

**The role of the multi-functional urban
space in meeting the requirements of
the “Arbaeen” visitors of Imam Hussein
(PBUH)
in the holy Karbala center**

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Abstract:

The “Ziyarte Al-Arba’een“, which takes place in the holy city of Karbala, is one of the most important visits that Muslims from different countries of the world are keen to perform annually, as a large number of visitors go to the city of Karbala on foot to commemorate the occasion of the “Arbaeen” of Imam Hussein (PBUH), the grandson of the Messenger of God (PBUH), Where the number of visitors in (2014 AD) who entered the city of Karbala exceeded (21) million visitors. These numbers of visitors have their own requirements and services that are difficult to provide in the small area of the city center of Karbala, which does not exceed (75.67 hectare) and is intended to accommodate (less than 40,000 people) of its local population. Therefore, the research problem was: the difficulty of providing the requirements and services for visitors in the city center of Karbala, especially in the “Ziyarte Al-Arba’een“. Therefore, it was a legal and ethical duty to think in scientific and sustainable ways to provide these requirements without the need to build new service structures in the movement axes that cause a lack of space for walking and crowding that impedes movement, by adopting the hypothesis: that relying on the concept of multifunctional urban space can contribute to finding solutions to provide the necessary services for visitors. The main objective of the research is to identify the urban spaces in the center of the holy city of Karbala, in which the elements of multi-functional urban spaces can be applied, and to identify the services and the entity responsible for managing them that can be appropriate for each space.

Keywords: Multifunctional urban space, the “Ziyarte Al-Arba’een“, visitor requirements.

Introduction:

The concept of multifunctional urban space is one of the modern concepts in the field of urban planning. It is common in the field of agricultural sciences and the field of architecture and urban design. It is often synonymous with the concept of multi-use, multi-purpose or mixed-use buildings, but in the field of urban planning it differs from these concepts. In addition to being a new concept, it has not been widely addressed in academic urban studies. The studies specialized in presenting the concept of multifunctional urban space as a solution to increase the quality of life in high-density areas, such as the study conducted by (Atieh Ghafouri, & Christiane Weber,2020) and the study conducted by (КОЛЕЧНИКОВ & МЕДВЕДЕВА,2023). There are other studies that dealt with it as a strategy for developing public health, such as the study conducted by (Andrew J. Lafrenz, 2022), and studies that dealt with it as a strategy for achieving sustainability, such as the study conducted by (Atieh Ghafouri, 2016) and the study conducted by (Aynaz Lotfata, 2022). Other studies dealt with it as a solution to revive the neglected parts of the city, such as the study conducted by (Radmila and Hekuran Iva,2022). In general, most of them look at achieving sustainability and quality of life. The center of the old city of Karbala is one of the densest city centers, which needs urban spaces that provide the necessary services, especially in the “ Ziyarte Al-Arba’een “ period, as the city of Karbala is choked by large numbers of visitors who come to it from all over the world. At the same time, the city has many spaces that can be exploited according to the concept of multifunctional space.

Urban space:

Multi-functionality: The word “function” is one of the key words in architecture and urban design refer to the purpose of a building and the type of activities that users perform within the space. This word is always used in architectural sources alongside the words “form, space, and beauty.” Therefore, the concept of “multifunctional spaces” was used concomitantly with the concept of multifunctional buildings and mixed use, often without any distinction or difference. The concept of multi-functionality means different uses of space at different times (Zeidler, 1985), while the concept of mixed use means the existence of a group of different uses, at least three of which are income-generating in a specific period of time (Thrall · 2002). In urban design, the concept of multifunctional urban space has a more precise definition, as Ziedler (1985) focuses on “space” and “function” and links the concept of multifunctional spaces to ancient Greek or medieval buildings. It is believed that the uses come initially from the buildings and then move to the comprehensive planning level and should not be limited to a single space, but rather in the form of an integrated network to enhance the functional integration between the many public spaces in the city, taking into account the principle of proximity (Pinto & Remesar, 2009.p:3).

Space and its relationship to activity and time: If we study the full life cycle of space, will see that sometimes space is more detailed and effective. On the other hand, in some periods of time it is less active or may even be empty and without use. An example of this is the space

opposite the university in European countries, where it is active during the working months and inactive during the vacation months. Even during the working months, it is occupied by students on working days and empty on Fridays and Saturdays. The space may be used as a market for selling vegetables, as well as at the one-day level, as it is crowded with students during the morning rush hour when class starts and the evening rush hour when students leave the university. As for the rest of the hours, it has little activity. A unitary space can work better with a few changes in conjunction with different time periods (daily, weekly or yearly). For example, school grounds (spaces) can be opened to the public during school holidays and temporarily. The process of intensification of functions in space aims to make the most of the maximum capacity of space, and this process of intensification does not occur only in “space” but also in “time”. This means that although space accommodates all numbers of planned users, it can always accommodate hidden capabilities (various activities) during different periods of time..

(Multifunctional urban space): firstly, there is no comprehensive definition of this concept, as it is often used in the field of architecture and urban design. In the field of urban planning, it is a new concept that was introduced in an integrated manner with the concept of land uses under the title (Multifunctional or multi-use land uses) with the aim of creating spatial and economic synergies for the use of land to save space by increasing its functional efficiency, while preserving spatial quality. This synergy is due to the interaction between the different activities

and it is in three forms: different functions in different spatial units but adjacent, different functions in one spatial unit but at different times and different and integrated functions in one spatial unit at the same time and these three forms agree on the idea of choosing the “optimal” arrangement and the most efficient use of the land (Atieh Ghafouri, 2020, p:26). Based on this proposition, (Atieh Ghafouri) provides a definition of the concept of a multifunctional urban space, a space that is characterized by the existence of different functions, different actors and different users in different periods of time, or accepting two or more activities at the same time (accepting more than one function in one activity cycle) (Atieh Ghafouri, 2020, p:27). Urban spaces can be considered, and at various levels (whether it is at the level of a residential complex, a neighborhood, or an entire city) that have a specific function that is limited to specific hours of the day, days of the month, or months of the year. These spaces can be revived with other functions during these hours, and spaces with private or semi-private uses can be dedicated to a public performance. For example, school yards can be opened to the public during school holidays and used temporarily as a common space (Atieh&Christiane,2020,p:42). Various examples of these spaces with the mentioned features can be cited all over the world: in the capital of Iran, Tehran, the open space of the University of Tehran is used on Fridays for Friday prayers; In the Vietnamese capital of Hanoi, sidewalks have become venues for badminton; In the French capital, Paris, streets along the Seine turn into urban beaches in summer, and in many cities and towns around the world, sidewalks are a suitable space for a permanent art exhibition

and parking spaces are allocated for commercial complexes or offices to hold local markets (Atieh Ghafouri, 2020, p:27). The multifunctional use of urban spaces may reduce the need to create new spaces in order to meet the needs arising from the increasing number of users and the increase in urban density (Atieh& Christiane, 2020, p: 43). This concept is more active in developing countries, in an instinctive way, because the restrictions imposed on the use of urban spaces are less than the restrictions imposed by developed countries. Therefore, the population in these countries is more free to use spaces, so they automatically give more functions to existing spaces other than the function according to which the space was designed (Atieh Ghafouri, 2020, p:27).

ingredients of the multifunctional urban space: The urban space has a set of ingredients that will be reviewed in detail as follows:

1. Quality:

Space quality relates to lighting, ventilation, sunlight, temperature, etc. And since most of the functions that occupy the same space are similar, therefore, the quality of space suitable for a particular function will certainly be suitable for other functions. Sometimes, adding a new function to the space may require making some changes. (Haile, 2003, p: 71).

1.1. Appropriate Infrastructure:

Usually, the process of adding new functions to the space requires the availability of basic requirements, and one of these requirements is the infrastructure, as the space must contain an infrastructure that makes it ready to receive a function other than the function for which the space was created, so the priority will be for the space that needs the least new infrastructure (Atieh, 2016, p:99).

1.2. Temperature and sunlight:

the temperature changes from one space to another depending on the geographical location, the infrastructure, misleading treatments or guidance. As for the functions that are added to the space, some of them do not need a temperature and can happen in normal conditions, and some of them need to be held in shaded spaces (Atieh,2016,p:101).

1.3. Freedom from pollution and noise sources:

Adding a new function to the space requires that the space be free from pollution sources of noise, in order to be suitable for users and not generate health risks for them (Atieh,2016,p:101).

1.4. Availability of protection means:

especially in functions that serve large numbers of users, the condition of protection from structural or environmental hazards or other dangers is one of the most important conditions that must be met to add a new function to the space (Atieh,2016,p:103).

.1.5. Adequate lighting:

whether it is natural lighting during the day or artificial lighting in spaces to which a new function is added that requires users to stay for hours at night. (Atieh,2016,p:104).

2. Size:

To contain a certain function, the space requires a certain size and to contain different functions, the size of the space must be suitable for all these functions.

2.1. Sufficient area:

where the unitary urban space can be transformed into a multi-functional space by calculating the area required by each function. Sometimes the space does not require a change in the area to contain different functions, and this is what can be seen in the space at the level of the residential area, as it contains a social function for the elderly and the function of playing for children. Sometimes it may be necessary to change the area (Haile, 2003, p: 70-71).

2.2. Size and ability to accommodate other activities:

Since most of the urban spaces that have become multi-functional spaces were originally designed as single-functional spaces as a result of the limitations of the land and the need for other activities, a multi-functional approach was resorted to as a fait accompli to take advantage of the possibility of space and exploit it at the maximum level (Atieh,2016,p:98).

3. Location:

The location of the space affects whether or not it is chosen as a multi-functional space. Spaces located in the city center or in areas characterized by high density and limited space are often chosen (Atieh,2016,p:102).

3.1. Accessibility:

Accessibility is considered one of the main and important factors. Therefore, priority is given to spaces that can be accessed directly to add a new function to it (Atieh,2016,p:102).

3.2. Communication:

It can occupy more than one function in only one space, while some functions need a connected series of spaces, where functions can be integrated to provide a general service to users by creating a connected chain of spaces (Aynaz,2022,p:2).

4. Shape:

The space also needs a specific shape to contain a specific function, and at the same time the space can contain more than one function without the need to change its shape in the case of selecting functions that require similar shapes, and sometimes the multi-use space requires changing its shape to contain Different functions. (Haile,2003,p: 71).

5. Time:

It refers to the time in which the space can be used, which is the time when the space becomes empty. Therefore, the space must have a time during which the basic activity stops for a period of time (several minutes, several hours, several days, or several months), and the appropriate activity for the space is chosen in proportion to this period of time (Atieh, 2016, p: 98).

6. The authority responsible for managing it:

the urban space must have a main body and a secondary one that is responsible for managing it and coordinating the start of the various functions of the space with its end period to avoid intersection or problems. Therefore, the main responsible body is often the body affiliated with the space itself, while the secondary body is often represented by voluntary civil associations, which act as a link between the main body and the public benefiting from the function (Aynaz,2022,p:4 and Atieh, 2016, p: 96).

7. The legal basis for ownership and management:

It refers to the legal basis for the sustainability and possession of space, so the space must have a clear and responsible owner who can negotiate with them for the purpose of owning and managing space as multi-functional space (Atieh,2016,p:103).

Methodology:

This study relies on the descriptive and analytical approach by collecting data on the concept of multi-functional urban space from different sources and relying on theoretical-spatial research and analysis in the practical aspect through the field study and frequent visits to the study area to determine the spaces to which the features and ingredients of multi-functional spaces can apply in the center of Karbala city and to determine the appropriate service (provided to visitors) for each space and the entity responsible for its management.

Karbala City (location and importance):

The city of Karbala is located 105 kilometers southwest of Baghdad (the capital of Iraq). It occupies an area of (52,856 square kilometers) (Ahmed & Deniz, 2022,p:111). The population of Karbala Governorate is 1,003,516 citizens,. it gained importance after the martyrdom of Imam Hussein in the Battle of Karbala in the year 61 in the Hijri calendar, in the Battle of Tuff (Sabeeh& Zuhair, 2018,p:56). Therefore, the holy city of Karbala is one of the most important Islamic holy shrine cities. Which is characterized by its historical and urban value and the privacy of its urban center represented by the presence of two important shrines that represent the nucleus of the city center; They are the shrine of Imam Hussein (pbuh) and the brotherhood of Abbas (pbuh) (Maymoon,2017,p:55).The study area is represented by the boundaries of the traditional city of Karbala, which consists of eight neighborhoods as shown in Map No. (1).

The “Ziyarte Al-Arba’een “: “ Ziyarte Al-Arba’een “is one of the rituals of God, which the Shari’a affirmed to glorify its highness and lofty goals. The visitors see that the visit of Imam Hussein (pbuh) Special symbolism and importance mentioned by the Prophet Muhammad (pbuh) and the imams of the Ahl al-Bayt (pbuh). On the authority of the Prophet Muhammad (pbuh) he said: “Whoever visits the tomb of Al-Hussein bin Ali, (pbuh), on the day of the Arbaeen, he is truly on the God to forgive his sins” (Al-Kafi, vol. 4, p. 582). Therefore, millions of visitors go every year to the Holy Karbala from different countries of the world in order to declare love and loyalty to the master of the martyrs, Imam Hussein,, with what it represents of a high human value (Anwar & Bushra, 2019, p: 31). Despite the ancient roots of walking to Imam Hussein (peace be upon him) on the “Ziyarte Al-Arba’een “, it increased after 2003, when visitors began to turn out more year after year (Karbala Center for Studies, 2022). Therefore, it is considered one of the largest visits as a result of the crowds that flock to the city center of Karbala during successive days starting from the 10th of Safar until the 20th of Safar, as the numbers increase as approach the date of the visit) (Maymoon,2017,p:82).

Visitors’ requirements:

Through the field visit and accompanying the visitors on the walking path to the holy Karbala center, it is possible to identify the most important requirements and the main services that the visitor needs: (Services of providing food and drink, Purification facilities services, Rest services, sleeping services, and medical services)

In addition to the presence of a number of services and other secondary requirements and other main services that are not of interest to the search, such as transportation services and guiding the lost, in addition to other services, the Arbaeen visitors' road is full of services that cannot be counted in one search. Shown in figure No. (1).

Multi-functional spaces in the study area: Through the field study, it is possible to identify four types of spaces that can be multi-functional (outdoor spaces for schools, vehicle parking spaces, open spaces and green areas) as shown in Map No.(2).

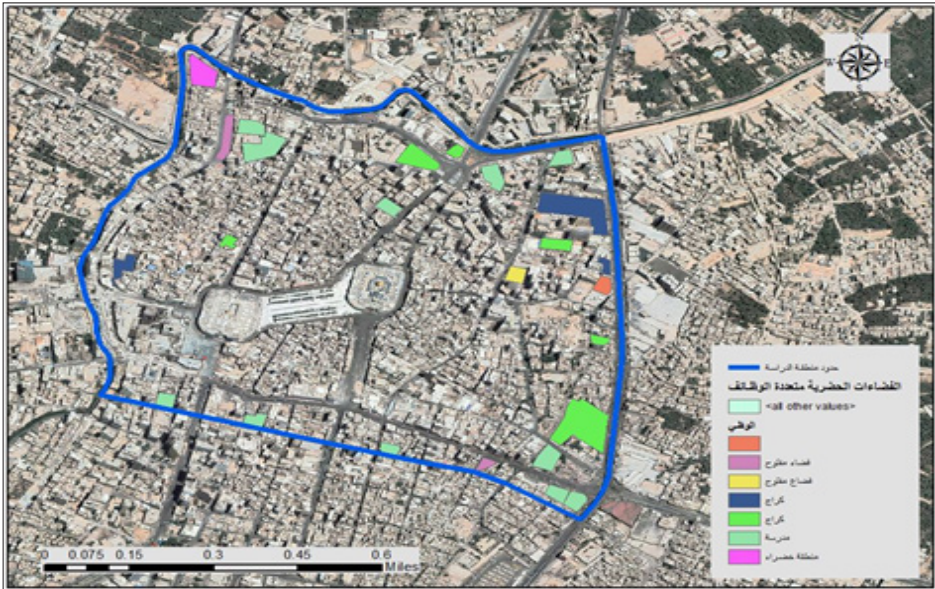
Pedestrian axes in the study area: In the holy Karbala center and during the “ Ziyarte Al-Arba’een “ period, pedestrian axes are divided into two types: the main pedestrian axes, which are often the main streets of the city and are characterized by the intensity of pedestrian movement, the other type is the secondary pedestrian axes, in which pedestrians are less than the first type, which are often the alleys and streets that connect the streets of the first type, as shown in Map No.(3).



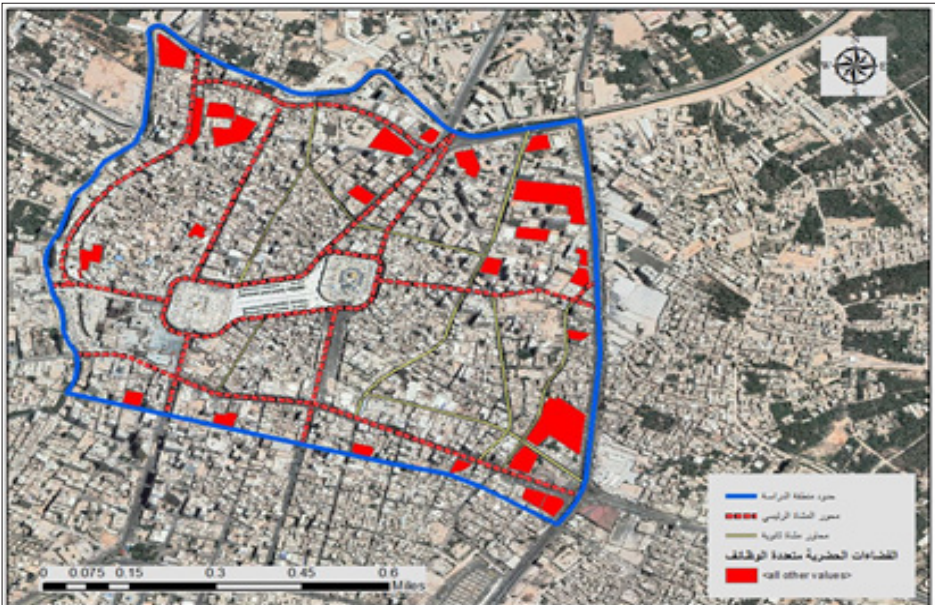
figure No. (1): The " Ziyarte Al-Arba'een "



Map (1): The study area, Maymoon muwafaq,2017, Spatial planning of the movement of crowds in the centers of holy cities (Karbala holy case study), the master degree in sciences of Urban and Regional Planning To the Center of Urban and Regional planning for post Graduated Studies \ University of Baghdad.



Map No. (2): The multifunctional spaces in the holy Karbala center: the researchers based on the 2021 aerial photograph and the Arc Map program



Map No. (3): Pedestrian movement axes in the holy Karbala center: the researchers based on the 2021 aerial photo and the Arc Map program

Choosing multi-functional spaces and comparing them: After defining the most important spaces that could be multifunctional spaces in the previous paragraph, in this paragraph the extent to which the space achieves the ingredients that have been reached and its distance from the pedestrian axis is measured and the function and the body responsible for managing the space are determined. Due to the large number of spaces and the similarity of many of them in the original function and characteristics, a part of these spaces was chosen, which has an area of more than (5000 square meters), with the exception of open spaces.

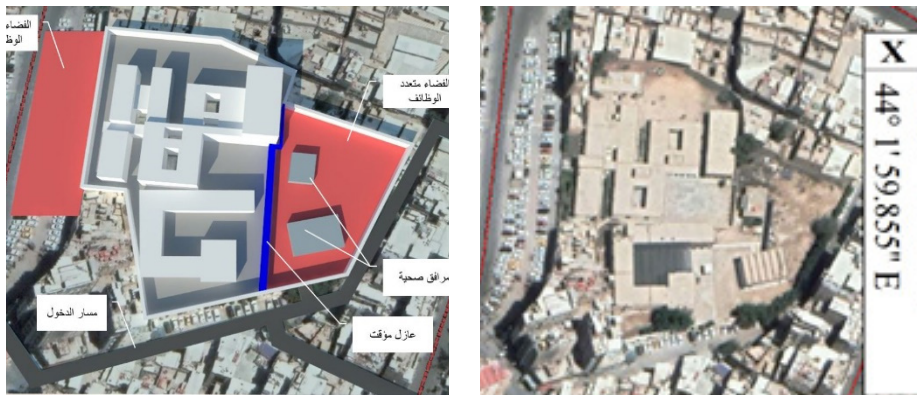


figure No. (2), the external spaces of Sidra

The first space: It is the external spaces of Sidra School, which are shown in figure No. (2).



figure No. (3), open green area

The second space: It is the space represented by the open green area, the location of which is shown in figure No. (3).

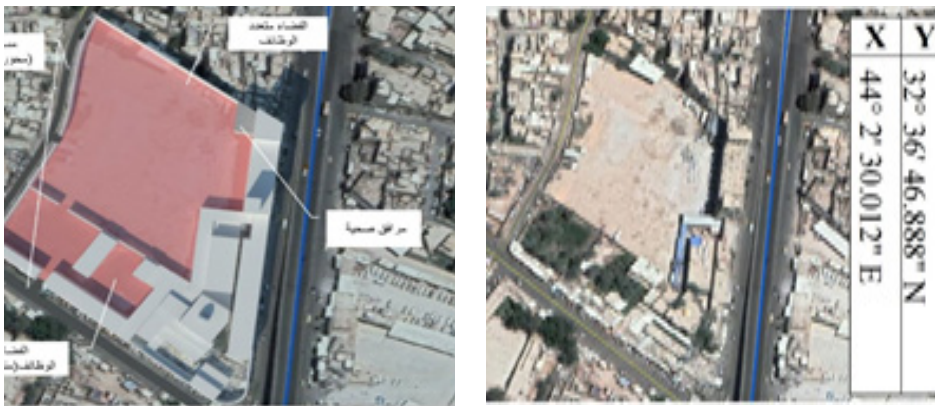


figure No. (4), vehicle parking (car garage)

The third space: It is the space represented by the vehicle parking (car garage), whose location is shown in figure No. (4).



figure No. (4), open urban space

The fourth space: It is the space represented by the open urban space, whose location is shown in figure No. (4).

Results of Ingredients Measurement: After reviewing the four spaces in this paragraph, the extent to which the ingredients were achieved was measured on the selected spaces, as shown Table No. (1).

Table No. (1)

Measuring the extracted Ingredients on the selected spaces

Quality	Main Ingredients
Appropriate Infrastructure	Minor Ingredients
Availability of sanitary facilities, water supply, sewage and electricity	The space (1)
Not suitable due to lack of infrastructure	The space (2)
Availability of sanitary facilities, water supply, sewage and electricity	The space (3)
Not suitable due to lack of infrastructure	The space (4)

Quality			
Adequate lighting	Availability of protection means	Freedom from pollution and noise sources	Temperature and sunlight
Lighting available (natural and artificial)	Fairly available	free from pollution and noise sources	The space is open and not shaded
Lighting available (natural and artificial)	unavailable	free from pollution and noise sources	The space is almost completely shaded by trees
Lighting available (natural and artificial)	unavailable	free from pollution and noise sources	The greater part of the space is open and the other part is shaded by trees
Lighting available (natural and artificial)	unavailable	free from pollution and noise sources	The space is open and not shaded

Location		Size	
Communication	Accessibility	Size and ability to accommodate other activities	Sufficient area
Appropriate duo to location near main pedestrian axes	Appropriate duo to direct accessibility	Fairly appropriate	Fairly appropriate
Appropriate duo to location near main pedestrian axes	Appropriate duo to direct accessibility	Appropriate	Appropriate
Far from main pedestrian axes	Appropriate duo to direct accessibility	Good size and holding capacity	Large and appropriate
Far from main pedestrian axes	Appropriate duo to direct accessibility	Appropriate	Appropriate

The legal basis for ownership and management	The authority responsible for managing it	Time	Shape
Public property, it is possible to use it in coordination with the Directorate of Education	Team of the Education Directorate with service organizations	summer vacation period	Fairly appropriate
Public property, it is possible to use it in coordination with the Municipality Directorate	Team from the Karbala Municipality Directorate with service organizations	Available at all times	Appropriate
Private property, it is possible to use it by renting it from the owners.	Team of parking owners with service organizations	Arbaeen visitation time is closed	Appropriate for accommodating different functions
Private property, it is possible to use it by renting it from the owners.	Team of space owners with service organizations	Available at all times	Appropriate

Discussion and Conclusion: In this part of the study, the appropriate function for each space was determined based on the analysis in the previous table. But before this determination must note that there is a relationship between some functions. For example, the function of performing the rituals of visiting is linked to the function of purification services and facilities, the function of serving food and beverages is linked to the function of comfort services, and the function of comfort services is linked to the function of medical services. Thus, these functions can overlap with each other by dividing the functions over different periods of time for the space itself, and the possibility of appropriateness of the function for the space depends on the ingredients that were measured, as well as the distance of these spaces from the religious event sites. As explained in the following paragraphs

The space (1) contains infrastructure services and is easily accessible. It becomes empty at the time of the “ Ziyarte Al-Arba’een “, but it is not comfortable from a climatic aspect, because it is not shaded. Therefore, it is suitable for the function of purification services. If it is shaded, it will be suitable for the function of performing the rituals of the visit and the function of rest. And the space can provide all these functions, but at different time periods, as it can provide the function of purification services throughout the day, while it is suitable for the function of prayer and performing the rituals of visiting at the time of prayer and is available for the function of rest at the remnant of the times.

The Space (2) It is almost completely shaded and free from sources of pollution and noise and is easily accessible and available at all times. Therefore, it is suitable for the function of rest, the function of serving food and drink, and the function of medical services. It is not suitable for the function of purification services because it does not contain the infrastructure, and therefore it is not suitable for the function of the rituals of visiting and praying. It can be made convenient by equipping the space with temporary infrastructure.

The Space (3) It contains infrastructure and part of it is shaded and part is not shaded and has a large area and is easily accessible so it is suitable for the function of purification services and in the shaded part it is possible to add the function of rest and the performance of visiting rituals and even the function of serving food and drink where jobs can be divided into different periods of time, for example To occupy the space with the function of providing food and drink before the time of the prayers, and then immediately perform the prayer function and perform the rituals of the visit. while the part that is not shaded, it can be shaded temporarily and exploited or exploited at night, and it is suitable when visitors gather in large numbers to perform some rituals of the visit.

The Space (4) It is not shaded and does not contain infrastructure, but it is easy to access, so it is not suitable for the function of purification services at all times, and it may be suitable for the function of rest and the function of visiting rites if the space is shaded temporarily or during night.

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