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Abstract

Recreating the space means creating a new 'atmosphere' there. The atmosphere surrounds the space like the atmosphere layer surrounding the earth. The spaces where the atmosphere of the space can be examined effectively are the spaces that are re-functioned. There are two important and distinct variables that determine the atmosphere formation in re-functional spaces: (1) Time and (2) memory.

In the re-functioning space, the past, present, and future come together and constantly transform each other. This feature emphasises the temporality of these spaces. This approach does not romanticise the space. It focuses on the new space and the atmosphere that changes, transforms, and is fluent in time. This study aims to examine the new spirit and atmosphere of the transformed space rather than telling the transformation story of the old space.

Bilgi University Campus (Santral Istanbul) in Istanbul and Abdullah Gul University Campus in Kayseri, which were re-functionalized and transformed, were determined as similar examples. These two campuses were observed and compared within the scope of criteria determined by grounded theory methodology.

The criteria by which the campuses that have been transformed by re-functioning are evaluated were created by compiling the criteria of architects and philosophers working on the experience of space. These criteria are classified as (1) senses and (2) sensations of space.

After the observations, the criteria for the sensations and senses of space were expanded, were added new criteria and redefined. The place has preserved the spirit of time-memory with elements from the past and created a new, holistic, and original atmosphere with its socially active education campus function. In this respect, the campuses have become re-functionalised industrial heritages that embody the spirit of the time and offer a new atmosphere experience beyond being purely educational campuses.

Keywords: re-functioning, industrial heritage, atmosphere, temporality, Santral Istanbul, AGU

1. Introduction

The space is too broad and deep to be limited by physical elements. The user's experience of the space and its environment recreates the space. The scape lives, sustains, produces, and is produced (Lefebvre, 1991). What is felt in the space differs from the previous one each time and

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offers an entirely different experience.

The space recreated in the mind deepens and becomes authentic beyond its physical characteristics. In this respect, re-creating the space means creating a new 'atmosphere' there. Architects such as Bohme, Zumthor, Rasmussen, Norberg-Schulz, and Porter have also evaluated the atmosphere of the space. The atmosphere surrounds the space like the atmosphere layer surrounding the earth. Like the weather, it determines the state of the place and the felt air.

The question of what kind of a connection exists between the old state of the structure existing in memory and the transformed new state of the structure comes to mind. This approach does not romanticise the space and focuses on the space that changes, transforms, and moves over time. Memory collects many moments of duration in a single perception, thus bringing the past into the present, bringing these two seemingly separate elements of time together (Kreps, 2015). This idea of bringing together defines the newly constructed atmosphere in the transformed spaces. However, Ricouer (2012) states that the living space defines the space that brings the past, present, and future together. The living space transforms the architectural space into narrative. This narrative refers to the concept of atmosphere. The space exists repeatedly within this narrative, creating its own atmosphere and involving the user.

One of the spaces where the atmosphere of the space can be examined effectively is the spaces that are transformed and re-functioned. The transformation of the space from the past to the present and the experience of the newly constructed space constitute the basic dynamic of the study. Two essential and distinct variables determine the atmosphere formation in re-functional spaces: Time and memory.

Therefore, as the time felt by the users differs, the space constantly changes and is recreated. For the old space in the past, the transformed space that exists now, the past, present and future time are together and are constantly transforming each other. Thus, the atmosphere and spirit of the place are created. The spirit of the place is associated with the spirit of the time. The spirit of the time accompanies the age and means to evaluate all kinds of concepts as belonging to that time. This also applies to the concept of space.

The space, which had a different function in its period, has adapted to the spirit of the time it belongs to and has transformed over time. Therefore, it is important to evaluate the place according to its age. In this study, the main starting point is to examine the new spirit and atmosphere of the transformed space rather than just telling the transformation story of the old space. The criteria by which the campuses that have been transformed by re-functioning are evaluated were created by compiling the criteria of architects and philosophers working on the experience of space and classified as (1) senses of space and (2) sensations of space.

Santral Istanbul and AGU campuses, which were re-functionalized and transformed, were determined as two examples. These two campuses were observed and compared within the scope of criteria determined by the grounded theory method. The sensations and the criteria for the senses of the space were expanded and redefined after the observations. These campuses are provided with a socially active function such as education, and the living spaces are provided. The spirit of time is reflected in these spaces, and each passing time leaves traces in the space. However, while these traces do not harm the new atmosphere of the space, they create a holistic effect and a significant impact that does not make you forget the long time spent in the space. In this respect, campuses are recorded as cultural heritage rather than being purely educational campuses.

The two sample campuses that were the subject of observation were recognised as industrial heritage and re-functionalized. Santral Istanbul is more crowded than AGU in terms of student numbers. The evaluation criteria of these campuses were systematically listed and classified from the statements of architects and theorists, including Rasmussen, Pallasma, Zumthor, Bohme, Corbusier, Barragan, Mayne, Tschumi, Bilgin, Serim, Norberg-Schulz and Porter, who mentioned the concept of atmosphere in the literature.

2. The Notion of Re-Functioning Regarding a Reading on Time

Time in chronological order, stratified into past, present and future. The common features of three different periods, divided into past, present and future, exist together with a conscious imagination on the level of experience in the mind, are brought to the same layer and made present (Ural, 2005). The feelings of the spaces that melted these three chronological times in one pot and became present will be examined within the scope of this study. For Mead, reality is now. Everything that happened in the past is reconstructed in the present and shapes the future (Adam, 1990). The new space, formed by carrying traces of what it brought from the past, is reproduced every time with the experience of different users. The now does not only consist of the present; it contains moments of the past and moments to come in the future (Augustine, 1961).

Architecture is the embodiment of an image that extends beyond the existing environment. Architectural space is also defined as embodying existential space (Norberg-Schulz, 1971). Space is the reflection of an image world beyond geometry. Geometric space, which is one-dimensional, gains its second dimension when associated with the senses and its third dimension when associated with the concept of time. The concept of space also deepens with the amount of time spent in the space and the feeling of time differently for each experiencer.

Another feature of time is that it moves in flow and is irreversible. Time is irreversible; not a single memory of it can be relived (Bergson, 1997). Just as Heraclitus expressed that one cannot bathe twice in the same river, there is a flow in the river, just like time. At the same time, but not the same thing, space is redefined when evaluated over time. The present moment becomes the past in a perpetual state. This constant state of transformation makes it impossible to consider time as a chronological or linear flow (Rodowick, 1997). As with time, objects that existed at that time are irretrievable and permanent, just as they were at that moment. The relationship between the concept of time and space needs to be approached through the fluidity of both (Giedion, 1941). Since objects and time constitute the existence of space, this continuity also includes space. The irreversibility of time can be understood when the experience of something is not considered spatially but when it is captured holistically and in its vitality (Kreps, 2015). On the other hand, the past tense is evaluated as a whole with spatial elements as it was in the past. The individual, who perceives the space with different experiences at different times, paints the space in his mind, just as the cubists paint the image of an object at various times on top of each other.

The concept of the spirit of time is another concept that will be associated with the spirit of place in this study. The spirit of time (Hubsh, 1992) is a concept that affects the experience of space that subjectivises time. This spirit, which helps the space to keep up with the time it is in, enables it to keep up with the times.

While the Zeitgeist talks about the relationship between change and architecture, the educationculture-experience trio of the idea of change overlaps with the period aiming to diversify life (Durmus, 2010). From this point of view, the spirit of time is expressed as change itself. The spirit of the time affects the atmosphere felt in the space. For the old space in the past, the transformed space that exists now, the past, present and future time are together, constantly transforming each other. Thus, the atmosphere and spirit of the place are created. The spirit of the place is associated with the spirit of the time. The spirit of the time accompanies the age and means to evaluate all kinds of concepts as belonging to that time. This also applies to the concept of space. Norberg-Schulz's (1971) idea of transforming space into the concept of place (the spirit of the place) is also associated with the concept of atmosphere.

Narrative time comes into play as a kind of expansion of the soul between what he calls the present of the past (memory), the present of the future (expectation) and the present of the present (attention) at the point of rupture and convergence between physical time and psychological time (Ricouer, 2012). In summary, The time of the narrative exists by evaluating this experienced time and chronological time together. Similarly, built space is formed by the interaction between living spaces surrounding the body and a three-dimensional geometric space where every point is a place (Ricouer, 2012). As a matter of fact, there are no first examples of architectural works in nature; architectural works are entirely the result of imagination, experimentation, and a science

that brings the two together (Semper, 1851). Moreover, Semper (1851) claims that while tracing the element, it should not be found in its original state (Urtypus) but should be taken into account that it has changed (Stoffwechsel) and that all metamorphosis steps must be legible on a correctly developed element. From this point of view, it is necessary to be able to read the stages of transformation in order to trace the time in transforming spaces.

The Industrial Revolution, which started in England in the 18th century and spread to Europe and America, not only changed the production structure; It has been effective in almost every aspect of life, especially the living order of people and the political systems of countries (Sahin, 2019). However, the need for different structures arose, and these new types began to be built rapidly. With the developments in the way of construction, factories and large power plants have started to be built rather than workshops, which include larger industrial spaces, which come with much broader mechanisation, where many more workers can work. Industrial structures, which have been actively used for many years, have taken a place in collective and individual memories due to the size of their traces in the city.

Industrial structures that take their place in social and individual memories may lose their functions in time with the coming of the age of technology, mostly with the growth of cities. Because times change, the requirements and needs of the age change. Re-functioning is defined as restoring the lost functional properties of structures whose physical life has not expired in line with existing or new needs (Burden, 2004).

Today, industrial buildings have remained idle with the formation of organised industrial zones in the middle of the city centres and all cities. What will happen to these industry structures has been the subject of discussion. In the direction of protecting the industrial heritage, Since the European countries such as France, Germany, and England experienced the enlightenment with industrialisation, they started to reevaluate the industrial structures built in the first half of the 20th century and before, with various functions since the 1960s (Ekinci, 2001). Sumer Cloth Factory and Silahtaraga Power Plant are also examples of industrial structures that have been re-functionalized. The most appropriate way for the sustainable preservation of industrial heritage sites and structures is to maintain their original use or to find suitable new services (Dublin Principles, 2011). To make these evaluations, the subject of refunctioning will be examined, provided that it is far from the logic of mummification. The concept of re-functioning is essential for the survival and protection of cultural heritage (Ahunbay, 2011).

Eye movement produces a constant change of perspective, in which things are, in a sense, experimentally shifted (Bohme, 2015)—submitting the process of experiencing the space only to the ability to see leads to an incomplete evaluation.

Architecture aims to create integrated wholes (Rasmussen, 1959). From this point of view, it is an incomplete evaluation to evaluate the space only with its physical features. It is necessary to experience the space with the whole body. Only then opens the door to new experiences. Just like a person's body, space has a physical existence just like the body. This adds human characteristics to the space. It is possible to talk about the five senses of spaces, like the human senses.

3. The Notion of Atmosphere

Creating space is creating a new atmosphere like the atmosphere on Earth. It would be more correct to consider not only the spatial form but also the spatial effect of the whole (Zevi, 2015). The concept of atmosphere emphasises the effect of the whole. In architecture, an answer is sought to the question of how to design a unique and original space every time. Making an impact on people and guiding them creates an atmosphere, and what we see is what makes them feel (Zumthor, 2016).

Zumthor (2016) emphasises that the atmosphere of space is established not only with the surrounding objects but also with their imaginary world. The atmosphere is the everyday reality of the perceiver and the perceived (Bohme, 2015). Atmosphere establishes a reality bond between the living space and the user. The user selects a subjective relationship in that space and recreates the space and himself. The atmosphere enables us to grasp the character of the

place and gives it new characters. He states that the spatial character of architecture is not just a matter of opinion but rather what one experiences in one's body (Wolfflin, 1914). Character (...) expresses, on the one hand, an overall atmosphere and on the other hand, the concrete form and substance of the elements that define the space (Norberg-Schulz, 1963).

Conceptual space is formed by the memory of what has been experienced. Memory and experience are directly related to each other. According to Ricoeur (2012), the transition from memory to narrative remembering occurs when the experiencer says 'I was there' and tells it to others. The atmosphere of the space is evaluated based on the concept of narrative. The space, which turns into a narrative, creates the atmosphere. The concept of atmosphere is associated with the concept of the spirit of the place. New spaces, where the smell of the past is felt, are an effort to create a different atmosphere. The place is an inseparable part of existence, and it gives character to the locality where it is located with its form, texture, colour and material beyond an abstract location (Norberg-Schulz, 1984).

Pallasmaa uses the following expressions in his work, Eyes of the Skin:

"Architecture frees us from the siege of the present, allowing us to experience the slow and healing flow of time. Buildings and cities are tools and museums of the time. They enable us to see the passage of history and participate in life cycles that transcend individual life. Architecture connects us with the dead; through buildings, we can imagine the bustle of a medieval street, envision an imposing procession approaching the cathedral."

Experiencing the space is like being in a time warp. Traces of the past in the building also shape the present experience and create a new atmosphere. The life of the building, which started with the design process, is actually in a constant state of construction. The memories of the places where different users, different actions and events come into contact are loaded with the traces of this contact. A building is not considered independent of time and its effects (Mostafavi and Leatherbarrow, 2005). The re-functionalised structures, where these traces and new experiences will be observed, are the sample of this study. In these places transformed from Sumer Cloth factory to AGU Campus, from Silahtaraga Electricity Power Plant to Santralistanbul Campus in this study, the experiences of the future brought by the past, that is, new spaces have been created. It creates a new atmosphere with the change of function in the old buildings that have been re-functionalized. The following criteria regarding the space form only a basis for the narrative space. These criteria are classified as (1) senses of space and (2) sensations of space.

Senses of Space	Sensations of Space	
Sight and Touch	Body of Architecture, Movement and Provocation	
Sound	Internal-External Tension, Context-Environment	
Taste and Smell	Scale-Ratio-Proportion	
Temperature	Foreignness and Familiarity	
Light, Shadow and Color	Material, Consistency-Harmony-Rhythm	

Table1. Compiled Criteria Table

Spaces are observed in which the atmosphere of the space has been reconstructed and changed as time flows, has become a place in the memories and is transformed. In this study, the transformed Santral Istanbul and AGU campuses are examined in light of the aforementioned criteria based on the concept of time and memory. A romanticised preservation story is not mentioned, but based on the traces of memory and time in the transformed space, the atmosphere of the present space is evaluated through these two examples based on theoretical principles.

4. A Comparative Study: AGU and Santral Istanbul Cases

The Silahtaraga Power Plant, which was preserved and transformed into Santralistanbul, is the first city-scale power plant of the Ottoman Empire (Web 10). The Silahtaraga Power Plant, established in 1914 to meet the electricity needs of Istanbul during the Ottoman Empire, continued its electricity generation activities until 1983 (Okandan, 2016). T.R. With the protocol signed between the Ministry of Energy and Natural Resources and Istanbul Bilgi University in the Hidiv Pavilion, the

Silahtaraga Power Plant complex was allocated to the university for 20 years (Masatlioglu, 2018).

After the exploration works carried out in 1932, Soviet experts suggested the establishment of a textile factory. In 1933, a company called Turkstroj was established in Moscow, and Ivan Nikolaev, one of the experts, was appointed as the head of the architectural design team (Yoney and Asiliskender, 2019). In 1996, the Republic of Turkey decided to stop production in all state factories and the Kayseri Sumerbank Cloth Factory was closed in 1999. Due to the recognition of its national importance, it was excluded from the scope of privatisation and allocated to Erciyes University. The campus belongs to the Treasury of Finance and was allocated to the newly established Abdullah Gul University in 2012. (Yoney and Asiliskender, 2019). The usage patterns of the students and daily visitors who are permanent users of the campus during the daytime hours when the campuses are used intensively were examined. An evaluation was made by putting these observations into a table, and the concepts were added as follows:

Senses of Space	Bilgi University Campus	Abdullah Gul Universty Campus	
Sight and Touch	These senses were used while observing.		
Sound	While increasing human voices express that the intensity of use of the place has increased, it is proof that the place is alive.		
Taste and Smell	The presence of large green areas of the campus evokes the feeling of being in nature together with the smell of green.		
Temperature & Sincerity	The axis, surrounded by protected buildings, makes the re-functioned old buildings think of the old story of the place, making the campus perceived as a more inti- mate environment rather than a workplace or school. In addition, the open areas of the campus are actively used at noon, where the air temperature is suitable for spending time outdoors.		
Light, Shadow and Colour	The fact that the axis receives sunlight from sunrise to sunset increases the shade of trees and the use of umbrellas In addition, the protection of the facade of the re-functioned buildings defines a new atmosphere, feeling the old times. The mesh-shaped facade of the build- ing, whose foundation was preserved, and its facade was redesigned, absorbs all the light into the building and main- tains communication with the campus even on the upper floors.	the campus, the axis remains in the dark and darkens the interior of the buildings. In addition, the protection of the facades of the re-functioned build- ings defines a new atmosphere, feeling	

Table 2. Evaluation of The Senses of Space According to Examples



Figure 1. AGU Campus (Edited from current Google Earth images)



Figure 2. Bilgi University Campus (Edited from current Google Earth images) Table 3. Evaluation of The Sensations of Space According to Examples

Sensations of Space	Bilgi University Campus	Abdullah Gul University Campus	
Body of Architecture, Movement and Provoca- tion	Capillary axes, which are like veins reaching the heart at every point of the campus, increase the accessibility of the campus. In addition, the squareness of the axle has increased the usage area. The continuity of the hard floor on the axle guides the users and transforms it into an attraction area where users can spend time.	Not all parts of the campus are sufficiently accessible. Capillary axles are not enough. The eaves, which create the effect of a long and single facade, visually limit the interaction with the axis. However, connecting the entrance and exit doors to this axis revitalizes the axis. The fact that the axis cannot be formed in an ef- ficient place causes a uniform movement.	
Internal-External Tension, Context-Environment	Although a clue about the internal functions of the old buildings can be obtained by looking from the outside, it is not fully understood. The connection of the entrances of the repur- posed buildings to this axis feeds the axis. The interaction of the buildings with the campus is provided through this axis.	It is easier to obtain information about the inter- nal functions of old buildings from the outside than at Santral Istanbul, because new steel structures are transparent. The connection of the entrances of the repurposed buildings to this axis feeds the axis. The interaction of the buildings with the campus is provided through this axis.	
Contrast	There are old buildings repurposed and new buildings added throughout the campus. The fact that the old buildings are intertwined with the new ones creates a contrast. In addition, there are buildings on both campuses that have not yet been transformed. This creates a distinct contrast between repurposed and unused structures. The old story of the campus is lived together with the new story.		
Scale-Ratio-Proportion	The re-functionalized structures generally hold the scales of each other. No overwhelming height was observed while experiencing the space. The completely new structures have long facades and are spread horizontally. It has a fragmented campus setup.	The buildings on campus are not close to each other's scales. There are very large or very small structures. In addition, the idea of gather- ing the buildings under the eaves causes the facade to be perceived much longer. There is a situational setup in which large structures are dominant.	
Foreignness and Famil- iarity	Familiar users of the campus, including students and staff of the university; students and staff of other universities; foreign users, including those who come to visit the museum and the univer- sity. While familiar users prefer recreational areas between classes, the density is seen in special areas created for cigarette-coffee-tea. Foreign users leave the campus after visiting the museum without being too involved.		
Use of Carrier System / Circulation Elements	The fire escape of the two old buildings, which were added as a necessity, has become an area used by students to smoke or take air be- tween classes. At the same time, it completes the visuality of the buildings on the campus scale in an industrial atmosphere.	The bottom of the cantilevered structure, where the eaves expand, is used as the open space of the cafe. This area becomes a square where students come together. The bottom of the eaves becomes the areas where the lecture-meeting breaks are evaluated. In addi- tion, there is a separate system from the fringe system created only for smoking.	

5. Conclusion

These two campuses, which were examined within the scope of the study, were transformed into an education campus by re-functioning as their industrial functions lost their importance. The campuses were evaluated and tabulated in the light of the criteria compiled from the literature. As can be seen in this table, it is seen that the campuses have become a living social campus. During the observations, the concept of the atmosphere was examined through these two examples and new components were added, as in the table.

Buildings accepted as industrial heritage have been included in urban daily life by giving an up-to-date function, such as an education function, and adding a museum function. They have managed to attract the citizens of the city by turning into a field of attraction in the area where they were established.

Even though the space consists of inanimate elements, it lives, as Lebevre says, with the experiences and uses of the users while reading the story of the old times with the restoration and use of the buildings, the newly built additional facilities and the additions to the old buildings and the story told by the new use are together. This narrative reflects the spirit of the times. By giving a new function to these industrial heritage buildings, where the flow of time is observed, a new spirit and a new character have been given to the building.

On both campuses, an axis has been designed to which the buildings are attached. These axes ensure that the campus, which combines both the new structures added and the old structures re-functioned, works like a body, as Zumthor says. As the campus is alive and constantly experienced, a new atmosphere is created every time.

Conflict of Interests

The author declares no potential conflict of interest was reported by the author.

Endnotes

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