accommodations onboard. The Orient Express is renowned for its opulent design, featuring restaurant carriages adorned with exquisite furnishings such as wall-to-wall Turkish carpets, silk-finished walls, and mahogany interiors (Sakurai, 2012). It provides a lavish and stylish environment for travelers to enjoy during their journey.

In addition to trains, some individuals have the privilege of owning private jets, providing them with the ultimate freedom and luxury in travel. Companies like Elite Traveler cater to these individuals by offering a range of options for private jet accessories, furniture, and interior layouts. These resources serve as inspiration for buyers, helping them create personalized and luxurious interiors that align with their unique style. Private jets serve as more than just a means of transportation; they can also function as temporary homes, offices, or simply a space for leisurely travel, providing a ground-free environment for those who seek unparalleled comfort and convenience.

Floating spaces are structures that have emerged as a result of people's desire to live on the water. These spaces have the comfort of home but are both active and inactive. In other words, people can go anywhere they want over the water and do not stay fixed in one

place. The desire to live or spend a certain time on the water has made the design of floating spaces important.

Moreover, there are caravans the closest to regular home or office but ground-free places. They are displaceable and can be stable in the desired location. They can be moved and can be fixed in the desired place. It has become a sector that continues to develop and has started to become popular. People are now more willing to adapt to a more minimal life and go one step further than living in the same spot. Covid-19 had a huge impact on this and people started to live more individualistic. Today, where the boundaries of home and office life have been stretched, the use of caravans as both home and office has increased even more.

There is no doubt that the most influential factor in a caravan's lifestyle is culture. Because culture shapes people's lifestyles, and especially today, the elements such as returning to the old nomadic life in Turkey and not living in a fixed place seem to have not been a difficult turn for this culture. In fact, the longing for nature and the desire to get out of the stifling space of the city started in Turkey's culture in the 1960s and continues to evolve with the help of technology (Antalya Government, 2010).

3.1. Caravan

Caravans originally designed for circus workers in the late 19th century later became popular among gypsies in Europe. With advancements in the automobile industry, motorhomes were introduced, which integrated the caravan into the vehicle itself, eliminating the need for a separate towing vehicle. Today, there are two main types of caravans: motorhomes and trailers. Each type has its own advantages and disadvantages. For longer stays, a tow caravan is often preferred, while a motorhome is more suitable for short-term stays. Trailers require minimal maintenance apart from tire wear. If freedom of movement is a priority, a motorhome is often the preferred choice (Wikipedia, 2022) (Figure 3.1).

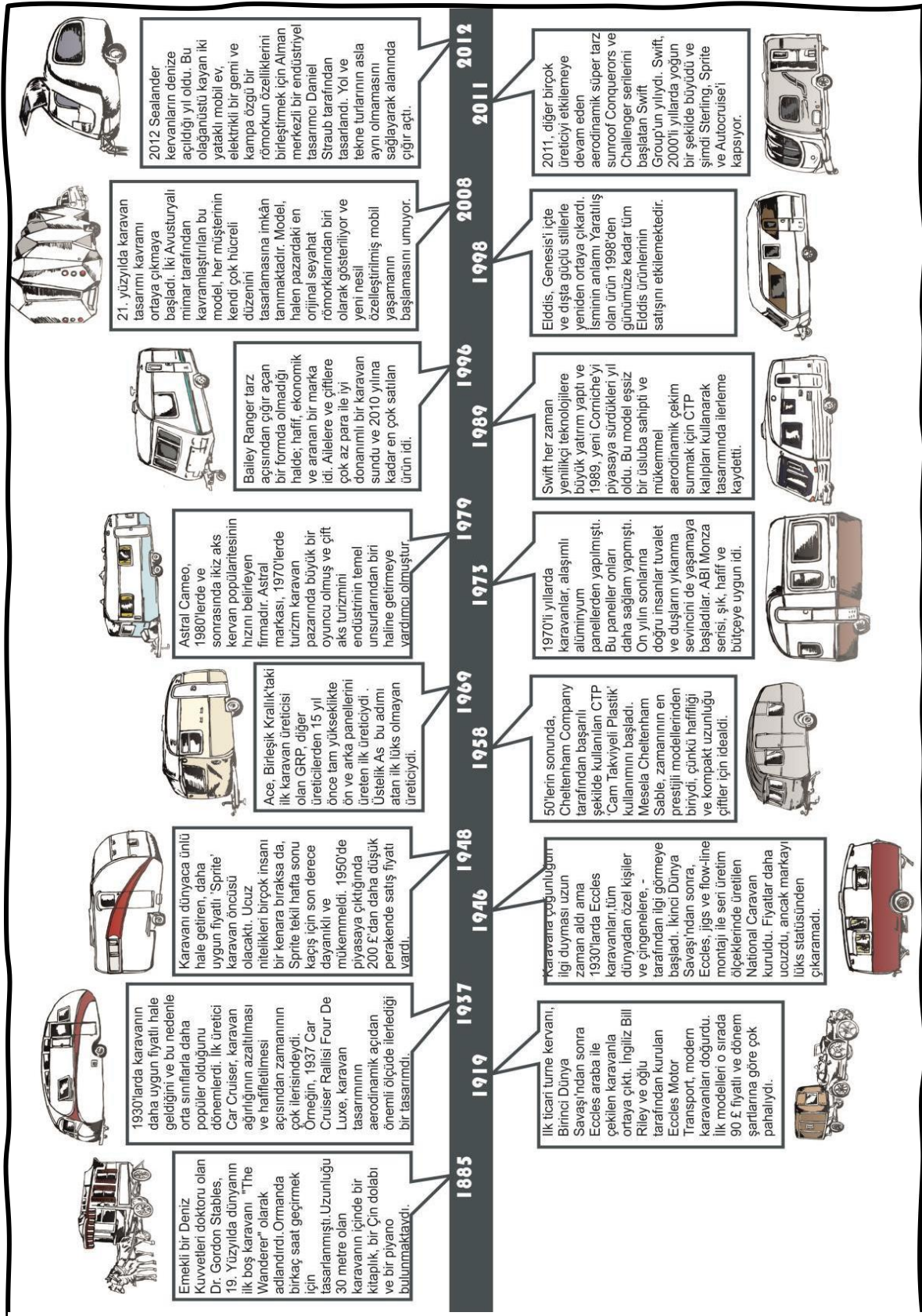


Figure 3. 1. Historical Process of Caravan Design (Original-2019)

Caravans are mobile living spaces designed to accommodate the standard dimensions of motor vehicles. They are equipped with essential amenities such as beds, kitchens, showers, toilets, and seating units, all within compact dimensions. Over time, caravan designs have evolved to include luxurious features. Today, there is a thriving industry of touring sites and caravan parks that offer comprehensive facilities for family holidays. The Harrogate Caravan Park, for example, is a popular site in Yorkshire that boasts excellent amenities, picturesque surroundings, and convenient transportation links to renowned landmarks in the region (The History of the Caravan, URL8).

Produced in the Netherlands in 1995, "Modular House Mobil" gives the user the feeling of both being in a caravan and living at home with its characteristic interior and exterior design (Figure 3.2). Its structure consists of three main parts. The first is the chassis that forms the mechanical part, the second is the module that defines the kitchen, shower, storage and living area, which is a functional area, and the third is the module that defines the sleeping areas. In addition to the transformable furniture, the floor is carpeted, and certain areas are covered with animal skins. It is also one of the remarkable features of Mobil House” (Nappo, 2010).



Figure 3. 2. Modular House Mobile (Atelier Van Lieshout- 1995- Netherlands)

Volkner Mobil, which took the stage for the first time at the Düsseldorf International Caravan Fair in 2006 to observe a development process, is the first caravan that can carry a car in addition to having all the features of comfort, performance and technology (Figure 3.3). It is a luxury hotel built on a 10.5m chassis and created on wheels. It includes a dining room, kitchen, bathroom, and a double bedroom (Figure 3.4). With all these qualities, the project pushes the limited space understanding and limits.



Figure 3. 3. Volkner Mobil (outside)



Figure 3. 4. Volkner Mobil (interior)

Caravan Typology

Although there are many types of caravans, in this study, there are only caravan types that are used more than other types. According to driver licenses people can use a number of caravan styles (Figure 3.5).

TÜM EHLİYET SINIFLARI					
SINIFI	KULLANDIĞI ARAÇLAR		KAPSAMI	DENEYİM ŞARTI	YAŞ
M	MOTOLUBİSİKLET (MOPED) (2-3-4 TEKERLEKLİ)		-----	-----	16
A1	125 CC KADAR MOTOSİKLET (2-3 TEKERLEKLİ)		M	-----	16
A2	35 KW KADAR MOTOSİKLET (2-3 TEKERLEKLİ)		M - A1	-----	18
A	35 KW ÜZERİ MOTOSİKLET (2-3 TEKERLEKLİ)		M - A1 - A2	24 YAŞ veya 2 YILLIK A2	20
B1	MOTOSİKLET (4 TEKERLEKLİ)		M	-----	16
B	OTOMOBİL ve KAMYONET		M - B1 - F	-----	18
BE	OTOMOBİL ve KAMYONET (Römorklu)		M - B - B1 - F	B	18
C1	7500 KG KADAR KAMYON ve ÇEKİCİ		M - B - B1 - F	EN AZ B	18
C1E	12000 KG KADAR KAMYON ve ÇEKİCİ (Römorklu)		M - B - BE B1 - C1 - F	C1	18
C	KAMYON ve ÇEKİCİ		M - B - B1 C1 - F	EN AZ B	21
CE	KAMYON ve ÇEKİCİ (Römorklu)		M - B - BE - B1 C - C1 - C1E - F	C	21
D1	16 + 1 KİŞİLİK MINİBÜS		M - B - B1 - F	EN AZ B	21
D1E	16 + 1 KİŞİLİK MINİBÜS (Römorklu)		M - B - BE B1 - D1 - F	D1	21
D	OTOBÜS		M - B - B1 D1 - F	EN AZ B	24
DE	OTOBÜS (Römorklu)		M - B - BE - B1 D - D1 - D1E -	D	24
F	TRAKTÖR		M	-----	18
G	İŞ MAKİNESİ		M	-----	18

Figure 3. 5. Driving license classes (URL2)

Class B Motorhomes: “These caravans, also known as campervans, are a type of caravan that can be easily used by people with a class B license. It is a van-style commercial vehicle converted into a caravan (Figure 3.6). There is no caravan appearance from the outside, so you can stay anywhere you want with these vehicles. You can make your journey by building a beautiful living space inside these vehicles. Since it is spacious inside, you can easily design the kitchen and bedroom area inside” (URL1).



Figure 3. 6. Class B Motorhome

Tent Trailer Caravans: “These caravans usually consist of a trailer where camping equipment is stored, and then the tent part is opened and set up. It is not a generally preferred caravan type, but it is very useful and very light. It is also very simple to use (Figure 3.7). You can provide your accommodation by setting up a tent at the place where you will camp” (URL1).



Figure 3. 7. Tent Trailer Caravan

Trailer Caravans: “They are caravans towed by being tied to a vehicle. These caravans have a design that we can call a top model of tent caravans (Figure 3.8). It contains the entire living space. This type of caravan is used more and more in our country due to its comfort and convenience. You can travel anywhere you want by caravan by connecting to

the car. Living spaces and equipment such as gas stove, refrigerator, table, and sink are in these caravans. You can make the addition you want according to the availability of the situation. Any of these types of caravans up to 10 meters can be found. Its width is also different. Caravans with even two beds are common in towing types. Some have outward opening mechanisms. This is how extra spaciousness and living space is created” (URL1).



Figure 3. 8. Trailer Caravan

Rising Roof Caravans: “These caravans have all the living space in them, just like the trailer caravans (Figure 3.9). There are varieties with even a bathroom. This caravan type, which provides half a meter of sunroof space, also has an open-top feature. Thanks to the rising ceiling, it is suitable for advantageous use” (URL1).



Figure 3. 9. Rising Roof Caravan

Crawler caravans: “They are caravans used as a pick-up truck. Visually, it looks like a caravan, and it is good to use, although it is not very spacious (Figure 3.10). These caravan types can also be preferred and used for accommodation on a trip to Turkey. You can change the interior of your caravans as you wish. It is possible to create unique designs” (URL1).



Figure 3. 10. Crawler caravan

Five-wheel Caravans: “They are caravans that can be towed with pick-up style vehicles with a high engine. Having five wheels makes it safer to go on the road. It also has enlarged sections. It is also suitable for people looking for a luxury caravan. The fact that it is extremely expensive is also a reflection of its luxury” (URL1).

Class A Motorhomes: “Persons with a B license cannot drive these caravans. It is generally 7-12 meters long. This caravan type on the truck chassis is also a preferred type. It is quite expensive compared to other caravan variants and has all the luxury equipment” (Figure 3.11) (URL1).



Figure 3. 11. Class A Motorhome

Class C Motorhomes: “They are known as Alkoven caravans in Turkey. Alkoven caravans are formed as a result of the rear part of pickup trucks. They have a high and wide structure. People who do not have a license cannot build these caravans. Therefore, there is a requirement for a license for the construction of these caravans” (URL1).

Mini Caravans: “These caravans, which are very small and inexpensive, are usually suitable for one person (Figure 3.12). It is a caravan that sits on a plastic body made of one piece. It is easy to use due to its light weight. You can design it as a bed, but it is not sure if it will provide a comfortable sleep. Instead of a bed, you can also create a toilet, kitchen, or bathroom” (URL1).



Figure 3. 12. Mini Caravan

Folding Caravans: “It is quite easy for vehicles to tow these caravans. That is why it's more preferable. Since it is light, it is also easy to shoot and saves fuel. It can be a caravan that will take some time as it requires setup each time. Since these caravans are made to order, the production of these caravans is custom made” (Figure 3.13) (URL1).



Figure 3. 13. Folding Caravan

Bus-Caravans: It is very popular refunctioning an old school bus to a caravan, especially in foreign countries (Figure 3.15). Bus caravans, which are gradually increasing in Turkey, give more space to users and it is thought that they provide a more sense of belonging as one of the hypotheses of this study.



Figure 3. 14. Lauren Gardenbelle’s bus-caravan (URL3)



Figure 3. 15. Allison & Nick's bus-caravan (URL4)

On the other hand, there is a huge attraction of tiny house concept nowadays (Figure 3.16). In this respect, there is no doubt that, there is mainly minimalism in human life in these days. The people need fewer space to live and fewer belongings, therefore, these people can survive in these circumstances and most importantly they can easily be in movement when they want.



Figure 3. 16. A tiny house example (URL 6)

The tiny-house movement, also known as the small house movement, is a social and architectural movement that promotes downsizing living spaces and embracing a simpler lifestyle (Figure 3.17). Tiny houses are defined as dwelling units with a maximum floor area of 37 square meters (400 sq ft), excluding lofts. This movement not only advocates for living with less but also presents itself as an eco-friendly solution to the housing industry and a viable option for individuals in need of shelter. Many people choose to live in tiny houses to reevaluate their priorities and focus on community, environmental sustainability, family time, or financial savings (Kilman, 2016). It is important to note that if a tiny house lacks the necessary amenities required for a dwelling unit, it is considered an accessory structure and must be placed on the same lot as a primary structure according to the 2018 International Residential Code (Ford & Gomez-Lanier, 2017).



Figure 3. 17. Tiny cabin of Lauren Gardenbelle (URL3)

According to Kilman (2016) and information from Wikipedia, the tiny house movement challenges the consumer-driven mindset by prioritizing quality living, personalization, environmental ethics, and community values. It offers an alternative

perspective where the value of the environment and human interaction outweighs the value of material possessions (Figure 3.18). However, the costs associated with owning and living in a tiny house are more complex than they may initially seem. One significant challenge is finding a suitable plot of land for the house. Potential options include placing it on one's own



Figure 3. 18. Tiny house design (URL5)

property, a friend's or neighbor's backyard as an RV, an RV park, or joining a tiny house community. Despite these obstacles, if individuals can gather the initial capital, purchasing a tiny house with a lower price tag and less debt than a conventional house can prove beneficial in the long run. In this respect, owning a movable house such as caravan or mobile tiny house is very useful. It is very convenient both in terms of compliance with the understanding of less is more and in terms of dynamism. People with a tiny house on wheels have much more freedom.

3.2. Caravan Owner's Perception of Space Identity

Space perception psychology focuses on how individuals perceive and remember a place based on their short or long-term experiences. The concepts of motion, time, and spatial relations influence this perception. For instance, when a caravan is used as a home, the user begins to perceive it as their own house over time. By using home furnishings and decorations, the user creates a homely environment within the caravan. Similarly, if the caravan is used as an office, it becomes a more functional workspace for the individual. In summary, the way individuals use and experience a space over time and for different purposes shapes their perception and identity of that space.

According to Altan (2012), the smells of the gardens, the smell of soot, the steam of the laundry, the smell of dust and dampness in the basements, the smell of the kitchens are some of our odor experiences that integrate with our senses of space. The sense of smell is of great importance in determining some places and times in our lives. Even years later, remembering our grandfather's house, we still remember the rooms with some special smells, or the sound of the stream next to the room while we sleep, the role of that room in my memory, is the best example that the perception of space is not just a result of visual experiences, and everyone has similar experiences (Altan, 2012). Therefore, where caravan is located, or the general time are crucial factors for space identity. In this concept, caravan users can feel an intense sense of place attachment to their mobile homes. Despite the transient nature of caravans, individuals can develop emotional connections and a sense of belonging to their living space. Here are some reasons why caravan users may experience place attachment:

Personalization and Ownership: Caravan users have the freedom to personalize and decorate their mobile homes according to their preferences and style. Through the process of making the space their own, they develop a sense of ownership and attachment to their caravan. This personalization can include choosing furniture, decor, and other elements that reflect their identity and create a comfortable and inviting atmosphere.

Familiarity and Comfort: Caravans often become a familiar and comforting space for users. The consistency of having their own belongings, layout, and design choices in a mobile home can provide a sense of stability and security. Returning to their caravan after a trip or being away can evoke feelings of comfort and familiarity, reinforcing their attachment to the space.

Memories and Experiences: Caravans often serve as vessels for memorable experiences and adventures. Caravan users may associate their caravan with special memories of family vacations, road trips, or time spent exploring new places. These positive experiences create emotional connections to the caravan, making it more than just a physical structure but a repository of cherished memories.

Sense of Freedom and Independence: For many caravan users, the lifestyle offers a sense of freedom and independence. The ability to travel and take their home with them allows them to experience new environments while still having a familiar and personal space

to retreat to. This sense of freedom and autonomy can contribute to a strong attachment to their mobile home.

Community and Social Connections: While the primary focus of place attachment is often on the physical space, the community and social connections within the caravan park can also contribute to a sense of attachment. Building relationships with neighbors, participating in communal activities, and feeling a sense of belonging within the caravan park community can deepen the attachment to the overall living environment.

Adaptability and Flexibility: Caravans are designed to be adaptable and flexible, allowing users to customize and modify the space to suit their needs. This adaptability provides a sense of control and ownership over the living environment, enhancing the attachment to the mobile home.

Emotional Investment: Ultimately, the sense of place attachment to a caravan is shaped by the emotional investment caravan users have in their living space. The time, effort, and care put into maintaining and improving the caravan, along with the memories and experiences accumulated over time, contribute to a strong emotional connection and attachment.

Overall, caravan users can develop a deep sense of place attachment to their mobile homes. Through personalization, familiarity, memories, sense of freedom, social connections, adaptability, and emotional investment, caravans become more than just a dwelling but a cherished space that holds significance and meaning in the lives of their owners.

3.3. User Interaction in Caravan Spaces in Terms of Interior Design

When it comes to interior design, caravan users have the opportunity to personalize their living space and create a comfortable and functional environment. Here are some considerations and trends in caravan interior design:

Space Optimization: Caravans have limited space, so optimizing the available area is crucial. Multifunctional furniture, such as convertible sofas or tables with storage compartments, can help maximize space utilization. Built-in storage solutions, like under-

bed drawers or overhead cabinets, are also popular to keep belongings organized and minimize clutter.

Light and Bright Colors: Light and neutral colors are often preferred in caravan interiors to create an open and airy feel. White, beige, or pastel shades on walls, ceilings, and furnishings can make the space appear larger. Adding mirrors can further enhance the sense of space and reflect natural light.

Clever Storage Solutions: Storage is a top priority in caravans to make the most of limited square footage. Utilizing vertical space, such as installing tall shelves or using hanging organizers, can help maximize storage capacity. Foldable or collapsible furniture, like dining tables or chairs, allows for flexibility and easy storage when not in use.

Compact and Functional Furniture: Choosing furniture that is specifically designed for smaller spaces is essential. Look for compact sofas, tables, and chairs that can be easily maneuvered or folded away when needed. Modular furniture systems that can be customized and reconfigured are also popular, allowing users to adapt the layout to their preferences.

Reflecting Personal Style: Caravan users can incorporate their personal style and preferences into the interior design. This can be achieved through the choice of decor, such as artwork, throw pillows, curtains, or rugs that reflect their individual tastes. Adding plants or natural elements can bring a touch of freshness and enhance the overall ambiance.

Maximizing Natural Light: Maximizing natural light helps create a bright and inviting atmosphere inside the caravan. Consider installing larger windows or skylights to bring in more sunlight. Lighter window treatments, such as sheer curtains or blinds, allow natural light to filter through while maintaining privacy.

Compact Appliances: Caravans often have smaller kitchens, so choosing compact and space-saving appliances is important. There are various options available, such as slimline refrigerators, combination microwave ovens, and compact cooktops. In order to save on space without compromising functionality the users can consider appliances with dual functions.

Customization and Personal Touches: Caravan users often personalize their space with unique touches. This can include DIY (do-it-yourself) projects, repurposing vintage

furniture, or incorporating sentimental items. Adding personal mementos or travel souvenirs can infuse the space with character and make it feel like home.

Ultimately, caravan interior design should prioritize functionality, space optimization, and personalization while considering the specific needs and preferences of the caravan users. It's an opportunity to create a cozy and personalized oasis on wheels.

3.4. Transition to Sedentism and Adaptation of Man to Nomadic Life

According to Misra (1986), the sedentary lifestyle that we are familiar with today is a relatively recent adaptation compared to the more mobile lifestyle of nomadic populations. Throughout human history, both nomadism and sedentariness have coexisted and influenced each other, undergoing qualitative changes. Nomadic populations have varying durations of camping, while settled communities have always encouraged mobility through activities such as exploration, migration, trade, pilgrimages, tourism, and in response to political or environmental changes (Misra, 1986).

According to Canbolat's discourse, "the most distinctive feature of the nomadic lifestyle is the state of being voluntary or temporary-obligatory. Volunteers (backpackers, campers, those traveling by caravan/vehicle) are in the category of volunteers, while there are temporary travelers. The segment who leads a forced mobile life consists of those who travel short or long distances and move from time to time due to occupation, education and similar reasons as a result of modern society. This group can be defined as individuals who are on the move for such short periods of time that they cannot establish a settled order" (Canbolat, 2015)

If we look at Maslow's (1943) theory regarding the needs of people to live; In the first step, the most basic needs of human beings are food, sleep, shelter, etc. are needs. Next step; is the need for security. Third step; social needs based on belonging and love; needs in the form of belonging to a place. In the fourth step, there is stated as the individual's need to achieve something, to be appreciated and respected. In the fifth and last step, there is the self-realization of the individual and the awareness of the individual's own capacity (Maslow, 1943) (Figure 3.19).

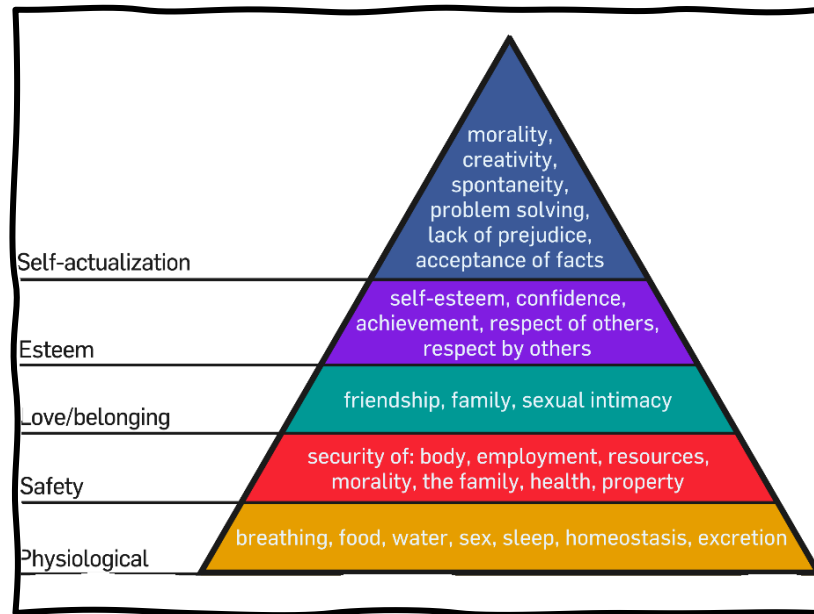


Figure 3. 19. Maslow's "Hierarchy of Needs" model

Over the years, people have resorted to various ways to meet their shelter needs. It has gone through many stages, from tree hollows to high-rise residences. However, the main factors that do not change have always been taken into account. While transitioning from a nomadic life to a settled life, it has been adapted to the region and a very large period of time has passed since its roots firmly adhered to that place. However, today, a search that pushes people from a settled life to a voluntary nomadic life has started to become popular. Perhaps the main factor sought is the need for freedom. In other words, it can be said that in addition to the factors in Maslow's need chart, staying constant in one place is a factor that restricts one's freedom.

Concepts such as housing and house are often used interchangeably within the scope of shelter (Üstün, 2000). However, as Parvaresh (2013) emphasized that, “housing has gained importance not only as a shelter, but also as a place where important activities take place in people's daily lives and where they raise their children. In fact, the house is the smallest unit of society, that is, the point where the family unites” (Parvaresh, 2013).

According to Levinson and Sparkes (2004), their research suggests that nomadism not only represented a way of life, but also provided a sense of order and structure. They argue that living a nomadic lifestyle offered a certain rhythm to life and a distinct identity. The sense of security and individual identity was closely tied to a social hierarchy where

roles were clearly defined. Levinson and Sparkes (2004) propose that nomadism served as more than just a way of life; it also imbued individuals with a sense of order, structure, and identity. By embracing a nomadic lifestyle, individuals found a unique rhythm to life and a strong sense of individual and social identity. The security and individual identity derived from nomadism were intricately linked to a well-defined social hierarchy.

Moreover, caravan users display distinct patterns in their usage periods, characterized by periods of intense activity followed by intervals of rest and recuperation. These users engage in bursts of travel and exploration, punctuated by moments of relaxation and reflection. The cyclical nature of their usage reflects a balance between movement and stability, as they navigate between the excitement of new experiences and the comfort of familiar surroundings. This rhythmic approach to caravan usage highlights the dynamic and adaptive nature of their lifestyle.

In this research, the answers of people who used the caravan for long and short periods were used, based on people who used the caravan as their home and those who used it for camping. This research study encompassed an examination of responses from individuals who utilized caravans for varying durations, distinguishing between those who employed caravans as permanent residences and those who utilized them for recreational camping purposes. The study specifically delved into the perspectives and experiences of individuals who engaged in long-term caravan living as well as those who opted for shorter stays. By capturing insights from both groups, the research aimed to explore the diverse motivations, challenges, and benefits associated with caravan usage across different usage contexts. This comprehensive approach allowed for a nuanced understanding of the multifaceted nature of caravan living and camping practices.

Furthermore, the research also investigated the impact of demographic factors on caravan usage periods, considering variables such as age, gender, and education level. By analyzing how these demographic characteristics influenced individuals' choices regarding the duration of caravan usage, the study sought to uncover potential correlations between specific demographic profiles and preferred usage patterns. Understanding the role of demographic information in shaping caravan usage periods can provide valuable insights into the diverse needs, preferences, and behaviors of individuals engaging in caravan living and camping activities.

In conclusion of this chapter (Table 3.1), mobile spaces like caravans and tiny houses offer individuals flexibility and personalized living environments. The evolution of mobile living, from iconic trains to modern motorhomes, reflects a balance between mobility and stability. Interior design trends in caravan living focus on functionality, personalization, and space optimization. The psychology of space perception underscores how individuals shape their identity within mobile spaces over time. Also, in this part of the study explains that the coexistence of nomadic and sedentary lifestyles throughout history highlights the dynamic relationship between movement and settlement in human habitation. Overall, mobile living provides individuals with the opportunity to create personalized and functional living spaces that cater to their unique needs and preferences.

Table 3.1. Table of the chapter

LOCATION-INDEPENDENT MOBILE SPACES AND CULTURE	
Caravan	- History of caravan
Caravan Typology	- Class B Motorhomes - Tent Trailer Caravans - Trailer Caravans - Rising Roof Caravans - Crawler caravans - Five-wheel Caravans - Class A Motorhomes - Class C Motorhomes - Mini Caravans - Folding Caravans - Bus-Caravans
Caravan Owner's Perception of Space Identity	- Short or long-term experiences - Personalization and Ownership - Familiarity and Comfort - Memories and Experiences - Sense of Freedom and Independence - Community and Social Connections - Adaptability and Flexibility

	- Emotional Investment
User Interaction in Caravan Spaces in Terms of Interior Design	- Space Optimization - Light and Bright Colors - Clever Storage Solutions - Compact and Functional Furniture - Reflecting Personal Style - Maximizing Natural Light - Compact Appliances - Customization and Personal Touches
Transition to Sedentism and Adaptation of Man to Nomadic Life	- Nomadic lifestyle - Maslow's theory

4. USER – SPACE INTERACTION IN CARAVANS

4.1. Semantic Dimension

The semantic dimension emerges as a result of the relationship between the symbolic or semantic situation experienced by the person and the form of the space (Jung, 1991; Montalban, 1992; Turgay, 2009). The sensory, symbolic and impression-based thought system, which is obtained by the perception of the data of the elements that make up the space, constitutes the semantic dimension. The semantic dimension, which is highly variable depending on the structure of the concept of "perception", is also highly personal. In other words, the meaning that the designer attributes to the space is essentially her/his past experiences and knowledge.

In the understanding of the semantic dimension, consciously or under the influence of the subconscious, the designer who designs the space reveals the data with the results of his experiences and thus designs. These experiences are based on a variety of environmental and personal experiences. According to Jung (1991); Associating the forms and meanings in the mind created by the experiences is part of the archetypal approach for that person. Archetype: It means the importance of an ancient memory, memory or created in memory and the connection of imagination and meaning.

In a nominal sense, the term "archetype" is associated with myth, esoteric teachings, and fairytales. However, when attempting to define the psychological nature of an archetype, the concept becomes more intricate and complex (Jung, 1991). The term archetype is explained by Jung (1991) as ancestral designs that make up the collective unconscious. In other words, it can be said that it is the image that creates a "mind picture" of a situation or concept in one's mind. At this point, it is possible to say that culture is the most influential factor in the archetype. Because the mind picture of a person is a phenomenon that can be shaped according to the culture. For this reason, the semantic dimensions of the caravan lifestyle are intertwined with the culture of that society. In this respect, caravan lifestyles are quite common in the Aegean and Mediterranean in Turkey.

The semantic dimension of the interaction of a design with the user can be explained with the following words of Varol (2014): "When designing, form is used to express the meaning. Form is also necessary for the living and management of the function. In other

words, it can be said that a semantic and functional concept will turn into a formal concept at some point. In some cases, the formal infrastructure can precede the semantic infrastructure and conceptual studies can be done in search of a form. Although they are usually shaped in parallel, it is sometimes possible to think of the form separately from the meaning in the field of design. That is, the form may not make any sense at first. an association, that is, a connection point towards the form, can push the designer to be inspired by himself, and the concept that directs the meaning can thus be the form" (Varol, 2014). With this discourse, a mobile space designed by the designer is interpreted according to its function, and an independent space such as a caravan can be designed and used as a home function.

The designer who designs the space can think with signs to conceptualize the meanings as a result of the archetypes that appear in her/his mind with her/his own experiences. Archetypal expressions, which are usually formed in the mind of people from verbal expressions, are mental pictures and the interior architect expresses what is said in an abstract way. In this way, it is ensured that the communication that is not sufficient verbally is supported.

According to Turgay (2009), space-user interaction can be explained with "schemas" formed by the factors that shape the concept of semantic dimension; "The "schemas" used in the analysis of the semantic dimension of the space are stored subconsciously by grouping them with other "schemas" close to them, depending on the past experiences of the person. The image created regarding the space is formed by going beyond the idea that the whole consisting of various physical components is conceptualized as an object-level schema in the mind. It depends on other factors and variables other than the conceptual world, past experiences, cultural characteristics, and physical dimensions of the space" (Turgay, 2009).

4.2. Physical Dimension

Space should not be considered separately from the people who use it, because it is a concept that gains meaning and can transform through interaction with its user, thus existing with people. With its physical dimension, space is as much related to the user's senses as it is to his feelings. As Yıldırım Erniş stated; "The space surrounding people and

the elements that make up the space determine the walking distance, temperature, what can be seen from what angle, what can be heard, and with whom people can communicate. The place they live in affects people's mood, their approach to actions and people. Therefore, people's expectations from space are quite high" (Yıldırım Erniş, 2012). It should be considered that how the user feels in that place and how he can meet his needs is very important, and its design affects the perception of the space in the user. "At a higher level, there is a need for a space where they feel good while performing the actions, at which point it becomes clear that the space is not just a volume that meets physical needs, but also the need to consider the perception of space and the different definitions of space" (Lawson, 2001).

"The physical environment that we construct is as much a social phenomenon as it is a physical one."

Harold Proshansky

"Architecture is the art of how to waste space."

Philip Johnson, New York Times

The physical dimension of the space is actually intertwined with the user's perception of that space. In other words, as Rapoport stated, the most basic factor whether the user meets the life and needs of that place is how he perceives that place. How that space is perceived and evaluated is directly related to how the user feels in that environment, how he realizes the qualities of that space, and the decision-making systematic he creates in his mind as a result (Rapoport, 1987).

It is necessary to consider the perceptual factors such as color, form and texture, which are necessary for the physical dimension of the space to be considered. As Aydın (1986) graphed in his study (Figure 4.1), it can be said that dimensional, auditory, visual and thermal perception are directly influenced by these factors.

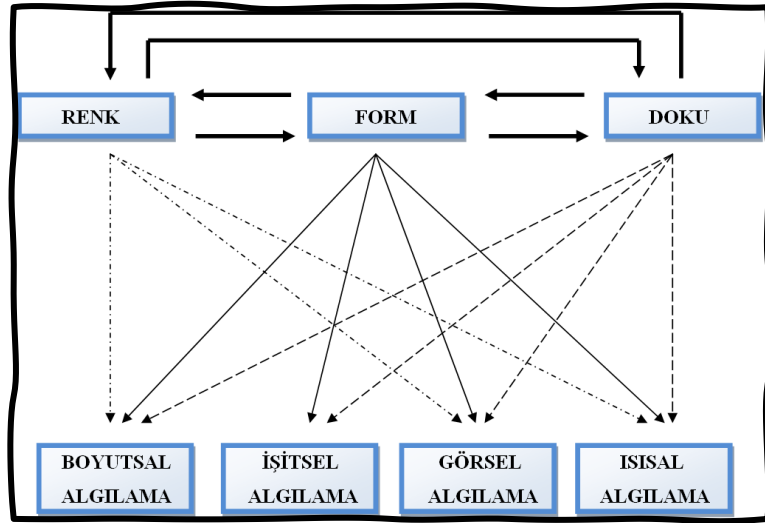


Figure 4. 1. Perceptual dimensions of the physical components of the space (Aydınlı, 1986).

In this study, semantic, physical and psychosocial dimensions were added based on Aydınlı's table (Figure 4.2).

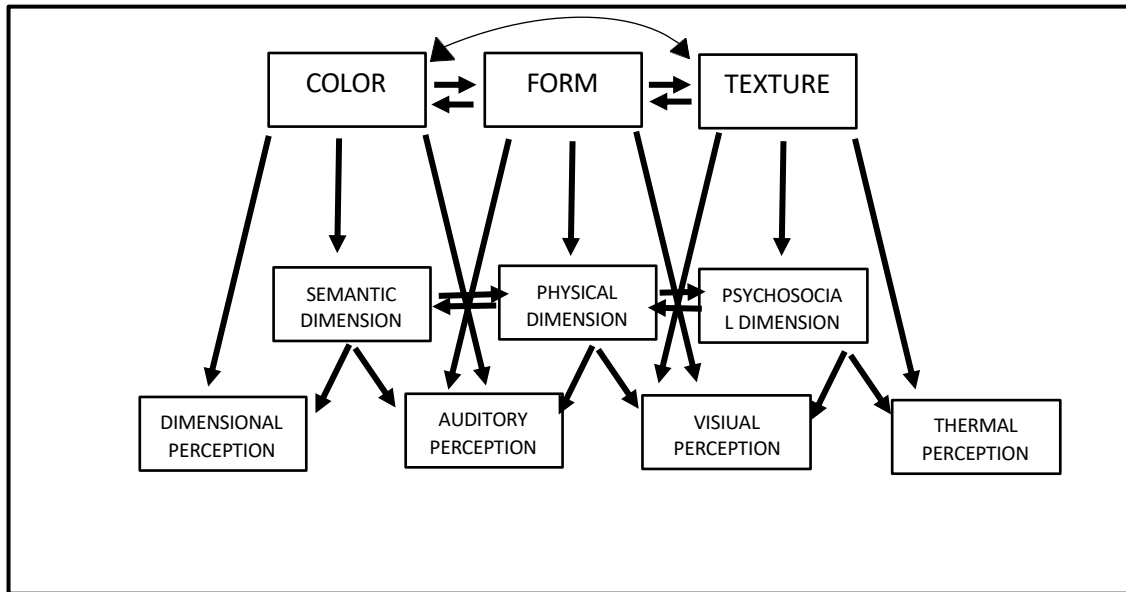


Figure 4. 2. The semantic, physical, and psychosocial dimensions added version

4.3. Psychosocial Dimension

The term "psychosocial" refers to the influence of social factors on an individual's mind and behavior, as well as the interrelation between behavioral and social factors (Oxford English Dictionary, 2012). Research by Dilani (2001) and Ulrich (2002) highlights the importance of both psychological and social components in shaping human health outcomes. Understanding the perceptual and behavioral processes of individuals using a space is crucial for identifying the psychosocial parameters within that space and meeting their needs effectively. Dilani further emphasizes that psychosocially supportive design plays a vital role in initiating a mental process that can alleviate anxiety and bring about positive psychological changes (Dilani, 2001). Therefore, in this study, the design of the caravan is a crucial factor in creating a sense of home and fostering positive experiences for its occupants.

According to Cüceloğlu (1999), perception can be defined as the process of organizing and interpreting sensory data in order to give meaning to objects and events in the environment. This process involves the formation of a perception or sense of the phenomenon, which is the product of utilizing sensory information. Cüceloğlu (1999) further explains that this utilization of sensory information is referred to as sensing (Cüceloğlu, 1999, p.118).

Psychosocial user needs were determined in Yalçın's master thesis (1998) and according to that, there are four factors:

“Confidentiality needs: People feel the need to hide some of their needs and behaviors in the space, either visually or audibly. The venue must comply with personal and social privacy.

Behavioral requirements: Humans can perform their behaviors in space within certain distances. He realizes his relations with society and the public environment at certain distances.

Aesthetic needs: The space's ability to meet aesthetic needs primarily depends on the ratio. Form, color, and textural features are also necessary for aesthetics.

Social needs: Humans engage in social behaviors in space. The space must meet the needs of realizing social relations. The physical and psychosocial needs of people, their

activities in the space, and their relations with the elements and components are interconnected. This bond takes place in an organic and dynamic balance” (Yalçın, 1998).

According to this statement about human’s psychosocial needs in an environment, a ground-free environment such as caravan as a home should consist of all of these approaches. Especially, it is very important to design a caravan considering human needs, especially since its usage area is limited. In order to design the interior in accordance with the needs of the user, interior architects and designers working on this subject are increasing day by day. There are many designs designed for use in narrow spaces and they continue to evolve.

Savaş (2011) stated in his study that, “In order to ensure the flexibility of the volume in limited spaces, the structural design should consist of fragmented components, that is, it should have a modular understanding. The use of flexible structures will enable the user to participate effectively in the design process and to adapt easily to innovations as a result of technological developments” (Savaş, 2011). For example, the Markies caravan creates two areas covered with transparent and opaque material, providing both protection against weather conditions and privacy (Figure 4.3).



Figure 4. 3. Markies, Eduard Böhthlingk, Hollanda, 1986

Another example could be "Villa Hermina" in the Czech Republic, made by the architectural firm "HSH Architekti", surrounds the space and is one of the examples of spatial furniture in a small volume (Figure 4.4). A sleeping unit was placed on the floor with a difference in elevation and the levels were connected to each other with the help of a ramp. The small library is hidden under the bed area, so that the storage and sleeping unit are used together. The ramp, which is connected to the lower level, divides the space into two and

becomes a seating unit in the space by creating spatial furniture. Thanks to the spatial furniture design in small volumes, the volumes can be brought to a minimum, in a way that combines many functions. The green color used, on the other hand, highlights the linear lines of the space and emphasizes the functions it contains (Richardson, 2011).



Figure 4. 4. Villa Hermina. Nano House. 2009. Czech Republic.

After the difficulties caused by the narrowness of the space, many solutions have been created. For example, it is a very important factor that the bathtub, which is one of the elements that is least considered to be reduced in size, is redesigned by considering this difficulty and has a design that can be reduced (Figure 4.5).



Figure 4. 5. Foldable and portable bathtub by CarinaDeuschl. (URL6)

5. FIELD STUDY

5.1. Description of the Problem

This study was conducted to understand how people can maintain spatial belonging to live in a trailer. Moreover, can people who are living in caravans feel spatial belonging? If so, how can they feel it? Furthermore, in what way do these people constitute the semantic, physical, and psychosocial feelings in the caravan where is their home?

In addition, it is a study conducted to investigate what features people living in caravans prefer in order to consider these spaces as houses. At the same time, in this thesis, the life preferences of people living in caravans have been examined.

This study seeks to address existing research gaps by examining the preferences of individuals living in caravans across semantic, physical, and psychosocial dimensions.

The specific objectives of this study include:

- Evaluation of the semantic characteristics of caravans on the sense of spatial belonging of the people living in these spaces.
- Evaluation of the effect of physical characteristics of caravans on the sense of spatial belonging of people living in these spaces.
- Evaluation of the psychosocial characteristics of caravans on the sense of spatial belonging of the people living in these spaces.
- Identification of the most important spatial features that affect caravan preferences.
- Evaluation of the impact of the benefits of mobile living on the level of advice of people living in caravans to recommend this lifestyle to other people.
- Assessing the impact of the returns of mobile living, people living in caravans, on this space rating level.

5.1.1. Research questions

1. Which gender, age group and education level prefer caravan life more?
2. What are the spatial characteristics preferred by people living in caravans?
3. What is the individuals' satisfaction level of feeling safe and comfortable in their caravans?

4. What is the relationship between user-space interaction in the caravan as semantic, physical, and psychosocial dimensions and sense of privacy?
5. What is the reason why caravan users prefer caravan life?

5.1.2. Hypotheses

To achieve the study objectives, the following hypotheses will be examined and tested:

- H1: Demographic information effect the caravan life.
- H2: People living in a caravans feel a sense of belonging to their caravan.
- H3: People living in caravans prefer multi-functional furniture.
- H4: People who prefer caravan life are people who want minimalism in their lives.
- H5: The biggest reason for choosing caravan life is wanting to be away from other people.

5.2. Methodology of Study

The method of this thesis started with determining the caravan types that were examined and decided according to the frequency of use. The next step is to choose the people who live in the trailer and share their lives with their followers on Instagram, and then contact them. Also, in order to conduct the field study, Denizli and Ankara Expo Center were invited, and brochures were distributed in these nationwide caravan fairs (Figure 30). Thanks to these fairs there conducted some datums and these datums were really effective because they were real caravan users or caravan producers at the same time. That is why the field study of this these answers were really successful and useful. Afterwards, the conclusion part of the research was created with the program called SPSS with the questionnaire questions prepared specifically for this thesis.

Yerden Bağımsız Mekanlarda “Kullanıcı-Mekan” Etkileşimi

Sizi, mekandan bağımsız yaşamın heyecan verici dünyasına davet ediyoruz! İç Mimarlık ve Çevre Tasarımı alanındaki bu doktora tezi, karavan tasarımlarının derinlemesine incelenmesine odaklanarak, mekandan bağımsız mekanlarda kullanıcı-yer etkileşimini keşfetmeyi amaçlamaktadır.

Lütfen ankete katılmak için aşağıdaki kare kodu telefonunuzun fotoğraf uygulamasıyla okutunuz. Tasarıma benzersiz bir bakış açısı katmamıza yardımcı olacaktır.

Mekan tasarımının sınırlarını zorlayacak!



Mekan tasarımlarına değerli bir katkı sağlayacak!



Figure 5. 1. The brochure handed to the people in the fair (Özgüner Atak, 2023)

In order to conduct survey and collect photographs and the detailed information about caravans and the opinions from the caravan users, Caravan Fair, which was organized by Denizli Büyükşehir Belediyesi, was travelled and given the brochures to people in Denizli, on November 26, 2023 (Figure 5.2).



Figure 5. 2. Figure 5. 2. The caravan fair in Denizli/Turkey (Özgüner Atak, 2023)

In order to conduct survey and collect photographs and the detailed information about caravans and the opinions from the caravan users, Caravan Fair, which was organized by Ankara Büyükşehir Belediyesi, was travelled and given the brochures to people in Ankara, on December 9, 2023 (Figure 5.3).



Figure 5. 3. The caravan fair in Ankara/Turkey (Özgüner Atak, 2023)

5.2.1. Conceptual framework of the study

The research framework of this study aims to provide a comprehensive understanding of the factors that influence individuals' preference for living in caravans. The study utilizes a questionnaire to measure the impact of these factors, focusing on the semantic, physical, and psychosocial dimensions of caravan living (Figure 5.4).

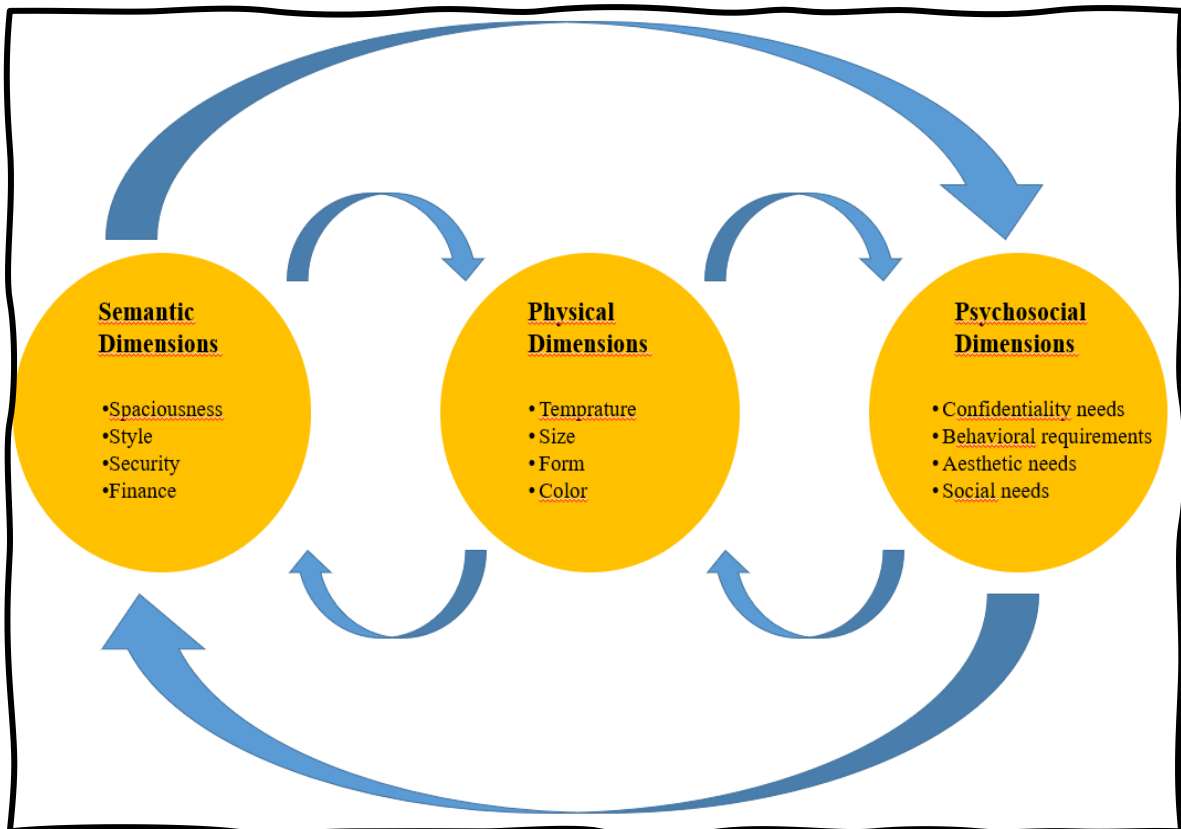


Figure 5. 4. Conceptual framework of the study

The research process involves identifying the caravans to be studied, determining the influential factors, and conducting an analysis. The ultimate goal of this study is to discover the dimensions that have the most influence on individuals' preference for a caravan lifestyle (Table 5.1).

Table 5. 1. Dimensions of caravan lifestyle

Semantic Dimensions	Physical Dimensions	Psychosocial Dimensions
spaciousness	temperature	confidentiality needs
style	size	behavioral requirements
security	form	aesthetic needs
finance	color	social needs

The workflow is starting with the identifying the caravans to be inspected. After identifying process there will be studied determining the factors, in terms of semantic, physical, or psychosocial dimensions, influence people live in a caravan. At the end of this study, there will start the analysis process. The stages of the study are shown in Table 5.2. Consequently, as the main purpose of this study, there will be a discovery about what the influential dimensions on preferring a caravan as a lifestyle.

Table 5. 2. Stages and instruments of the study.

Stages of the Study	Instruments
1. Identification of caravans to be inspected.	Identification Sheet
2. Determining the dimensions; • Semantic dimension, • Physical dimension, • Psychosocial dimension.	Questionnaire
3. Analysis of the influential factors on preferring a caravan as a lifestyle.	Statistical Analysis by SPSS

5.2.2. Participants of the study

The participants in this study will consist of caravan users. The intercepted convenience sampling method will be employed to randomly select participants from Instagram pages and through email communication. These participants will be approached and asked if they are interested in completing a questionnaire, with participation being entirely voluntary. It is anticipated that there will be a total of two hundred users as participants in this study. As well as the caravan fairs in different cities are going to be visited, handed out brochures made on this subject, and conducted surveys in these places. The field study will take place from November to December 2023, because the fairs will be in these periods. Participants will be selected from Turkey, because there are lots of "caravan pages" and groups on the internet, such as Instagram or Facebook pages, and can be anticipated there will be lots of datasets for this research.

5.2.3. Instruments of the study

This study utilized two instruments to investigate the reasons why individuals prefer living in a caravan and which dimension (semantic, physical, or psychosocial) has the most influence on this preference. The instruments used were an identification sheet and a questionnaire. The identification sheet was used to gather information about the activities individuals engage in while living in a caravan, their age group, and the duration of their stays. The questionnaire consisted of five parts: demographic variables, semantic dimension characteristics, physical dimension characteristics, and psychosocial dimension characteristics of the caravan they reside in. For the statistical analysis, SPSS was employed. The chosen caravan and its residents were analyzed in terms of the semantic, physical, and psychosocial dimensions of the interior environment.

5.2.4. Organizing the study

A fieldwork approach was used in this research study for several reasons. The subjects of the study are teams that have lived in caravans for different periods of time and designed them. The way of observing will be done through the photos and videos that are constantly shared on Instagram because a different way of observing is not possible.

6. RESULTS

6.1. Demographic Characteristics

The survey consists of 218 participants. Frequency tables and pie charts were obtained for the demographic characteristics of the participants. The frequency table for the gender, age, and education level of the participants is given in Table 6.1 (See Appendix 3).

Table 6. 1. Demographic characteristics of the participants of the study

Demographic Characteristics	Category	Frequency	Percent
Gender	Female	81	37,2
	Male	137	62,8
	Total	218	100,0
Age	Under 25	19	8,7
	25-50	160	73,4
	Over 50	39	17,9
	Total	218	100,0
Education level	High School	21	9,6
	Bachelor	136	62,4
	Post Graduate	61	28,0
	Total	218	100,0

Looking at Table 6.1, it is seen that 37.2% of the participants are women and 62.8% are men. it can be seen that 8.7% of the participants are under 25 years old, 73.4% are between 25 and 50 years old, and 17.9% are over 50 years old. it can be seen that 62.4% of the participants are university graduates, 28% are master's or doctoral graduates, and 9.6% are high school graduates.

Looking at Figure 6.1, it can be seen that women are in the minority among the participants. Therefore, in this study the H1 is verified. In Figure 6.2, it can be seen that the overwhelming majority of participants are between the ages of 25-50. Therefore, also this result is verified the H1 in this study. In Figure 6.3, it can be seen that more than half of the

participants have a bachelor's degree. Finally, this outcome as well demonstrates that H1 is proved in this research.

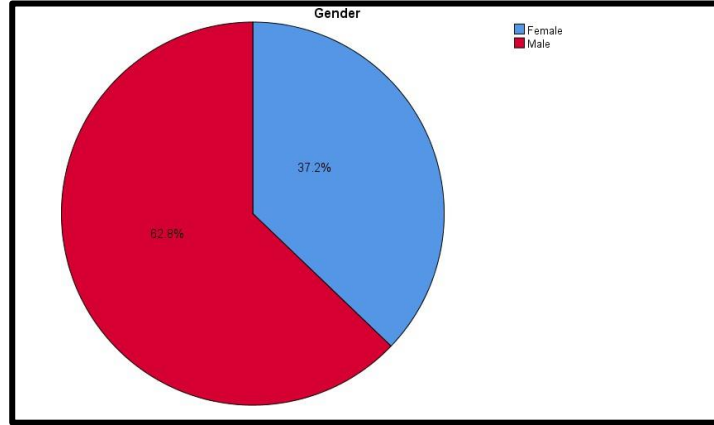


Figure 6. 1. The pie chart of participants' gender

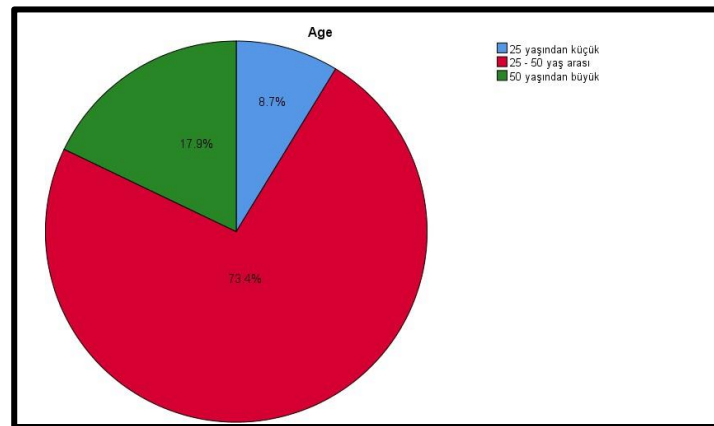


Figure 6. 2. The pie chart of participants' age

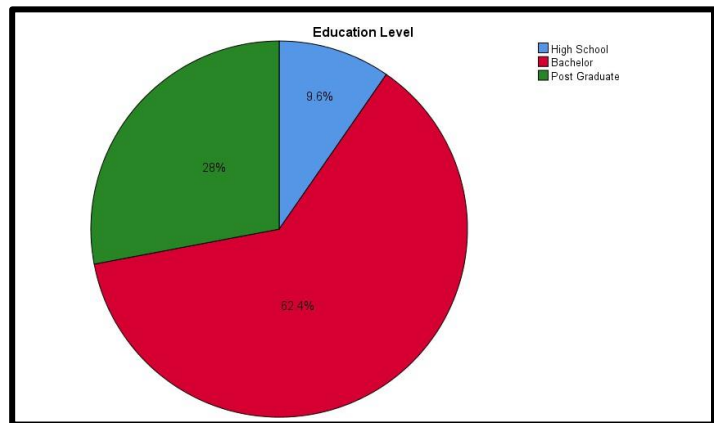


Figure 6. 3. The pie chart of participants' education level

6.2. Comparison of Importance Given by the Caravan Users and Suitability of Caravan Space in Terms of Place-Attachment Level

6.2.1. Given importance and suitability of the caravan users in terms of space characteristics

Caravan users rated the importance and suitability of space characteristics in terms of flexibility, functionality, and changeability for their caravans. Summary statistics for these levels are given in Table 6.2 (see Appendix 6).

Table 6. 2. Given Importance and Suitability of the Caravan Users in terms of Space Characteristics

Space Characteristics	Importance				Suitability			
	Mean	Std. Dev.	95% CI		Mean	Std. Dev.	95% CI	
Flexibility	2,57	0,064	2,447	2,699	2,216	0,066	2,087	2,344
Functionality	2,115	0,065	1,987	2,243	2,211	0,070	2,072	2,350
Changeability	2,807	0,075	2,659	2,956	2,844	0,073	2,699	2,883

When we look at Table 6.2, it is seen that the importance of flexibility is higher than the suitability of flexibility in their caravans as an average score; that shows that in the participants' minds, flexibility in the caravan is so much important and they have not that amount of flexibility in their caravans.

In terms of functionality, and changeability, it was observed that suitability received higher scores on average than importance. Consequently, H3 is verified in this study because multi-functional furniture success is much higher than the importance. Thus, H2 is also verified. Because it turns out that interchangeability and multi-functionality are very valuable for caravan owners in terms of interior design. In this respect, because their suitability is higher than their importance shows that caravan interior design makes the caravan more like home. However, a clear interpretation cannot be made without testing whether the differences seen in the average are statistically significant or not.

6.2.2. Paired samples t-tests for each space characteristics in terms of importance vs suitability

A Paired Sample t-test was conducted to test whether there were differences in suitability and importance on average in terms of flexibility, functionality, and changeability (see Appendix 6).

Table 6. 3. Paired Samples t-Tests for each Dimension in Terms of Importance vs Suitability

Paired Samples Test								
Space Characteristics	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		t	df	Sig. (2-tailed)
				Lower	Upper			
Flexibility	,35780	1,02073	,06913	,22154	,49406	5,176	217	,00F0
Functionality	-,09633	,98602	,06678	-,22795	,03529	-1,442	217	,151
Changeability	-,03670	,99238	,06721	-,16917	,09578	-,546	217	,586

Looking at Table 6.3, it can be seen that a paired sample t-test was performed to test whether the importance and success of flexibility differed in average scores (Figure 6.4). Since the probability value of the test statistic is 0.000, it can be said that the importance and suitability in scoring for flexibility differ on average, however, it was observed that the importance and suitability scores for functionality and changeability were not statistically different (Figure 6.5-6.6). This result demonstrates that the H3 is verified in this study, because flexibility is changing the people's preferences of interior design and multi-functional furniture provide more flexibility in the caravan.

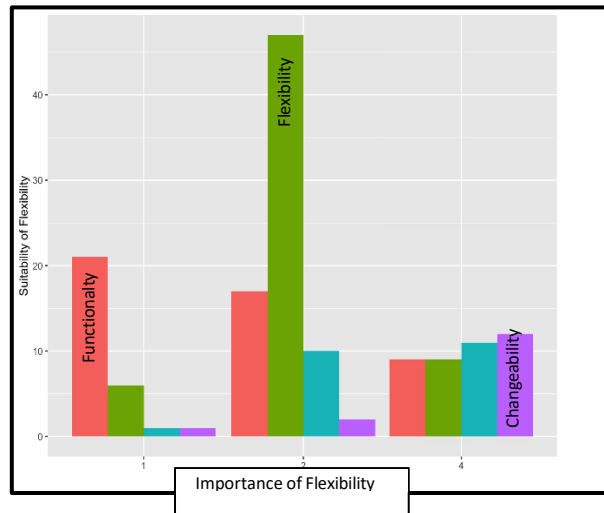


Figure 6. 4. The suitability vs. the importance of flexibility

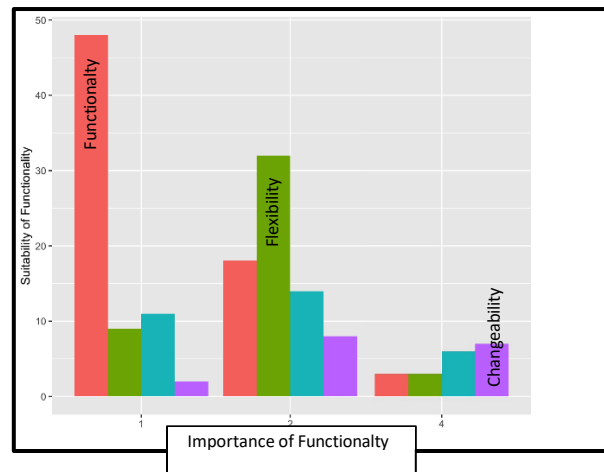


Figure 6. 5. The suitability vs. the importance of functionality

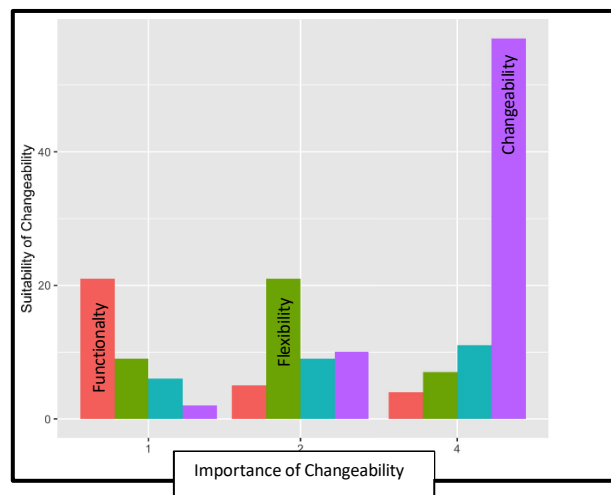


Figure 6. 6. The suitability vs. the importance of changability

6.3. Priority of Spaces in Terms of Place-Attachment Level

Summary statistics were obtained for each dimension included in the study. According to the data analysis the importance level of the psychological dimensions is demonstrated in Table 6.4 (see Appendix F).

Table 6. 4. Priority of Spaces in Terms of Place-Attachment Level

Psychological Dimensions	Importance			
	Mean	Std. Dev.	95% CI	
Semantic Dimension	24,647	0,317	24,021	25,272
Physical Dimension	49,289	0,359	48,581	49,997
Psychosocial Dimension	23,05	0,224	22,619	23,501

Looking at the Table 6.4, the average of the semantic dimension is 24.65. With 95% confidence, the average score of the semantic dimension is between 24.02 and 23.50. Also, the scatter plot for semantic dimension shown the result is in the middle generally (Figure 6.7).

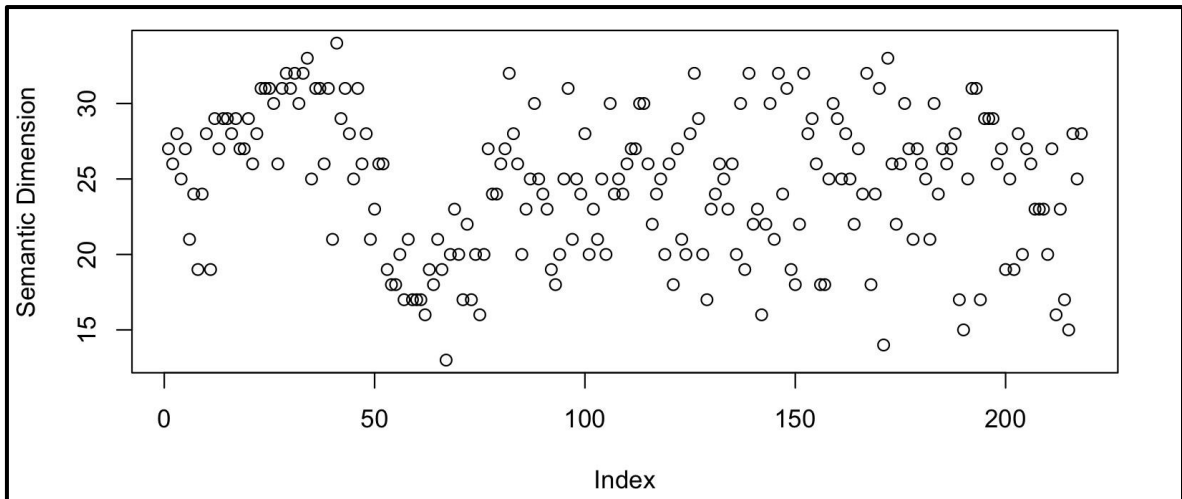


Figure 6. 7. Scatter Plot for Semantic Dimension

It is seen that the average score for physical dimension is 49.29 (Table 6.4). Additionally, with 95% confidence, the average physical dimension is between 48.68 and 49.997. Therefore, it can be understood that physical dimension is the most important to the participant in general (Figure 6.8).

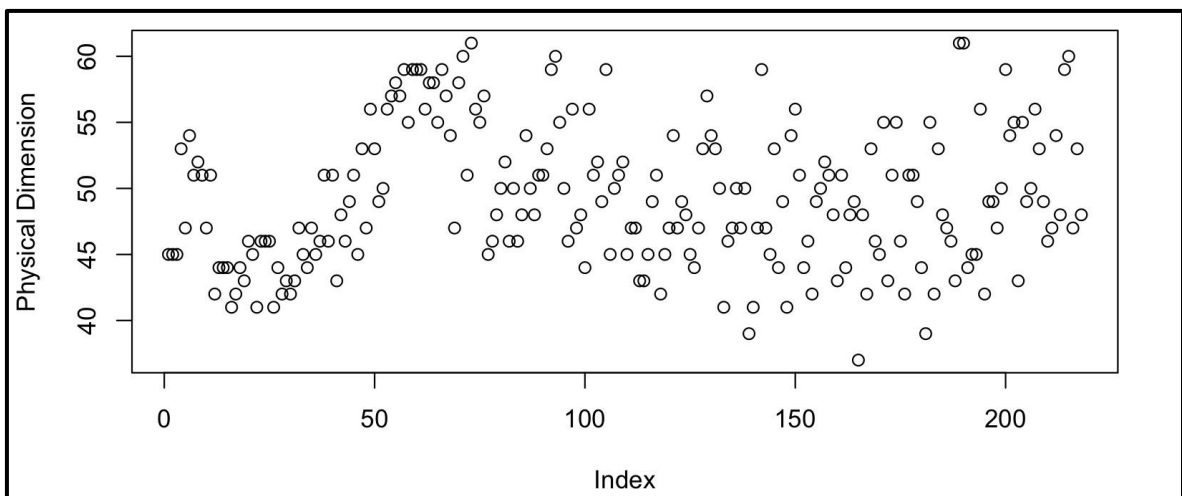


Figure 6. 8. Scatter Plot for Physical Dimension

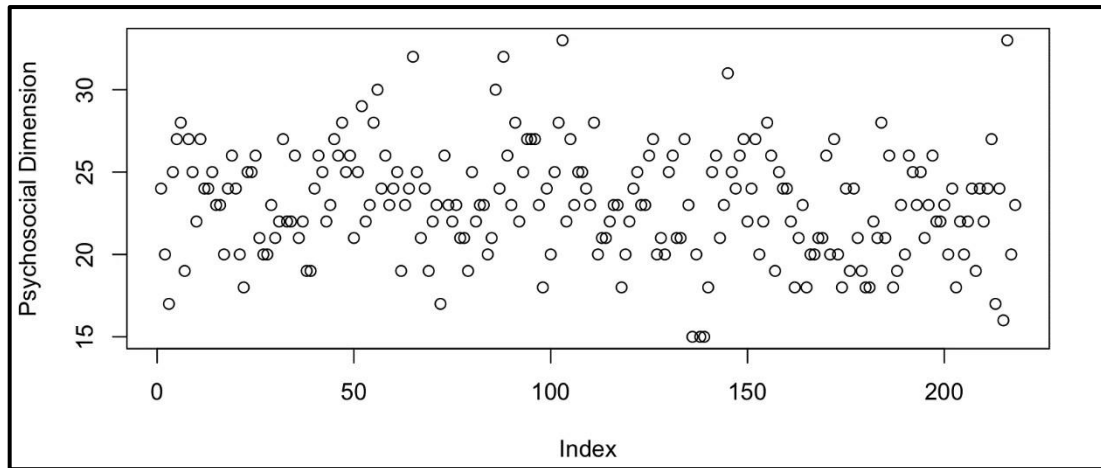


Figure 6. 9. Scatter Plot for Psychosocial Dimension

Finally, according to Table 6.4, the mean of the psychosocial dimension is 23.05 and the average of this dimension is between 22.62-23.50 with 95% confidence. Also, as in Figure 6.9, it can be said that the psychosocial dimension is the least important psychological dimension for the participants in this study.

6.4. Association of Semantic Dimension, Physical Dimension and Psycho-social Dimension with Caravan Users Ratings

6.4.1. ANOVA – place rating Level with semantic dimension

The change of semantic score according to the satisfaction level of the participants was examined with ANOVA (Analysis of Variance), and the results are given in Table 6.5 (Appendix 4).

Table 6. 5. ANOVA – Place Rating Level with Semantic Dimension

	F Stat.	Prob.
Noise level	3,342	0,002
Wet areas	2,486	0,018
Air quality	7,704	0,000
Confidentiality level	29,743	0,000
Lighting level	7,050	0,000
Furniture	1,871	0,076
Privacy level	43,587	0,000
Area size	1,382	0,214

Looking at Table 6.5, it can be seen that the probability value as a result of the noise test is 0.000. For this reason, it can be said that the semantic dimension varies according to the level of satisfaction with noise. Similarly, when we look at the test results for the other place rating level characteristics in terms of the semantic dimensions, wet floors, air quality, privacy level, lighting level, furniture, and privacy level vary according to the satisfaction level. However, as a result of the test for area size, it is seen that the probability value is 0.214. For this reason, it can be said that the semantic dimension does not vary according to the area size in terms of satisfaction level.

In this respect, it can be said that caravan users' ratings are mostly adequate for the semantic dimension. Just the area size is not adequate for them and because it is in terms of semantic dimension it can be said that the perception of the participants is different which is why H3 is valid because according to the caravan users, feeling the caravan like a home depends on the area size of the caravan.

6.4.2. ANOVA test for independence – place rating level with physical dimension

Table 6. 6. ANOVA test for Independence – Place Rating Level with Physical Dimension

	F Stat.	Prob.
Noise level	3,831	0,000
Wet areas	2,518	0,017
Air quality	5,193	0,000
Confidentiality level	33,867	0,000
Lighting level	6,567	0,000
Furniture	2,366	0,024
Privacy level	28,775	0,000
Area size	1,500	0,169

Based on Table 6.6, it is evident that, similar to previous tests, the rating levels of all place characteristics vary based on the physical dimension. However, only the area size does not vary according to the physical dimension. Therefore, it can be concluded that the ratings of caravan users are generally suitable for the semantic dimension. The only exception is the area size, which is not adequate for them. This difference in perception

suggests that the participants' understanding of feeling the caravan like a home depends on the size of the area, supporting the validity of H3 (Appendix 4).

6.4.3. ANOVA test for independence – place rating level with psycho-social dimension

Table 6. 7. ANOVA test for Independence – Place Rating Level with Psycho-social Dimension

	F Stat.	Prob.
Noise level	10,154	0,000
Wet areas	1,386	0,213
Air quality	0,366	0,911
Confidentiality level	1,954	0,063
Lighting level	8,490	0,000
Furniture	0,469	0,857
Privacy level	1,925	0,067
Area size	4,035	0,000

When the psychosocial dimension with the place rating characteristics is looked at in terms of place rating level, it can be seen that the probability value as a result of the noise test is 0.000. For this reason, it can be said that the psychosocial score varies according to the level of satisfaction with noise. Similarly, the privacy level, lighting level, confidentiality level, and area size vary according to the psychosocial dimension in terms of the place rating level. On the contrary, wet floor, air quality and furniture does not vary according to the psychosocial dimension in terms of the place rating level (Appendix 4).

Moreover, the analysis of the psychosocial dimension and its relationship with place rating characteristics supports the validity of hypothesis H3, which states that area size is very important for people living in a caravan to feel it as their home. The analysis shows that the area size varies according to the psychosocial dimension in terms of the place rating level. This suggests that the participants' understanding of feeling the caravan like a home depends on the size of the area.

Therefore, the findings of the analysis provide a link between the importance of area size for the psychosocial experience of a place and the hypothesis that area size is crucial for people living in a caravan to feel it as their home.

6.5. The Relationship Between the Semantic Dimension, Physical Dimension and Psycho-social Dimension with Caravan User Ratings

6.5.1. Multiple regression of independent variables against semantic dimensions

Table 6. 8. Multiple Regression of Independent Variables against Semantic Dimension

Semantic Dimension	Coef.	t-stat	Prob.
Intercept	55,061	28,177	0,000
Age 25-50	-0,186	-0,276	0,783
Over 50	0,367	0,482	0,630
Male	0,754	2,016	0,045
Bachelor	1,210	1,866	0,063
Postgraduate	0,903	1,277	0,203
Physical	-0,750	21,576	0,000
Psychosocial	0,224	3,948	0,000

Looking at Table 6.8, we see that the intercept and coefficients of physical and coefficients of psychosocial variables are significant at all traditional significance levels. *Ceteris paribus* (if all conditions are equal) if the physical dimension increases by 1 point, the semantic dimension decreases by 0.75 points on average, and this decrease is statistically significant. Also, it means that semantic and physical dimensions are inversely proportional. On the other hand, if the psychosocial dimension increases by 1 point, *ceteris paribus* (if all conditions are equal) the semantic dimension increases by 0.224 points. That means again that, the psychosocial and semantic dimensions are inversely proportional as well. Consequently, the physical and psychosocial dimensions are directly proportional in this study (see Appendix 7).

6.5.2. Multiple regression of independent variables against physical dimensions

Table 6. 9. Multiple Regression of Independent Variables against Physical Dimension

Physical Dimension	Coef.	t-stat	Prob.
Intercept	63,083	34,201	0,000
Age 25-50	0,042	0,056	0,956
Over 50	0,327	0,389	0,698
Male	0,933	2,260	0,025
Bachelor	0,934	1,297	0,196
Postgraduate	0,588	0,751	0,454
Semantic	0,322	5,276	0,000
Psychosocial	-0,919	-21,576	0,000

Looking at Table 6.9, we can see that the coefficient of male, semantic, and psychosocial variables, along with the constant term, is significant at the 5% significance level. *Ceteris paribus* (if all conditions are equal) men's physical score is 0.933 points higher than others. *Ceteris paribus* (if all conditions are equal) if the semantic score increases by 1 point, the physical score increases by 0.322 points on average. That means the semantic dimension and physical dimension are directly proportional. *Ceteris paribus* (if all conditions are equal) if the psychosocial score increases by 1 point, the physical score decreases by 0.919 points. That means the psychosocial dimension and physical dimension are inversely proportional (see Appendix 7).

6.5.3. Multiple regression of independent variables against psychosocial dimensions

Table 6. 10. Multiple Regression of Independent Variables against Psychosocial Dimension

Psychosocial Dimension	Coef.	t-stat	Prob.
Intercept	-4,05	-0,807	0,420
Age 25-50	0,890	1,124	0,262
Over 50	1,336	1,499	0,135
Male	-0,321	-0,723	0,470
Bachelor	0,983	1,283	0,201
Postgraduate	0,950	1,143	0,254
Semantic	0,309	3,948	0,000
Physical	0,364	5,276	0,000

Looking at Table 6.10, we can see that the coefficients of the semantic and physical variables are significant at all traditional significance levels. *Ceteris paribus* (if all conditions are equal) if the semantic score increases by 1 point, the psychosocial score increases by 0.309 points on average. *Ceteris paribus* (if all conditions are equal) if the physical score increases by 1 point, the psychosocial score increases by 0.364 points on average. Therefore, all of the dimensions are directly proportional in this multiple regression test (see Appendix 7).

6.6. The Relationship Between Individuals' Satisfaction Levels and Their Sense of Attachment to Their Caravans

The relationship between individuals' satisfaction levels and their sense of attachment to their caravans has been tested and the test results are given in Table 6.11 and there is no significant relationship between individuals' satisfaction levels and their sense of attachment to their caravans (see Appendix 5).

Table 6. 11. The Relationship Between Individuals' Satisfaction Levels and Their Sense of Attachment to Their Caravans

	Chi-Square	Prob.
Noise level	10, 928	0,535
Wet areas	18,433	0,103
Air quality	12,924	0,375
Confidentiality level	14,031	0,299
Lighting level	10,199	0,599
Furniture	16,308	0,178
Privacy level	11,880	0,455
Area size	15,549	0,213

6.7. The Relationship Between Demographic Information and Preference of Living in Caravans

It was tested whether the reasons why individuals prefer caravan living differ according to gender, age, and education level. The test results testing whether wanting to be active differ according to demographic characteristics are given in Table 6.12 and it can be seen that wanting to be active or not does not vary according to gender, age, or education level (see Appendix 5).

Table 6. 12. The Relationship Between Demographic Information and Preference of Living in Caravans

	Chi-Square	Prob.
Gender	0,207	0,902
Age	0,435	0,805
Education	0,668	0,716

6.8. The Relationship Between Demographic Information and Preference of Minimalism

The test results, which tested whether choosing minimalism varies according to demographic characteristics, are given in Table 6.13 and it can be seen that the preference for minimalism does not vary according to gender, age, or education level (see Appendix 4).

Table 6. 13. The Relationship Between Demographic Information and Preference of Minimalism

	Chi-Square	Prob.
Gender	1,348	0,246
Age	0,012	0,914
Education	1,116	0,291

6.9. The Relationship Between Satisfaction Level and Privacy Level in Caravans

The test results showing how individuals' satisfaction level to their privacy level in the caravan affects their semantic, physical, and psychosocial dimensions are given in Table 6.14 an as it can be seen that satisfaction level to the privacy level in the caravan significantly affects only the physical dimension (see Appendix 4).

Table 6. 14. The Relationship Between Satisfaction Level and Privacy Level in Caravans

Dimension	F Stat.	Prob.
Semantic Dimension	1,631	0,167
Physical Dimension	7,672	0,000
Psychosocial Dimension	1,896	0,112

7. CONCLUSION AND EVALUATION

In recent years, there has been a growing emphasis on flexible and practical building designs that prioritize natural living and individual well-being. Ground-independent spaces, such as caravans, offer freedom and a sense of belonging. The design of these spaces considers the needs of modern nomads and the importance of housing as a source of safety, ownership, and identity.

In conclusion of this study demonstrated that the psychosocial dimension of a space is crucial in creating a sense of well-being and satisfaction for the user. Understanding the perceptual and behavioral processes of individuals in a space is essential in determining the psychosocial parameters and meeting their needs. Factors such as confidentiality, behavioral requirements, aesthetic needs, and social needs play a significant role in designing a space that fosters positive psychological changes and a sense of home. Designing ground-independent spaces, such as caravans, to accommodate these psychosocial needs is important, especially considering the limited space available. Innovative design solutions, such as modular structures and spatial furniture, can help optimize the functionality and flexibility of these spaces. Overall, the design of the interior should prioritize the user's needs and create a harmonious balance between physical and psychosocial elements.

Moreover, the semantic dimension of a space is influenced by the individual's perception, experiences, and cultural background. The designer's interpretation of meaning and the use of archetypes play a significant role in shaping the semantic dimension of a space. The physical dimension of a space is closely related to the user's senses and feelings, and it affects their perception and interaction with the environment. Factors such as color, form, and texture contribute to the user's perception of the physical dimension of a space. Overall, both the semantic and physical dimensions are essential in creating a meaningful and functional space for the user.

In this analysis of user-space interaction, the concept of movement in architecture is explored, particularly in relation to nomadic lifestyles and the idea of instability. The word "movement" is defined in various ways, including displacement, migration, vitality, and the depiction of non-static stances. The Turkish word for "housing" also reflects both mobility and settled urban life. The philosopher Frederick Engels emphasizes that movement is

inherent to the existence of matter, with every atom participating in various forms of motion simultaneously. This highlights the interconnectedness of motion and matter. Overall, this analysis suggests that movement is a fundamental aspect of architecture and the built environment, influencing both physical structures and human experiences within them.

Consequently, this research highlights the significance of space and place in our lives, emphasizing the distinction between the tangible and intangible aspects of these concepts. The feeling of familiarity and belonging is crucial for individuals to feel safe and connected to their surroundings. The notion of "place" encompasses both spatial location and one's position in society and lifestyle. Our attachment to home and community has emotional and spatial elements that shape our social behavior and identity. The ownership, protection, and sense of belonging to a space contribute to the formation of sovereignty. The emergence of portable structures and mobile residences reflects the human need for freedom and a sense of belonging, allowing individuals to create independent spaces that provide comfort and a sense of place. The concept of freedom is closely linked to mobility and is often associated with tourism, representing liberation and autonomy. The use of caravans as homes or businesses allows people to fulfill their desire for freedom while still maintaining their daily activities. Overall, this research emphasizes the importance of space and place in shaping our experiences, identities, and sense of belonging.

Table 7. 1. Table of the chapter

Importance	Result
Psychosocial dimension of a space	Sense of well-being and satisfaction
Perceptual and behavioral processes	Psychosocial parameters and meeting their needs
Confidentiality, behavioral requirements, aesthetic needs, and social needs	Fosters positive psychological changes and a sense of home
Innovative design solutions	Optimize the functionality and flexibility

In summary, as it is seen on Table 7.1, this study discusses the importance of nomadism and movable structures in architecture. It explores the evolution of tents as suitable shelters for nomadic lifestyles and their continued use in modern times. This research also highlights the concept of mobile architecture and its ability to meet different

needs in various locations. It emphasizes the importance of adaptable and sustainable building practices. This study concludes by stating that movable structures offer unique opportunities and advantages over static structures.

Thus, this study emphasizes the importance of movable structures and flexible architecture in meeting changing needs and environments. It discusses the evolution of tents and their continued use in modern times, as well as the concept of mobile architecture. This research highlights the advantages of adaptable and sustainable building practices and concludes that movable structures offer unique opportunities and advantages over static structures.

In conclusion, the rapid increase in global population and the growing demands for equal and comfortable shelters have led to the need for flexible and adaptable structures. The Archigram group and other theorists have developed theories and plans for future cities and structures that incorporate concepts of change, adaptation, and high technology. The concept of mobile architecture, exemplified by the Archigram group's designs, emphasizes the desire for movement and the ability to relocate both physically and mentally. This shift towards mobility and lightweight materials reflects a changing relationship between people and space. The 21st century has seen a redefinition of the relationship between buildings and the ground, with a focus on lightweight, changeable, and multifunctional designs. The concept of limited space has been explored in historical contexts such as caravans and boats, leading to the development of versatile and functional vehicles like the Volkswagen Transporter. Overall, the concept of movement and flexibility in architecture continues to evolve and shape the future of design.

Furthermore, in this study, it is found that the area size is not so important for the users, and the functionality of the furniture is so much more important for them. As so as according to Nicoleta Voineagu in her study she mentions that Beauer and Safari Condo Alto are two companies that have designed small teardrop caravans that are easy to tow and provide comfortable camping experiences. The Beauer 3X caravan has a push-button operated ceiling that expands to create standing space, while Safari Condo Alto's "Newbie" caravans are lightweight and can be towed by small cars (Voineagu, 2018).

As Mikkelsen and Cohen stated their study in 2015, freedom, individualization, mobility or “getting away from it all” etc. are as all of these are the subject of their study,

they are also very important in this research as well. Also, according to Nicoleta Voineagu, Dimensions are chosen according to the proportions that are needed, like Vitruvian Man, so users do not feel trapped in a space that is too small (Voineagu, 2018). Meanwhile, in this study as well, the size of the area is very important, and as hypothesis 3, men wanted caravan life more than women because of comfort. Because of the observation of the caravan users, the result shows that women feel they are trapped in a caravan which is why they generally don't prefer caravan life.

In this study, according to the statistical results of the answers given by 218 participants to the survey questions, the hypotheses of the study and more were included in the research. Of course, much more can be done in the future. For example, material choices and more efficient use of space can be investigated regarding the place of interior design factors in caravan life.

This study has some limitations. The data was collected through the participation of caravans and caravan users in Ankara, Denizli, and online. Therefore, it may not be possible to generalize the results. However, this study makes a unique contribution to the literature. The first aim was attending more caravan fairs and collect more datum, however, the two fairs in Ankara and Istanbul was cancelled in the field trip process. Nevertheless, two fairs were attended, and sufficient data were collected for this study.

There are some suggestions for future research. More research is needed to examine caravan users' preferences regarding the choice of caravan living. Future researchers can use this study's proposed framework in a variety of different interior design environments, such as a casual caravan setting.

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APPENDICES

APPENDIX 1: QUACTIONNAIRE (TURKISH)

Yerden Bağımsız Mekanlarda "Kullanıcı-Mekan" Etkileşimi

1.

Bu çalışmanın amacı, mekandan bağımsız mekanlarda kullanıcı-yer etkileşimini keşfetmektir. Verdiğiniz tüm bilgiler gizli tutulacaktır ve toplanan veriler İçmimarlık ve Çevre Tasarımı doktora tezi için kullanılacaktır. Bu anket için karavan kullanıcısı değilseniz bile karavan kullanıcısı gibi düşünerek cevaplayabilirsiniz.

1. Lütfen aşağıda yaşınızın aralığını seçiniz.

25 yaşından küçük

25 - 50 yaş arası

50 yaşından büyük

☐☐☐

2. Lütfen aşağıda cinsiyetinizi seçiniz.

Kadın

Erkek

☐☐

3. Lütfen aşağıda eğitim durumunuzu seçiniz.

Lise mezunu

Üniversite mezunu

Lisansüstü mezunu

☐☐☐

4. Lütfen aşağıda karavanda kaç kişi yaşadığınızla ilgili işaretleme yapınız.

Karavanda tek yaşıyor

Karavanda 2 kişi yaşıyor

Karavanda 2'den fazla kişi yaşıyor

☐☐☐

5. Lütfen mesleğinizi yazınız.

* 6. Lütfen karavanınızdaki esneklik, işlevsellik, değişebilirlik ve mahremiyet konularını, verdiğiniz **önem derecesine** (1- çok önemli, 4- en önemsiz) göre sıralayınız.

☐☐

· Esneklik (birleşip-büyüyüp-küçülebilmesi vb.)

☐☐

· İşlevsellik (birden fazla işleve olanak)

☐☐

· Değişebilirlik (mekanın farklı amaçlarla kullanılabilirliği, bölümlere ayrılabilmesi vb.)

☐☐

· Mahremiyet (izole olabilmek, huzur ve sessizlik)

* 7. Lütfen karavanınızdaki esneklik, işlevsellik, değişebilirlik ve mahremiyet konularını, **başarılı olup olmadığına göre** (1- çok başarılı, 4- en başarısız) sıralayınız.

- ☐ Esneklik (birleşip-büyüyüp-küçülebilmesi vb.)
- ☐ İşlevsellik (birden fazla işleve olanak)
- ☐ Değişebilirlik (mekanın farklı amaçlarla kullanılabilirliği, bölümlere ayrılabilmesi vb.)
- ☐ Mahremiyet (izole olabilmek, huzur ve sessizlik)

8. Karavan yaşamınızda **mahremiyet durumunuz** ile ilgili değerlendirmeniz nasıl?

Hiç önemi yok			Ne önemli, ne değil			Çok önemli
☐	☐	☐	☐	☐	☐	☐

9. Karavanınız sıradan aktiviteleriniz için yeterli alana sahip mi?

Kesinlikle hayır			Nötr			Kesinlikle evet
☐	☐	☐	☐	☐	☐	☐

10. Karavanınızda iken kendinizi rahat ve güvende hissedebiliyor musunuz?

Kesinlikle hayır			Nötr			Kesinlikle evet
☐	☐	☐	☐	☐	☐	☐

* 11. Lütfen karavanınızdaki aşağıdaki özellikleri **memnuniyet seviyenize** (1- çok memnunum, 8- hiç memnun değilim) göre sıralayınız.

- ☐ Gürültü
- ☐ Islak zemin alanları
- ☐ Hava kalitesi
- ☐ Mahremiyet
- ☐ Aydınlatma
- ☐ Mobilya
- ☐ Gizlilik ihtiyacı
- ☐ Alan ihtiyacı

* 12. Karavanınızda evcil hayvanınız veya hayvanlarınız var mı?

- ☐ Evet
- ☐ Hayır

* 13. Karavan yaşamına geçmenize neden olarak aşağıdakilerden hangisini veya hangilerini gösterebilirsiniz?

- ☐ Hareket halinde olmayı istemek
- ☐ Minimalizm
- ☐ İnsanlardan ve/veya şehirden uzak yaşayabilmek
- ☐ Diğer (lütfen belirtin)

14. Karavanınızı sahipleniyor onunla kendinizi bağdaşık hissediyor musunuz?

Kesinlikle hayır Nötr Kesinlikle evet

☐☐☐☐☐

APPENDIX 2: QUASTIONNAIRE (ENGLISH)

"User-Space" Interaction in Location-Independent Spaces

For this purpose, user-space usage is separated in spaces independent of the space. All information you provide will be kept confidential and the data collected will be used for the doctoral thesis in Interior Architecture and Environmental Design. Even if you are not a caravan user, you can answer this survey by thinking like a caravan user.

1. Please select your age range below.

25 years old younger 25 - 50 years old 50 years older

2. Please select your gender below.

Woman Male

3. Please select your education level below.

High school graduate Graduated from a Universty Postgraduate

4. Please mark the number of people living in the caravan below.

Lives alone 2 people More than 2 people

5. Please write your profession below.

6. Please consider the importance level flexibility, functionality, and, interchangeability in your caravan (1- very important, 3- least important).

- Flexibility (ability to combine, grow or shrink etc.)
- Functionality (multiple functions possibility)
- Interchangeability (different locations usability for purposes, can be divided into sections, etc.)

7. Please consider the success level of flexibility, functionality, and, interchangeability in your caravan (1- very successful, 4- most successful).

- Flexibility (ability to combine, grow or shrink etc.)
- Functionality (multiple functions possibility)
- Interchangeability (different locations usability for purposes, can be divided into sections, etc.)
- Privacy (being able to isolate, peace and quiet)

8. How do you evaluate your privacy situation in your caravan life?

Strongly unimportant Neutral Strongly important

9. Does your caravan have enough space for your regular activities?

Absolutely not Neutral Absolutely yes

10. Can you feel comfortable and safe while in your caravan?

Absolutely not Neutral Absolutely yes

11. Please rank the following features of your caravan according to your level of satisfaction (1- very satisfied, 8- very dissatisfied).

- Noise level
- Wet areas
- Air-quality
- Confidentiality level
- Lighting level
- Furniture
- Privacy level
- Area size

12. Which of the following can you point to as the reason why you switched to caravan life?

- Wanting to be in motion
- Minimalism

- Being able to live away from people and/or the city
- Other (please specify)

13. Do you own your caravan and feel connected with it?

Absolutely not Neutral Absolutely yes

APPENDIX 3: DEMOGRAPHIC INFORMATION

Table 3.1. Ages of the participants of the study

Q1					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	25 yaşından küçük	19	8,7	8,7	8,7
	25 - 50 yaş arası	160	73,4	73,4	82,1
	50 yaşından büyük	39	17,9	17,9	100,0
	Total	218	100,0	100,0	

Table 3.2. Genders of the participants of the study

Q2					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Kadın	81	37,2	37,2	37,2
	Erkek	137	62,8	62,8	100,0
	Total	218	100,0	100,0	

Table 3.3. Education levels of the participants of the study

Q3					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Lise mezunu	21	9,6	9,6	9,6
	Üniversite mezunu	136	62,4	62,4	72,0
	Lisansüstü mezunu	61	28,0	28,0	100,0
	Total	218	100,0	100,0	

APPENDIX 4: DESCRIPTIVE STATISTICS FOR EACH DIMENSION

Table 4.1. Descriptive Statistics for Semantic Dimensions

Descriptive Statistics			
	N	Mean	Std. Deviation
· Mahremiyet (izole olabilmek, huzur ve sessizlik)	218	2,5046	1,31369
· Mahremiyet (izole olabilmek, huzur ve sessizlik)	218	2,7294	1,22386
Q8	217	4,2258	1,05833
Q10	217	4,0507	1,07247
Mahremiyet	218	4,1468	1,89749
Gizlilik ihtiyacı	218	5,1422	2,18983
Karavanınızda evcil hayvanınız veya hayvanlarınız var mı?	218	1,7385	,44045
Karavan yaşamına geçmenize neden olarak aşağıdakilerden hangisini veya hangilerini gösterebilirsiniz?	218	,1376	,34529
Q14	217	4,2212	,95108
Valid N (listwise)	216		

Descriptives				
			Statistic	Std. Error
· Esneklik (birleşip-büyüyüp-küçülebilmesi vb.)	Mean		2,5734	,06393
	95% Confidence Interval for Mean	Lower Bound	2,4474	
		Upper Bound	2,6994	
	5% Trimmed Mean		2,5815	
	Median		3,0000	
	Variance		,891	

	Std. Deviation		,94388	
	Minimum		1,00	
	Maximum		4,00	
	Range		3,00	
	Interquartile Range		1,00	
	Skewness		-,015	,165
	Kurtosis		-,904	,328
· İşlevsellik (birden fazla işleve olanak)	Mean		2,1147	,06504
	95% Confidence Interval for Mean	Lower Bound	1,9865	
		Upper Bound	2,2429	
	5% Trimmed Mean		2,0719	
	Median		2,0000	
	Variance		,922	
	Std. Deviation		,96035	
	Minimum		1,00	
	Maximum		4,00	
	Range		3,00	
	Interquartile Range		2,00	
	Skewness		,367	,165
	Kurtosis		-,908	,328
· Değişebilirlik (mekânın farklı amaçlarla kullanılabilirliği, bölümlere ayrılabilirliği vb.)	Mean		2,8073	,07525
	95% Confidence Interval for Mean	Lower Bound	2,6590	
		Upper Bound	2,9557	
	5% Trimmed Mean		2,8415	
	Median		3,0000	
	Variance		1,235	
	Std. Deviation		1,1111 3	
	Minimum		1,00	
	Maximum		4,00	
	Range		3,00	
	Interquartile Range		2,00	
	Skewness		-,385	,165
	Kurtosis		-1,225	,328
· Esneklik (birleşip-büyüyüp-küçülebilmesi vb.)	Mean		2,2156	,06549
	95% Confidence Interval for Mean	Lower Bound	2,0865	

			Upper Bound	2,3447	
	5% Trimmed Mean			2,1840	
	Median			2,0000	
	Variance			,935	
	Std. Deviation			,96689	
	Minimum			1,00	
	Maximum			4,00	
	Range			3,00	
	Interquartile Range			2,00	
	Skewness			,358	,165
	Kurtosis			-,831	,328
· İşlevsellik (birden fazla işleve olanak)	Mean			2,2110	,07038
	95% Confidence Interval for Mean	Lower Bound	2,0723		
		Upper Bound	2,3497		
	5% Trimmed Mean			2,1789	
	Median			2,0000	
	Variance			1,080	
	Std. Deviation			1,0390 8	
	Minimum			1,00	
	Maximum			4,00	
	Range			3,00	
	Interquartile Range			2,00	
	Skewness			,214	,165
	Kurtosis			-1,216	,328
· Değişebilirlik (mekanın farklı amaçlarla kullanılabilirliği, bölümlere ayrılabilmesi vb.)	Mean			2,8440	,07338
	95% Confidence Interval for Mean	Lower Bound	2,6994		
		Upper Bound	2,9887		
	5% Trimmed Mean			2,8823	
	Median			3,0000	
	Variance			1,174	
	Std. Deviation			1,0833 8	
	Minimum			1,00	
	Maximum			4,00	
	Range			3,00	

	Interquartile Range		2,00	
	Skewness		-,432	,165
	Kurtosis		-1,126	,328
Q8	Mean		4,2110	,07303
	95% Confidence Interval for Mean	Lower Bound	4,0671	
		Upper Bound	4,3549	
	5% Trimmed Mean		4,3262	
	Median		5,0000	
	Variance		1,163	
	Std. Deviation		1,0782 6	
	Minimum		1,00	
	Maximum		5,00	
	Range		4,00	
	Interquartile Range		2,00	
	Skewness		-1,186	,165
	Kurtosis		,687	,328
Q10	Mean		4,0367	,07381
	95% Confidence Interval for Mean	Lower Bound	3,8912	
		Upper Bound	4,1822	
	5% Trimmed Mean		4,1269	
	Median		4,0000	
	Variance		1,188	
	Std. Deviation		1,0897 6	
	Minimum		1,00	
	Maximum		5,00	
	Range		4,00	
	Interquartile Range		2,00	
	Skewness		-,828	,165
	Kurtosis		-,174	,328
Mahremiyet	Mean		4,1468	,12851
	95% Confidence Interval for Mean	Lower Bound	3,8935	
		Upper Bound	4,4001	
	5% Trimmed Mean		4,1274	

	Median		4,0000	
	Variance		3,600	
	Std. Deviation		1,8974 9	
	Minimum		1,00	
	Maximum		8,00	
	Range		7,00	
	Interquartile Range		2,00	
	Skewness		,016	,165
	Kurtosis		-,814	,328
Gizlilik ihtiyacı	Mean		5,1422	,14831
	95% Confidence Interval for Mean	Lower Bound	4,8499	
		Upper Bound	5,4345	
	5% Trimmed Mean		5,2136	
	Median		6,0000	
	Variance		4,795	
	Std. Deviation		2,1898 3	
	Minimum		1,00	
	Maximum		8,00	
	Range		7,00	
	Interquartile Range		4,00	
	Skewness		-,515	,165
	Kurtosis		-1,057	,328
Karavan yaşamına geçmenize neden olarak aşağıdakilerden hangisini veya hangilerini gösterebilirsiniz?	Mean		,1376	,02339
	95% Confidence Interval for Mean	Lower Bound	,0915	
		Upper Bound	,1837	
	5% Trimmed Mean		,0973	
	Median		,0000	
	Variance		,119	
	Std. Deviation		,34529	
	Minimum		,00	
	Maximum		1,00	
	Range		1,00	
	Interquartile Range		,00	
	Skewness		2,118	,165
	Kurtosis		2,511	,328

Q14	Mean		4,2248	,06437
	95% Confidence Interval for Mean	Lower Bound	4,0979	
		Upper Bound	4,3516	
	5% Trimmed Mean		4,2905	
	Median		5,0000	
	Variance		,903	
	Std. Deviation		,95035	
	Minimum		1,00	
	Maximum		5,00	
	Range		4,00	
	Interquartile Range		2,00	
	Skewness		-,919	,165
	Kurtosis		,092	,328

Table 4.2. Descriptive Statistics for Physical Dimensions

Descriptive Statistics			
	N	Mean	Std. Deviation
· Mahremiyet (izole olabilmek, huzur ve sessizlik)	218	2,5046	1,31369
· Mahremiyet (izole olabilmek, huzur ve sessizlik)	218	2,7294	1,22386
Q8	217	4,2258	1,05833
Q10	217	4,0507	1,07247
Mahremiyet	218	4,1468	1,89749
Gizlilik ihtiyacı	218	5,1422	2,18983
Karavanınızda evcil hayvanınız veya hayvanlarınız var mı?	218	1,7385	,44045
Karavan yaşamına geçmenize neden olarak aşağıdakilerden hangisini veya hangilerini gösterebilirsiniz?	218	,1376	,34529
Q14	217	4,2212	,95108
Valid N (listwise)	216		

Descriptives				
			Statistic	Std. Error
· Esneklik (birleşip-büyüyüp-küçülebilmesi vb.)	Mean		2,5734	,06393
	95% Confidence Interval for Mean	Lower Bound	2,4474	
		Upper Bound	2,6994	
	5% Trimmed Mean		2,5815	
	Median		3,0000	
	Variance		,891	
	Std. Deviation		,94388	

	Minimum		1,00	
	Maximum		4,00	
	Range		3,00	
	Interquartile Range		1,00	
	Skewness		-,015	,165
	Kurtosis		-,904	,328
· İşlevsellik (birden fazla işleve olanak)	Mean		2,1147	,06504
	95% Confidence Interval for Mean	Lower Bound	1,9865	
		Upper Bound	2,2429	
	5% Trimmed Mean		2,0719	
	Median		2,0000	
	Variance		,922	
	Std. Deviation		,96035	
	Minimum		1,00	
	Maximum		4,00	
	Range		3,00	
	Interquartile Range		2,00	
	Skewness		,367	,165
	Kurtosis		-,908	,328
· Değişebilirlik (mekânın farklı amaçlarla kullanılabilirliği, bölümlere ayrılabilmesi vb.)	Mean		2,8073	,07525
	95% Confidence Interval for Mean	Lower Bound	2,6590	
		Upper Bound	2,9557	
	5% Trimmed Mean		2,8415	
	Median		3,0000	
	Variance		1,235	
	Std. Deviation		1,1111 3	
	Minimum		1,00	
	Maximum		4,00	
	Range		3,00	
	Interquartile Range		2,00	
	Skewness		-,385	,165
	Kurtosis		-1,225	,328
· Esneklik (birleşip-büyüyüp-küçülebilmesi vb.)	Mean		2,2156	,06549
	95% Confidence Interval for Mean	Lower Bound	2,0865	

			Upper Bound	2,3447	
	5% Trimmed Mean			2,1840	
	Median			2,0000	
	Variance			,935	
	Std. Deviation			,96689	
	Minimum			1,00	
	Maximum			4,00	
	Range			3,00	
	Interquartile Range			2,00	
	Skewness			,358	,165
	Kurtosis			-,831	,328
· İşlevsellik (birden fazla işleve olanak)	Mean			2,2110	,07038
	95% Confidence Interval for Mean	Lower Bound	2,0723		
		Upper Bound	2,3497		
	5% Trimmed Mean			2,1789	
	Median			2,0000	
	Variance			1,080	
	Std. Deviation			1,0390 8	
	Minimum			1,00	
	Maximum			4,00	
	Range			3,00	
	Interquartile Range			2,00	
	Skewness			,214	,165
	Kurtosis			-1,216	,328
· Değişebilirlik (mekanın farklı amaçlarla kullanılabilirliği, bölümlere ayrılabilmesi vb.)	Mean			2,8440	,07338
	95% Confidence Interval for Mean	Lower Bound	2,6994		
		Upper Bound	2,9887		
	5% Trimmed Mean			2,8823	
	Median			3,0000	
	Variance			1,174	
	Std. Deviation			1,0833 8	
	Minimum			1,00	
	Maximum			4,00	
	Range			3,00	

	Interquartile Range		2,00	
	Skewness		-,432	,165
	Kurtosis		-1,126	,328
Q9	Mean		3,2890	,08337
	95% Confidence Interval for Mean	Lower Bound	3,1247	
		Upper Bound	3,4533	
	5% Trimmed Mean		3,3211	
	Median		3,0000	
	Variance		1,515	
	Std. Deviation		1,2309 3	
	Minimum		1,00	
	Maximum		5,00	
	Range		4,00	
	Interquartile Range		1,00	
	Skewness		-,268	,165
	Kurtosis		-,481	,328
Q10	Mean		4,0367	,07381
	95% Confidence Interval for Mean	Lower Bound	3,8912	
		Upper Bound	4,1822	
	5% Trimmed Mean		4,1269	
	Median		4,0000	
	Variance		1,188	
	Std. Deviation		1,0897 6	
	Minimum		1,00	
	Maximum		5,00	
	Range		4,00	
	Interquartile Range		2,00	
	Skewness		-,828	,165
	Kurtosis		-,174	,328
Gürültü	Mean		3,6147	,14896
	95% Confidence Interval for Mean	Lower Bound	3,3211	
		Upper Bound	3,9083	
	5% Trimmed Mean		3,5163	

	Median		3,0000	
	Variance		4,837	
	Std. Deviation		2,1993 2	
	Minimum		1,00	
	Maximum		8,00	
	Range		7,00	
	Interquartile Range		3,00	
	Skewness		,596	,165
	Kurtosis		-,743	,328
Islak zemin alanları	Mean		5,2982	,17372
	95% Confidence Interval for Mean	Lower Bound	4,9558	
		Upper Bound	5,6406	
	5% Trimmed Mean		5,3869	
	Median		6,0000	
	Variance		6,579	
	Std. Deviation		2,5649 3	
	Minimum		1,00	
	Maximum		8,00	
	Range		7,00	
	Interquartile Range		5,00	
	Skewness		-,326	,165
	Kurtosis		-1,473	,328
Hava kalitesi	Mean		3,3578	,12474
	95% Confidence Interval for Mean	Lower Bound	3,1119	
		Upper Bound	3,6037	
	5% Trimmed Mean		3,2661	
	Median		3,0000	
	Variance		3,392	
	Std. Deviation		1,8417 7	
	Minimum		1,00	
	Maximum		8,00	
	Range		7,00	
	Interquartile Range		3,00	
	Skewness		,467	,165

	Kurtosis		-,560	,328
Aydınlatma	Mean		4,1193	,13348
	95% Confidence Interval for Mean	Lower Bound	3,8562	
		Upper Bound	4,3824	
	5% Trimmed Mean		4,0866	
	Median		4,0000	
	Variance		3,884	
	Std. Deviation		1,9708 7	
	Minimum		1,00	
	Maximum		8,00	
	Range		7,00	
	Interquartile Range		3,00	
	Skewness		-,015	,165
	Kurtosis		-,881	,328
Mobilya	Mean		4,7294	,13538
	95% Confidence Interval for Mean	Lower Bound	4,4625	
		Upper Bound	4,9962	
	5% Trimmed Mean		4,7594	
	Median		5,0000	
	Variance		3,996	
	Std. Deviation		1,9988 8	
	Minimum		1,00	
	Maximum		8,00	
	Range		7,00	
	Interquartile Range		3,00	
	Skewness		-,373	,165
	Kurtosis		-,945	,328
Alan ihtiyacı	Mean		5,5917	,17183
	95% Confidence Interval for Mean	Lower Bound	5,2531	
		Upper Bound	5,9304	
	5% Trimmed Mean		5,7130	
	Median		7,0000	
	Variance		6,436	

	Std. Deviation		2,5369 8	
	Minimum		1,00	
	Maximum		8,00	
	Range		7,00	
	Interquartile Range		5,00	
	Skewness		-,699	,165
	Kurtosis		-1,005	,328
Karavan yaşamına geçmenize neden olarak aşağıdakilerden hangisini veya hangilerini gösterebilirsiniz?	Mean		,4862	,03393
	95% Confidence Interval for Mean	Lower Bound	,4194	
		Upper Bound	,5531	
	5% Trimmed Mean		,4847	
	Median		,0000	
	Variance		,251	
	Std. Deviation		,50096	
	Minimum		,00	
	Maximum		1,00	
	Range		1,00	
	Interquartile Range		1,00	
	Skewness		,055	,165
	Kurtosis		-2,016	,328

Table 4.3. Descriptive Statistics for Psychosocial Dimensions

Descriptive Statistics			
	N	Mean	Std. Deviation
· Mahremiyet (izole olabilmek, huzur ve sessizlik)	218	2,5046	1,31369
· Mahremiyet (izole olabilmek, huzur ve sessizlik)	218	2,7294	1,22386
Q8	217	4,2258	1,05833
Q10	217	4,0507	1,07247
Mahremiyet	218	4,1468	1,89749
Gizlilik ihtiyacı	218	5,1422	2,18983
Karavanınızda evcil hayvanınız veya hayvanlarınız var mı?	218	1,7385	,44045
Karavan yaşamına geçmenize neden olarak aşağıdakilerden hangisini veya hangilerini gösterebilirsiniz?	218	,1376	,34529
Q14	217	4,2212	,95108
Valid N (listwise)	216		

Descriptives				
			Statistic	Std. Error
· Değişebilirlik (mekânın farklı amaçlarla kullanılabilirliği, bölümlere ayrılabilmesi vb.)	Mean		2,8073	,07525
	95% Confidence Interval for Mean	Lower Bound	2,6590	
		Upper Bound	2,9557	
	5% Trimmed Mean		2,8415	
	Median		3,0000	
	Variance		1,235	

	Std. Deviation		1,1111 3	
	Minimum		1,00	
	Maximum		4,00	
	Range		3,00	
	Interquartile Range		2,00	
	Skewness		-,385	,165
	Kurtosis		-1,225	,328
· Mahremiyet (izole olabilmek, huzur ve sessizlik)	Mean		2,5046	,08897
	95% Confidence Interval for Mean	Lower Bound	2,3292	
		Upper Bound	2,6800	
	5% Trimmed Mean		2,5051	
	Median		3,0000	
	Variance		1,726	
	Std. Deviation		1,3136 9	
	Minimum		1,00	
	Maximum		4,00	
	Range		3,00	
	Interquartile Range		3,00	
	Skewness		-,022	,165
	Kurtosis		-1,747	,328
· Değişebilirlik (mekânın farklı amaçlarla kullanılabilirliği, bölümlere ayrılabilmesi vb.)	Mean		2,8440	,07338
	95% Confidence Interval for Mean	Lower Bound	2,6994	
		Upper Bound	2,9887	
	5% Trimmed Mean		2,8823	
	Median		3,0000	
	Variance		1,174	
	Std. Deviation		1,0833 8	
	Minimum		1,00	
	Maximum		4,00	
	Range		3,00	
	Interquartile Range		2,00	
	Skewness		-,432	,165
	Kurtosis		-1,126	,328
	Mean		2,7294	,08289

· Mahremiyet (izole olabilmek, huzur ve sessizlik)	95% Confidence Interval for Mean	Lower Bound	2,5660	
		Upper Bound	2,8927	
	5% Trimmed Mean		2,7548	
	Median		3,0000	
	Variance		1,498	
	Std. Deviation		1,2238 6	
	Minimum		1,00	
	Maximum		4,00	
	Range		3,00	
	Interquartile Range		2,25	
	Skewness		-,291	,165
	Kurtosis		-1,520	,328
Q10	Mean		4,0367	,07381
	95% Confidence Interval for Mean	Lower Bound	3,8912	
		Upper Bound	4,1822	
	5% Trimmed Mean		4,1269	
	Median		4,0000	
	Variance		1,188	
	Std. Deviation		1,0897 6	
	Minimum		1,00	
	Maximum		5,00	
	Range		4,00	
	Interquartile Range		2,00	
	Skewness		-,828	,165
	Kurtosis		-,174	,328
Gürültü	Mean		3,6147	,14896
	95% Confidence Interval for Mean	Lower Bound	3,3211	
		Upper Bound	3,9083	
	5% Trimmed Mean		3,5163	
	Median		3,0000	
	Variance		4,837	
	Std. Deviation		2,1993 2	

	Minimum		1,00	
	Maximum		8,00	
	Range		7,00	
	Interquartile Range		3,00	
	Skewness		,596	,165
	Kurtosis		-,743	,328
Aydınlatma	Mean		4,1193	,13348
	95% Confidence Interval for Mean	Lower Bound	3,8562	
		Upper Bound	4,3824	
	5% Trimmed Mean		4,0866	
	Median		4,0000	
	Variance		3,884	
	Std. Deviation		1,9708 7	
	Minimum		1,00	
	Maximum		8,00	
	Range		7,00	
	Interquartile Range		3,00	
	Skewness		-,015	,165
	Kurtosis		-,881	,328
	Mean		,4037	,03331
	95% Confidence Interval for Mean	Lower Bound	,3380	
		Upper Bound	,4693	
Karavan yaşamına geçmenize neden olarak aşağıdakilerden hangisini veya hangilerini gösterebilirsiniz?	5% Trimmed Mean		,3930	
	Median		,0000	
	Variance		,242	
	Std. Deviation		,49176	
	Minimum		,00	
	Maximum		1,00	
	Range		1,00	
	Interquartile Range		1,00	
	Skewness		,395	,165
	Kurtosis		-1,861	,328

APPENDIX 5: CHI-SQUARE TEST FOR EACH DIMENSION

Table 5.1. Chi-Square Test for Semantic Dimensions

Hypothesis Test Summary				
	Null Hypothesis	Test	Sig.	Decision
1	The categories of Karavanınızda evcil hayvanınız veya hayvanlarınız var mı? occur with equal probabilities.	One-Sample Chi-Square Test	,000	Reject the null hypothesis.
2	The categories of Karavan yaşamına geçmenize neden olarak aşağıdakilerden hangisini veya hangilerini gösterebilirsiniz? occur with equal probabilities.	One-Sample Chi-Square Test	,000	Reject the null hypothesis.
3	The sequence of values defined by · Mahremiyet (izole olabilmek, huzur ve sessizlik) $\leq 3,00$ and $> 3,00$ is random.	One-Sample Runs Test	,000	Reject the null hypothesis.
4	The sequence of values defined by · Mahremiyet (izole olabilmek, huzur ve sessizlik) $\leq 3,00$ and $> 3,00$ is random.	One-Sample Runs Test	,000	Reject the null hypothesis.
5	The sequence of values defined by Q8 $\leq 5,00$ and $> 5,00$ is random.	One-Sample Runs Test	,001	Reject the null hypothesis.
6	The sequence of values defined by Q10 $\leq 4,00$ and $> 4,00$ is random.	One-Sample Runs Test	,090	Retain the null hypothesis.
7	The sequence of values defined by Mahremiyet $\leq 4,00$ and $> 4,00$ is random.	One-Sample Runs Test	,000	Reject the null hypothesis.
8	The sequence of values defined by Gizlilik ihtiyacı $\leq 6,00$ and $> 6,00$ is random.	One-Sample Runs Test	,658	Retain the null hypothesis.
9	The sequence of values defined by Karavanınızda evcil hayvanınız ve hayvanlarınız var mı? = (Hayır) and (Evet) is random.	One-Sample Runs Test	,574	Retain the null hypothesis.
10	The sequence of values defined by Karavan yaşamına geçmenize neden olarak aşağıdakilerden hangisini veya hangilerini gösterebilirsiniz? = (0,00) and (Minimalizm) is random.	One-Sample Runs Test	,000	Reject the null hypothesis.
11	The sequence of values defined by Q14 $\leq 5,00$ and $> 5,00$ is random.	One-Sample Runs Test	,001	Reject the null hypothesis.

Asymptotic significances are displayed. The significance level is ,05.

Table 5.2. Chi-Square Test for Physical Dimensions

Hypothesis Test Summary				
	Null Hypothesis	Test	Sig.	Decision
1	The categories of Karavan yaşamına geçmenize neden olarak aşağıdakilerden hangisini veya hangilerini gösterebilirsiniz? occur with equal probabilities.	One-Sample Chi-Square Test	,684	Retain the null hypothesis.
2	The sequence of values defined by · Esneklik (birleşip-büyüyüp-küçülebilmesi vb.) $\leq 3,00$ and $> 3,00$ is random.	One-Sample Runs Test	,000	Reject the null hypothesis.
3	The sequence of values defined by · İşlevsellik (birden fazla işleve olanak) $\leq 2,00$ and $> 2,00$ is random.	One-Sample Runs Test	,019	Reject the null hypothesis.
4	The sequence of values defined by · Değişebilirlik (mekanın farklı amaçlarla kullanılabilirliği, bölümlere ayrılabilmesi vb.) $\leq 3,00$ and $> 3,00$ is random.	One-Sample Runs Test	,000	Reject the null hypothesis.
5	The sequence of values defined by · Esneklik (birleşip-büyüyüp-küçülebilmesi vb.) $\leq 2,00$ and $> 2,00$ is random.	One-Sample Runs Test	,032	Reject the null hypothesis.
6	The sequence of values defined by · İşlevsellik (birden fazla işleve olanak) $\leq 2,00$ and $> 2,00$ is random.	One-Sample Runs Test	,004	Reject the null hypothesis.
7	The sequence of values defined by · Değişebilirlik (mekanın farklı amaçlarla kullanılabilirliği, bölümlere ayrılabilmesi vb.) $\leq 3,00$ and $> 3,00$ is random.	One-Sample Runs Test	,021	Reject the null hypothesis.
8	The sequence of values defined by Q9 $\leq 3,00$ and $> 3,00$ is random.	One-Sample Runs Test	,000	Reject the null hypothesis.
9	The sequence of values defined by Q10 $\leq 4,00$ and $> 4,00$ is random.	One-Sample Runs Test	,090	Retain the null hypothesis.
10	The sequence of values defined by Gürültü $\leq 3,00$ and $> 3,00$ is random.	One-Sample Runs Test	,580	Retain the null hypothesis.
11	The sequence of values defined by Islak zemin alanları $\leq 6,00$ and $> 6,00$ is random.	One-Sample Runs Test	,000	Reject the null hypothesis.

Asymptotic significances are displayed. The significance level is ,05.

Hypothesis Test Summary

	Null Hypothesis	Test	Sig.	Decision
12	The sequence of values defined byOne-Hava kalitesi<=3,00 and >3,00 is random.	Sample Runs Test	,002	Reject the null hypothesis.
13	The sequence of values defined byOne-Aydınlatma<=4,00 and >4,00 is random.	Sample Runs Test	,006	Reject the null hypothesis.
14	The sequence of values defined byOne-Mobilya<=5,00 and >5,00 is random.	Sample Runs Test	,337	Retain the null hypothesis.
15	The sequence of values defined byOne-Alan ihtiyacı<=7,00 and >7,00 is random.	Sample Runs Test	,381	Retain the null hypothesis.
16	The sequence of values defined by Karavan yaşamına geçmenize neden olarak aşağıdakilerden hangisini veya hangilerini gösterebilirsiniz? = (0,00) and (Hareket halinde olmayı istemek) is random.	One-Sample Runs Test	,007	Reject the null hypothesis.

Asymptotic significances are displayed. The significance level is ,05.

Table 5.3. Chi-Square Test for Psychosocial Dimensions

Hypothesis Test Summary				
	Null Hypothesis	Test	Sig.	Decision
1	The categories of Karavan yaşamına geçmenize neden olarak aşağıdakilerden hangisini veya hangilerini gösterebilirsiniz? occur with equal probabilities.	One-Sample Chi-Square Test	,004	Reject the null hypothesis.
2	The sequence of values defined by · Değişebilirlik (mekanın farklı amaçlarla kullanılabilirliği, bölümleri ayrılabilirliği vb.) $\leq 3,00$ and $> 3,00$ is random.	One-Sample Runs Test	,000	Reject the null hypothesis.
3	The sequence of values defined by · Mahremiyet (izole olabilmek, huzur ve sessizlik) $\leq 3,00$ and $> 3,00$ is random.	One-Sample Runs Test	,000	Reject the null hypothesis.
4	The sequence of values defined by · Değişebilirlik (mekanın farklı amaçlarla kullanılabilirliği, bölümleri ayrılabilirliği vb.) $\leq 3,00$ and $> 3,00$ is random.	One-Sample Runs Test	,021	Reject the null hypothesis.
5	The sequence of values defined by · Mahremiyet (izole olabilmek, huzur ve sessizlik) $\leq 3,00$ and $> 3,00$ is random.	One-Sample Runs Test	,000	Reject the null hypothesis.
6	The sequence of values defined by Q10 $\leq 4,00$ and $> 4,00$ is random.	One-Sample Runs Test	,090	Retain the null hypothesis.
7	The sequence of values defined by Gürültü $\leq 3,00$ and $> 3,00$ is random.	One-Sample Runs Test	,580	Retain the null hypothesis.
8	The sequence of values defined by Aydınlatma $\leq 4,00$ and $> 4,00$ is random.	One-Sample Runs Test	,006	Reject the null hypothesis.
9	The sequence of values defined by Karavan yaşamına geçmenize neden olarak aşağıdakilerden hangisini veya hangilerini gösterebilirsiniz? = (İnsanlardan ve/veya şehirden uzak yaşayabilmek) and (0,00) is random.	One-Sample Runs Test	,001	Reject the null hypothesis.

Asymptotic significances are displayed. The significance level is ,05.

APPENDIX 6: DESCRIPTIVE FOR EACH SPACE CHARACTERISTICS IN TERMS OF IMPORTANCE VS SUITABILITY

Table 6.1. Descriptives for each Space Characteristics in Terms of Importance vs Suitability

Descriptives				
			Statistic	Std. Error
· Esneklik (birleşip-büyüyüp-küçülebilmesi vb.)	Mean		2,5734	,06393
	95% Confidence Interval for Mean	Lower Bound	2,4474	
		Upper Bound	2,6994	
	5% Trimmed Mean		2,5815	
	Median		3,0000	
	Variance		,891	
	Std. Deviation		,94388	
	Minimum		1,00	
	Maximum		4,00	
	Range		3,00	
	Interquartile Range		1,00	
	Skewness		-,015	,165
	Kurtosis		-,904	,328
· İşlevsellik (birden fazla işleve olanak)	Mean		2,1147	,06504
	95% Confidence Interval for Mean	Lower Bound	1,9865	
		Upper Bound	2,2429	
	5% Trimmed Mean		2,0719	
	Median		2,0000	
	Variance		,922	
	Std. Deviation		,96035	
	Minimum		1,00	
	Maximum		4,00	
	Range		3,00	
	Interquartile Range		2,00	
	Skewness		,367	,165
	Kurtosis		-,908	,328
	Mean		2,8073	,07525

· Değişebilirlik (mekânın farklı amaçlarla kullanılabilirliği, bölümlere ayrılabilirliği vb.)	95% Confidence Interval for Mean		Lower Bound	2,6590	
			Upper Bound	2,9557	
	5% Trimmed Mean			2,8415	
	Median			3,0000	
	Variance			1,235	
	Std. Deviation			1,1111 3	
	Minimum			1,00	
	Maximum			4,00	
	Range			3,00	
	Interquartile Range			2,00	
	Skewness			-,385	,165
	Kurtosis			-1,225	,328
· Mahremiyet (izole olabilmek, huzur ve sessizlik)	Mean			2,5046	,08897
	95% Confidence Interval for Mean		Lower Bound	2,3292	
			Upper Bound	2,6800	
	5% Trimmed Mean			2,5051	
	Median			3,0000	
	Variance			1,726	
	Std. Deviation			1,3136 9	
	Minimum			1,00	
	Maximum			4,00	
	Range			3,00	
	Interquartile Range			3,00	
	Skewness			-,022	,165
	Kurtosis			-1,747	,328
· Esneklik (birleşip-büyüyüp-küçülebilmesi vb.)	Mean			2,2156	,06549
	95% Confidence Interval for Mean		Lower Bound	2,0865	
			Upper Bound	2,3447	
	5% Trimmed Mean			2,1840	
	Median			2,0000	
	Variance			,935	
	Std. Deviation			,96689	
	Minimum			1,00	

	Maximum		4,00	
	Range		3,00	
	Interquartile Range		2,00	
	Skewness		,358	,165
	Kurtosis		-,831	,328
· İşlevsellik (birden fazla işleve olanak)	Mean		2,2110	,07038
	95% Confidence Interval for Mean	Lower Bound	2,0723	
		Upper Bound	2,3497	
	5% Trimmed Mean		2,1789	
	Median		2,0000	
	Variance		1,080	
	Std. Deviation		1,0390	
			8	
	Minimum		1,00	
	Maximum		4,00	
	Range		3,00	
	Interquartile Range		2,00	
	Skewness		,214	,165
	Kurtosis		-1,216	,328
· Değişebilirlik (mekânın farklı amaçlarla kullanılabilirliği, bölümlere ayrılabilmesi vb.)	Mean		2,8440	,07338
	95% Confidence Interval for Mean	Lower Bound	2,6994	
		Upper Bound	2,9887	
	5% Trimmed Mean		2,8823	
	Median		3,0000	
	Variance		1,174	
	Std. Deviation		1,0833	
			8	
	Minimum		1,00	
	Maximum		4,00	
	Range		3,00	
	Interquartile Range		2,00	
	Skewness		-,432	,165
	Kurtosis		-1,126	,328
· Mahremiyet (izole olabilmek, huzur ve sessizlik)	Mean		2,7294	,08289
	95% Confidence Interval for Mean	Lower Bound	2,5660	

		Upper Bound	2,8927	
	5% Trimmed Mean		2,7548	
	Median		3,0000	
	Variance		1,498	
	Std. Deviation		1,2238 6	
	Minimum		1,00	
	Maximum		4,00	
	Range		3,00	
	Interquartile Range		2,25	
	Skewness		-,291	,165
	Kurtosis		-1,520	,328

Table 6.2. Paired Samples t-Tests for each Space Characteristics in Terms of Importance vs Suitability

Paired Samples Test									
		Paired Differences							
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		t	df	Sig. (2-tailed)
					Lower	Upper			
Pair 1	· Esneklik (birleşip-büyüyüp-küçülebilmesi vb.) - · Esneklik (birleşip-büyüyüp-küçülebilmesi vb.)	,35780	1,02073	,06913	,22154	,49406	5,176	217	,000
Pair 2	· İşlevsellik (birden fazla işleve olanak) - · İşlevsellik (birden fazla işleve olanak)	-,09633	,98602	,06678	-,22795	,03529	-1,442	217	,151
Pair 3	· Değişebilirlik (mekanın farklı amaçlarla kullanılabilirliği, bölümlere ayrılabilmesi vb.) - · Değişebilirlik (mekanın farklı amaçlarla kullanılabilirliği, bölümlere ayrılabilmesi vb.)	-,03670	,99238	,06721	-,16917	,09578	-,546	217	,586
Pair 4	· Mahremiyet (izole olabilmek, huzur ve sessizlik) - · Mahremiyet (izole olabilmek, huzur ve sessizlik)	-,22477	1,10713	,07498	-,37256	-,07698	-2,998	217	,003

Table 6.3. Descriptives of each Dimension in Terms of Importance vs Suitability

Descriptives				
			Statistic	Std. Error
Psychosocial Dimension	Mean		23,0596	,22384
	95% Confidence Interval for Mean	Lower Bound	22,6185	
		Upper Bound	23,5008	
	5% Trimmed Mean		23,0051	
	Median		23,0000	
	Variance		10,923	
	Std. Deviation		3,30495	
	Minimum		15,00	
	Maximum		33,00	

	Range		18,00	
	Interquartile Range		4,00	
	Skewness		,223	,165
	Kurtosis		,288	,328
Semantic_ Dimension	Mean		24,64 68	,3173 4
	95% Confidence Interval for Mean	Lower Bound	24,02 13	
		Upper Bound	25,27 22	
	5% Trimmed Mean		24,71 92	
	Median		25,00 00	
	Variance		21,95 3	
	Std. Deviation		4,685 40	
	Minimum		13,00	
	Maximum		34,00	
	Range		21,00	
	Interquartile Range		7,00	
	Skewness		-,243	,165
	Kurtosis		-,818	,328
Physical_ Dimension	Mean		49,28 90	,3594 1
	95% Confidence Interval for Mean	Lower Bound	48,58 06	
		Upper Bound	49,99 74	
	5% Trimmed Mean		49,19 52	
	Median		49,00 00	
	Variance		28,16 0	
	Std. Deviation		5,306 63	
	Minimum		37,00	
	Maximum		61,00	
	Range		24,00	

	Interquartile Range	8,00	
	Skewness	,331	,165
	Kurtosis	-,678	,328

APPENDIX 7: THE RELATIONSHIPS BETWEEN EACH DIMENSION WITH CARAVAN USER RATINGS

Table 7.1. The Relationship Between the Semantic Dimension with Caravan User Ratings

```
Call:
lm(formula = physical_sum ~ as.factor(Q1) + as.factor(Q2) + as.factor(Q3) +
    psychosocial_sum + semantic_sum, data = spss)

Residuals:
    Min       1Q   Median       3Q      Max
-9.5772 -1.5521  0.2477  2.1213  5.2489

Coefficients:
              Estimate Std. Error t value Pr(>|t|)
(Intercept)   63.08302    1.84449   34.201 < 2e-16 ***
as.factor(Q1)2    0.04156    0.74700    0.056  0.9557
as.factor(Q1)3    0.32744    0.84262    0.389  0.6980
as.factor(Q2)5    0.93254    0.41269    2.260  0.0249 *
as.factor(Q3)7    0.93408    0.72033    1.297  0.1961
as.factor(Q3)8    0.58832    0.78385    0.751  0.4538
psychosocial_sum  0.32193    0.06101    5.276 3.27e-07 ***
semantic_sum   -0.91858    0.04257  -21.576 < 2e-16 ***
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 2.913 on 210 degrees of freedom
Multiple R-squared:  0.7083,    Adjusted R-squared:  0.6986
F-statistic: 72.86 on 7 and 210 DF,  p-value: < 2.2e-16
```

Table 7.2. The Relationship Between the Physical Dimension

```
Call:
lm(formula = psychosocial_sum ~ as.factor(Q1) + as.factor(Q2) +
    as.factor(Q3) + semantic_sum + physical_sum, data = spss)

Residuals:
    Min       1Q   Median       3Q      Max
-7.9548 -2.1299 -0.0989  1.8074  9.8111

Coefficients:
              Estimate Std. Error t value Pr(>|t|)
(Intercept)   -4.04982    5.01677   -0.807 0.420433
as.factor(Q1)2    0.88995    0.79152    1.124 0.262146
as.factor(Q1)3    1.33600    0.89108    1.499 0.135296
as.factor(Q2)5   -0.32069    0.44334   -0.723 0.470273
as.factor(Q3)7    0.98263    0.76560    1.283 0.200739
as.factor(Q3)8    0.95035    0.83159    1.143 0.254415
semantic_sum     0.30909    0.07830    3.948 0.000108 ***
physical_sum     0.36361    0.06891    5.276 3.27e-07 ***
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 3.096 on 210 degrees of freedom
Multiple R-squared:  0.1507,    Adjusted R-squared:  0.1224
F-statistic: 5.323 on 7 and 210 DF,  p-value: 1.272e-05
```

Table 7.3. The Relationship Between the Psycho-social Dimension

```

Call:
lm(formula = semantic_sum ~ as.factor(Q1) + as.factor(Q2) + as.factor(Q3) +
    physical_sum + psychosocial_sum, data = spss)

Residuals:
    Min       1Q   Median       3Q      Max
-8.1017 -1.4609  0.2271  1.9383  5.2854

Coefficients:
              Estimate Std. Error t value Pr(>|t|)
(Intercept)   55.06087    1.95413   28.177 < 2e-16 ***
as.factor(Q1)2 -0.18629    0.67497   -0.276 0.782820
as.factor(Q1)3  0.36708    0.76135    0.482 0.630205
as.factor(Q2)5  0.75356    0.37387    2.016 0.045117 *
as.factor(Q3)7  1.20954    0.64823    1.866 0.063446 .
as.factor(Q3)8  0.90248    0.70659    1.277 0.202935
physical_sum   -0.75022    0.03477  -21.576 < 2e-16 ***
psychosocial_sum 0.22350    0.05662    3.948 0.000108 ***
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 2.633 on 210 degrees of freedom
Multiple R-squared:  0.6944,    Adjusted R-squared:  0.6843
F-statistic: 68.18 on 7 and 210 DF,  p-value: < 2.2e-16

```