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A Strategy for Fostering Integration of Historical Buildings to Increase Citizens' Positive Perceptions: The Case of Izmir Historical Coal Gas Cultural Center

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Abstract: *This paper proposes fostering the social integration of historical urban industrial sites so that they are perceived more positively by the city's citizens. Because of many factors, cities are growing, which brings many problems, such as preserving urban historical sites. As a specific example, this study examined the former Izmir Historical Coal Gas Cultural Center in Izmir, Turkey, regarding the city's acquisition of the site and evaluation of its potential. The study tried to answer three main questions: How can we integrate this area into the city? How can we assess its potential for maintaining the historical and social values of this area? How can we preserve the historical value of this industrial site despite present-day changes and demands? To answer these questions, the integration of the whole factory with the city was evaluated in terms of accessibility, readability, preference for use, and communication with the past, as well as the integration of its landscape through its parameters (boundaries, wayfinding, building density, plants, and water use). Following a literature review, on-site observations and questionnaires were used to provide data analyzed by Crosstab and ChiSquare tests. The results showed very low ratings for accessibility, readability, and preference for site use. The site was particularly not preferred for leisure time activities, which was partly because of inappropriate use of landscape elements. The study concludes by suggesting several strategies to foster the social integration of this and other historical industrial sites so that citizens have more positive perceptions of them*

Key Words: *Adaptıve Reuse Landscape, Rural Tourism, Landscape, Rural Landscape*

INTRODUCTION

City populations have gradually increased in recent years so that 54% of the total global population now lives in cities, up from 34% in 1960 [1], expected to reach 66% by 2050 [2]. This increase has changed the physical, social, environmental, and economic characteristics of cities. As the International Institute for Environment and Development and the World Business Council for Sustainable Development note, city development will be seen clearly in economic, social, and governmental aspects [3]. Cities currently aim to attract national and international investors to develop large urban projects [4], [5] while also promoting cities as places to settle in [6], [7], [8]. Although the main focus is attracting new comers and stimulating growth in cities, they also need to ensure their existing citizens are satisfied [9]. Providing this satisfaction for both new and existing citizens will require proper urban planning to meet the citizens' needs and maintain community quality [10]. However, achieving these important goals is difficult because of the challenges from many problems, such as housing, transport, water, employment [11], sewage, energy [12], pollution, poverty, social dislocation [13], density of new buildings, and traffic.

Besides these problems, abandoned industrial areas in city centers are one of the most important challenges in these growing cities, particularly regarding how to evaluate the potential and risk of these sites. Most urban industrial areas have a historical value reflecting the history of the era when they were built. According to the Department of Environment and Heritage [14], heritage buildings provide a valuable moment of the past and give character to cities, so to promote sustainability through historical renovation, these areas should be adapted and reused [14], [15], [16], [17]. If these areas can be adapted appropriately, they can be transformed into accessible and useable places while providing sustainable renovation [18]. Conversely, if their layout and function is inappropriate, they may become uneconomic and derelict [16], [19]. Renovating such areas requires detailed consideration of investment costs [20], maintenance costs, building regulations, stagnancy of development criteria, and the lack of subsistence and uncertainty consistent with existent building stock [18].

Besides the risks listed above, there are many risks in terms of use and social integration of these areas. In the literature, abandoned historical industrial sites have been studied from various perspectives: social [21], economic [22], environmental [23], [24], [25] and cultural [26]. Many other studies have investigated the relationship between the sustainable use of these sites and heritage preservation [27], [28], [29], [30], [31], [18]. Finally, some studies have considered reuse and adaptation as a sustainable strategy for energy consumption in material use, easy transportation, and decreased pollution [32], [33], [31].

This study focused on the social integration of these sites so that city dwellers develop more positive perceptions about these abandoned historical areas. Such sites that remain in city centers have close link with citizens than in the past, which has a major effect on their perceptions. Although these historic industrial sites are adaptable and have great potential, they also create many risks, of which one of the most important is that they fail to be reused and become abandoned again. It is known that historical sites that develop temporary and contemporary uses perceived more positively by the public than if they remain abandoned [34], [35]. Therefore, conservation should not imply merely the preservation of a building block but should also be evaluated in terms of its social and symbolic meanings [36]. To sustain these meanings both now and in the future, the needs of citizens should be determined within a holistic approach. Apart from abandoned historical urban industrial sites, many studies on urban design and planning have discussed the general factors that make cities liveable, such as physical features, accessibility, communication, character, and personal freedom [37],[38], [39], [40]; [10] . These factors should also be considered regarding historical urban industrial sites to foster social integration with local citizens.

Given these factors, this study proposes a strategy for fostering the social integration of abandoned industrial areas with citizens by investigating the former Izmir Historical Coal Gas Factory as a case to evaluate the social integration of the factory with Izmir's citizens. To assess this social integration in a detailed and holistic manner, the study investigates two layers in a deductive approach:

- integration of the whole factory with the city through accessibility, readability, preference for using, and connection with the past
- integration of the landscape through its parameters (boundaries, wayfinding, building density, plants, and water use) to support the factory's integrating with the city

A. Conservation and Adaptive Re-Use

Conservation of historical areas is significant and valuable for cities in terms of maintaining national values, memories, architectural traces, etc. To be integrated with today's society, a historical industrial area has to keep its identity while adapting to modern functions. Re-use seems to be an appropriate strategy for such areas.

Re-functioning can be defined as opening the historical assets that cannot be used for their original function for some reason by preserving their physical structures while re-using them [41].

A historical area should be revaluated for a different function if it is structurally preserved but not be used for construction purposes because of the functional, environmental, or economic reasons. Evaluating exiting building stock for re-functioning has various advantages, such as reducing damage to the natural environment, obtaining economic benefits, and ensuring the continuity of culture and history. The following issues should be considered in preparing for adaptive re-use:

- Properties which are evaluated as worth preserving should be protected.
- Interventions that disrupt the physical structure or semantic integrity should be avoided.
- It should be ensured that interventions do not permanently affect the space while the change should be clearly implemented.

• The difference between the original structure and the interventions made must be perceptible to the user.

• Comprehensive spatial analysis must be performed before interventions. The physical condition of the place as well as historical data should be examined [42].

Adaptive re-use has many advantages [43], such as being important in terms of participation in urban life and preservation of its values by ensuring the sustainability of structures and environments with cultural value. It also provides economic [44], cultural, and historical continuity, an environment-friendly attitude to reducing energy consumption, and supporting livelihoods based on human power and manual labor [45]. Rather than intensive energy inputs [46]. Also, it reflects the properties that belong to their era within the cities they are in [47] and gives uniqueness and character to this environment.

B. Hinterland of Izmir Port Area

In line with socio-economic, cultural, and political developments, Izmir has grown dramatically to become Turkey's third largest city, with 4.274 million people according to TUIK data from 2017 and a population density of 356/km2. Due to its industrial history, the characteristics of its recent development, and its central port, Izmir has an important role in trade. It has expanded its trade capacity to attract both national and international commerce. Therefore, Izmir has had to extend its boundaries in three directions (south to Cesme, north to Karsiyaka, east to Bornova).

While the city's borders have expanded, Izmir's original and major industrial region remains the port hinterland in the city center. This district links the old and new city center, located at the focal point of education, industry, tourism, trade, and residential districts. Thus, it is also a junction for the city's transportation network. As Çıkış48 notes, it is also an extension of Alsancak district, which already has a dense structure, traffic, population, and function. Yet, although this area forms a major junction in the city center, it lacks a strong physical or social relationship with the city. This raises the following three research questions:

Q1: How can we integrate this area into the city?

Q2: How can we assess its potential for preserving the historical and social values of this historical area?

Q3: How can we preserve the historical values of this industrial site with despite present-day changes and demands?

To answer these questions, it is first necessary to become more familiar with Izmir's port hinterland, which has experienced various revolutions. Before the Industrial Revolution, it was an area of fields and farm buildings. However, after it gained a train station and harbour, and a rail link between Alsancak and Halkapınar, it was renamed Daraağacı and reborn as industrial area with depots and factories. After oil, soap, flour, and cement factories were constructed at the beginning of the 20th century, the area became used more intensely [48].

The foundation of 19th-century Izmir, which developed a cosmopolitan socio-economic structure that included non-Muslim Ottoman and European merchants, actually originated from the East-West caravan trade through Izmir Port in the 17th century.

As business momentum increased in the 19th century, it was necessary to develop the city's transportation and financial infrastructure, which stimulated major construction projects, such as the port-rail and railway. Industrial activities in the city intensified and industrial structures emerged. These developments continued during the Republican period, leading to a multilayered accumulation in the port area. Besides stores and depots, major buildings include the Gas Factory (19th century), Electricity Factory (1928), Tile Factory (late 19th/early 20th century), Tariş Alcohol Factory (1895, 1908, 1954), Flour Factories (1924), Şark Industrial Factory (20th century), and Sümerbank Fabric Printing Factory [49].

According to the 1925 Danger Plan, with the establishment of the Republic, area district covering the area from Alsancak railway station to Mersinli, known as Daraağacı, was declared an industrial zone while construction for the port to be opened in 1959 also started [50].

In 1953, Kemal Ahmet Aru, Emin Canpolat, and Gündüz Ödes approved and implemented the İzmir city plan. Within the plan, Alsancak port expanded its function as a trade port and expanded towards Halkapınar and Salhane by preserving the industrial facilities to the south of the port, which created Izmir's present-day urban texture [51], [48].

Even though the port was supposed to be retrofitted under the 1989 Revision Construction Plan, the region was not fully transformed, so an international design competition for the region was launched in

2001. In 2003, the New City Center Master Plan was declared the competition winner, which defined the boundaries of the area.

Izmir port hinterland covers the area between Liman Road and Şehitler Road, which currently run parallel to the port.

According to the New City Center Master Plan Report of 2003, the area is triangular, bordered by Alsancak port in the north, Alsancak railway station and facilities in the west, and Meles Creek and Mürselpaşa Boulevard to the southeast [48].

This area has very few housing units but many industrial buildings in large plots. In particular, the Gas Factory, Şark Industry, Sümerbank Fabric Printing Factory, and the Electricity Factory are considered to have industrial heritage value among the many historical buildings. Accordingly, these buildings were categorized as Cultural and Natural Properties and listed for preservation under the order 7003, dated 08.01.1998, by Izmir First Cultural and Natural Heritage Preservation Board [48].

MATERIAL (IZMIR HISTORICAL COAL GAS CULTURAL CENTER)

The transformation of İzmir Historical Gas Factory' to 'İzmir Historical Coal Gas Cultural Center' is one of the transformation projects for the city as part of the functional restoration project in the İzmir Port Hinterland Area. Providing a public service as a cultural center strengthens its connection with the city. Thus, without requiring any membership or ownership, it has become part of living history that brings together individuals from every part of the city, which has given the settlement important value in the city.

The agreement to construct the coal gas factory (Fig. 2.1.a, b, Fig. 2.2) was signed by Morhais in 1856 to provide İzmir with gas-powered lighting. However, following the death of Morchais, a journalist from Istanbul, Edwards, started its construction on a 22,000 m^2 plot in 1862. By 1864, the streets were illuminated by gas, firstly in Levantine and other minority residential districts, followed by Bornova and Karşıyaka. Finally, it reached the city's Turkish districts [52]. As the population grew, the number of gaslights increased from 600 to 3,000 and additional buildings were constructed. However, by the 1900s, electricity had become a cheaper illumination source, so it has decided to use gas just for heating instead of illumination. After losing its function, the coal gas complex closed on 24 October, 1994 [49].

Fig. 1(a): View of the site, the old entrance of İzmir Historical Gas Factory - R. Bayam Archive [49].

(b) The status of the originalfunction of the foundry and bakeries - R. Bayam Archieve [49].

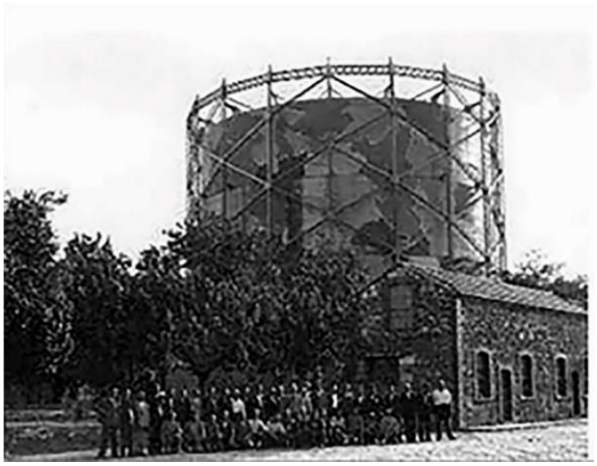

Fig 2: Photograph taken in front of the gasometer and staff building - Apikam Archieve [49].

In 1995, some of the coal gas production equipment was moved to the Rahmi Koç Museum of İstanbul. The complex, which was used as a repair and waiting point for ESHOT (Public Transportation Service of Izmir Municipality) around 2000, faced some deterioration in its features, such as the detachment of the gasmeter, closure of the water drill, removal of the coal-carrying rails, and planing landscape. This made it very difficult to follow the production process.

Finally, in 2003, it was proposed to convert the complex into a cultural and entertainment center. In accordance with the decision of İzmir Municipality, the complex began its new function as a cultural center in 2009.

METHODS

Evaluating perceptions of historical buildings in a dynamic urban context is clearly a complex and challenging process, which necessitates a holistic approach [53]; [54] using extensive valid data from various databases. Thus, a qualitative method was used in this study based on the following conceptual framework.

To determine the conceptual framework, the literature was reviewed through a comprehensive search and the data found were classified into subjects. In line with the study's aims, the data was analyzed and synthesized. This refined data provided the theoretical framework of the study.

Besides the data from the literature, the study used on-site observations and structured questionnaires to conduct a postoccupancy evaluation.

The literature review fell into three main subjects: perception theory, history of the gas factory and surrounding area, and social identity of cities.

Reasons for selection of the material (İzmir Historical Coal Gas Cultural Center):

- While the settlement was originally designed mainly for the use of machinery for its function of gasoline production, it now serves as a cultural center for intensive human use.
- As a cultural center, it currently appeals to many different groups.
- It now functions as a cultural center located between Karsiyaka, Bornova, Basmane, and Alsancak districts,
- As a port city, it is important for İzmir to exploit its great touristic and commercial potential.
- Given its visibility and accessibility, the site can be a valuable new landmark for the city.

The steps of the study can be summarized as follows:

- The conceptual and theoretical framework was determined by examining previous relevant studies.
- A second literature review was conducted regarding the area to be surveyed for functionally transformed industrial structures.

- The second phase of data collection involved the following steps.
- Preparing and organizing data collection tools consisting of preparation and user surveys for observation
- Identification of the research universe
- Determination of the research areas to be observed by selecting the appropriate sampling method
- Determining the target group to be surveyed
- Pre-observation studies and trial surveys to ensure that data collection tools were feasible
- Analysis of the information obtained from the questionnaires and observations • Providing suggestions by evaluating the obtained findings

A. On-site observations

Before starting on-site observations, a deductive observation form was prepared running from general to specific based on the data discovered in the literature review. To obtain detailed and classifiable information, the form was structured in two main parts: 'perceptions in the city' and 'perceptions of the complex's landscape'. Notes and photographs were also used as part of the on-site observations.

B. Questionnaire

Structured questionnaires were considered as a valid, feasible, and rapid method for evaluating users' opinions about the area without giving their personal details The most important criterion to be considered when determining the user group to answer the questionnaire was to identify users with enough knowledge to answer the questions. Because the questions were not very clear for users from outside design disciplines, it was thought that using the survey with such users could produce misleading results. After a second screening was conducted within the design disciplines, it was decided that the questionnaire should only be applied to users who had received or were receiving training in space design disciplines. Therefore, the final survey was used with graduate students from any of the space design disciplines or third or fourth-year undergraduate students who had at least once visited the campus of the discipline.

As for the on-site observations, the questionnaire had two main parts: 'perceptions in the city' and 'visual perceptions of the complex's landscape'. To be clear and help remind users, the questions were paired with relevant photographs from the site. To manage the survey period effectively without using too much of the participants' time, the questionnaire was presented online through survey software.

Random sampling was used to select participants for the questionnaire. The number of participants was calculated according to T-test level of significance (Table 1).

T test is a statistical method to assess whether the mean value of the data from an independent sample which follows a normal distribution is consistent with or depart significantly from the mean value of a null hypothesis, or whether the difference between the means of two independent samples which follow a normal distribution are statistically significant … T-test is suitable for the small samples (such as $n < 30$), in which the statistics follow a normal distribution but the standard deviation (SD) of population is unknown [55].

The term level of significance indicates the possibility that the selected random sample does not represent the population, whereby a lower level of significance indicates more confidence that the researcher could replicate the results. Significance levels are mostly given as 0.05 and 0.01 levels. The former means that 95 out of 100 times the same results will be gained when reapplying this test with this population. The latter means that 99 out of 100 times the same results will be gained [56]. Table 1. The t-test formula for determining the number of questionnaires required

$$n = \frac{t^2 . p . q}{E2}$$

$$n = \frac{(1.96)^2 (0.05)\ (0.09)}{(0.05)2}$$

T = ratio of the mean of the difference to the standard error of the difference

E = standard error of a random variable

P = probability value

q (1-p) = probability that the event does not occur

The questionnaire used multiple choice items, yes-no, 3-point Likert scale, and open-ended items. The questionnaire data were analyzed using the Pearson Chi-Square test and the Cross Test to determine whether the distributions of the categorical variables differed significantly from each other.

RESULTS

To evaluate the 'readability' of the gas plant site, users were asked first whether it was visible from the outside, with 53% finding it partially visible, 42% finding it visible, and 5% not visible. Of the participants who found it visible, 65% could see it easily in the daytime while 55% could easily see it at night (p=0.002), with 36% of those who found the settlement visible in the daytime also easily seeing it at night (p=0.04). Finally, only 7% of those who could easily see the site from the outside could perceive 'the whole' from the outside (p=0.012).

To evaluate the 'accessibility' of the settlement, participants were asked whether it was suitable for pedestrian access, with

24% agreeing, 52% partially agreeing, and 24% disagreeing. Regarding private vehicles, 79% said it was accessible, 15% said yes but with difficulty, while 7% gave no response. For public transport accessibility, 73% said yes, 23% said yes but hard, while 5% said it was inaccessible. The participants' preferred transport was cars (30%), buses (20%), İzmir Suburb (42%), walking (6%), and taxis (3%).

The pedestrian connection to Alsancak train station to the northwest was evaluated as partially inadequate by 44%, inadequate by 42%, and inadequate by 14% of users. Pedestrian connection to İzmir port to the north was evaluated as inadequate by 59%, partially adequate by 33%, and adequate by 8% of the users.

To assess the 'use preference's, participants were first asked how often they used the complex, with 52% using it once a year, 47% once every few years, and 2% once or more a month. No participants visited once a week or more. Regarding purpose of use, 65% came for special events, 21% for other events, 6% for food, rest, and chat, and 1% for business meetings. Regarding who they came with, 59% came with friends, 21% with colleagues, 10% with family, and 3% alone.

It was also seen that, 61% of the participants who visit the site every few years visiting here with their friends. Likewise

59% of the participants visited the site a few times a year visiting here with their friends. In contrast, the ones who visited once a month or more came alone (p=0.0003).

Regarding time of visit, 78% of the participants visited the settlement mostly during the evening hours (20:00-23:59). They preferred special day events. For the morning hours (09:00-1:55), all attendees preferred to work. These participants did not visit at any time of the day for chatting, resting, walking, or studying apart from the meal (p=0.00001).

To assess 'the connection of İzmir Historical Coal Gas Cultural Center with the past', the survey included questions about its original function. While 55% of participants stated that they knew its original function, 45% did not know. The former group mentioned production and storage facility, gas plant, factory, gas distribution center, gas fuel production center, industrial use and electricity generation, meeting the electricity needs of Izmir's homes, heating system with coal gas, heating, gas storage, or preventing the accumulation of coal dust as its original function.

Regarding the original function of the site's major steel structure (Fig. 4.1.a, b), 71% did not know its original function,

20% knew but were not sure, and 9% knew. Participants in the first group described the structure as a gas tank, gas boiler platform, old gas tank carrier, production plant, gas measurement, or gas storage area.

Fig 3 (a): External view of the site's steel structure **(b)** Internal view of the site's steel structure (photos taken by the author)

To preserve the memory of the complex's original function, 31% of respondents proposed models and recording a trace in the ground, 18% did not consider any application necessary, and 6% proposed reconstructing all the original complex.

To assess how the landscape is perceived, the participants were asked about their views on boundaries, wayfinding, construction density, plants, and water use.

Regarding the clarity of the distinction between pedestrian and vehicle entrances, 47% found it distinct but insufficient, 44% found it unclear, and 9% found it sufficient (Fig. 4.2.). Regarding the clarity of the boundaries between the different functions within the complex, 42% found them partially clear, 32% found them unclear, and 26% found them clear.

Fig 4: View of the pedestrian and vehicle entrance (photo taken by the author)

Regarding the effectiveness of the footpaths that provide an outside circulation and connect the buildings to each other, 50% thought they were effective, 42% thought they were effective but insufficient, and 8% thought they were ineffective (Fig. 4.3.). For wayfinding, 46% of participants preferred to use the walking routes, 19% preferred the signboards, 16% relied on officials, 4% preferred trees, and 2% preferred something else.

Fig 5: View of complex's footpaths (photo taken by the author)

Regarding the density of buildings, 73% of participants believed they occupied less than half of the total area, 15% said half of the total area, 11% could not evaluate, and 2% said more than half the total area. Participants were also asked how the spaces left between the buildings affected their view of the buildings. While 55% thought the spaces made it easy to see them, 35% thought it partially made it easy, and 11% thought it made no contribution (Fig. 4.4.).

Fig 6: General view of the complex's buildings (photo taken by the author)

To assess the effect of plant use on visual perceptions of the landscape, participants were asked whether the connection of plants (color, texture, shading, sound, etc.) was sufficient, with 56% saying inadequate, 40% saying partially satisfactory, and saying 5% adequate (Fig. 4.5.a).

Fig 7: View of plant use (photo taken by the author)

In addition to plants, participants were asked whether the connection of water (sound, cleanliness, color, reflection, stagnation, movement, or fluidity) was sufficient, with 45% saying that they did not interact with the water features, 40% saying that they had no interaction with the water features, and 15% saying that they interacted with the water features (Fig. 4.5).

Fig 8: View of water feature (photo taken by the author)

Participants were also asked about their initial feelings regarding the complex. While 44% felt curiosity, 28% felt nothing, 11% felt some other feelings, 8% had not comment, 5% felt disturbed, 3% excited, 3% happy, and 3% bored.

DISCUSSION

This study investigated perceptions of brown field sites in terms of social integration through the case of İzmir's historic preserved Gas Factory. The study tested the hypothesis that this historic area has not been sufficiently socially integrated and aimed to reveal the reasons for this situation. These reasons were classified in two layers, as defined in the introduction. The first layer comprised four factors, readability, accessibility, preference for using, and connection with the past, while the second comprised boundaries, wayfinding, construction density, plants, and water use. To understand the role of these factors, the results were classified under the following sub-topics.

Readability of İzmir Coal Gas Factory:

Under its present name of İzmir Historical Gas Cultural Center, the former factory forms one of the connection points between the very busy Alsancak, Bornova, and Karşıyaka districts. For this reason, it sees both pedestrian and vehicle traffic throughout the day, especially during the beginning and end of work hours. The density of Harbor Avenue leading north from the complex decreases its visibility at some points. While the elevated road linking Harbour Avenue towards Karsiyaka and Bornova allows the complex to be seen from above, the acoustic wall constructed to prevent air, noise, and visual pollution reduces the complex's readability (Fig. 5.1). Similarly, heavy vehicle traffic reduces pedestrian circulation and the

complex's visibility. In parallel with these site observations, just under half of the participants said that they could read the factory easily.

Fig 9: The hedge forming the complex's outside boundary (photo taken by the author)

Another factor that influences perceptions of this historic site within the city is its contrasting daytime and nighttime visibility. Specifically, non-continuous lighting weakens the homogeneous perception of the texture and shape of its facades during the night. Similarly, participants have better perceptions of it in the daytime than the night, with only 36% of participants saying they can perceive it easily in both day and night. At night, the chimney offers the most visibility from the city, since, in addition to its size and form, the chimney's façade is lit in red during the night (Fig. 5.2.).

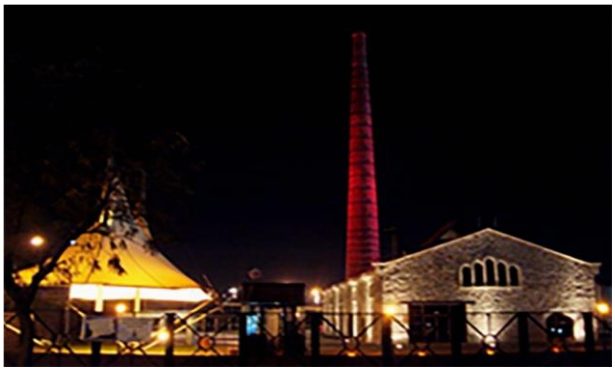

Fig 10: Outside view of the site at night (http://mapio.net/pic/p-45285908/) Accessibility of İzmir Coal Gas Factory:

The historic settlement is located within a very dense area within the city. Besides the heavy pedestrian traffic, it is greatly affected by vehicle traffic. Because the vehicle traffic impedes pedestrian access, participants mostly prefer to access the site by car instead of walking.

From the observation, pedestrian access is mostly from the western direction of Alsancak train station and bus stop.

However, safe pedestrian passage is unsafely interrupted by vehicles at several points (Fig. 5.3). Some other pedestrian routes are also difficult to use for access to the site because they are interrupted by vehicle traffic. Such factors may have caused the participants to report limited pedestrian access in the survey.

Fig 11: View of pedestrian accessibility from Alsancak train station (photo taken by the author)

Similar problems affect the site's connection to the port because vehicle traffic on the downward sloping road makes it dangerous for pedestrians wanting to reach the site from that direction. (Fig. 5.4). This

creates negative perceptions of the complex from the outside and poses a safety threat to pedestrians. Thus, participants reported 'limited access' in the survey.

Fig 12: View of pedestrian accessibility from the Port of İzmir (photo taken by the author) Usability of İzmir Coal Gas Factory:

Perceptions of urban spaces for public use are closely related to usage intensity.

Spending time here and creating memories with different functions in different areas enrich and transform the perception of these spaces. According to the information obtained from workers interviewed in the complex, resources surveyed, and observations, people visit the historical complex more often on special occasions (such as weddings, concerts, or festivals) several times a year and more often in the evenings when such events are organized. In addition to data acquired from on-site observations, the questionnaire responses revealed that nobody visits the site once a week or more while those who visit once a month tend to come alone. Commonly, visitors come just once a year or once every couple of years, generally for special events like concerts, film screenings, or wedding ceremonies. Due to the timings of such events, visitors tend to use the site at night, except for those who come for business meetings during the daytime.

Connecting İzmir Coal Gas Factory with the past Examination of the complex's exterior features showed that some parts are partially or totally preserved while others have been completely destroyed.

However, the lack of a link between the remaining parts prevents users to perceive a whole. Since they cannot understand the purposes of the remaining structures and where they were assembled users do not need to detect and perceive these preserved structures. Confirming these observations, almost none of the participants could state the factory's original function. For instance, despite its distinct vertical features, different from other buildings in the factory, most of the participants could not understand the gasometer's original function.

Establishing a connection to the site's original function not only concerns a physical transfer of industrial parts or structures from past to present. This approach it underestimates the value of such structures that represent the historical heritage of society.

On this site, it was aimed to reproduce the unpreserved parts in accordance with its original form by creating a circulation scheme that followed the factory's original function. The continuity of these parts was supposed to be established both horizontally and vertically.

In summary, the site aims to contrast the new cultural center with its original function in a dramatic way, thereby enriching the cultural value of the historic site, which is quite different from the industrial function and completely dedicated to the city.

From the evaluation of the landscape elements regarding their effects on users' perceptions, it was found that users find the borders between different functions within the site inadequate. While the shared entrance for vehicles and pedestrians is simple and readable, the border between them is not clearly perceivable. In addition, the signboards do provide appropriate wayfinding within the site. In contrast, users have a positive view of the low density of buildings in the complex, which may also make wayfinding easier. Finally, users do form adequate visual or other sense relationships with water and plant features.

CONCLUSION

The current inevitable growth of cities brings not only physical but also social and economic imbalances. The number and variety of requirements in urban life are increasing, which has created a fast life with rapid consumption curiosity in every area of life. Urban spaces are also forced to transform themselves in response to this passion for speed to get rid of the excesses but also to get rid of their meanings as well. This rapid change, as discussed in this study, means that sites originally built for industrial purposes have

been left abandoned, which separates them from their historical meanings. However, these areas may become important and valuable opportunities to preserve historical values for the present and future, and to increase social connection within the city.

Thus, it is important to increase positive perceptions of these areas by fostering their social integration with the citizens.

This study investigated three main research questions (Q1, Q2, Q3) as steps towards solving this problem. First, such sites should provide readability because changes over time and the changing dynamics of the spaces make a search constant. This search for readability allows users to understand space. Therefore, it is necessary to ensure that these areas are readable from the city, both day and night, and on foot or when passing in vehicles. These historic areas also need to be accessible and have valid functions to increase social interaction. Access to these areas should always be reliable and easy throughout the day, especially for pedestrians and by public transport. To encourage citizens to use these areas, it is necessary to create opportunities for both daytime and nighttime leisure activities.

While increasing the social interaction of these areas with both present and future citizens, it is important that they reflect the traces and the original functions of the building to preserve their historical value. To ensure this, the main goal should be to maintain an interactive environment for the site, not just to look at it. In short, it is necessary to analyze correctly the tension between changing human needs, the formal form of the proposed function, and the systematic and fixed direction of the expectations of citizens.

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