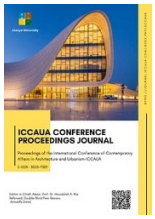

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Perceived Values of Zonguldak Central Scrubber Area as an Alternative Approach to Preservation of Industrial Heritage

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Abstract

Zonguldak, a modern industrial city in Turkey, has witnessed the highest social life and production style, urban architecture, and socio-economic relations in the 20th century. As a prominent industrial symbol in the city, the Zonguldak Central Scrubber Area has become idle with the neoliberal economy. This paper focuses on the values of this site by examining the pre- and post-industrialization status. As a methodology, conceptual and value mapping have been conducted on the data, of which both 10 semi-structured in-depth interviews with three stakeholder groups: decision-makers, site employees, and researchers and archival data. This approach presents technological, document, socio-cultural, political, aesthetic, symbolic, identity, and economic values between 1970s and 2000s. The mixed method analysis of interviews emphasizes the organic role of the stakeholders in the preservation process. The importance of the study is to reveal the multi-dimensional character of Zonguldak's industrial heritage through place-based values.

Keywords: urban preservation; industrial heritage; perceived values; conceptual mapping; value-based approach.

1. Introduction

1.1. Background, Problem Statement, and Research Gap

As an extension of globalization and neoliberal policies, contemporary urban developments have been changing the cities in terms of significant financial, social, and spatial restructuring for more than three decades. Taking into account this perspective, industrial sites, located in the city center, are seemed unaesthetic and needless owing to having enormous sizes all around the world towards contemporary urban policies (Ifko & Stokin, 2018). Hence, these areas are being destroyed due to the land demands of cities (De Nardi et al., 2021). The implementations affected not only the socio-spatial character of cities but also their financial structure. In the 21st century, the extinction of industrial sites has increased. Though preservation of the industrial heritage network is a multi-dimensional concern with its political, cultural, social, and physical dimensions, the changes in production methods over time the transformation of industrialization to de-industrialization leads to the abandonment and extinction (Fidan & Önür, 2021).

On the other hand, the conservation studies for industrial buildings started to be discussed in the Amateur Historian article of Michael Rix in 1955. In this study, he proposed the term industrial archeology as the trace of production events that occurred in human history. The achievement of this article produced the Industrial Monuments Survey to define the industrial heritage and the method to assess it in 1963. At the beginning of the 20th century, the declaration of the Nizhny Tagil Charter in 2003 and the International Day for Monuments and Sites organized by ICOMOS under the industrial heritage concept in 2006 brought industrial sites into prominence in terms of values.

Today, it is known that industrial areas are the evidence of the technical, economic, and social changes in society and the city over time (Kara Yüksel & Cihan, 2025; Xie, 2015). Also, tangible and intangible assets of built heritage infuse stakeholders' sense of belonging to a broader community (Akkar Ercan, 2017). As an extension of this perspective, international platforms highlight the importance of understanding the different perspectives of stakeholders. For instance, many ICOMOS meetings and studies bring the different parties and individuals together to set new decisions and strategies about conservation. With these meetings, both value-based approaches in industrial sites have been adopted and also the educational strength of industrial heritage for the next generations would be understood.

For Türkiye, the Ankara Maltepe Gas and Electric Factory opened the industrial heritage discussions with the archeology term in the 1990s (Saner, 2012). Besides, SantralİstanbulinSilahtarağa Campus of Bilgi University proves a change of

the Ottoman Empire's first urban scale power plant into a cultural facility with a museum project. Another example is the faculty building of Kadir Has University in the Cibali Campus, which exhibits a well-defined transformation of an Ottoman Tobacco Factory into an education facility. Despite such examples, the different expectations of the authorities and various parts of society still lead to the destruction problems for industrial heritage in Türkiye. The lack of legislation or organization and common ground for conservation methods peculiar to industrial heritage makes the preservation of the value of industrial heritage hard. Also, Türkiye is still in the process of understanding and documenting the industrial heritage, and constructing a theoretical structure (Fidan & Önür, 2021). Besides, the conservation studies made in heritage sites focus only on the plot scale while there is a need for a region-based approach (Fidan & Önür, 2021). The lack of a value-based conservation model is another reflection of the Turkish scenario.

1.2. Objectives and Hypothesis

The existence of an industrial object or site is formed in time by depending on its surrounding environment or locality and its community or society. Locality consists of the historical, social, economic, and planning contexts in the site and urban scale while community variables frame the actors or related users. The former refers to history, while the latter represents directly perceived notions of the present. For both, examining the object is essential within its context when the conservation of the heritage object becomes a matter since the intricate interactions of elements not only form the physical environment but also shape the perceived asset that occurs over time (Fouseki et al., 2019; Fredheim & Khalaf, 2016).

In this study, values were attributed to the combination of local and personal variables from world to building scales. This explained value relation can be valid for the industrial heritage sites when considering the process of deindustrialization and its effects on society and the built environment after the 1960s for the world and 1980s in Türkiye. Also, stakeholders can take precautions by strengthening the potential relations of values (Mason, 2002). From this point of view, this paper focuses on the Zonguldak Central Scrubber Area[1] and its perceived values by stakeholders through mapping techniques. It aims to understand the value relationships among diverse actors within their political, cultural, social, and physical dimensions and to document the destruction process of the studied site. The main research question is how to address the perception of industrial heritage value within the meaning of the built environment by using mapping techniques.

1.3. Significance and Structure of the Paper

Taking the background information into account, Zonguldak as a modern industrial city, provides a clear case of the industrial conservation problem because of the contradictions between local and central authorities. Though the city has witnessed a vibrant social life and evolving production style, urban architecture, and socio-economic relations in the 20th century, Central Scrubber Area in the city is at risk of total demolition and being lost. Even if the site was registered as protected, it has decayed since 2006, and there is a lack of a management plan for the future. The value relations between different site actors are hidden and have not been studied before. Hence, revealing the values and exploring different perspectives of parties becomes an incentive and a preferable approach to preparing a substructure of common ground among stakeholders for future studies.

In this paper, Zonguldak City and its central scrubber area were studied with a mixed method and analyzed by mapping techniques. While the site survey was conducted in 2019 as a part of the urban design master thesis, the output of the research remains relevant and valid today. In examining the site today, it would be seen that decision-makers are still discussing the future of the site and the transformation of the city[2]. Moreover, both the physical and cultural conditions of the site sustain its imprecise conservation statute and remain a current discussion among institutions. In light of this information, the study will be divided into the following parts; methodology, case study, and conclusion.

2. Materials and Methods

2.1. Value-Based Methodology

For the value-based approach, the main question is what makes the site significant. This approach takes the heritage perception of the community based on preservation and tries to establish 'a lingua franca' or common language among different interests and parties (Mason, 2002). Assessment strategies are aligned with this perspective. For instance, the three-stage value assessment proposes identifying all the values of the heritage in question, describing them, and integrating and ranking the different, sometimes conflicting values (Mason, 2002). Collaborations can be encouraged when there are similarities among values. In the construction of a value set, the definition of general information of value terms plays an essential role in the analysis stage. Riegl's (1903) and Mason's (2002) approaches provide values to evaluate and document according to their individual and time-based perceptions. By using them, setting the value terms for industrial heritage in Zonguldak was another strategy. Hence, technical or technological, document, sociocultural, political, aesthetic, symbolic, identity, the economic values were selected for the case study (Table 2.1.). Before reviewing them, it would be beneficial to define the terms to analyze them efficiently.

For ***technical or technological value***, Mason (2002) associates it with having the latest innovations, better living conditions, technological structures, new products, and ways of production techniques, which are key codes to be investigated. Specific to region or age construction techniques or machines, symbolic turning point statistical data, and significant policies that changed the faith of building or production rate determine the ***documentary value*** (Mason, 2002). This documentation points out the industrial heritage's unique requirements. ***Sociocultural value*** represents the

[1] Scrubber means yıkama, lavuar, lavvar in Turkish.

[2] "Urban Transformation Summit" organized by Zonguldak Chamber of Commerce and Industry in 2024. http://www.zonguldak.gov.tr/cevre-sehircilik-ve-iklim-degisikligi-bakani-sn-mehmet-ozhaseki-ilimizde

social positions and cultural backgrounds of individuals or parties (Mason, 2002) as well as specific events in the physical environment. ***Political value*** relates to the reflection of civic or social life decisions by decision-makers on the physical environment (Mason, 2002). Associated terms with ***aesthetic value*** are style, beauty, and art, which can guide us to determine what aesthetic is (Mason, 2002). Besides physical appearance, the intangible qualities define the value of aesthetics like space, mass, volume, time, movement, color, light, smell, sound, tactility, kinesthesia, pattern, order, information, and meaning (Zukin, 1995). The representation of a notion, individual, event, period or party, and the interpretation of the ideology of one period or situation forms ***the symbolic value*** (Rapoport, 1982). In another way, in the process of comprehension of the urban form and history, symbols of city elements help to reveal the spiritual meanings of the community (McMillan & Chavis, 1986). ***Identity value*** relates to place since identity includes physical settings, activities, and meanings (Akkar Ercan, 2017). Likewise, it investigates meanings of physical space, space-user interaction, distinguishing a situation or thing, similar instances, and social-cultural-physical environment. As last, ***economic value*** can be related to both the purpose and use of the building, and the strength for gaining money from the site.

Table 2.1. The code list for the value set

Economic Value	**Technical or Technological Value**	**Identity Value**	**Aesthetic Value**
- financially **profitable** for the parties, owner, and administrator. **Sustain** monetarily. - new **profits** to the public. -**marketing**. -**purpose** and (potential) **use** of a building.	- latest **innovations**. - better living **conditions**. - technological **structures**. - **effect** on ethics, education, and lifestyle of its society. - new **products**. - **way of production**	- physical **settings**, **activities,** and **meanings**. - tangible **space**. - space - user **interaction**. - distinguishing a **situation** or **thing**. - similar **instances**. - social-cultural-physical **environment**.	- **style**, **beauty,** and **art**. - physical **appearance**. - space, mass, volume, time, movement, color, light, smell, sound, tactility, kinesthesia, pattern, order, information, and meaning. - new **technology**. - distinct **view**.
Political Value	**Symbolic Value**	**Sociocultural Value**	**Document Value**
- civic/social life **decisions**. - governmental **behaviors**. - civil **activities** or **reactions**.	- **representation** of a notion, individual, event, period, or party. - **interpretation** of ideology of one period or situation remnants.	- social **position**. - cultural **background**. - changing **factors** in life.	- **specific** production/construction techniques, material, history, art, daily life, etc.

2.2. Research Method

With this research, perceived and existing technological, document, socio-cultural, political, aesthetic, symbolic, identity and economic values of the Zonguldak Central Scrubber Area between 1970s and 2000s were investigated. For the time boundary, the analysis focused on three key decades tied to the history of the facility and the city: the 1970s (peak production), 1980s (decline), and 2000s (continued downturn). For the data collection and analysis process, the comparative research of archival data with the interview and the mixed-method research of interviews were applied to observe the values of the site with the Zonguldak city. The study also included taking photographs, archival research, interviews, value-based history, and analysis of values by mapping.

Moreover, the concept of space and the value-based approach defined the classification of values such as existing and perceived. The former one, as being related to organic space, emerged from the archival data of the site like technical drawings and reports. On the other hand, the latter which represented the user experiences and perceptions was extracted from the site survey which was conducted through in-depth interviews, and photographs. The perceived value represented the perceptual and symbolic space through in-depth interviews done by authorities, researchers, and past users. Also, the boundaries and relations of actors specified the discrepancies and similarities of perceptions in setting the new values and proposing the future existence of the site. The main goal of the meetings was to understand the experienced history of the site in the defined contexts mentioned before and to analyze the discrepancies and compatibilities between archival and site surveys. The site surveys occurred at different intervals through ten in total semi-structured in-depth interviews over two months in 2019 while the archival information is up to date.

After the site survey, a thematic analysis method was applied with the inductive perspective through line-by-line coding. In this point, Braun & Clarke propose a six-stage strategy, which guides the useful framework for in-depth interviews (as cited in Maguire & Delahunt, 2017). These are, respectively, familiarizing with the data, generating initial codes, searching for, reviewing, defining themes, and writing up. As well as this method, Taba (1962) and Ornstein & Hunkins (1998) (as cited in Sherborne, 2014) propose another strategy through the implementation of concept mapping. Respectively, these stages are specification and organization of content according to technical, visual, communication and social aspects (keywords, codes, ideas, subthemes, sequence); selection and organization of technical perception (collective and individual or group idea); evaluation of the resulting interview (Sherborne, 2014). By combining and adapting these two stage-based strategies, the obtained data from the site survey was scrutinized in a series of stages respectively;

- collecting data,
- coding the information according to values and context
- categorizing into themes and subthemes,
- deducing the links and ideas.

In this way, not only a proper investigation of interview data has been achieved but also a clear understanding of findings could be visualized. The mixed-method research produces the concept and value maps of Zonguldak's central scrubber and city. The conceptual and perceived value maps present the mixed-method research outcome by focusing on the interviews. In the conceptual mapping, there are two different outcomes, which are a comparison of pre/after interview and city/site scale-based revealed values.

2.2.1. Constructing The Interview

In the design of the interview, these periods structured interview questions and value assessments. The questions consisted of five sections: (1) demographical information of the attendant, (2) Zonguldak city, (3) the surrounding environment, (4) the site, and (5) general evaluation questions. The design of questions aimed to explore the previously defined eight perceived values for the Zonguldak case (Table 2.1). First, ***demography questions*** provided personal data, which helped to classify the profile of attendants and to understand the background information of the participants. Second, the A-type questions about ***Zonguldak City*** revealed the experienced social, economic, and cultural life of individuals. They could be explored also how Zonguldak's identity, economy, culture, and urban life have been shaped by coal mining, as well as the changes and continuities in the city's social and physical landscape over time. Third, the surrounding environment questions aimed to exhibit the perceived data about the ***relations among harbor, scrubber, and railway***. These B-type questions tried to understand the historical and functional relationship between Zonguldak's port, scrubber, and railway, as well as their impact on the city's urban and economic development over time.

Fourth, the site, ***central scrubber***, there were specific questions for participant groups. C#A type of questions aimed to understand the strategic vision, past and present evaluations, and emotional perspectives of decision-makers regarding the Lavuar (coal washing plant), including its operational history, physical identity, and current significance. C#B type questions purposed to explore the working conditions, daily routines, social life, and emotional significance of the Central Lavuar (coal washing plant) for its former workers, as well as their perspectives on its historical and present role in Zonguldak. The purpose of C#C type questions was to examine researchers' studies on the Lavuar (coal washing plant), assessing their objectives, impacts, and perspectives on the site's historical transformation, current state, and potential future significance within Zonguldak's urban context. In the final section, the personal position of the interviewee about the situation of Central Scrubber and City helped to clarify and summarize with ***general evaluation questions***.

In the determination of stakeholder groups, Harrison (2013) proposes archeologists, practitioners, state officials, local stakeholders, and academics, while Bandarin & Oers (2014) associate governments, local authorities, public service providers and the private sector, international organizations, and national/international non-governmental organizations. By referencing them, the profile of the attendants was composed of three categories which were site workers or employees, researchers experts of the city and the site, and decision-makers (Table 2.2). The groups were decision-makers (a01, a02) who had substantial power to shape the site's future, site workers (b01, b02, b03) who studied during the last active period of the facility, and researchers (c01, c02, c03, c04, c05) who had a direct investigation on the site.

Table 2.2. The general information about interviews.

Interview Type: semi-structured in-depth interview
Interview Time and Form: 8 face-to-face interviews in Zonguldak within 5 days and 2 e-mail interviews
Interview Duration: 30 minutes to 1 hour
Number of Attendants: 10
Profiles of Attendants: 2 decision-makers (a01, a02), 3 site workers (b01, b02, b03), 5 researchers (c01, c02, c03, c04, c05)
Projected Site Relation Year: 1970s, 1980s, 2000s
City Experience: more than 10 years (partially or uninterrupted)
Question Types and Sections: Open-ended questions with Demography, Zonguldak City, Surrounding Environment, Site Sections
Projected Values: technical or technological, document, sociocultural, political, aesthetic, symbolic, identity, economic
Analysis Type: mixed method research
Analysis Strategy: thematic concept mapping, value mapping
Analysis technique: both inductive (through line-by-line coding) and open coding technique

Decision-makers, one architect in Zonguldak Municipality (a01) and an urban planner with a master's degree in Turkish Hard Coal Institution (TTK) (a02), studied for years in their institutions. Site workers (b01, b02, b03) were one operation mining engineer, one last manager (formerly electrical engineer), and one retired supervisor mining engineer. Researchers were from various institutions like an architect from TTK and ZOKEV (c01), a local writer and retired mining engineer from TTK (c02), a retired mining worker from TTK and one of the founders of ZOKEV as well as graduated from two years apprentice school of EKİ (c03), and mining engineers from Bülent Ecevit University (c04, c05). Also, the researchers (c01, c02) contribute to current heritage studies such as the "Urban Transformation Summit" organized by the Zonguldak Chamber of Commerce and Industry in 2024.

2.2.2. Process, Procedures and Limitations

For the qualitative nature of the interview, balancing internal validity becomes essential. In this point, Krefting (1991) proposes two principles for the role of the interviewer, naturalistic behavior (influenced by physical, socio-cultural, and psychological environment), and observed behavior by the investigator (subjective meanings and perceptions). In the field, first, the research title, context, and flow of interviews were introduced. The use type of personal information of

the interviewee was explained. In the end, the talk was concluded kindly. All face-to-face interviews were audio-recorded.

The triangulation strategy which means asking similar information in different questions and different ways, provides the trustworthiness of answers (Krefting, 1991; Lincoln & Guba as cited in Hsieh & Shannon, 2005). For instance, the order of questions changed spontaneously to protect the neutral tone and fluency. In addition, specifying the target group, duration, question tips, and applying interviews to a different person is essential to define group limits. For this, keeping the duration of the meeting from thirty minutes to one hour at the beginning of the meeting was the strategy. Besides, the information provided by the attendant should be compatible with other responses and archival surveys. After describing the differences and similarities of actors and the changing values within time by value-actor relation, the mapping analysis presented the outcome of the value-based study.

2.4. Data Analysis

The decoding of each answer is based on the guideline of value definitions (Table 2.1). However, the context of the sentence defines the emerged value of the answer. So, it can be said that there is no direct selection and matching of keywords. While coding the value terms through analysis, it was fundamental to understand the meaning of the keyword within the position of the sentence and paragraph (Figure 2.1). After the highlighting mentioned or not value terms for each question and its type, a critical analysis of the interview can be followed. The result of this step provides the difference between practice and design for future studies. The idea of diagrams is based on the strategic background of mapping studies (Sepe, 2013; Graafland, 2010).

RED: though not aimed to reveal but mentioned in answer **BOLD BLACK: aimed to reveal and mentioned in answer** BLACK: aimed to reveal but not mentioned in answer								**A1. Kömür olmasaydı Zonguldak nasıl bir şehir olabilirdi? Ya da Zonguldak'ın ekonomik ve kültürel açıdan kömür kadar güçlü olduğunu düşündüğünüz bir başka yönü var mıdır?** SYMBOLIC ECONOMIC POLITIC IDENTITY SOCIOCULTURAL	**A2. Zonguldak insanı ve kenti için önemli olduğunu düşündüğünüz en dikkat çekici kamusal yapı ya da alan nedir? Neden?** POLICY IDENTITY AESTHETIC SYMBOLIC
PRTCPNT	BIRTH YEAR	CITY	CITY YEAR	OCCP	WORK YEAR	ACTOR POSITION	ACTIONS	A1	A2
b01	In	In		ME	1991-2006	CENTRAL SCRUBBER	last operation engineer	**Kömür olmasaydı Zonguldak olmazdı** zaten Zonguldak kömüre bağlı olmadan önce Kastamonu'ya bağlı bir köydür kömürün bulunmasından sonra Zonguldak'ta bir gelişim oluyor yani 1848 den sonra kömürden sonra yabancılar giriyor yabancı şirketler geliyor cumhuriyetten sonra devletin kurduğu işletmeler yürüttü. Yani geriye baktığımızda yok gibi gözüküyor ama tabii Bunu zaman gösterir yani Burası bir **liman şehri olabilirdi** ya da başka bir şey olabilirdi Bunu bilemeyiz ama Zonguldak'ın bugüne kadar gelmesi kömüre bağlı tamamen kömür üstüne gelişmiş cumhuriyetten sonra Ereğli kömür işletmeleri kurulmuş Fransızların ellerindeki sahalar devletleştirilmiş. Sonra Zonguldak'ta Ereğli Kömür İşletmeleri devlet olmuştur. yani nerenin ne **ihtiyacı varsa** **Kömür İşletmeleri hem iş vermiş insanlara, sadece Zonguldak halkına değil Bütün Türkiye'ye vermiş** **hemen hemen her bölgeden Her ilden insan vardır. Değişik bir demografik yapısı oluşmuş.**	Ben gitmedim Çünkü bizim zamanımızda kalmadı zamanında işletme çalışmaya başladıktan sonra **Başçavuş okulları** olarak açılmış lar sonradan maden mektebine dönmüş oradan çıkanlar Ocaklar'da **Yeraltında Çalışan işçileri sevk ve idare etmesi için bizim baş çavuş dediğimiz Şef yetiştiriyor** ama çok donanımlı Ve gerçekten **iyi eğitim veriyorlar sonradan buradan çıkanlar Mühendislik seviyesini ulaşıyorlar mı** buradan mezun olup da yurtdışına Mühendislik okumaya gidenler var Benim bildiğim kadarıyla Tabii çok eski bunlar Ben itüden mezunum, zonguldaklıyım, kozlu-devrek.

Figure 2.1. One of the interview analysis scenes.

For the analysis of mapping, the colors represent the sections of the interview. The value diagrams for questions are quantified separately for each group (Figure 2.2). In this way, the differences and similarities of actors' perceptions can be evaluated. The dark black lines refer to that all group members mentioned this value, although the question did not mean to ask. The black lines explain that some interviewees mentioned this value despite the question that did not intend that value. When the question wanted to refer to one value, some parts of the group members did not mean that dark grey lines were used to explain this situation. For the light grey, it means that no one mentioned this value despite the expectation from the question. Even though the informative presentation of maps, this graphical representation is acceptable for the selected sample for this case. For future studies, it can be a reference, but the results cannot be generalized for other cases. In other words, these graphics exhibit the perception of particular people who were chosen in terms of the fact that they lived in a similar period in the city and were in different positions and relations with the site.

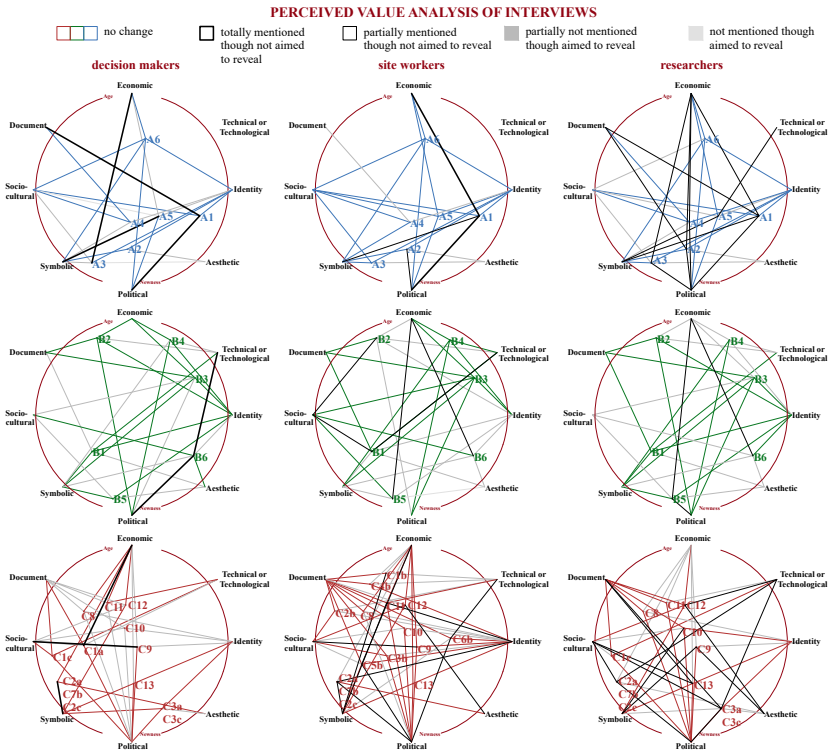

Figure 2.2. Interview question-answer matching made by the author (2019)[3].

The conceptual mapping analysis based on the sections of the interview was implemented for three topics which were city character, socio-cultural life in the city, and scrubber area. Each mentioned value term was classified based on its related stakeholder group. There were four essential criteria in this analysis (Figure 2.3);

1. Each value was considered in a period. The past symbolized old experiences and perceptions of the groups. The present explained destruction on the site with the effect of them on the views of groups. That is why the division year was selected as 2011 which was the last destruction time of the building part, coal grading unit.
2. The mentioned frequency was out of ten, considering the number of actors. It meant that the value of the term was calculated only once even the same person talked about various terms under the same value. The notion of this person was recorded as an alternative term for the description of the city. The main reason was to provide a balance among actors.
3. There was a heterogeneous group of actor distribution. The percentage of actors was based on their numbers, so there was a correction factor for each period.
4. The scale of letters presented the expression ratio among the sample group for one value. The more prominent letter referred to the highest mentioned ratio compared to other groups. If the letters were the same size, there was a homogenous amount of expression for this value. However, the group letter did not exist if no one mentioned this value.

[3] Interview question-answer matching diagram is in respect to site actors (city which is upper; surrounding environment which is middle; site which is bottom questions).

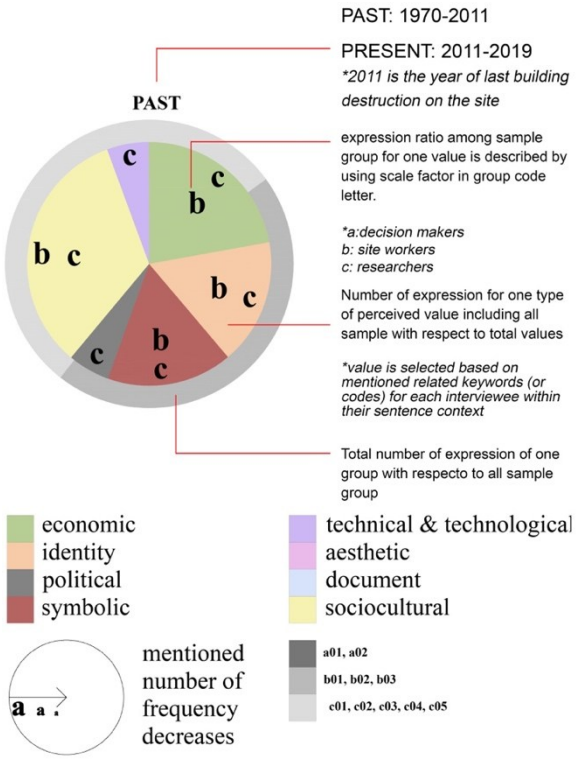

Figure 2.3. Guide map for analysis designed by author (2019).

Briefly, concept mapping is beneficial for three reasons. First, defining common values constructs a foundation between all interviews (Hassard, as cited in Sherborne, 2014). At that point, some central ideas and links among questions and values arise. Second, differences or discrepancies among individuals or groups can navigate the communities in making new decisions. Third, the evaluation of codes and relations based on the time highlights the current losses or continuities in the perception of stakeholders.

3. The Case Study

3.1. Value-Based History of The Zonguldak Central Scrubber Area and Its Mapping Analysis

Zonguldak city within the ZBK[4] coal basin region has been the critical geography in the industrial history of the country since the discovery of coal in the 19th century. During the Republican era, coal production led to a series of urban developments under state power (Zaman, 2012). The first known city plans[5] by cartographer Tevfik Çakmakçı (1924-1926), the establishment of Ereğli Coals Enterprise (EKİ) in the 1940s, and the construction of the central scrubber[6] by the English Simon-Carver Company in 1953 were the extension of improvements. Particularly, the holistic design of the Central Coal Washery Facility related to the railway lines, harbor, and the Fevkani Bridge becomes this area socio-economically and socio-spatially important factor in the history of the city. In light of this, the value typology of the site needs to be examined with the comparative analysis of archival information and stakeholder perceptions.

As the primary source, the Archives of TTK, Municipality, and Zonguldak Chamber of Mining Engineers Branch were used as well as the personal archives of Ece Bakioğlu and Ekrem Murat Zaman. The stakeholders were decision-makers, site workers, and researchers as mentioned previously. The analysis exhibited the eight value types, technical & technological, document, sociocultural, political, aesthetic, symbolic, identity, and economic.

1. Technical and Technological Value: The site was the latest innovation when it was constructed as a knuckle jiks washing system in the city center (a02; c05, personal interviews, 2019) (Figure 3.1). The site evolved with the new sections to meet the needs. There were respectively drying unit (1960), heavy washing unit (1973) by Robert & Schaffers, TTK cargo section (1987) and filtration unit (1992) built and designed by TEK, constructed by Macar Trans-Elektro firm (TTK Archive, 2019; Didari & Kızgut, 2003; a02, 2019, personal interview). Nevertheless, the facility had lost its technological importance over time. For instance, shipping and handling were transferred to Kozlu and Kilimli due to a fall in economic gain and the old version of used technology in 1971 (TTK Archive, 2019). The flotation was deactivated in 1991, and its removal was in 2002 (Didari & Kızgut, 2003). Following them, the destruction continued until the termination of the facility in 2011.

[4] Zonguldak, Bartın, Karabük
[5] 42 plans were ordered by Worker's Bank.
[6] With the order of EKİ, Asım Kömürcüoğlu designed 1/1000 & 1/2000 city plans.

Figure 3.1. Ideal presentation of the case site designed by the author (2019).[7]

2. Document Value: Not only the volume but also the steel construction with brickwork material quality of the main building became the remnants valuable in the memories of users (b01, c02, c04, 2019, personal interviews). In addition, the planning scenario of the city center has evolved with the relation between scrubber, harbor, and railway by starting from drawings of Çakmakçı (1924-1926), documenting the peak and decline. Furthermore, the scrubber had unique characteristics that affected the social life and the working hours in the facility. For instance, there were three shifts with highly qualified personnel; (1) 7.30 am-3.30 pm for usual work, (2) 3.30 pm-8.00 pm for maintenance, and (3) 8.00 pm-6.00 am for night work (b01, 2019, personal interview; Didari & Kızgut, 2003; Istanbul Technical University, 2004) After the facility washed the last coal coming from Kozlu on 20 May 2006 (b01, 2019, personal interview), all works of the site were terminated and transferred to new mobile coal washing units, which were a new technology in Üzülmez and Kozlu. In the following months, the destruction started (13 November 2006); however, 23.000 m² area of the facility was registered with the organization of institutions on 8 December 2006. The coal grading unit, three decantation towers, and underground silo were recorded as immovable cultural values at the request of the TMMOB Chamber of Architects by Karabük Regional Council for the Protection of Cultural and Natural Heritage (Zonguldak Municipality Archive, 2019).
3. Sociocultural value: The coal character of the city and the social life in the scrubber affected the total number of coal employees in the city, which was about 40.000, which equals 10 % of the population between 1960-1975. This sectoral hegemony led to the similarities among the income levels, and accelerated the solidarity among workers and engineers (Ersoy & Şengül, 2001). For instance, community organizations such as the Mine-labor Union and TMMOB Chamber of Mining Engineers, Chamber of Commerce and Industry, Chamber of Architects, and ZOKEV[8] emerged as the reflection of community spirit, exhibiting shared emotional connection (McMillan & Chavis, 1986). These institutions are keeping alive their belongingness to the city by contributing the city planning events such as the organization of the City Dreams 3 students' competition by the TMMOB Chamber of Architects Ankara Branch. “2024 Urban Transformation Summit” organized by Zonguldak Chamber of Commerce and Industry is also a reflection of community spirit. Today, decision-makers[9] still put an effort to revitalize sociocultural life in the central scrubber area as in the other social facilities such as the Tennis club.
4. Political value has an organic relation with planning decisions. To illustrate, Zonguldak City Plans (Çakmakçı, 1924-1926) led to the profit increase by affecting the railway and harbor relations. Additionally, the city center was politically valuable with the hegemony of EKİ in the management of the facilities and decisions for constructions (Ersoy & Şengül, 2001). Later, the Zonguldak Master Plan (1971-1975) kept the political value of the scrubber in the production life. Nevertheless, the decrease in the production and manpower rates, and the damage to the services, buildings and working conditions seemed to cause the downfall of the political importance of the scrubber in the 1980s.
5. Aesthetic Value: For the active period of the site, there was dust, smoke, and mud throughout the day but the scrubber was a part of life (b02, 2019, personal interview). Today, the three decantation towers and miner’s

[7] This plan drawing shows the ideal version of the site, with all constructed units represented. Positions and areas are based on the TTK Archive, while building part names result from a comparative analysis of the İTÜ (2004) and BEÜ (2003) Reports.

[8] Zonguldak Culture and Education Foundation was established in 1995.

[9] https://www.zonguldak.bel.tr/sayfa/Lavuar%20Alanı%20Projesi%2026%20Şubat'ta%20İhale%20Edilecek/8643
http://www.zonguldak.gov.tr/cevre-sehircilik-ve-iklim-degisikligi-bakani-sn-mehmet-ozhaseki-ilimizde

monuments evoke the image of the city with the activities they remembered. Therefore, participants were dissatisfied with the present bulky and ragged appearance due to the destruction and unclear use of land (b03, 2019, personal interview). The concerns continue that transformation should be regarding public use and sociocultural activities.

6. Symbolic value: Both the train and scrubber were symbolizing the productive city and the place of work for everyone, national wealth, and coal (c04 and b02, 2019, personal interviews). After the termination of the facility, it was recorded that they were worth being seen as a nostalgia even though bulkiness and tremendous land occupation of the remnants (b02, 2019, personal interview). In brief, the expressions of memories can evoke symbolic meaning with the structures.
7. Identity value: The distinct character of the city was associated with the city of production and labor (Zukin, 1995) while the uniqueness of the site was related to composing the cityscape with its massive structure. This was also implied in the interviews by a huge mass of scrubber, and the sound of the train or other running machines (a02, 2019, personal interview). Afterward, the distinct character turned into a "smokeless chimney" with deindustrialization (Ersoy & Şengül, 2001; a01, 2019, personal interview). The number of employees decreased from 40.000 to 7.000 in 2018. Thereby, the city became the city of retirees. Furthermore, there is another tendency for the future identity such as jeo-city, university town. To illustrate, tourism-based projects like Zonguldak Jeopark and the university can bring migration to the city.
8. Economic value: According to TTK, 1970-1980 was the time interval for the highest profit increase and manpower rates for both basin field and central scrubber. The new economy regulations such as Law No. 2821 & 2822 for the field, led to a decline in the production rates by damaging the hegemony of TTK in 1982 (Ersoy & Şengül, 2001). For example, it was reported that washing 8 to 9 thousand tones of coal per day diminished to under 6 thousand after 1991 (b01, 2019, personal interview). Also, this dramatic fall can be proved by municipality records (2010) that 4389 tones of coal were entering the facility per day in 2003. In the 2000s, the central scrubber terminated its economic life and value (a02, 2019, personal interview). On the other hand, using and functioning the remnant structures for sociocultural purposes can provide financial benefits for the parties, owner, and administrator (Kara Yüksel & Cihan, 2025).

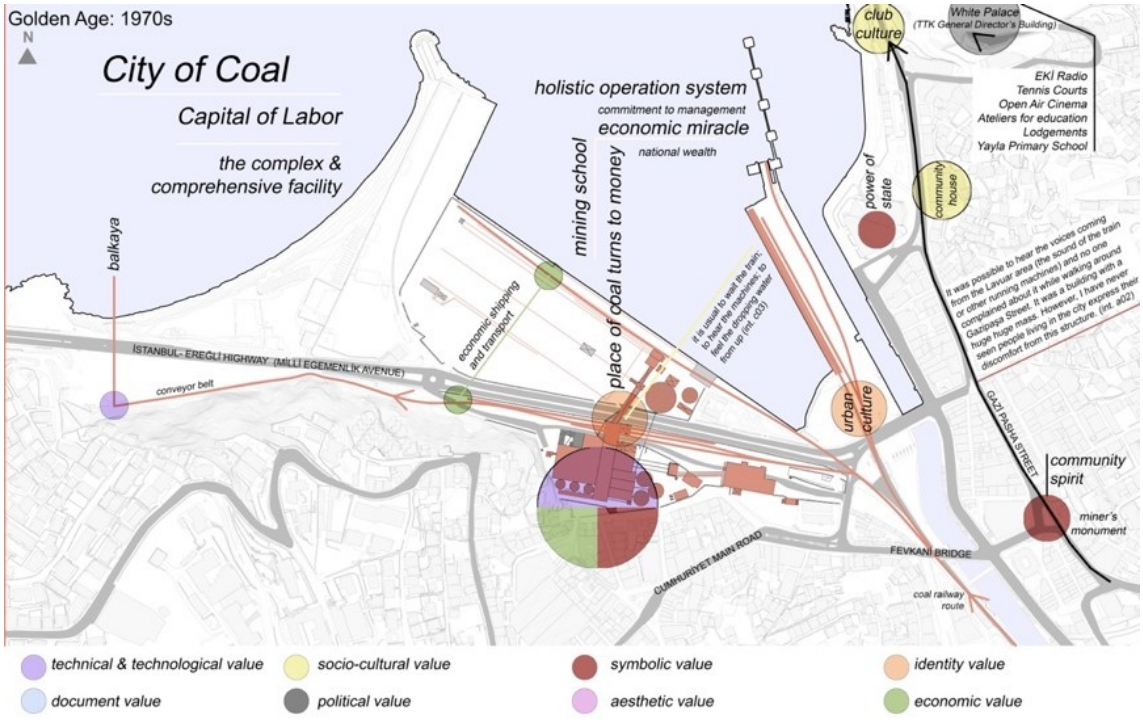

Figure 3.2. Value analysis map for golden age (2019).

In the perceived value map, the 1970s was defined as the golden age when the facility had a holistic operation system. The domination of technical or technological values turned the place of coal into an economic miracle. Besides, the Gazi Pasha Street complemented the social needs and any community activity of the sample group. While the scrubber played a vital role as the production place in the memories, the Gazi Pasha street symbolized the community spirit. For the second map, the present situation claimed that there was a loss of values, particularly for the relation of the scrubber with its environment. The sample group hardly mentioned the surrounding environment when it was asked about the present conditions and ideas. The participants preferred to talk about only scrubber, and they did not link their social life habits to the site. So, the site had no connection with the past values and today's facilities on Gazi Pasha Street. Also, the data from interviews reported that the low employee rates in the city, and the rising number of university students turned it into both a city of retirees and university.

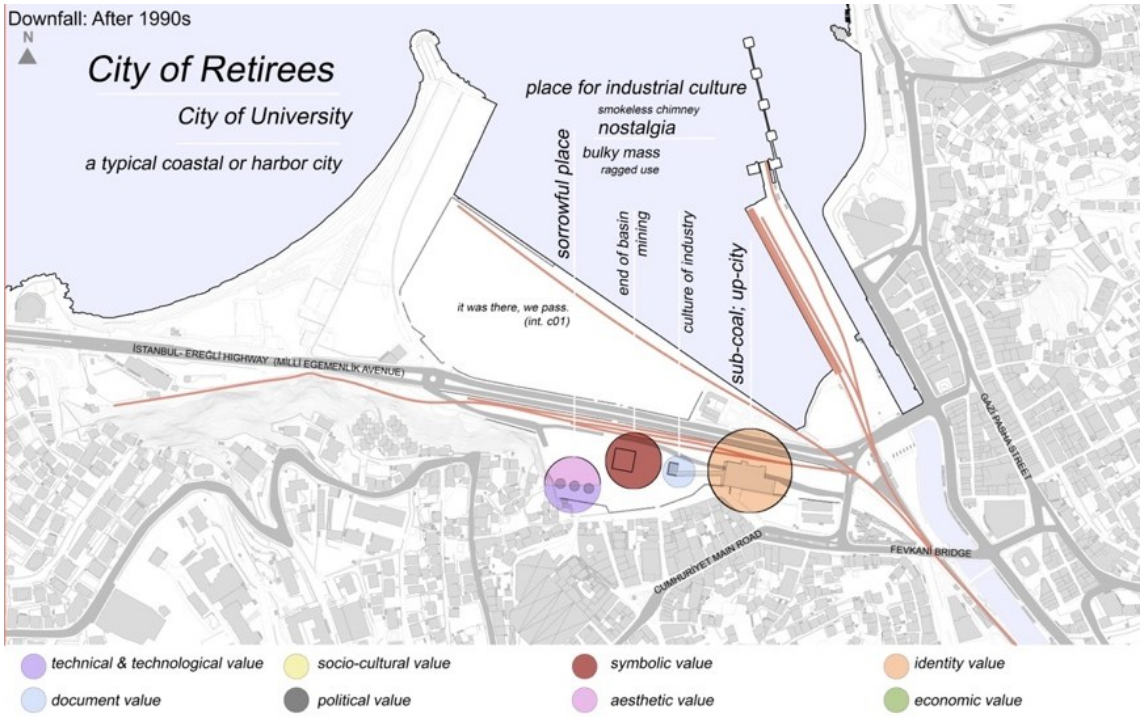

Figure 3.3. Value analysis map for downfall (2019).

3.2. Conceptual Mapping Results

The difference in conceptual mapping is the visualizing of the qualitative information with a percentile-oriented graph. There have been recent studies that have emphasized the applicability of such research methods in finding the multifaceted nature of urban identity which encompasses tangible along with intangible elements (Mansour et al., 2023). According to the systematic of the concept map, the researchers from stakeholders answered the questions in much from the economic and political perspectives (Figure 3.4). In addition, the documentation and technical values were mentioned even though the questions did not ask them, and vice versa, the attendant meant other aspects. On the other hand, three questions were asked about the city's identity, thoughts about the physical structure, and aesthetic value of the site, which aimed to reveal the aesthetic notion. However, the expressions did not show aesthetic terms. Instead of it, the other values, like identity and symbolic meanings, started to be mentioned by interviewees. This situation means that there is a need for a new way for revised methodologies in assessing perceptions of the physical environment.

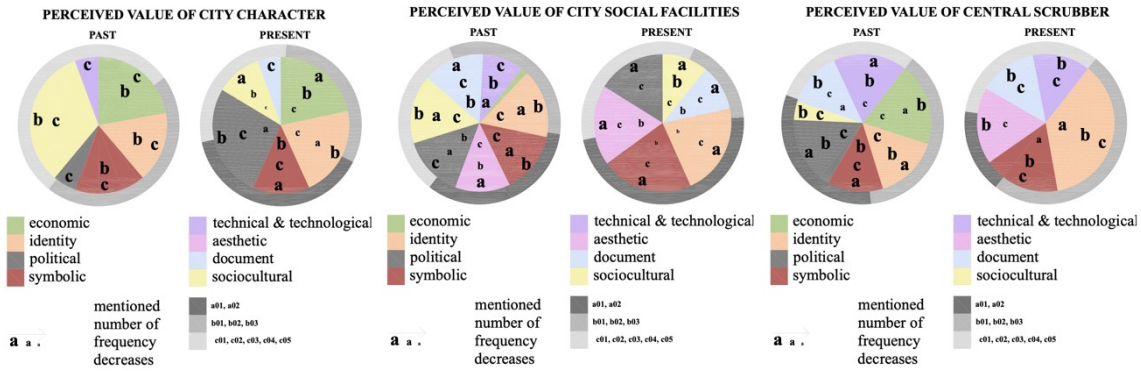

Figure 3.4. Analysis map respectively for the city character, social facilities, and central scrubber (2019).

For the city's character, coal was associated with the success of the city, which stems from technological innovations and facilities. After coal emerged, the city started to evolve. Then, the migration to the city enhanced the labor character. On the other hand, today, the need for sociocultural activities of university students caused the formation of the university character. Briefly, the city's coal character seemed like national wealth, and a mining school together with the identity of a labor and production city in the past. However, the current situation turned into a city of retirees, university, coastal, and forestry.

For the socio-cultural life, the past was explained mutually with the total values. Also, the notions varied through the content. For instance, Bahçelievler, Yayla, and Fener neighborhoods were the urbanized areas with their social facilities. In the EKİ period, Fener was highly qualified with socio-cultural activities such as open-air cinema and theatre, therefore it symbolized prestige (b02, b03, c04, 2019, personal interviews). Also, the physical structure of the Municipality Culture Center, governors building, İnönü sculpture, and miner's monument were recorded as one of the symbolic and identity values of the city in the past.

For the scrubber, although it seemed that the variety of values was much in the past, the close-down factor led to a decrease in economic and socio-cultural sustainability. The past values were defined more due to the lack of experience

in the present. On the other hand, the memories were full of values in the site decisions and workers, but the notion of researchers had in the present as its nature.

4. Discussion and Conclusion

4.1. Summary of The Key Findings

In value-based history, there were parallel perceived values with the archival data. For instance, sociocultural, identity, and symbolic values highlighted the community spirit and production culture in the city as referenced in interviews and existing data. For the scrubber area, identity, symbolic, document, and technical/technological values became crucial in the analysis. From this result, the prominent values of an industrial city or a site can be proposed as sociocultural, identity, and symbolic values. Though there were questions aiming to emerge the aesthetic value, the stakeholders did not express it much. Mansour et al. (2023) claim as well that individuals tend to functional as well as symbolic dimensions over visual attractiveness even if they are welcomed to appreciate physical and aesthetic features. On the other hand, it is known that the conservation of industrial heritage needs the effort of different stakeholders and a holistic perspective including distinct values (Fidan & Önür, 2021).

From the planning concept, Zonguldak should not be thought of as a city where it is a remarkable place for the industrial story of the whole country. Therefore, there should be a series of precautions, and comprehensive conservation needs to be generated strategy regarding the boundary of ZMADP. The research findings also stress the need for regional, rather than city-specific, approaches to industrial heritage conservation such as regarding Zonguldak, Bartın, and Karabük together. For the site scale, it was obtained that the main problems of the central coal washery area were high operating costs due to old-fashioned technology, hardships in operation conditions, and incompatible production with the coal demand (İstanbul Technical University, 2004). With deindustrialization, the decline in mining activities affected the furnaces, early retirement, and uninsured operations (Ersoy & Şengül, 2001). Afterward, workers did not tolerate social and labor conditions.

For difficulties, there was a risk of generalizing the outcome due to the limited number of attendants and groups to interviews and limited time and environment, which the researcher could contact, and which caused unrevealed information. The attendant to the interview was voluntary so it might be an unintended ignorance for some groups. Likewise, using mapping techniques offers a unique method for understanding abstract and subjective concepts but they can be difficult to read and interpret. The inherent subjectivity involved in maps is a critical issue to mislead both participants and researchers when data are inconsistent. Therefore, the comparative research with archival data prevents the misrepresentations of spatial perceptions.

4.2. Contribution

As experienced from the case study, controlling or conserving the architectural products of the 20th century becomes tough as much as cities evolve with the increasing land demands (Fiden & Önür, 2021). Similarly, the results presented that the economy policy has an organic relation with the conservation of industrial heritage sites. In light of this, the study highlighted the importance of including the perceptions of stakeholders for conserving the industrial sites by using the value-based approach as a methodological contribution. Also, the use of mapping techniques makes the study original by inclusion of perceptions. Briefly, this study underscores the challenges and opportunities in understanding and managing industrial heritage sites from a participatory aspect.

4.3. Future Research Directions

This study establishes an initial step of further studies on forming the relationship between inclusive value-based approach and creative mappings. Building on this foundation, they can investigate how values manifest in different contexts and explore ways to explore stakeholder value maps more effectively in heritage conservation efforts. The mappings, particularly GIS platforms, can be enhanced in the conservation issues to implement an inclusive conservation process. By leveraging GIS tools, future studies can explore new ways to incorporate diverse stakeholder perspectives into conservation practices, allowing for a more inclusive and comprehensive approach.

The increasing interest in the inclusive design approach stems from the crucial role of this system in the negotiation and decision-making processes. This growing interest highlights the potential for future research to expand on the inclusive design method, emphasizing its ability to foster collaboration and ensure that all voices are heard in heritage preservation discussions.

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Conflict of Interests

The Author(s) declare(s) that there is no conflict of interest.

References

a02. (2019). Personal interview about the Zonguldak Lavuar site. 08 November 2019 (email).

Akkar Ercan, M. (2017). 'Evolving' or 'lost' identity of a historic public space? The tale of

Gençlik Park in Ankara. *Journal of Urban Design, 22*(4), 520–543. https://doi.org/10.1080/13574809.2016.1256192

b01. (2019). Personal interview about the Zonguldak Lavuar site. 27 September 2019. Zonguldak.

b02. (2019). Personal interview about the Zonguldak Lavuar site. 28 September 2019. Zonguldak.

b03. (2019). Personal interview about the Zonguldak Lavuar site. 30 September 2019. Zonguldak.

Babazadeh-Asbagh, N. (2018). The adaptive reuse of Cibali Tobacco Factory, Kadir Has University. *Tourism Graduate Students Research Congress, 9*, 203–210. Famagusta, Northern Cyprus. https://dx.doi.org/10.2139/ssrn.5119737

Amen, M. A., Afara, A., & Nia, H. A. (2023). Exploring the link between street layout centrality and walkability for sustainable tourism in historical urban areas. *Urban Science, 7*(2), 67. https://doi.org/10.3390/urbansci7020067

Amen, M. A. (2022). The effects of buildings' physical characteristics on urban network centrality. *Ain Shams Engineering Journal, 13*(6), 101765. https://doi.org/10.1016/j.asej.2022.101765

Amen, M. A., & Nia, H. A. (2020). The effect of centrality values in urban gentrification development: A case study of Erbil City. *Civil Engineering and Architecture, 8*(5), 916–928. https://doi.org/10.13189/cea.2020.080519

Bakioğlu, E. (2019). Personal archive. Zonguldak.

Bandarin, F., & Van Oers, R. (2014). *The historic urban landscape: Managing heritage in an urban century*. New York: Wiley.

c01. (2019). Personal interview about the Zonguldak Lavuar site. 27 September 2019. Zonguldak.

c02. (2019). Personal interview about the Zonguldak Lavuar site. 28 September 2019. Zonguldak.

c05. (2019). Personal interview about the Zonguldak Lavuar site. 06 November 2019 (email).

Çakmakçı, T. (1924–1926). Zonguldak city map. Retrieved from the personal archive of Zaman, 2019.

De Nardi, S., Orange, H., High, S., & Koskinen-Koivisto, E. (2021). *The Routledge handbook of memory and place*. London: Routledge.

Didari, V., & Kızgut, S. (2003). Zonguldak Merkez Lavuarı'nın mevcut durumunun incelenmesi ve yapılacak iyileştirmeler ile metalurjik kok üretiminde kullanılabilir temiz kömür yıkama olanaklarının araştırılması [Investigation of the current state of Zonguldak Central Washery and research on possibilities of clean coal washing for metallurgical coke production with improvements]. Zonguldak: Zonguldak Karaelmas Üniversitesi Mühendislik Fakültesi Maden Mühendisliği Bölümü.

Ersoy, M., & Şengül, H. T. (Eds.). (2001). *Sanayisizleşme sürecinin kentsel yaşama etkileri: Zonguldak örneği* [The effects of deindustrialisation on urban life: The case of Zonguldak]. Ankara: ODTÜ.

Fidan, F., & Önür, S. (2021). Analysis of the industrial heritage in Zonguldak and recommendations for its reutilisation. *International Journal of Conservation Science, 12*(1), 177. https://ijcs.ro/issues/issue_1_2021.htm

Fouseki, K., Guttormsen, T., & Swensen, G. (Eds.). (2019). *Heritage and sustainable urban transformations: Deep cities* (1st ed.). London: Routledge. https://doi.org/10.4324/9780429462894

Fredheim, L. H., & Khalaf, M. (2016). The significance of values: Heritage value typologies re-examined. *International Journal of Heritage Studies, 22*(6), 466–481. https://doi.org/10.1080/13527258.2016.1171247

Graafland, A. (2010). *Understanding the socius through creative mapping techniques*. Delft: Delft School of Design (DSD).

Harrison, R. (2013). *Heritage: Critical approaches*. Milton Park, Abingdon: Routledge.

Hsieh, H.-F., & Shannon, S. E. (2005). Three approaches to qualitative content analysis.

Qualitative Health Research, 15(9), 1277–1288. https://doi.org/10.1177/1049732305276687

Ifko, S., & Stokin, M. (2018). *Protection and reuse of industrial heritage: Dilemmas, problems, examples*. Ljubljana: ICOMOS Slovenija.

İstanbul Technical University. (2004). Zonguldak Merkez Lavvarının performans etüdü ve kurulması düşünülen yeni lavvarların prosesi ile kuruluş yerlerinin saptanması [Performance study of Zonguldak Central Washery and determination of processes and locations of proposed new washeries]. İstanbul: İstanbul Teknik Üniversitesi Maden Fakültesi Vakfı İktisadi İşletmeleri.

Kara Yüksel, M. A., & Cihan, M. (2025). Adaptive reuse scenarios in industrial heritage sites: An investigation through Haliç Shipyards. In G. Cairns (Ed.), *Urban futures – cultural pasts: The heritage of people & place* (pp. 268–279). AMPS.

Krefting, L. (1991). Rigor in qualitative research: The assessment of trustworthiness. *American Journal of Occupational Therapy, 45*(3), 214–222. https://doi.org/10.5014/ajot.45.3.214

Maguire, M., & Delahunt, B. (2017). Doing a thematic analysis: A practical, step-by-step guide for learning and teaching scholars. *All Ireland Journal of Teaching and Learning in Higher Education (AISHE-J), 9*(3), 335.

Mansour, H. M., Alves, F. B., & da Costa, A. R. (2023). A comprehensive methodological approach for the assessment of urban identity. *Sustainability, 15*(18), 13350. https://doi.org/10.3390/su151813350

Mason, R. (2002). Assessing values in conservation planning: Methodological issues and choices. In M. de la Torre (Ed.), *Assessing the values of cultural heritage: Research report* (pp. 5–30). Los Angeles: The Getty Conservation Institute.

McMillan, D. W., & Chavis, D. M. (1986). Sense of community: A definition and theory. *Journal of Community Psychology, 14*(1), 6–23.

Rapoport, A. (1982). *The meaning of the built environment: A non-verbal communication approach*. USA: Sage.

Riegl, A. (1903). The modern cult of monuments: Its character and its origin. *Oppositions, 25* (Autumn), 21–51. (Translated and edited by K. Foster & D. Ghirardo).

Saner, M. (2012). Endüstri mirası: Kavramlar, kurumlar ve Türkiye'deki yaklaşımlar [Industrial heritage: Concepts, institutions and approaches in Turkey]. *Planlama, 2012*(1–2), 53–66.

Sepe, M. (2013). *Planning and place in the city: Mapping place identity*. London: Routledge.

Sherborne, T. (2014). Mapping the curriculum: How concept maps can improve the effectiveness of course development. In A. Okada, S. J. B. Shum, & T. Sherborne (Eds.), *Knowledge cartography: Software tools and mapping techniques* (pp. 193–207). London: Springer.

TTK Archive. (2019). Personal archive. Zonguldak.

Xie, P. F. (2015). *Industrial heritage tourism*. Bristol: Channel View Publications.

Zaman, E. M. (2012). *Zonguldak, insan mekan zaman* [Zonguldak, people space time]. Zonguldak: TMMOB Maden Mühendisleri Odası.

Zaman, E. M. (2019). Personal archive. Zonguldak.

ZMADP. (1971–1975). Master plan of Zonguldak Metropolitan Area & report of strategic plan & infrastructure system report. Engin Erkin (Head of Union of Municipalities including Zonguldak, Kilimli, Çatalağzı, Kozlu).

Zonguldak. (1967). Zonguldak il yıllığı [Zonguldak Province Yearbook]. Zonguldak.

Zonguldak Municipality. (2010). Competition report. Zonguldak.

Zonguldak Municipality Archive. (2019). Personal archive. Zonguldak.

Zukin, S. (1995). *The cultures of cities*. Oxford: Blackwell.