

T.C.
BAHCESEHIR UNIVERSITY
GRADUATE SCHOOL
THE DEPARTMENT OF ARCHITECTURE

**REIMAGINING ZÜRAFA STREET: A SPACE SYNTAX APPROACH TO
URBAN REGENERATION IN ISTANBUL'S OLDEST RED LIGHT
DISTRICT**

MASTER'S THESIS
SOMAIYEH NASROLLAHZADEH

ISTANBUL 2025

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ISTANBUL 2025



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BAHCESEHIR UNIVERSITY
GRADUATE SCHOOL

10.01.2025

MASTER THESIS APPROVAL FORM

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Student's Name and Surname:	SOMAIYEH NASROLLAHZADEH
Name Of The Thesis:	REIMAGINING ZÜRAFA STREET: A SPACE SYNTAX APPROACH TO URBAN REGENERATION IN ISTANBUL'S OLDEST RED LIGHT DISTRICT
Thesis Defense Date:	10.01.2025

This thesis has been approved by the Graduate School which has fulfilled the necessary conditions as Master thesis.

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ABSTRACT

REIMAGINING ZÜRAFA STREET: A SPACE SYNTAX APPROACH TO URBAN REGENERATION IN ISTANBUL'S OLDEST RED LIGHT DISTRICT

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Master's Program in Architecture

Supervisor: Assoc. Prof. Berna Yaylalı

January 2025, 104 pages

Metropolitan centers serve as showcases for urban visitors. As a result, the type of land use and built space is significant. The red light district is one of those urban uses located in the center of some cities around the world, which are not favorable due to their functions. The land use choice after demolition has been a matter for city administrators in recent decades. Some urban administrators are attempting to erase the notoriety of them, while others are unconcerned about the collective mind of the space. Istanbul is one of the European cities that is transforming its deteriorated neighborhoods specially in its urban centers. Zürafa Street is one of three streets that had formed the Istanbul's red light district. This street was open for approximately two centuries before being closed because of the Corona pandemic. Since the destruction of brothels on this street in 2021, no decision has been made to renovate it. As a result, during the last three years, this area has turned to an urban void despite being frequently visited by tourists. This study investigated the urban spatial configuration and the left over spatial products through Lefebvre's spatial triple lens to determine the proper function change for the red light area. Due to the findings, the perceived space is currently suffering from the consequences of the urban void, which has degraded the efficiency and quality of conceived space production. Besides a suitable design could enhance the quality of the space production by dynamic and pedestrian-oriented space.

This area is best suited to land uses that their visitors' inputs and outputs movements can be monitored.

Key Words: Red Light District, Transformation, Space Syntax Method, Zürafa Street



ÖZET

ZÜRAFA SOKAĞI'NI YENİDEN TASARLAMAK: İSTANBUL'UN EN ESKİ KIRMIZI FENER BÖLGESİNDE KENTSEL DÖNÜŞÜME MEKAN DİZİMİ YAKLAŞIMI

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Tez Danışmanı: Assoc. Prof. Berna Yaylalı

Ocak 2025, 104 sayfa

Bu Metropol merkezleri, kentin ziyaretçileri için vitrin görevi görür. Bu sebeple, arazi kullanım türü ve meskun alan önemlidir. Kırmızı Fener bölgesi, dünyadaki bazı şehirlerin merkezinde bulunan ve işlevleri nedeniyle uygun bulunmayan kentsel kullanımlardan biridir. Yıkımdan sonra arazi kullanım seçimi son on yıllarda şehir yöneticilerinin meselesi haline gelmiştir. Bazı şehir yöneticileri bahse konu bölgelerin kötü şöhretini silmeye çalışırken, diğerleri bu alanların kolektif zihniyle ilgilenmiyor. İstanbul, özellikle kent merkezlerindeki bozulmuş mahallelerini dönüştüren Avrupa şehirleri arasındadır. Zürafa Caddesi, İstanbul'un kırmızı fener bölgesini oluşturan üç caddeden biridir. Bu cadde, Korona pandemisi nedeniyle kapatılmadan önce yaklaşık iki yüzyıl boyunca açıktı. 2021'de bu caddedeki genelevlerin yıkılmasından bu yana, bölgeyi yenileme kararı alınmadı. Sonuç olarak, son üç yıldır bu alan, turistler tarafından sık sık ziyaret edilmesine rağmen kentsel bir boşluğa dönüştü. Mevcut araştırma, kentsel yapılandırma sonuçlarını ve Lefebvre'in mekansal üçlü analizini kullanarak, eskiden kalma mekan üretimlerinin kaldırılması suretiyle eski kırmızı fener bölgesi için ikincil bir kimlik tanımlamayı amaçlamaktadır. Bulgulara göre, algılanan mekan şu anda kentsel boşluğun sonuçlarından muzdariptir ve bu da tasarlanan mekan üretiminin verimliliğini ve kalitesini düşürmüştür. Ayrıca uygun bir tasarım, dinamik ve yaya odaklı mekan ile mekan üretiminin kalitesini artırabilir.

Bu alan, ziyaretçilerinin girdi ve çıktı hareketlerinin izlenebileceđi arazi kullanımları için son derece uygundur.

Anahtar Kelimeler: Kırmızı Fener Bölgesi, Kentsel Dönüşüm, Space Syntax Yöntemi, Zürafa Sokak.





To my beloved family

ACKNOWLEDGEMENTS

I convey my sincere gratitude to my Academic Supervisor Assoc. Prof. Berna Yaylali for supporting me during the period of writing the dissertation. As a dissertation supervisor, she supported me in all stages of this work. She is the initiator of this dissertation and she always gave me constant encouragement and advice, despite her busy agenda. Without a coherent and illuminating instruction, this dissertation would not have reached its present form. I thank her for having managed to convince me during our discussions. I am especially grateful for her confidence and the freedom she gave me to do this work.

My deep appreciation goes out to Mr. Benjamin for all of his guidance through the investigation process; his discussion, ideas, and feedback have been absolutely invaluable.

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LIST OF ABBREVIATIONS

RLD RED LIGHT DISTRICT



Chapter 1

Introduction

Metropolitan centers (the world of cities) serve as showcases for urban visitors (entrepreneurs, tourists, and so on). As a result, the type of land use and built space is significant. The red light district is one of those urban uses located in the center of some cities around the world, which are not very favorable due to their type of function and the host citizens' interpretation and perception of their activity in order to be visited by the world in the showcase. The presence of these districts in city centers and the land use choice after demolition has been a problem for city administrators in recent decades. Some urban administrators (Iran, after Islamic revolution of 1979, Beyoğlu Municipality (after demolition in 2021)) are attempting to erase the notoriety that this area has created for the respective urban space over the years, while others (European countries like Netherlands, Germany, etc.) are unconcerned about changing the collective mind of the space. Istanbul is one of the European cities that is transforming its urban spaces and extensively transforming its deteriorated neighborhoods in city centers.

Zürafa Street is one of three streets (Yüksek Kaldırım, Alageyik, Zürafa streets) that form Istanbul's red light district. This street was open for approximately two centuries before being closed because to the Corona pandemic.

1.1 Statement of the Problem

The site (Streets of brothels) is located in one of Istanbul's most historically significant and valuable context-in the city center-and is frequently visited by tourists. Since the destruction of brothels on this street in 2021, the municipality has done nothing to renovate it. As a result, during the last three years, this area has become a neglected site in the heart of the Istanbul's most prominent neighborhoods, serving as a refuge for criminals (addicts, thieves, homeless, working children, and so on) during the daytime. On the other hand, the presence of demolished structures, casual writings

on the wall, and graffiti that have caused visual pollution presented an image of an abandoned place (so-called space garbage).

Destruction of these areas and leaving them abandoned in the heart of tourist cities, regardless of their history of activity (prostitution, drug buying and selling, etc.), will reduce security in the surrounding area. Zürafa Street is one of these neighborhoods that has been abandoned despite being destroyed for three years. It should be noted that this neighborhood is in the city center, and the majority of visitors in the surrounding areas are tourists. As a result, it has a high potential to become a gathering location for criminals. Dilapidated structures, narrow alleys, hidden corners, and a lack of light and surveillance all contribute to a conducive environment for criminal activity.

1.2 Purpose Of The Study

Nowadays, in most European countries, new policies are being implemented that aim to push red light areas to the suburbs of cities, in contrast to previous centuries' policies of locating these areas in city centers.

When we confront an urban space with a spatial quality that is the result of a combination of demolished brothels and abandoned spaces, the conditions for rehabilitation of this region become critical in terms of time and the type of land use.

In addition, adapting to the host culture has the potential to be more or less difficult. As a result, transformation plans have extensively destroyed and rebuilt these areas. However, in some societies, the alternative type of usage is regarded as a challenge for urban designers due to existing ethical sensitivities

Urban designers face the complex task of reimagining these spaces as vibrant and attractive tourist destinations. This necessitates a thorough understanding of the existing physical and social layers within the area, identifying elements that can be repurposed or integrated into the new urban fabric. To guide this process, the theoretical framework of Lefebvre's spatial triad can be applied.

According to his theory (urban spaces are places of social production), this case will look into what other production factors are attempting to replace the physical removal of these brothels and the interruption of their spatial production, as well as to

what extent the physical conditions, public daily life of the people living there, and their mentalities at the time (and aware of the neighborhood's history) can be effective.

This study aims to understand how the social-spatial structure of a specific area has been transformed. To achieve this, the research will employ theoretical tool (Lefebvre' spatial triad) and space syntax method.

1. Lefebvre's Spatial Triad: This framework will be used to identify the crucial factors that have driven these spatial changes. Lefebvre's triad considers the interplay of the perceived, conceived, and lived spaces, offering a nuanced understanding of how social, economic, and cultural forces shape urban environments.

2. Space Syntax Analysis: This method will be applied to analyze the urban configuration of the areas surrounding Zuraafa Street. By examining the spatial relationships between streets, buildings, and open spaces, Space Syntax can reveal patterns of accessibility, movement, and social interaction within the urban fabric.

By combining these two methodologies, the study will gain a comprehensive understanding of the factors that have shaped the social-spatial dynamics of the area under investigation

1.3 Research Questions

The main question of this research is as following:

What appropriate functions are conceivable for the ruined former Red Light District considering its alterations in terms of urban configuration and the production space?

This main question necessitates answering the following questions, which are addressed in this study. The following are the sub-questions:

1. To what extent the urban configuration of Zürafa street (RLDs) got changed after being demolished?
2. How the urban spatial triad altered, before and after destruction of red-light-district (Lived-perceived-conceived spaces lense)?

1.4 Methodology

In this study, quantitative (space syntax) and qualitative approaches (interviews) were utilized to assess the conditions of Lefebvre's three spaces in the study area. The goal of this research is to investigate the status of the transformation of brothels' character into tourist zones as a result of new spatial productions and to provide appropriate options for an urban transformation plan.

The current study attempted to conduct observations and interviews in a natural setting to explore participants' daily behaviors and activities.

A total of 21 people were questioned in five groups. Local observations were made by photographing current activities and buildings during weekends, weekdays (day and night).

The land use and access maps obtained from the municipality were updated.

Photography was conducted in four time periods (December, February, July, and September) between 2023 and 2024 to document the state of the abandoned areas. The goal was to document the physical modifications (what the municipality did for this region) as well as to evaluate whether the area's functions had changed or not.

The relationship between the places lived, seen, and imagined by individuals and specialists is achieved by overlaying the assessment layers acquired in the earlier phases. However, the results of Space Syntax's configuration analysis also identify the research area's points of integration, connection, and choice. Thus, a general strategy for transforming the urban area in the devastated streets is achieved by overlaying these layers on the one hand, and its current circumstances on the other.

1.5 Significance of the Study

The importance of this research can be emphasized in some ways. On the one hand, the location of this area, which is located in the historical center of Istanbul, and all the streets limited to it include buildings that are valuable in terms of architecture. However, due to its former function, it is known as one of Istanbul's notorious areas, which hosted brothels for over a century.

On the other hand, these streets are the connecting spot of two tourist areas (Galata port and Galata tower), which are considered to be the most famous landmarks of the city, and special tourists also go there. It is also close to the main accesses, such as Karaköy port (1959), and the old nostalgic tunnel (1875). Extensive urban renewal projects have also been built, are being built, or are planned to the south and north of it. In other words, this neighborhood is included in key urban regeneration plans because of its cultural (culture-tourist activities), historical (architecturally valuable buildings), and geographical location.

The destruction of these buildings over time has also created spaces that threaten the region's security. After whole three years and nothing being done by municipality, the area turned to a known urban void that make troubles for inhabitants and shop owners. Considering the fact that this area used to be a meeting place for criminals and anti-moral society, therefore, it should be transformed as soon as possible. The living conditions will get more difficult for its permanent residents if this area continues to be neglected.

1.6 Limitations

Conducting interviews and surveys with local residents and municipal authorities made two major challenges for this research. Due to the sensitive nature of the land possession issue and the rise in land prices and current rant in the region brought about by the Galata Port project, some municipal officials declined to participate in interviews or refused to respond to specific questions.

However, because the topic is tied to the immoral issue of brothels, shop owners and inhabitants refused to answer any inquiries about it and Some individuals did not effectively respond to the questions.

Chapter 2

Literature Review

This section discusses in detail the debates required to meet the project's goals. Lefebvre's spatial triad was utilized to identify and analyse the various visible and hidden production layers of the urban space in the research area. Since the area under study has been without plans or programs for three years since its destruction, as well as no intervention or care to prevent it from becoming an abandoned space, abandoned and void spaces are discussed in the second section. Other concepts that contribute to the achievement of this research's goals include space transformation, which determines the dimensions and manner of any intervention to solve the problem. And finally, the space syntax approach technique is thoroughly discussed so that the technological instruments for data analysis can be determined based on the relevant criteria.

2.1 Urban Space

Urban space is more than just an empty area with physical boundaries. Because of its dynamic and live nature, the city is constantly revised and rebuilt on its ruins (Zieleniec, 2018). An urban space is made up of three elements: buildings, people, and open space. These three elements are influenced by the space's identity, user reactions when interacting with it, and physical protrusions (Abdul Rahman et al., 2020). Urban spaces are conceptualized as a network of interconnected situations. They are considered to be the result of social interactions, and their historical characteristics determine whether they are unique or not. Everyday urban spaces can occasionally be affected by significant factors such as how the space functions (beyond the law or host society customs) and how it is gendered (used by a particular gender) (Soja, 1996). Urban space integrates the produced activities, so it undoubtedly includes their relationships. The inhabitants' and the temporary spectators' space, which is created by human physics in daily activity, is the space that urban designers and architects determine.

Humans must discover the space of life as a place that holds the past's hidden secrets. Contemporary urban economic theorists recognize urban space as a link between social relations and the built environment, which has a direct impact on them. Drawing on the idea of heterotopia, Foucault recognizes urban spaces as living, dialectical, and dynamic, resulting from relations of domination (Foucault, 1984; Pugalis, 2009). Urban ecologists claim that human adaptation and usage create urban space. To Creswell, urban space is the result of current social developments (neighborhood events) in built urban environments. According to a research on urban space design, focusing on recreational aspects, ease of access, and financial (commercial, etc.) profitability increases audience (user) satisfaction with the space and fosters mutual respect between people and the urban space. They take care of themselves while caring for the space (Ndimande, 2024).

According to Harvey's theory, urban spaces are subject to the phenomenon of capital, which is the result of neoliberalism. Due to Marxist researchers, land developers and interest groups are responsible for the continuous change of user groups in urban spaces in order to ensure the economic reproduction of the urban space's profit and the common social-capitalist relations throughout it. Unlike some urban planners and social theorists, Lefebvre believes that the urban space is a living being that is constantly changing as a result of its previous development processes, current developments, and relationships. It is being produced and transformed. Harvey believes that Lefebvre's concept of examining lived spaces is correct and logical, but it is approximate and has to be elaborated. (Goonewardena et al., 2008; Woodward & Jones, 2008).

2.1.1 Urban space and Lefebvre's spatial triad. The importance of space in the modern era has expanded dramatically as more actors enter the spaces. As a result, humans lack appropriate space for their operations. This saturation and lack of space is caused by factors such as low-quality distributed places or assigning more space to the rich than the poor. One of the grounds for capitalism's existence is its rapid development of areas and economic activities in the global market. New spaces are created or replicated as a result of the production of everything (social-economic-political-cultural activities, etc.) in metropolitan areas. Among the primary aspects of

modernity that are changing are the definition of new options, the supply of new amenities, a new experience of time, the involvement of women in the city (maids, prostitutes, and middle-class women employed close to public areas), and the new standards of urbanization (Zieleniec, 2018, Abdul Rahman et al., 2020, Carrera & Castellaneta, 2023).

Modernity has brought with it concepts such as protecting the quality of urban life, which is directly targeted at these spaces in city centers. The removal of all visible sexual acts from the city surface for the comfort of women and children is valued by city scholars. As long as women are still harassed, have no sense of security, and are perceived as helpless and vulnerable, these sexually charged urban spaces will continue to be patriarchal (Zieleniec, 2018; Carrera & Castellaneta, 2023).

Urban theorist Lefebvre's theories on urban space give valuable insights into the potential of our study area. Departing from idea based on the western dialectics, Lefebvre argued for the interconnectedness of space and society. He has a different perspective on the city, focusing more on urban needs. Urban spaces are places for people to meet, not for commercial exchanges and profits. Space is a combination of abstract and physical components that materialize in the presence of people. He believes that urban spaces are the result of intersecting layers of social (from local to transnational) and economic relations. In this power struggle, ruthless competition and subordination prevail. According to Lefebvre, knowledge of society enables comprehension and interpretation of space. He explores the concept of space with a focus on production. It is critical to uncover the productive aspect of space and investigate how to actively produce space (Merrifield, 2006).

Space is created in two ways: through social productions and existing mentalities. The timing of the construction of social spaces is determined by the users' physical and psychological structures. As a result, the space is experienced through three primary channels: understanding, analysis, and imagination. According to Lefebvre, these three channels comprise a single unit that cannot be judged without the others (Brenner & Elden, 2009).

In 1974, Lefebvre proposed a theory that states and technocrats divide and exchange urban space.

This categorization means that anyone who purchases a space for a specific purpose (work, leisure, residence, etc.) is also purchasing the time to use it. Each urban space has a specific time for people to use it, which is determined by its distance from the others. Lefebvre believed that every urban area should demonstrate how it is a part of the cycle of history and time in a distinctive way (Brenner & Elden, 2009; Elden, 2007).

According to Lefebvre, space analysis should be focused on the demographic and structural changes of the space users, rather than the physical changes of the space itself. Space is not a static aspect; rather, it is derived from the human body's rhythm, which changes with time and space. Lefebvre thinks that society, which is fundamentally historical, undergoes external modification in the shape of location. If a space does not advance, it is assumed that it has been overlooked in the predefined spatial prioritization. He defines space as the coexistence of three dialectical concepts; perceived, lived, and conceived space (Brenner & Elden, 2009; Elden, 2007).

The area can be perceived through the senses, and it is given labels such as feminine-masculine, good-bad, and so on. Perceived space (spatial space), unlike lived space, is dependent on observation, readability, and descriptivity.

This space is defined in addition to individual daily lives, and it includes collective movements and interactions within the framework of a developed network structure. These networks are developed through linkages between residents' homes and workplaces, as well as productive exchanges between their activities (Thodelius, 2019; Ghulyan, 2019).

People experience lived space (representational space, users' space) through the symbols and daily activities. In other words, an individual and space have an unconsciously formed relationship that stems from a person's imagination regardless of theoretical experiences. Because of their location and size, specific spaces attract more attention than their surroundings. The variables for life space analysis include new meanings and daily life experiences (Baydar et al., 2018). The emergence of modernity brought about significant shifts in societal norms that put the established order under pressure (Knoblauch & Löw, 2020). In the lived space, users are confronted with the true shape of their living environment. A place that represents activities and interactions (Thodelius, 2019; Fraser, 2015).

Comprehending conceived space (Abstract space) facilitates the understanding of how a space transforms into a commodity and where it fits into the production, distribution, and consumption chain. Developments in politics, society, economy, culture, and technology create abstract space because they bring about changes in people's personal and emotional lives. The architect and city planner can identify and specify the future production type of the space with the assistance of the space's history. Because it makes visible the periodic process that creates space (Wilson, 2013; Gotham et al., 2001; Thodelius, 2019). All social spaces have an expiration date, so they enter the capital cycle for a limited time, produce and add value, and then exit the cycle. This process is abstract, and this space gets out of cycle when its land use changes (Fraser, 2015).

The social structure of urban space is impacted by modernity. Urban spaces were changed into spatial organizations at the very beginning of modernity's emergence in the West. One of the advantages that modernity has brought to urban spaces is that a space is now interpreted and perceived globally, rather than just locally. Urban spaces have become competitive over the course of modernity, influencing one another, while the identity logic of places continues to resist tensions. As a result, local places with significant historical value are experienced in all sensory and perceptual dimensions (Carrera & Castellaneta, 2023; Knoblauch & Löw, 2020; Quijada & Estrada, 2021).

Foucault also uses a unique notion of space. He believes that the area should be portrayed in a way that demonstrates its importance at various ages. In this regard, it introduces the term "space production exhibition". By offering this term, Foucault takes another important step toward completing Lefebvre's theory. The exhibition's interpretation focuses on the relationships between spatial producers and assesses their operations on a greater scale (Foucault, 1984; Pugalís, 2009).

Lefebvre defines socially created space in terms of modernity as an abstract space. He feels that these two concepts are inextricably linked and should be viewed as one. He examines social production from a spatial perspective, with a focus on investigating the interconnected connection between these two concepts.

2.2.1.1 Scholars' attitudes to Lefebvre's theory. Marxist geographer David Harvey provides a review of Lefebvre's triad in the book "Rebel Cities" (2012).

He identifies a network of actions as well as physical and spatial relationships that produce space. Harvey's definition of spatial practices emphasizes the processes of producing and reproducing social space through material and objective interactions. The second component of Lefebvre's spatial triad is signals and codes that comprehend physical and material interaction. To be understood, these standards may employ vocabulary from the sciences of architectural engineering, urban planning, or ecology. The third part is the spaces, which are regarded as mental inventions that give the required facilities for space applications. This network stresses the complexity of spatial and temporal activities in society, and he argues that it should portray the complex processes of production and reproduction of social interactions in space. The network's columns contain accesses, space use and production, and space function control, while the horizontal line covers spatial experiences, space knowledge, and inferential imaginations. (Harvey, 2012; Ertem, 2019).

In other words, Harvey defines, analyses, and expands Lefebvre's spatial triad in relation to four other spatial features. The first aspect is access and distance, contains the divides that occur from establishing distances and accesses between social interactions. In other words, economic and social activities that generate are situated in space at proper distances from one another, which may result in expenses imposed on the space production system. The second dimension of Harvey's formulation is devoted to spatial allocation. This allocation encompasses the individuals who use the space, their activities, socioeconomic class, and the objects in it. The systematic deployment of these elements in space results in urban and regional shapes distinct to social solidarity. Control over space, as a third facet, highlights the organizations that influence how space is produced and dispersed through various legal and extra-legal channels. Finally, the fourth part is space creation, which relates to the development of new technology-based methods for territorial organization. Harvey developed the matrix he showed because he believed that all three aspects of space are inextricably linked. The distribution and kind of distances are linked to the inference and comprehension of how to control space. In addition, when a group takes over a location, they have effectively dominated it. Space production can alter the conditions and types of domination of groups over space by shortening distances (Ertem, 2019).

Christian Schmid uses Lefebvre's spatial triangle to convey his theory for better understanding the material and social worlds, as well as how they are dispersed.

He contributes to a better understanding of Lefebvre's work by examining his phenomenological aspect in relation to the trilogy of space production. He believes Lefebvre's spatial triad is accountable for both individual and social processes. According to Schmidt, Lefebvre's lived space is understandable to all human senses since it contains the material side of social activity as well as tangible elements.

In addition, social acts in response to this impression concern spatial organization. He defines Lefebvre's imagined space as a space from part to whole in which multiple aspects combine to generate a whole known as space. A presupposition idea that links the development of space to the production of space knowledge. Schmitt's approach to Lefebvre's "life space" emphasizes actual experience over theoretical understanding. The purpose of this strategy is to record individual and community experiences and turn them into a distinct notion. According to Schmitt, spatial practice refers to the materiality of social activity. In this approach, he focuses on the system that establishes linkages between activities and has an objective and material component. Connections between economic trades, habitation, and work are some of the most common human activities in the social context (Schmid, 2008, 2009).

Space representations are defined using scientific and logical explanations and definitions. This concept's framework assigns the picture to the place through the use of maps, signs, plans, and other ways. Architects, social science professionals, and urban planners are responsible for giving concepts to spaces. The space of representation is a symbol of the space and does not refer to the spaces themselves, but rather to the powers, gendered space, and, more broadly, the groups that inhabit the area. In other words, it is the practical reversal of space representation, associating symbols with the material world (Soja, 1996).

2.2.1.1.1 Criticism of Lefebvre's theory. Spaces do not diminish or disappear; rather, they are continually rereading their users' behavior and, as a result, their specific reproduction. Thus, the historical qualities of each location have a direct impact on how the space is created. Lefebvre's approach overlooks an analytical phenomenon that is critical to space production.

Other theorists discussed and elaborated on Lefebvre's notion, and it was given larger dimensions. Johan Vaide (2023) by examining intercultural contacts in the context of social development, challenged the "spatial" context rather than physical. The spatial triad established by Lefebvre is employed with a sociological perspective that considers socio-spatial interactions (Vaide, 2023).

Theorists such as Andrey Zilenich (2007) and Setha Low (2017) think that Lefebvre did not provide sufficient information on how to do spatial analysis within the framework he defined. Merrifield (2006) claims that he intentionally sketched this space trilogy in a preliminary manner so that everyone may interpret and recreate it based on their own ideas. The essential aspect is that various theorists, such as Karp (2008), Pierce, and Martin (2015), investigated a variety of approaches for using this spatial triad in order to better comprehend the relationship between location and Lefebvre's theory. He attempted to operationalize the space trinity in his work (Merrifield, 2006; Zilenich, 2007; Setha Low, 2017; Carp, 2008; Pierce, & Martin, 2015). According to Elden, Lefebvre is interested in the interactions between architecture, current codes, signs in space, and daily life. Daily organized urban life is the product of capitalist society interacting with industrial society, which has been superficially transformed. This notion was aided by increased urbanization as traditional cities disintegrated over time. Furthermore, he argues that the urban environment is an environment in constant production that is generated from the technical environment and should be studied. According to him, the capitalist process has had such an impact on urban environments that it can no longer be argued that they evolve naturally and optionally. Rather, it has an impact on people's private lives, organizing and dividing them by deciphering the codes of their everyday lives in accordance with an acceptable and calculated plan (Elden, 1998).

The consideration of Lefebvre's spatial triad and its critics reveals that these three spatial characteristics (spatial practice, space representation, and representational spaces) are tied to each other. These interactions result in a process known as spatial social production. It must be noted that the space is a living being that constantly generates spatial practices and images for its users. This study applies spatial triad theory to clarify the characteristics of urban transformation for the case study.

2.2 Abandoned Urban Spaces-Urban Voids

In the 1970s and 1980s, there was a trend toward urban reconstruction projects being carried out based on their history and a revision of their social-spatial principles (Biddau et al., 2020). Urban void spaces are areas that have lost their importance in the active urban space around them. The most common sight in cities is urban voids, or empty and abandoned areas. Often, the reason is a lack of financial resources for reconstruction or a lack of new development ideas. Void spaces have a negative impact on the image of the city and are increasingly damaged if neglected (AL-Mohannadi et al., 2023; Hashem et al., 2022).

The term "void" refers to areas where buildings or industrial sites have been evacuated as a result of complex and unplanned events in the city. Urban voids are areas in cities where the connection to their surroundings has been detached or diminished as a result of their past. Abandoned, neglected urban spaces, half-demolished buildings, and so on must be addressed and reconstructed because, according to economic conditions, destroying urban spaces for the purpose of reconstruction without considering the necessary infrastructure jeopardizes the quality of life for residents adjacent to these spaces (Adebara, 2024; Sharma, 2016). Roger Trancick (1986) claimed that he would refer to these spaces as lost spaces (Trancik, 1986). Michael Greenberg (1990) examined urban void spaces and classified them as temporarily obsolete abandoned locations (Zecca, 2019).

Urban voids are urban areas that have left an imprint on citizens' memories and are now abandoned, posing a challenge for urban planners seeking to implement a new plan. This concept of void encompasses the functional and spiritual aspects of feeling empty in urban spaces. Void highlights the desolation and uncertainty of the desired space. However, the solidity of the space (the shape of the city fabric and the structure of the buildings) is taken into account. Colin's research of the collage city identifies these areas as a bad component of cities. However, these spaces have an advantageous feature since they govern the relationship between old and new places in terms of function and form in the rehabilitation of worn-out neighbourhoods.

If some of these spaces remain "abandoned," they would jeopardize the urban fabric's integrity (Mozzato, 2021; Hashem et al., 2022).

The following are the primary causes of these spaces' (voids') formation and classification: (Hashem et al., 2022).

1. Planning inefficiencies: Inadequate planning procedures result in management gaps, which isolate some of these locations from the city center.
2. Functional gap: regions that stop working and are referred to as dead.
3. Distinct geographical features: Some of these regions have hills, rivers, and other distinguishing geographic features. If the designers do not account for these locations, the gaps created will result in a vacuum void.

Urban voids are fragmentary sorts of abandoned urban places that can be characterized as: Abandoned places without identity and lost (not developed); In contemporary city projects, it is necessary to assess the negative memories rooted and experienced in areas of historical value (has meaning in the surrounding context). Historical sites and remnants of their ruins occasionally prompt architects and city planners to revisit these sites and reveal the secrets hidden within them throughout history (include some historically significant buildings that have been destroyed). Modern cities are the result of diverse architectural and urban developments that are constantly in the process of reconstruction, with different spaces being recreated (includes humans, and is marginal) (Mozzato, 2021; AL-Mohannadi et al., 2023).

The unidentified owner of these abandoned buildings and spaces, along with the associated organization and officials, is one of the reasons that the redevelopment of these spaces has been put on hold. If neglected for an extended period, they can effectively become urban trash cans, not only detracting from the city's appearance but also serving as a safe place for criminal activity, homeless individuals, and the emergence of social issues (AL-Mohannadi et al., 2023).

The following legal challenges led to the creation of these spaces: (Aleha et al., 2023)

1. The abandoned structures that are the subject of ongoing legal and property disputes.
2. The government and heirs jointly own them.
3. Determining the user of the planning system is challenging due to its intricate bureaucratic process.

Urban void spaces are ideal for experimentation, as they can be renovated and redesigned to serve a new purpose. These areas have greater potential to attract investment. It is necessary to explore urban voids because of their negative potential and the difficulties they cause, and proper measures should be performed first. By making these spaces habitable and defining new functions that are compatible with their surroundings, a new configuration for this space and its immediate environment can be defined. For this type of space, a function with both private and public ownership can be defined so that residents feel a sense of belonging there (AL-Mohannadi et al., 2023).

Temporary uses for void urban spaces are recommended in accordance with urban, recreational, and artistic service programs. Squatter movements emerged in the late 1970s, taking advantage of gaps to make temporary use of unused space. By keeping vacant and abandoned spaces from becoming urban trash, temporary use can contribute to prepare them for future development. There have been instances where this tactic has worked, despite the opinions of those who think otherwise. Temporary use compels a person to participate in its activities, which help shape the surrounding environment. Despite the temporary nature of these uses, an arena is created for the emergence of cultural and artistic ideas, transforming an indefinite void into a potential one (Nefs, 2006; Aleha et al., 2023).

Planners and urban designers should evaluate these spaces to determine their potential. Transformation, renovation, gentrification, and urban revitalization projects nearly invariably involve underutilized land and structures. These areas, devoid of human activity, typically don't elicit many inquiries or particular interests. When we think of them as a piece of history, as platforms for transient use, or as potential for future activity, they seem to inspire. Because of this, scholars and planners are interested in what will happen to unused urban space in the future and are in favor of changing or preserving it. According to studies, in order to propose a temporary use for void urban spaces, an urban rhythmic analysis should be performed, allowing mental maps of the location to be observed (Nefs, 2006; Zecca, 2019).

The effective factors in the production of urban void spaces can be divided into three main classifications (Hashem et al., 2022; AL-Mohannadi et al., 2023):

1. Urban planning gaps and managerial inefficiencies in preventing ineffective urban projects.

2. The second aspect is related to the existing functions of the urban environment. Vacant areas contain abandoned building masses that lack practice, are frequently placed on valuable urban property, and have a negative visual and environmental impact. Typically, these types of abandoned structures in important urban sites have stayed mute due to legal challenges over land ownership (private or state) or have been owned by the state, but implementing and acting on them necessitates a difficult and time-consuming administrative process.

3. The third factor merely deals with the geographical characteristics of the design zone. Geographical gaps that do not always meet the so-called design standards due to their unique geographical characteristics. Urban designers have ignored them in their designs, interpreting them impractical like space gaps.

The cases of urban voids for which suitable plans have been developed will be addressed in the following parts.

2.2.1 Mexico's San Pablo Xalpa district. The empty spaces between residential sections in San Pablo Xalpa were deemed an environmental and security issue. These abandoned vacant lots between building masses could not be used as public spaces during the day, but they might be utilized as criminal refuges at night. As a result, the residents of these apartment buildings eventually had to reinforce their doors and windows with iron fences to defend themselves from thieves and criminals at night. As a result, the municipality decides to reconstruct them as part of a project according to the "revolution of void spaces" approach. What makes this project unique is that the architects produced plans based on the demands of the residents of each apartment complex. Children's parks, for example, have been constructed in dwellings with more children to provide educational and sporting activities. The achievement of this so-called revolutionary project is that it transformed urban void spaces into productive spaces, resulting in social and cultural improvement in the neighborhood. At the sub-neighborhood level, areas for communication and socializing, as well as urban activities, replaced void and abandoned spaces (Montiel & Wallach, 2015; Conference & Indonesia, 2020) -(Figure 1).



Figure 1. Before (upper) and after (lower) renovating of urban voids (Montiel & Wallach, 2015; Barliana, 2020).

2.2.2 Denmark, Copenhagen, Superkilen urban park. Since its founding in the nineteenth century, this neighborhood has served as a safe haven for foreign immigrants and refugees. Because of the area's multi-ethnicity (approximately 60 nations dwell here) and cultural differences, the vacant spaces between the settlements became a source of tension, with criminal activity, riots, and protests taking place on occasion. The purpose for the renovation of this area was to have no empty space for presenting these types of gatherings.

The architects decided to rehabilitate this project using aspects from adjacent communities to create a kind of ethnic-local exhibition. As a result, they selected and utilized urban features from several nations that dwell in this area (kind of tree (from China), neon signs (Qatar, hamlet), and so on (Alshehri, 2017; Barliana, 2020; Lökçe & Balık, 2010) -(Figure 2).



Figure 2. After renovating of urban voids, (URL 1)

2.3 Pathway to Urban Transformation

Modern cities are continually changing. New lifestyles as a result of technology advancement and the well-being of urban dwellers have made transformations in cities unavoidable. The term "transformation" is used to express the complex nature of interacting processes among city consumers, their requirements, and the relationship between cities and their adjacent towns and villages. All of these transformations are aimed at resolving socioeconomic and environmental issues throughout time (Figure 3). Urban transformation, as an effective phenomenon for better understanding urban growth and changes, assists city planners and architects in obtaining the formulae required for urban space the reconstruction process (Akçakaya Waite, 2019; Gök & R. Tılıç, 2016; Van Liempt & Chimienti, 2017).

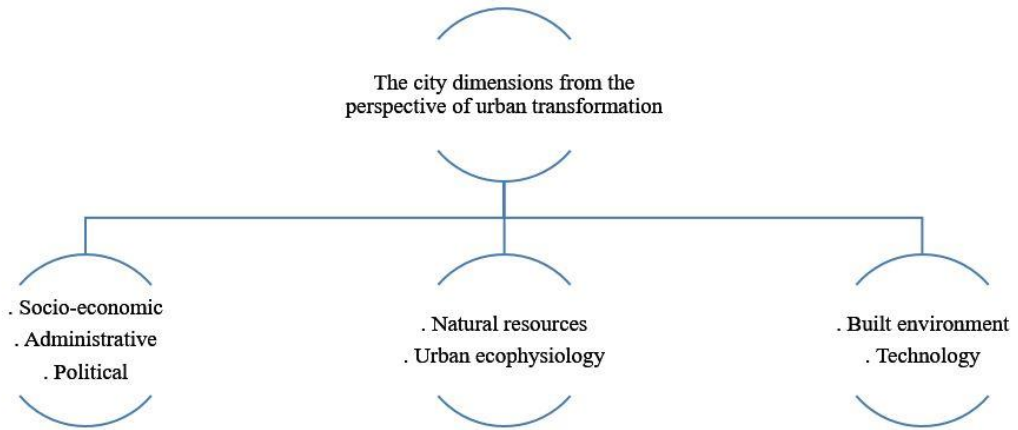


Figure 3. The city's dimension from urban transformation view, (Author derived from Rosenzweig et al., 2018; Akçakaya Waite, 2019; Görk & R. Tılıç, 2016; Van Liempt & Chimienti, 2017).

Hölscher and Frantzeskaki (2021) have categorized urban transformation by considering it as a set of complex processes that function systematically and structurally in several dimensions simultaneously. According to them, urban transformations are not restricted spatially, but rather modify direction and strategy in along with sectional and cross-sectional dynamics. The modification categorized as transformation in cities, of cities, and by cities (Hölscher & Frantzeskaki, 2021).

Hölscher and Frantzeskaki's (2021) first perspective (Transformation in cities), states that a city is made up of a variety of places with their own administrative and geographic boundaries. These places are subjected to dynamic variables and pressures that cause them to evolve over time. This method focuses on processes and developments at three levels (local, regional, and extra-regional) that are place-oriented and converging. The second perspective (Transformation of cities), focuses on the products of transformation over city as a (sub) system. The results of transformations' strategies are evaluated and examined regarding sustainability and resiliency approaches. Since the transformation makes a radical modification over urban systems, so its multi-dimensional functions must be compared to other supporting approaches. The third perspective (Transformation by cities), recognizes cities as agents which play roles regionally and globally. So their changes make considerable changes at global level. In this perspective urban transformation covers

triple aspects (natural resources, environmental circumstances, and governance) of human settlements (Rosenzweig et al., 2018).

Urban transformation method includes various type of urban projects due to the specific urban issues. The first one is urban renewal method which is applied for resolving physical problems like clearance of slums and public-private redevelopment. The other type is urban regeneration which focuses on improving socio-economic problems of urban areas. Urban planners and architectures applied this method to improve the living quality of deprived urban spaces through integrated tools of vision and action. Due to particular issues, urban regeneration projects are categorized into three groups as economic, socio/cultural, and environmental projects (Castagnola, 2015; Ergun, 2004; van Liempt & Chimienti, 2017). It is intended to create opportunities for producing socio-cultural, artistic, and wellbeing functions. Economic regeneration projects increase the economic functions of urban spaces by investing in public infrastructures (in order to attract investment, consumers, residents). And finally in environmental regeneration approach, the purpose is improving abandoned urban lands and neighborhoods through building parks, recreational spaces for daily activities and well-being of people (Pearman, 2019; Akçakaya Waite, 2019).

Urban rehabilitation and restoration is another significant method that specifically focused on (existing – worthy) buildings. This method focuses on buildings' demolitions, (re)constructions, and upgrades. One of the necessary actions after (re) construction of the buildings is presenting an energy certificate for the buildings. This method is more restricted physically and officially for being implemented. Just the areas can be rehabilitated and restored which are identified by city council since they can get benefit from financial supports of municipality. Historical and heritage buildings are main targets in this method to be conserved due to the environmental-ecosystems, technical developments, and structural security standards (Castagnola, 2015; Yeom & Mikelbank, 2019).

Gentrification is one of the concepts of urban transformation that consists of two stages. Bringing capitalist residents (households, business owners) into urban areas while displacing low-income residents to more distant areas. Progressive changes in the surrounding built environment determine whether an area is to be gentrified.

Different groups' approaches to using space are the source of this kind of spatial and physical transformation (Castagnola, 2015; Luís De Melo et al., 2018; Pearman, 2019; Yeom & Mikelbank, 2019; Zuk et al., 2018). According to Glass (1964), Lee (1978), and Smith (1979), the primary causes of this change in urban areas are the middle class's arrival in the neighborhood and the post-industrial era's improvements in employment and economic conditions, which in turn led to physical improvements (Yeom & Mikelbank, 2019). There are concepts like urban redevelopment and urban development that are similar to the idea of gentrification (Pearman, 2019). A brief explanation of it is provided here to prevent confusion with other concepts. Large-scale physical improvements to urban areas and the emergence of public or private investment are the two main goals of urban redevelopment. It should be mentioned that this development encompasses residential, commercial-industrial which took into account the target area's political, economic, and cultural aspects. To redevelop the urban neighborhood in areas that have already been developed, the government and local capitalists—households, business owners, and local businesses—carry out urban redevelopment in the form of urban plans. Because both urban redevelopment and gentrification are carried out on previously developed land and the primary uses in the target neighborhood are residential, commercial, and industrial, they are comparable in methodology. A fully developed urban neighborhood is the result of targeting the gentrification of urban neighborhoods' deteriorating fabric (Luís De Melo et al., 2018; Zuk et al., 2018; Pearman, 2019; Yeom & Mikelbank, 2019). Ha (2015) claims that since urban redevelopment involves the population that is displaced as a result of the plan, it is a sort of gentrification, which is carried out by the government (Ha, 2004) - (Table 1).

Table 1

Differences Between Gentrification And Urban Redevelopment Approaches, (Author derived from Yeom & Mikelbank, 2019, p.83)

Criteria	Gentrification	Urban redevelopment
Location status	Already developed area	Already developed area
Eviction	Yes	Yes /No
Authority	Private sector	Private / government sectors
Output	Without plan	Plan

2.3.1 Urban transformation of red-light-district. The concepts related to the Red Light District and the location of these homes in urban areas will be covered in this part prior to the transformation of the district.

2.3.1.1 Red-light-district –Definition, type, and location choice. Throughout history, prostitution has always been present, both inside and outside of cities. Places with a sexual theme in cities are known as red-light districts. Each of these definitions varies depending on the period and location. Brothels are spaces that have arisen as a result of social tensions outside of society. Well-known political theoretician Michel Foucault describes them as heterotopias and finds them to be influential and confusing (Zerva & Nijkamp, 2016). The locations where these activities take place are frequently perceived as being out of sight since they are considered disrespectful and inconsiderate towards the broader public. These heterotopias are known as banished, isolated (mental hospitals), imaginary, sacred, or forbidden (brothel)-(Soraya Batmanghelichi, 2015; Kurien, 2023).

According to Foucault (1984, 1986), brothels are among the spaces that emerge as a result of material and spiritual gaps between real and utopian space. These spaces reflect real society, which is perceived as an illusion (Foucault, 1984).

There are various kinds of red light districts; some are found outside of cities and are regarded as expendable due to their reliance solely on sexual activity. Others engaged in the sale and purchase of drugs, gambling, cafes, traveller's hotels, restaurants, stores offering porn and related goods, special events, and nightclubs in addition to providing sexual services. Red light districts are arranged differently in urban areas depending on the social and religious beliefs of the community. It is easier to include prostitution in urban design in certain countries where it is legal and the host society is less sensitive to locations designated for prostitution. Locating and camouflaging them in urban areas, however, becomes extremely difficult in nations where it is still illegal and moral and religious sensibilities are highly valued (Laing & Cook, 2014; Kurien, 2023; Deinema & Aalbers, 2018).

It is important to note that the variety of consumption and the way these sexual symbols are presented from the totality of separate belongings influence visitors' perception and interpretation of these red light areas. Different characters can be identified for these regions based on the emotional and moral complexities caused by human geography. Because of their functions as gathering places for the impoverished, destitute, and occasionally criminals, these transitional spaces—marked by red lights—are frequently found close to the centers of cities with a predominance of commercial activity. As a result, they are occasionally subject to changes in urban development, such as an increase in land prices or a change in the uses of nearby properties. It is noteworthy that in some towns, prostitution and related activities (drug use, drug gatherings, human trafficking, car parking, etc.) have found perfect locations due to the low price of land (Deinema & Aalbers, 2018; Laing & Cook, 2014; McKewon, 2003; Mörk & Brandellero, 2023). While some countries relocate their red light districts from city centers to outside of cities and close to industrial areas, others prioritize the districts' design and highlight them as tourist attractions. Concerning the relationship between prostitution and urban spaces, and why city centers are more conducive to these activities, it can be stated that the sex industry has an undeniable link with social and economic activities with their workplaces in the city center (İnce, 2021; Mörk & Brandellero, 2023; Soraya Batmanghelichi, 2015).

The location of sexual activities, according to Ashworth (1988), Winchester and White (1988), is determined by three factors: availability of opportunities (sex activities are more likely to occur in places with higher population densities because these areas are popular among travellers and tourists), access to the intercity transportation network, and moral and legal constraints that either support or contradict the existence of these spaces (Ashworth, 1988; Winchester and White, 1988).

Ports, train stations, and intercity bus terminals are a few examples of access points where brothel places could be built. Travelers and tourists make up the majority of customers because, in light of the fact that this theme is still unpopular with people, customer anonymity is deemed to be important. Factors influencing the formation or displacement of red light districts can be classified as endogenous or exogenous based on global experience. Endogenous factors include urban areas with a high concentration of nightlife, commercial and industrial activities where men make up the majority of employees, and areas with appropriate places for this type of activity, such as residential buildings, hotels, and guest houses. Exogenous factors control the limitations and generate opportunities for these red light districts; these are more closely tied to legislative policies concerning this kind of activity. Designing the way these locations are presented in urban settings is difficult because, while they should be hidden from view since these activities are immoral and disrespectful, they also need to be recognized and considered by customers in order to attract in more (McKewon, 2003; Deinema & Aalbers, 2018; Kurien, 2023; Mörk & Brandellero, 2023; Soraya Batmanghelichi, 2015; Weitzer, 2018; Weitzer & Boels, 2015; Zheng, 2018) -(Figure 4).



Figure 4. Location choice of Red light district, McKewon, 2003. p.300

The way that traders and people living in nearby areas respond to red light districts varies. While some focus on moving these activities from the level of the cities to the outskirts, others are merely interested in gaining control and surveillance of how these neighborhoods are run. However, it's also clear that when wealthy investors and consumers control urban areas, they are structured to maximize their interests, and impoverished and weakened people are doomed to be rejected and driven out of the city's central areas. Because urban areas, particularly those nearer to city centers, adapt to the needs and preferences of the middle class by becoming cleaner, more luxurious, and global (Mörk & Brandellero, 2023; Soraya Batmanghelichi, 2015; Weitzer, 2018).

By giving these locations more authority and educating the people in the surrounding communities, urban planners in some communities are attempting to boost public acceptance. However, by organizing and empowering these areas, they have attempted to improve the lives of sex workers and lessen the negative effects of their presence in cities (Lamblanova, 2019). According to some other experts in the field, it would be preferable for investors, brokers, and city officials to try to conceptualize and remove the term "red light" from these areas, thereby desensitizing the public to the existence of these areas (Gent and Singelenberg, 2020).

2.3.1.2 Urban transformation of red-light-district into a different RLD version.

One of the best areas to target for gentrification is red light districts, which force sex workers out of these neighborhoods. The effects of gentrification in these areas vary, but the only justification for removing these spaces is the moral sensibilities of society and political movements against the presence of urban filth. However, the evidence indicates that the accumulation of capital and commercial activities in city centers (CBD) has resulted in economic development that no longer reflects the presence of these districts. In other words, the conflict and tension between legal and illegal businesses (the sex industry) ultimately benefits the growth of legal businesses (Van Liempt & Chimienti, 2017). According to global experiences, gentrification of these areas has been a global phenomenon with varying outcomes depending on local features and time constraints (Campbell, 2019). America began to transform these neighborhoods a century before Europe, beginning with San Francisco.

Because of the anti-social nature of the common activities in these neighborhoods in America, they are also known as tolerance zones. The wave of gentrification projects for red light districts began in Europe in the early 1990s. The new European policy for gentrification of red-light districts focuses on dispersing them and driving them to the outskirts of cities. (Aalbers & Sabat, 2012; Zerlina, 2019; Hennigan, 2004; Hubbard, 1998). Unlike some European countries, such as the United Kingdom, which attempt to conceal such activities, Amsterdam and Zurich, by legalizing prostitution and the purchase and sale of drugs, attempt to remove the stigma of red lights, thereby reducing potential harm to sex workers. Furthermore, by combining sex industry activities with entertainment activities, parks, and sales of sex industry equipment, areas that are considered tourist attractions are created, and people sometimes come only to visit these complexes rather than to receive sexual services. In fact, combining activities that benefit each other promotes their growth and development (Zerlina, 2019; Van Liempt & Chimienti, 2017).

Some European nations, like Brussels' Antwerp, are concentrating on renovating former brothels and finding ways to integrate these populations into the city's overall plan by enacting the required laws and regulations. By distributing sex workers, their clients, and regular residents in the surrounding residential areas in a balanced manner, this strategy seeks to reduce the negative effects of red light districts (Weitzer, 2014). To raise awareness of the sex industry, fictitious brothels with an educational component and a moral bent toward humane and moral norms have been constructed in some cities, like Amsterdam and Zurich. In these establishments, sex workers do not actually work; instead, they serve as tourist attractions. To remind people of the moral and human standards in the sex industry, these actually have an educational component with moral tendencies. In contrast, Walter Reckless (1926) claims that these sexual areas are not compatible with criminal behavior, but rather are aligned with recreational activities (Van Liempt & Chimienti, 2017).

According to studies, the stigma associated with anti-social activities related to prostitution in the city is more political and economic than social and moral. When economic forces compete for the maximum profit from urban spaces, they target weak urban spaces such as red light districts and informal settlements, and they require legal tools to occupy and appropriate them. It is enabled by changes in legislative policies.

In other words, the majority of red light districts are destroyed as a result of business relocation in the city, not moral considerations (Hennigan, 2004; Aalbers & Sabat, 2012). The rise in land prices has been the primary cause of the destruction, displacement, and renovation of these neighborhoods in all cities around the world, despite any religious beliefs (Hennigan, 2004; Fiolka et al., 2022). The proof of this claim is that, for example, in Brussels, the presence of some Turkish and Moroccan Muslim groups in the vicinity of these brothels was accompanied by social tensions and many complaints about the demand to close these brothels, which were practically ignored (Hubbard, 1998). Because, the liberalization policy is the focus of the performance of urban policies, the protesters were accused of being religious radicals and promoting Islamophobia behaviors in cities such as Brussels (Weitzer & Boels, 2015).

Deinema and Aalbers (2012) in their study by analyzing the Amsterdam red light district claim that red light fashion and art may take over new global positions. By extending and thus preserving its musicianship characteristics as well as the capital of "legitimacy" between all red lights may help guarantee the area's social and financial sustainability. However, it appears obvious that many sex workers will be evacuated as an aftermath of this restructuring movement and will enter a world that is unquestionably darker for them (Deinema & Aalbers, 2012). Among the Asian countries with religion sensitivities Iran is the best sample to be considered.

From an aesthetic and moral perspective, red light districts in modernity are also seen as social issues in the urban environment. Considering that these areas are border spaces and contain dark, dangerous areas. These areas are considered unsafe and poor, and their frequently shifting boundaries and lack of visibility are the reasons for their given name. (Álvarez de Andrés et al., 2015; Fiolka et al., 2022).

The competing powers in the cities determine the general geographic setting in which prostitution occurs (Fiolka et al., 2022; Hennigan, 2004). Since the 19th century, red light districts have been a significant aspect of cities. Chicago school urban sociologists like Booth (1988), Burgess (1925), and Reckless (1926) have always examined red light districts from the perspectives of urban ecology and activity within the district (Booth, 1988; Burgess, 1925; Reckless, 1926; Van Liempt & Chimienti, 2017).

Based on the experiences of certain European nations (Belgium, the Netherlands), brothels were situated in specific areas that were closely monitored by law enforcement. Furthermore, they were situated in areas of the CBD that were free of residential areas and criminal activity (Aalbers & Sabat, 2012; Campbell, 2019; Hubbard, 1998). Since the 20th century, red light districts and brothels have been incorporated into recreational activities to lessen their stigma and draw in more tourists. Concepts and factors associated with red light districts and prostitutes have evolved over time, causing urban policies and law enforcement behavior to shift in accordance with how these areas are managed. Destigmatizing the act of being a sex worker, considering them as victims rather than subjects, and the globalization of prostitution in Amsterdam are among the factors that have specifically made Amsterdam a destination of sex tourists as part of the globalization process (Dezhamkhooy & Papoli-yazdi, 2020; Hubbard, 1998; Zerlina, 2019).

The De Wallen neighborhood in the heart of Amsterdam has the city's oldest streets and is popular with both local and international tourists for its historical and functional significance. It is constantly connected to the city's main port. This area was once the center of prostitution, crimes (drug consumption and buying and selling), and urban waste accumulation, and it was a rotten area that has undergone decline and renaissance throughout history, earning it the nickname "forbidden area.". Now, this neighborhood has become a red light district where lawful activities (drug sales and prostitution) are conducted, and prostitutes are promoted through the presence of pornographic shops, exhibits featuring sex workers, etc. (Aalbers & Sabat, 2012; Nouban & Abazid, 2017; Mörk & Brandellero, 2023; Singelenberg & van Gent, 2020).

2.3.1.3 Urban transformation of red-light-district into other land uses. Transformation of Jakarta's Kalijodo red-light district into a vibrant public space. Kalijodo district in Jakarta was once a well-known red light district. In 2017, the government decided to rid this area of prostitution by not only destroying the brothels and bars, but also demolishing neighboring houses and evicting their residents. It should be noted that these houses were the homes of illegal immigrants or citizens. This area's history can be traced back to the 17th century Dutch colonial period.

This area was once a cultural hub, but due to the presence of illegal immigrants, its isolation, and the city officials' failure to care for it, it became a border area that was considered a hiding place for criminals. Hence, this region turned into a haven for Chinese refugees, who, due to their lack of partners, found love here. Until 1958, this area served as a special cultural center for the establishment of the Chinese cultural festival, where women and men would meet their lovers during the Blue Festival. The government halted this ceremony for unknown reasons, and the area became gradually isolated. In 1960, this area gradually became a gathering place for gamblers and sex workers. The reunion of these people and their prostitution-related activities resulted in the arrival of prostitutes from other brothels until 1999, causing the development of this area. This area eventually turned more notorious, and crime and sexual harassment rates rose alongside prostitution. After the area was destroyed and evacuated in 2017, the plan to construct an urban park was implemented. The plan to replace brothels includes a children's park and integrated green spaces with gaming and entertainment equipment (Nouban & Abazid, 2017; Zerlina, 2019)-(Figure 5).



Figure 5. From red-light district to public park, (Nouban & Abazid, 2017; Zerlina, 2019)

Transformation of Iran's Shahr-e-Noe red-light district into public park (Razi Park. Among the Asian countries with religion sensitivities Iran is the best sample to be considered. The establishment of a brothel in Iran dates back to the 1920s and the formation of an area known as Shahr-No. This century-old neighborhood was Tehran's largest red light district. After the revolution of 1979, extreme revolutionaries set fire to the entire area, and prostitution was made illegal. The former red light district has now been converted into a large city-scale park with a variety of recreational activities (Soraya Batmanghelichi, 2015; Dezhmakhoo & Papoli-yazdi, 2020)-(Figure 6).



Figure 6. From red light district to multi-purpose entertainment district, Tehran, Iran, URL 2

Transformation of Former Red-Light District 'Gang Dolly' into a women-and-child-friendly area-Indonesia. The " Dolly " neighborhood, which covered 24 hectares, included both residential and informal areas. Since the 1970s, it has been one of the most well-known red light districts in Southeast Asia for the sex trade. In addition to the presence of sex workers in this area, the industry's supporting activities have been very successful, providing a living for thousands of people. In addition to the presence of sex workers in this area, the industry's supporting activities have been very profitable in this area, employing thousands of people. However, in 2014, when the government decided to close these neighborhoods and rebuild these houses, thousands of people's economic lives changed dramatically. The sudden clearance of this neighborhood, without regard for its critical role in the economic life of the " Dolly area" and the entire city, resulted in a stagnation in the socioeconomic atmosphere of society. After the destruction of this area, local authorities were perplexed for five years because they had not planned for alternative uses in advance, and the lack of necessary physical and cultural-social infrastructure practically precluded effective action (Figure 2.7). Finally, in 2019, a British company took responsibility for the renovation of this neighborhood and presented a plan for it that was based on sustainable development (improvement of the local economy, and welfare) - (GFCP Surabaya Urban Transformation). (Daulay et al., 2018).



Figure 7. Dolly district from red to green district, Daulay et al., 2018

2.4 Space Syntax Method in Urban Studies

Method space syntax was first investigated by Bill Hillier and Julian Hanson of University College London in the 1980s. By describing and interpreting the primary characteristics of urban space, these studies sought to define and apply morphological language to environmental planning. In this method, the city is observed as a living and changing organism. Designers and architects benefit from this method by being able to make accurate predictions about the revival and design of urban spaces based on the characteristics of cities and existing spaces. In other words, this approach rereads urban space to investigate its social-spatial, physical, and cultural dimensions and qualities (Önder & Gigi, 2009; Wu & Guo, 2014).

According to the principles of this approach, there is a cause-and-effect relationship between the physical and social structure of urban places. By laying functional and physical features, the space syntax method reveals urban settings' hidden potential. This method is used to assess the spatial configuration and the users' perception of it. This method supports architects and urban planners in predicting spatial configurations by decoding how these spaces are produced. Space is considered as a physical layer that penetrates the social production layer of its users. Analyzing the shape of the space has a fractal aspect that allows us to study the shape of the space based on the frequency of social interactions (Al-Saadi, 2018; Gündoğdu & Ciraci Hale, 2007; Putra, 2021).

Among the researches that apply this multidisciplinary method: analyzing the movement of spatial components such as pedestrians and cars in urban space, predicting the degree of air pollution, and so on are considered. Space Syntax evaluation includes tools such as connectivity, integration, choice, map depth, and length indexes, that differs depending on the study's objectives. When streets with a high degree of connectivity appear in the middle of a street network, it is assumed that these streets provide their users with the best feasible route to their destinations. Integration, which stresses how urban areas communicate with each other, is an important element in understanding the relationship between urban places and people.

The higher this criterion's score for a street or urban space, the more people are present in that space and how well it is integrated.

The relationship between the construction of social space and the criterion of integration demonstrates that if a space has a low level of integration (poor engagement by people) and is not controlled, non-preventive and possibly criminal behaviors will eventually emerge (Abdulla & Ibrahim, 2023; Edgü & Ünlü, 2003; Wu & Guo, 2014).

An article by Jana in 2014 analyzed urban and building characteristics in Prague's Holesovice neighborhood using Space Syntax (Figure 8). By using this method, he evaluated gentrified 19th-century neighborhoods and assessed the actual lifestyle of the residents (Jana, 2014).



Figure 8. Axial map of eastern Holesovice, segment angular integration of freely accessible space, (The more integrated and connected the neighborhoods are, the warmer the colors become). Jana, 2014

Okuyucu and Çoban (2021) examined the relationship between spaces and social structures in the iconic Millet Bath (Hamamı) building in Afyonkarahisar. They used this method to assess the new function (cultural home) in this architectural construction. The provision and re-arrangement of space in accordance with its new use (including daily use and user movement) is translated in a structure known as the bathroom with cultural activities, as well as the space's compliance with the new function (Figure 9). The Space Syntax technique has aided in the selection of the appropriate function in historical buildings, such as the case example in this study (the

aim was to re-distribute the new functions by space syntax method (Okuyucu & Çoban, 2021) -(Figure 10).

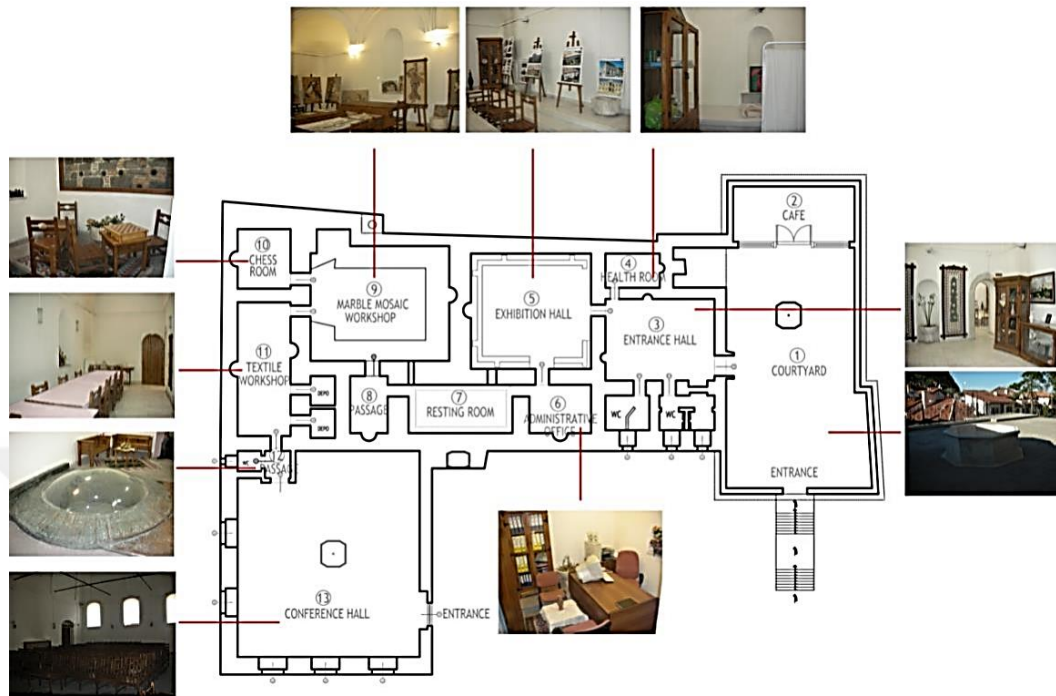


Figure 9. Distribution of function throughout the structure, Okuyucu & Çoban, 2021, p.275

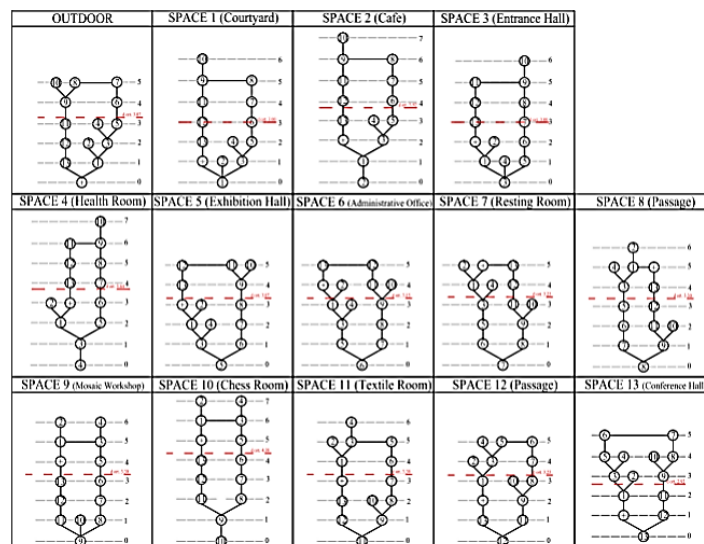


Figure 10. Graphs new functions in bath, Okuyucu & Çoban, 2021, p. 276

Desyllas (1997), in his study for the city of Berlin, used the Space Syntax approach to explore the morphology of Berlin since the 17th century. In this analysis, land values and land use modifications were considered. In this study, he determined that intensive reconstruction of land use allocation and value is compatible with changes in the city's accessibility patterns (Desyllas, 1997).

This method contributes to determining the level of social-spatial degradation in these areas. Areas like Zürafa Street, which has been a socially vibrant location for many years but has been in opposition to the surrounding environment in terms of their activities, examined in this study by Space Syntax method. This method aids in the investigation of the relationship between the individual components of the case study's socio-spatial units with one another and with the entire urban space. This analysis allows one to comprehend the integrity of the urban space surrounding Zürafa Street, as well as the natural progression of urban development (accessibility, land use, and land prices). In this direction, the description of changes becomes possible, and the correlation of people is discovered by expressing the architecture of space and nearby physical institutions. Space Syntax analyzes the spatial configuration to provide a clear understanding of the value of land as one of the criteria of urban quality. This model was chosen because one of the criteria for this research is land price (Abdulla & Ibrahim, 2023; Alalouch et al., 2019; Desyllas, 1997; Jana, 2014; Kuzulugil, 2023; Misa & Viana, 2018).

The criteria called “integration” and “connectivity” and control values, are among the parameters of the formation features of the space syntax method (Jana, 2014) that are applied in the current study.

Concluding remarks. In conclusion, it can be stated that urban space is the site of conflicts between the government, nation, economy, culture, and private property, all of which have been updated with modern concepts. Profit is the driving force behind the two-way and dynamic relationship between urban space and citizens' daily lives. Every urban space is considered a component of the larger system, which is constantly evolving; depending on time and scale, this transformation can be short- or long-term. Because each part of the spatial network develops differently, these developments can sometimes be associated with tensions in the heart of the system.

As a result, the urban transformation should be based on its inhabitants, who demonstrates the interpretation of time. Lefebvre's spatial triad define urban space's phenomenological structure. He provides evaluation tool through three dimensions. The first aspect focuses on the social structure forms a landscape through the places and activities it generates. The second aspect is engineered, understood by users, and subject to critique and review, providing engineers, urban planners, and architects with the essential regulations for reproduction and reconstruction. These codes take the shape of maps, calculations, and so on. And finally the third one generates symbols, meanings, and ideas for its users, designers, and planners on a regular basis, defining the essential horizons for replication. When comparing Lefebvre's spatial triad with urban transformation, it can be concluded that Lefebvre's analytical tools might be utilized to determine the urban transformation approach to urban settings (Figure 11).

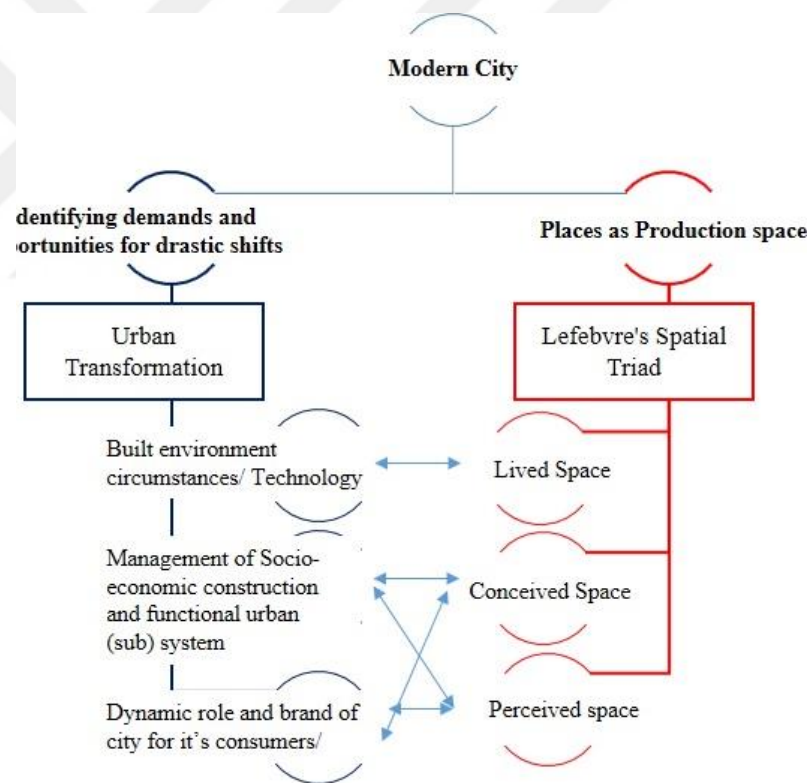


Figure 11. Lefebvre's spatial triad versus urban transformation, Author

To achieve the research objectives, a framework has been developed to evaluate the spatial triad using interviews, survey, field observations, mapping, and Space

Syntax. The results of these analyses are used to develop guidelines for an urban transformation project. (Figure 12).

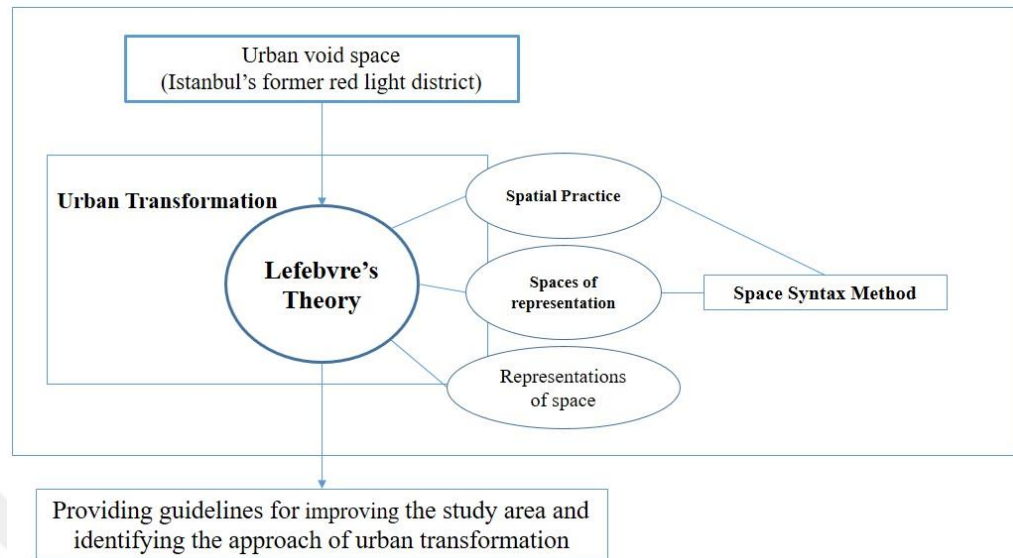


Figure 12. The research framework.

Table 2 details the criteria, data and information extraction techniques, and measurement tools. This table is used in the case study to help explain the spatial triad and propose strategies for urban transformation.

Table 2

Detailed Proposed Framework to Evaluate the Case Study

Lefebvre's Spatial Dimension	Constituent variables	Required data and Information
Lived space	Space users	Defining and classifying space users
	Space configuration	The circumstances of connections, communication, and coherence of the networks of spaces
	Routes, Networks	Accessibility Pattern
	Daily functions	Identifying and categorizing land uses and activities
	Land marks as buildings	Buildings' Role in Space Identification and Representation, Symbols
Representations of space (Conceived)	Urban planning visions for the space,	Previously approved (or is being planned) urban projects,
	How space is being ordered (Used),	The impact of these projects on the space if there is –(like rising land value, environmental impact , and etc.)
Perceived space	Theory and vision regarding the space	Images of space
	Thought and ideals of people towards the space	

Chapter 3

Methodology

3.1 Research Design

In this study, quantitative (space syntax) and qualitative (interviews) approaches were utilized to assess the conditions of Lefebvre's three spaces in the study area. The goal of this research is to investigate the status of the transformation of brothels' character into tourist zones as a result of new spatial productions and to provide appropriate options for an urban transformation plan.

According to the framework of the research literature, "social relations between spatial productions" and "social production" are investigated in order to comprehend urban settings.

As a result, the research focuses on the socioeconomic and cultural producers who dominate this area (tourists, shopkeepers who rented stores following the pandemic, and municipal officials).

The production of social and economic space has evolved in accordance with the transforming producers and consumers of space (economic, social, and cultural interactions). Economic products that were previously responsive to sex workers and their clients must now address the needs of tourists and new visitors by providing them with an economic and social relations. This transformation will be noticeable even in the types of things commercialized in this space. Even the type of tourist (local or foreign) influences how spatial productions and spatial representations are incorporated into the survey questions. Tourists' expectations and experiences in historical-cultural areas would differ, so this area (from Galata Port to Galata Tower) is also one of the attractions of Istanbul that are being interpreted by user groups. On the other hand, to investigate the dimension of people's mental image of the area, former producers of social and economic activities (former sex workers and retailers who are no longer) are considered.

3.2 Setting and Participants

3.2.1 Setting. The evaluated area includes Müeyyedzade and Galata neighborhoods. The sampling group (a sample of 21 individuals from five groups) was chosen due to the numerous layers of people's experience and spatial comprehension that are considered. Observations were conducted for 24 hours over two days (weekend and weekday) to recognize the groups referring to the space. In this study, it is attempted to conduct observations and interviews in a natural setting to explore participants' daily behaviors and activities. The land use and access maps obtained from the municipality were updated. Photography was conducted in four time periods (December, February, July, and September) between 2023 and 2024 to document the state of the abandoned areas. The goal was to document the physical modifications (what the municipality did for this region) as well as to evaluate whether the area's functions had changed or not.

3.2.2 Participants. The participants in this research are listed below due to their significance:

1. Shop owners (newcomers and older) & inhabitants
2. Tourists
3. Municipal officials
4. Police officers
5. Former sex workers

3.3 Procedures

3.3.1 Data collection procedures. In the first phase, the discussed literature, documents and mapping are applied. The parameters and variables needed to evaluate the study's scope are derived from the research literature. The Lefebvre's spatial triad applied to recognize the daily activities, the physical features of space, and the interactive productions of space and society that control the area. The design of the questionnaire questions is based on the criteria taken from this section.

To measure the spatial configuration Space Syntax is applied. In order to accomplish that, assessments are carried out using the maps from 1905, 1927, 2000, 2013, and 2024. Analyzing the space's perceived dimension using the Space Syntax method will contribute comprehending how the physical components of the area correlate with routine neighborhood activities. In second phase the interviews are conducted. Interviews are conducted with the owners of each business unit situated on the three sides of the studied area (Zürafa street, Alageyik street, and Yüksek Kaldırım avenue.). Interviews are carried out with ten former sex workers who worked here and ten urban experts from Beyoglu Municipality.

Table 3

Target Groups

Groups involved in the interview	Frequency	Percent
Municipal officials	2	9.5
Shop owner	9	42.9
Former sex worker	2	9.5
Police officer	2	9.5
Tourist	6	28.6
Total	21	100.0

In the first step, interviews were conducted with every group observable in the urban space (store owners, residents, and passers-by, all of whom are international and domestic tourists) regardless of the streets' history and famous identity. Aside from discussing the prior activity of this street, this step gathers general information on their everyday lives and their perceptions of the physical and spatial condition of the study area (Table 3).

In the second step, interviews are conducted with groups who are or were active in this space and are somehow affected by the consequences of the destruction of the physical body of brothels (police, former shop owners who are no longer active, shopkeepers, sex workers, police officers, and city executors were also active before the destruction).

The rationale behind selecting these categories is that the streets' 200-year-old functional character has engendered multiple layers of activity and collective memories that have persisted within the framework of these interconnected urban areas. Passing visitors, souvenir stores, markets and retail shops, cafes, and restaurants are all activities that respond to the needs of the primary users of the case study. Following the removal of the brothels, passing tourists play an important part in the production of space in this sub-neighborhood. Shops are important in the production of space because they must integrate with tourists. Their importance in space production stems from the fact that they have distinct experiences, and stores are also providing services in order to supply these dominant user interactions. Those that come here during the day, as well as clients of sex workers, ex-bosses of brothels, and sex workers, claimed that in the near future, similar houses on nearby streets will be activated (sexual services). When it gets dark, these individuals begin to visit the area, which makes the police more aware of their presence on these streets. There are historic structures (with unique architectural styles) that are over a century old that have particular functions, and correspond with obvious actions. In the phase three, transformation plan and overlaying evaluated products are examined. At this point, the relationship between the places lived, seen, and imagined by individuals and specialists is achieved by overlaying the assessment layers acquired in the earlier phases. However, the results of Space Syntax's configuration analysis also identify the research area's points of integration, connection, and choice. Thus, a general strategy for transforming the urban area in the devastated streets is achieved by overlaying these layers on the one hand, and its current circumstances on the other. Throughout the study the applied evaluation tools are as: SPSS, GIS, Depthmapx (Analyzing tools) (Table 4).

Table 4

Data Gathering and Evaluation Tools

Lefebvre's Spatial Dimension	Constituent variables	Required data and Information	Evaluation tool	Applied platform
Lived space	Space users.	Defining and classifying space users	Observation and Conducting a survey	SPSS
	Space configuration	The circumstances of connections, communication, and coherence of the networks of spaces	Space syntax Method (application of connectivity and integration variables)	DepthmapX
	Routes, Networks	Accessibility Pattern	European standards	AutoCAD
	Daily functions	Identifying and categorizing land uses and activities	Application of land use maps and update it	
	Land marks as buildings	Buildings' Role in Space Identification and Representation	Observation and mapping	
Conceived space	Urban planning visions for the space,	Previously approved (or is being planned) urban projects,	Municipality Documents, Interviews with official staff	GIS
	How space is being ordered (Used),	The impact of these projects on the space if there is –(like rising land value, environmental impact , and etc.)	IDW(Inverse Distance Weighting) Interpolation Method	
Perceived space	Theory and vision regarding the space	Symbols, and images of space	Map and photography	SPSS
	Thought and ideals of people towards the space		Conducting a survey	

3.4 Limitation

One of the most important limitations of this research is the reluctance of the majority to cooperate in interviews and meetings. Due to the moral sensitivity towards the issue of brothels, most people (shopkeepers, residents) did not have much desire to participate in the interview, and some gave irrelevant answers, which caused some questions to be removed.

Another limitation in data collection is related to the discussion of land ownership in this area. As a result of the interviews, it became clear that the discussion of land ownership in this area is challenging, and because of this, interviews with some municipal employees were limited.

Another difficulty of the field collection was the observation of space users in the dark hours, which was done only one day on the weekend at 9 pm due to the lack of security in the area (frequent disturbances) at night.

And finally, the lack of conducting any pre-study, or formulating a plan and program for this area caused the opinions of urban experts to be insufficiently comprehensive.

Chapter 4

Case Study: Istanbul's Oldest Red Light District

4.1 Location and General Information

Müeyyetzade neighborhood is located in Beyoğlu, an urban region in Istanbul. Beyoğlu was once known as "Pera," which means "beyond" in Greek, and it retained this name until the early twentieth century. The Golden Horn separates this neighborhood from the Old City (Freely and Freely, 2016). This area, on one side, connects to Galata's ancient quarter. Beyoğlu emerged from Galata and Karaköy, two significant neighborhoods in this municipal division (Istanbul Metropolitan Municipality, 2023) -(Figure 13).

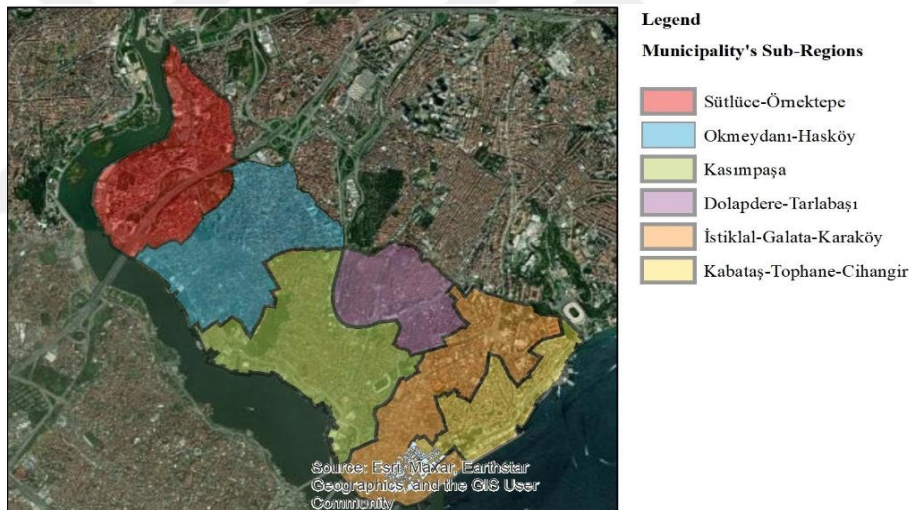


Figure 13. Municipality's sub-regions, (Author derived from Beyoğlu Municipality, 2024)

The Istanbul red light district consists of three streets, Zürafa, Alageyık, and Kadem, all of which are located in Istanbul's Beyolu municipality. This area, however, has become recognized as Zürafa Street (Figure 14). These three streets are in the Müeyyetzade neighborhood, about 250 meters from the Galata Tower and 450 meters from the old Karaköy pier. This is one of the most active arts and entertainment districts in Istanbul's old city, with a vibrant nightlife. Since the founding of

Byzantium, this region has been used for residential purposes, and it was once a hub of activity for European merchants. The Galata Tower, erected in 1348, is one of Istanbul's most renowned buildings (Figure 15). This region became well-known in the nineteenth century as the home of many European merchants and the location of the majority of embassies (Aydin & Çiçek, 2022).

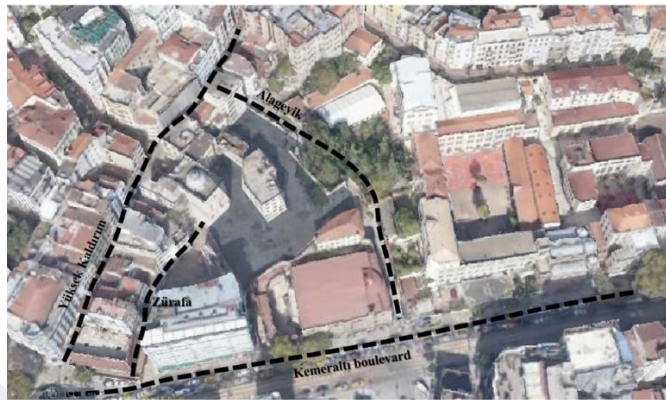


Figure 14. Borders of Istanbul's former red light district, (Author derived from Beyoğlu Municipality, 2024)



Figure 15. Land mark distribution of case study (Author derived from Beyoğlu Municipality, 2024)

This region was one of the most contemporary in the nineteenth century due to the activities of fashion, art and culture (theater, cinema), technology (underground train), and the presence of a large European community. This neighborhood also includes Bank Street, one of the Ottoman Empire's financial centers. This neighborhood has served as a foundation for Istanbul's modernization since the foreign populations that arrived here erected their schools, promoting the quick dissemination of Western culture and producing the education of the Turkish elite in subsequent generations. Many of these schools are still operational and are among the greatest educational institutions. The quality of living in this district deteriorated drastically over the twentieth and twenty-first century as a result of multiple wars (Cyprus 1950-1960), political problems, the large-scale evacuation of Greeks from this area, and the escape of inhabitants to other areas of Istanbul. The residential neighborhoods of the elites and elite class were replaced by the houses of rural migrants who went to Istanbul in search of job, and the area's economy deteriorated (Akıncı Turan, 2018; Beyoğlu Belediyesi, 2020; Alan, 2021)- (Figure 16).

Because of the plague outbreak in Istanbul (1811- 1812), people blamed the Muhoud brothels in the Karakoy district, and all pubs and brothels were razed under their demand. Instead, a mosque called Hidayat Mosque was built, but it was destroyed in the following years (Üstündağ, 2017; Turna, 2011).

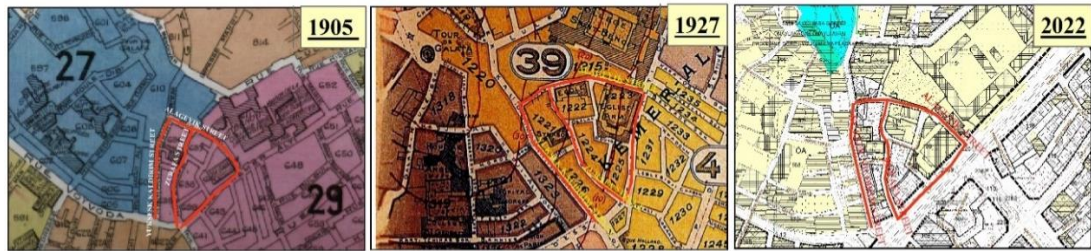


Figure 16. Evolutionary changes over a 100-year period (Beyoğlu Municipality, 2023)

The studied area is located inside a traditional and organic urban framework, and the majority of its communication networks are local. Local streets merge with two main roads. Comparing the access networks in this area over a period of several centuries reveals that not much has changed (Figure 17).

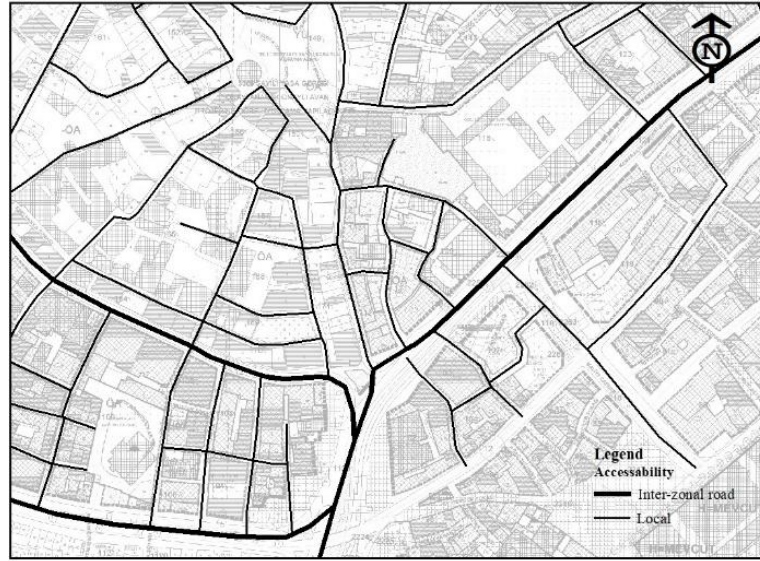


Figure 17. Accessibility network (Author derived from Beyoğlu municipality, 2024)

Based on the existing state of the uses in the investigated region, it is clear that majority of them are commercial and cultural. The majority of commercial uses are restaurants, cafes, retail shops (souvenir shops), a row of electricity-related shops (next in line to Zürafa Street), and clothing boutiques. Among the cultural uses, historical mosques, old synagogues, French schools, and tourist services are dominant (Figure 18)- (Beyoglu Municipality, 2024).

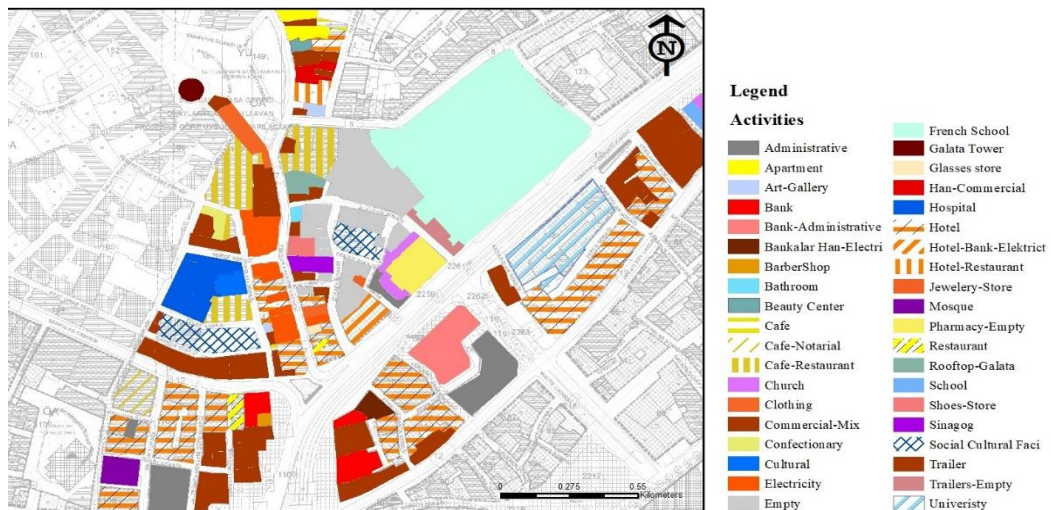


Figure 18. Land use of case study (Author derived from Beyoglu Municipality, 2024)

4.2 The History of Prostitution and Brothels in Istanbul's Oldest Red Light District - Zürafa Street

These houses actually have a long history; during Abdulhamid II's reign, they were initially opened to European residents of Beyoğlu. In the late 1870s, the Ottoman municipal government began requiring prostitutes to carry unique identity cards designating their special status among the general population. Brothels were also obliged to register as licensed businesses with municipal commissions. The construction of brothels in Istanbul dates back to the late nineteenth century, as a result of various wars, particularly the Crimean War (1856-1853), in order to meet the needs of the people. The brothels were built to meet the needs of soldiers. The earliest of these homes was constructed in Galata, and several more were later built in Beyoğlu before the residents noticed them. According to the locals, these houses were initially public buildings before becoming schools. These locations had faced numerous problems over the years, until they were finally closed and demolished in 2021 as a result of the Corona pandemic (Ze'evi, 2010; Belli, 2022; Ünal, 2022).

Golden Horn has been as a port since antiquity, and it is well known that Karakoy has had a prostitute district since the Middle Ages. The brothel zone in karakoy is made up of two intersecting streets which are Alageyik street and Zürafa street. There was only one entrance to Zürafa street which was from Alageyik street to protect the "clean" women. The buildings were overloaded and conditions were very bad even though the zone is right in the middle of the city (reference). Zürefa street was officially opened for prostitution activities during the reign of Abdul Hamit, and after the declaration of the Republic of Turkey, it was renamed Zürafa. The word "Zürefa " means "Lesbian" in Ottoman Turkish, but it became popular through word of mouth as Zürafa (Zürafa (Giraffe) is an animal's name in Turkish) among locals who were unaware of its meaning. Comparing to the continuous and rapid changes of the neighboring areas of this street, this area has remained unchanged as Istanbul's red light for more than a century (Belli, 2022).

There was a bathhouse next to this street that made profit because of its location. In addition to soldiers, this Zürafa street captured the interest of sailors because it was near a port that was regarded as one of the best in the world, and it is

also near an old tunnel that connects two historically and economically significant areas. Note that this port is merely used as a pier for the transportation of local passengers and occasionally city tourists; it is no longer as active as it once was.

Galata and Karaköy have roots in Istanbul's foundation history. This neighborhood is particularly important socially, culturally, and commercially because it has been the city's main international connection (Aydin & Çiçek, 2022; Ünal, 2022).

Matild Manukyan (1914-2001) began her career as a sewer. Then, after purchasing a number of residences in this neighborhood, he started managing brothels legally. As a result, she acquired a large fortune, and her reign over these brothels lasted until her death. After her death in 2001, her heirs ran the properties until 2020, when it was closed due to the Corona epidemic and demolished within a year. 25 of the houses belonged to Manukyan. According to interviews with old residents and shop owners of this location and some documentation (Official Turkish newspapers, police reports), the prosperity of this old red light district in Istanbul declined with her death. Between 2020 and 2021, from closure to destruction, the issues in this area escalated. Among these challenges and problems are the continuation of sex workers' work in these houses in a more dangerous environment, as well as the sheltering of the homeless in the ruins of this neighbourhood.

4.2.1 The most important dates and events in Karaköy-Galata sub-region.

In order to understand the link between activity development and disappearance, historical, socio-economic, and urban events in this area should be considered.

1812: Istanbul experienced a catastrophic plague epidemic, which was blamed on prostitutes on Melek Girmez Street. The outbreak caused the destruction of all pubs and brothels on the street. The Hidayet Mosque was built in their place in an attempt to erase the street's notorious reputation.

1821: When the global plague pandemic reached Istanbul, the identical pattern of brothels in European countries transmitted to the Ottoman Empire as well.

1850s: Langa Fatma: The first proprietor and manager of a brothel in Istanbul: Edirne Kapısı/ Brothels initially began to provide sexual services to foreign merchants (after the establishment of political-commercial links with France and England).

1856-1853: Wars like the Crimean War / The brothels were first built in Istanbul to meet the needs of soldiers. The earliest was built in Galata.

1876 to 1909: The reign of Abdul Hamit,

1923: After the declaration of the Republic of Turkey, Zürefa street was officially opened (Except for those in Beyoğlu, brothels are prohibited).

Late 1870: Ottoman municipal government began requiring prostitutes/ The construction of brothels

1882: Construction of Karaköy 's historical port begins in.

1884: The authorities acknowledged the brothels in this area and granted them a formal permit to function.

1895: Earthquake and damage of the port, and the beginning of the construction of Galata ports (Ünal, 2022).

1900: Pier building completes in

1909: Regular voyages begin in.

1923: Half of the underground brothels became lawful after the Republic's declaration/ In light of public health concerns; the Brothels supervision has been updated to a document system.

1934: A boom in voyages/ Increased transportation of commodities in addition to passengers.

1963: The number of brothels owned by Manukyan climbed to 25 houses (Figure 19).

1986: Turkey's largest shipping port constructed.

1995: The balance Manukyan initially achieved broke down in 1995

1998: First Police raid

2001: (February): Matild Manukyan death (Born 1914)

2001: (July): Second Police raid

2006: Prostitutes are being relocated to different locations as a result of the major police operation in 2001.

2013: Brothels are being closed/ Protest is taking place on Zürafa Street (Figure 20).

2016: Lowering the total number of homes to four (Figure 21).

2021: Zürafa, Alageyik , Yüksek Kaldırım Streets are demolished (Figure 22).

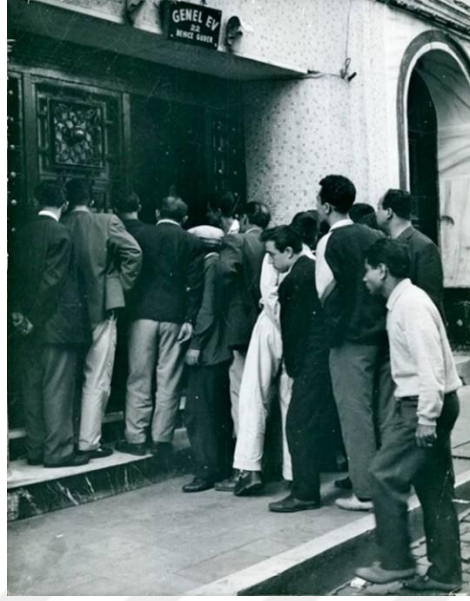


Figure 19. Zürafa street, 1963, (URL 10)



Figure 20. Protest in Zürafa St. (URL 1)



Figure 21. A view from Zürafa St.in 2017, (URL 11)



Figure 22. A view from Zürafa, Alageyik and Kadem St., (Author, 2013)

4.2.2 The first successful attempt to eliminate brothels on Zürafa street. On 1998, the Istanbul Security Police conducted their first raid on these streets. During this operation, prostitution houses that were not licensed and were in poor condition were sealed. In addition, people on the run and wanted by the police for a variety of offenses have been identified in some of these homes as clients. The police started conducting raids after 19 street prostitutes filed a criminal complaint against the Manukyan prostitution network, detailing the cruel and illegal behavior that goes on behind closed doors against women and girls who are grabbed as sexual slaves. (Genelevlere polis baskını. Güncelleme Tarihi: Mayıs 22, 1998 00:01) -(URL 8) - (Belli, 2022).

Following a complaint against one of Matild Manukyan's sons and the team, another police raid was conducted at this area in 2001. Numerous weapons and ammo were taken during this attack. In addition, five brothel operators and their men were detained, along with fraudsters. The purpose of this attack was to stop those who coerce women into becoming prostitutes in these brothels. A claim that teenage girls are being held hostage here and coerced into prostitution (by signing promissory notes) led to the execution of this attack.

The period from 1998 to 2001 experienced a significant increase in the number of arrests in this neighborhood; these arrests had begun before to Manukyan's death and continued after her passing. The police routinely cleared and inspected these homes starting in 1998 and continued until they were closed and completely destroyed in 2021. The police attack this year occurred over a criminal inquiry of another prostitute in this neighborhood who claimed to have been kidnapped at young ages and sold to the owners of Zürafa street's brothels (using the same system of putting people in debt by forcing them to sign promissory notes under torture and threats). As a result of the woman's complaint and the police's investigation, which included searching deeper into the Manukyan family and further inquiries as well as the backgrounds of the employees and the boss, "Agha" in particular, it became evident that the crimes being committed in this neighborhood were more extensive and included beating and extorting clients and allowing juveniles to enter only if they pay more than usual (a form of child abuse). The essential point is that Matild Manukyan's son was not only aware of these common incidents in the neighborhood, but actually directed these actions. After more research, it was discovered that the majority of the women involved in prostitution in this neighborhood were country girls who had been abducted, transported here by force and threats, and coerced into becoming prostitutes. (Atuk, 2023; İnce & Çalışkan, 2024; URL 8).

Because of the big police operation in 2001, prostitutes started moving to other locations in 2006. The prosperity of this neighborhood fell after the police's constant interference, the periodic closing of houses, the deaths of two brothel heads, and the transfer of prostitutes to neighboring brothels (URL 8).

There were just 4 homes on the street in 2016. There were fewer houses, despite the large number of customers.

After the demolition the municipality initially planned to construct a cultural and artistic center in their place during the two-year reconstruction project following its demolition. Indeed, the primary identity recommended for this cultural-artistic area is to forget the area's notorious mentality. Before demolishing these structures, the municipality negotiated with the heirs of these houses about the proposed plan and, after receiving their approval, publicly announced the proposed project (Bayoglu Culture Road Project). According to the municipality's announcement, the heirs of

these houses are responsible for the cost of renovation in this area (Beyoglu Municipality, 2023-URL 1).

In total, 42 residences on these three streets were engaged in prostitution. Another issue that the municipality has dealt with is the discovery of an old bathroom during the excavation of this particular site.

On 20 December 2021, Heydar Ali Yildiz, Mayor of Beyoglu Officially announced that the brothels in the historic streets of Zurafe, Kadem, and Alageyik Karakoy no longer provide services, and the streets is going to be merged into the Cultural Beyoglu road through a cultural transition project.

Regarding the status of property possession in the study area, at the press conference, Beyoğlu Municipality stated that it had reached the requisite agreements with the owners of the properties that had been destroyed in the area and the heirs of Manukyan (sending the heirs an offering letter). However, according to the claims of various complainants who claim possession of some houses, the issue of ownership has become a complex challenge for the municipality. Apart from Manukyan 's heirs and some locals, these lands are also owned by others, according to the findings. A more controversial argument has been made that many of these houses and lands were transferred to government ownership without compensation by the corresponding municipality. Therefore, one of the current issues is the power-related legal and property issue concerning these areas, which is a significant barrier to choosing the best plan of action for conducting any kind of urban renovation project. To put it another way, a proposed cultural project will involve a number of real estate partners, and the municipality will have to go through a long legal procedure in order to acquire these properties. Meanwhile, the municipality has admitted that providing a use for these assets and an investment plan in them is enclosed in its scope of action and that the property rights of the owners of these lands would not be violated in any manner.

4.3 Beyoğlu Urban Transformation Projects

The Galata Port project, implemented to boost tourism in the cruise port, is one of the major projects that has had a significant impact on land prices in the study area.

This project has brought tourism back to Istanbul, brought prosperity to Karaköy's surrounding neighborhoods, and transformed the once dangerous and run-down region into a hub for welcoming elite travellers. This project's particular design creates a shoreline for sidewalks in the absence of ships. Historical structures and landmarks, including the Yeraltı mosque, clock tower, post office, and Tophane historical square, are situated between the Galata Port and the present study area (İBB, 2023; Tanis, 2017; URL 2; Ünal, 2022).

4.4 The New Zürafa Street- An Urban Void in the Heart of Touristic Area of Istanbul

Only Alageyik street is available for walking, while the other two (Zürafa and Kadem streets) are closed by temporary walls. On the other side of these walls are the ruins of structures that comprise of four walls within. Alageyik Street is highly busy during the day and has a fairly steep slope. On the right side of the street, there are little stores that sell tourist souvenirs (Figure 23).



Figure 23. Remains of destroyed structures beyond the municipality's temporary walls (Author, 2024)

The pavement is of extremely low quality. On the other side, beggars are spotted sitting directly in the midst of this roadway during the busy hours of this passage and start feeding on the garbage that they have brought. This is a highly unattractive sight that obstacles numerous people walking in addition to degrading the environment's visual quality. The aged doors and windows, as well as the weird graffiti on the walls, accentuate the abandoned spaces (Figure 24).



Figure 24. The physical and visual quality of spaces of Alageyik St. (Author, 2023)

The majority of tourists who pass through this street take this path to reach İstiklal Street, Taksim Square, the Metro Station, and the Galata Tower. In one of the interviews (with the shopkeeper at the intersection of Alageyik St. and Kemer Altı Road), it was discovered that due to many concerns from tourists about how to get to the sites described above, this person put a sign to address this issue (Figure 25).



Figure 25. The sign that the store owner put up at the crossroads of Kemer Altı Road and Alagik Street (Author, 2024)

During the day, these abandoned spaces that are not enclosed by a wall are used as parking lot. According to the interviews (with shops and police officers), these empty locations are gathering sites for drug addicts and beggars during the night. This street's lighting system is extremely inadequate at night, when the majority of shops are closed (Figure 26-27).



Figure 26. Daytime usage of abandoned spaces (Author, 2023-2024)



Figure 27. Nighttime lighting conditions (Author, 2023)

According to the findings of the interviews, the following activities were popular in these three streets prior to the demolition of brothels: women's shoe businesses, emanetçi, hammam(bath), shops that supplied customers with needed items, and tea and sandwich peddlers (Figure 28).



Figure 28. Emanetçi station, official magazine, 2000s,

5.1.1.1 The features of space producer groups. There were 21 participants in all who were interviewed, and the majority of them were "shop owners" and "tourists" in accordance with the purpose of the study. Out of the 21 participants, 9 are shop owners, 6 are tourists, and the remaining individuals are staff members of Beyoğlu Municipality 2, police officers 2, and former sex workers 2 -(Chart 1).

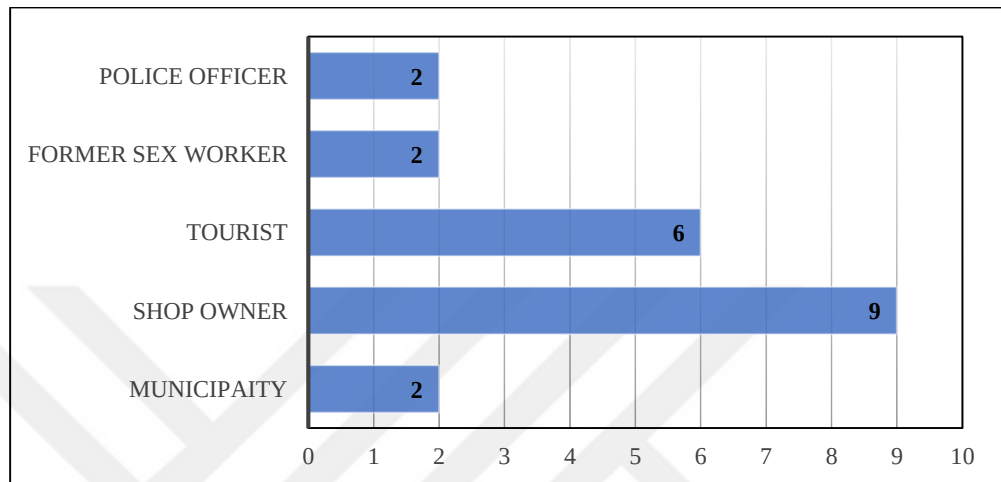


Chart 1. Which heading defines you?

Participants' ages vary widely: 6 of participants fall between the ages of 25 and 34, while 10 of them split equally between the 35–44 and 45–54 age groups. Of those interviewees, 3 of them are within the 55–64 age group and 2 of them fall within the 18–24 age range. (Chart 2)

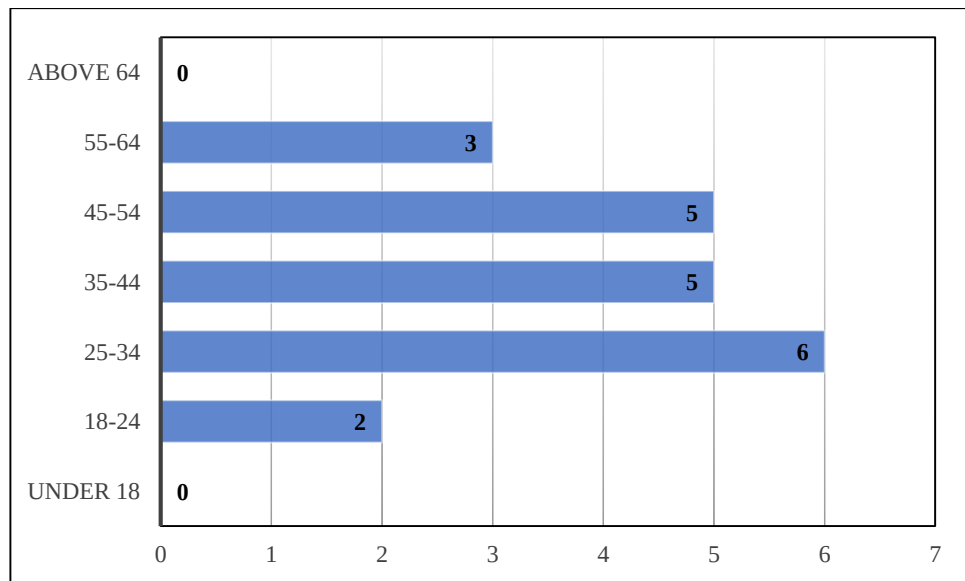


Chart 2. How old are you?

Men make up 15 of the participants, and women make up 6. In order to ascertain whether the spaces still have an impact from the previous brothels' activities, more women were involved while choosing the interview subjects (tourists) or not (Chart 3).

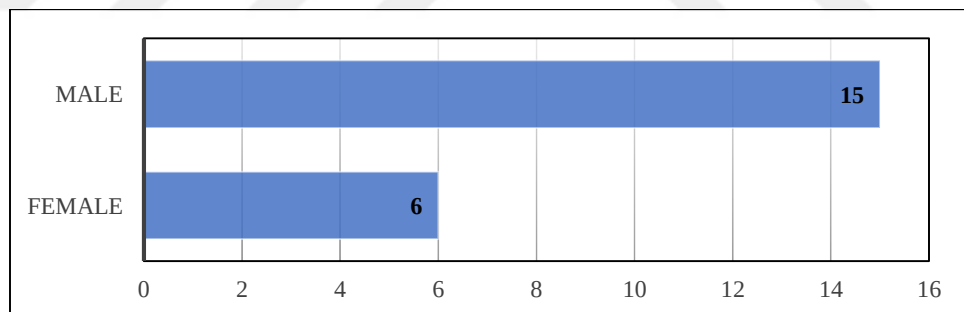


Chart 3. What is your gender?

The significance of the participants' level of education lies in the fact that people's comprehension, perception, and expectations of urban spaces vary depending on their level of education. Of the participants, 5 are either guidance (high) school graduates or failure to graduate, 3 of interviewed people have only completed their primary education, 2 people are uneducated, and 10 are university graduates. (Chart 4). This high rate of university education among the participants is due to tourists and

young shopkeepers who provide tourist services or moved to this area after the destruction of the brothels.

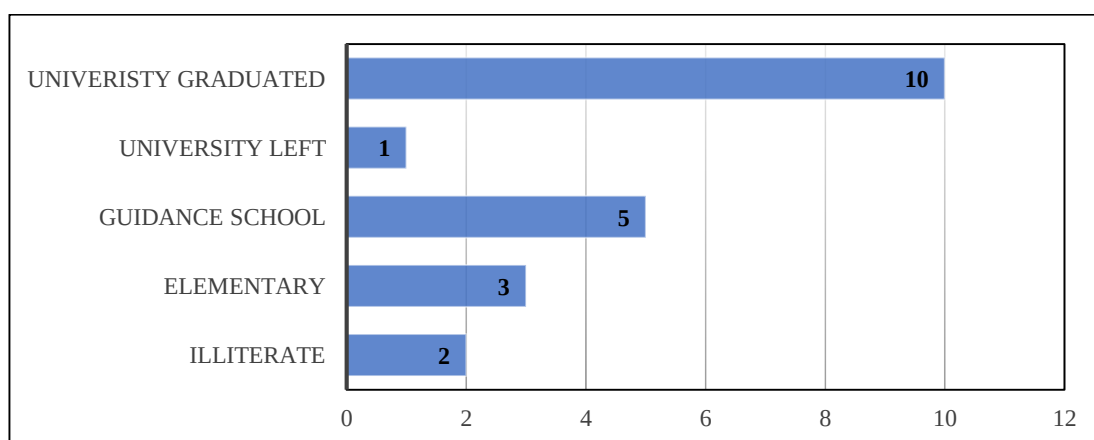


Chart 4. Determine your level of education?

Knowing how long participants have resided in the community is crucial because brothels had a long-lasting socio-economic impact until 2020. Seven respondents aged 0–5 years, four aged 26–30 years, two participants aged 16–20 years, and two individuals aged over 30 years reside or work in the vicinity of these streets (Chart 5).

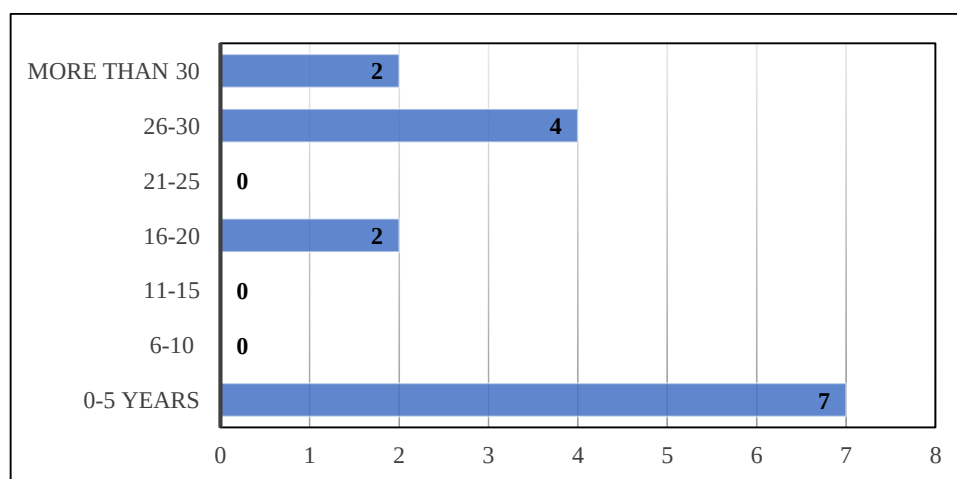


Chart 5. How long have you been living /working in this neighbourhood?

It should be mentioned that the high percentage in the range (0-5 year) is related to the fact that once the brothels were destroyed, many of the people who had stores

here returned to their businesses¹. All of the interviewees—aside from the tourists—have witnessed these streets' previous identity and image, and they themselves have contributed to the change of the spatial productions from that era and beyond. 5 of the inhabitants and shop keepers Interviewed are owners, while 4 of them are tenants (Chart 6). It is worth noting that the majority of shopkeepers who participated claimed to be owners of the shops, and live in districts remote from their workplaces (Sarıyer, Ataşehir, and so on).

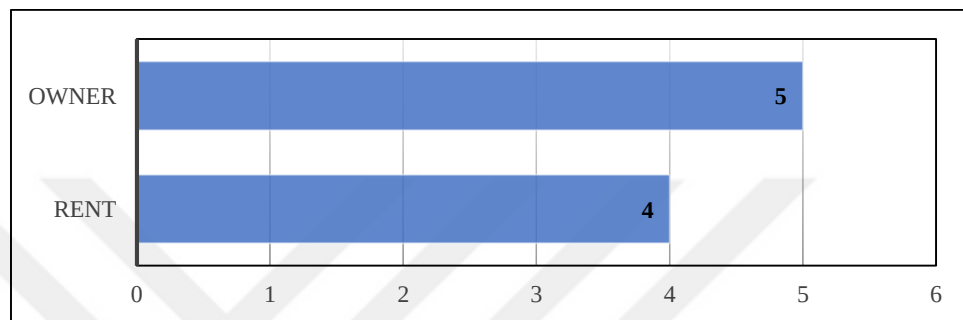


Chart 6. Do you currently rent, or own the shop/house?

The participants provided several answers for why they chose this place as a workplace or the residence. 4 of the inhabitants was born here, and 3 stated that having their stores in the heart of the city contributes to the economic prosperity of their businesses.

The large number of people who claimed to be born in this district demonstrates a strong sense of belonging to this neighborhood. According to 1 of respondents, when the brothels were open, their working status was also quite favorable, and they earned a lot of money from unofficial activities relating to these clients and the workers of these brothels. However, after the brothels closed, their business encountered a decrease in sales. (Chart 7).

¹ As a result of frequent complaints and police raids in this neighborhood, several store owners would open their businesses during that time only to close them again when the criminals began to harass them.

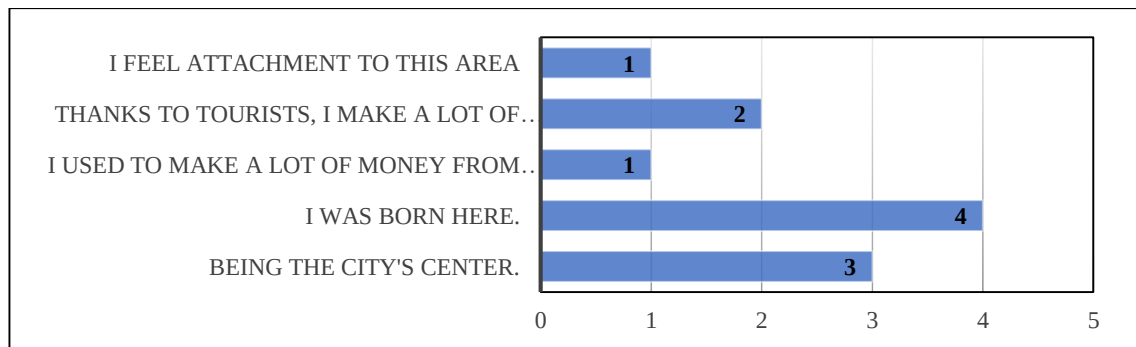


Chart 7. Why did you decide to live/work in this neighbourhood?

Among business owners (shopkeepers, police officers, and former sex workers), 4 dwell in the same neighborhood within a 400-meter radius, while 13 live away (some also live in the Asian part) (Chart 8).

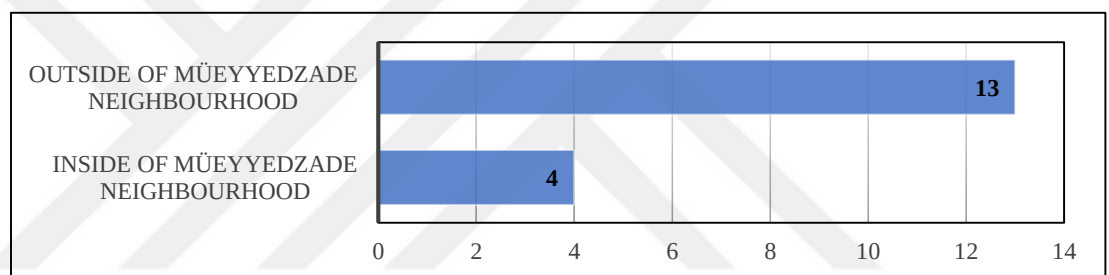


Chart 8. Where is your house?

4 of the tourists came from other countries (Iran, Morocco, Pakistan, Germany), while 2 of them came from other cities in Turkey (Bursa, Mardin). Half of them have been in Istanbul for more than a week, while the other half have been there for less than that (Charts 9 & 10).

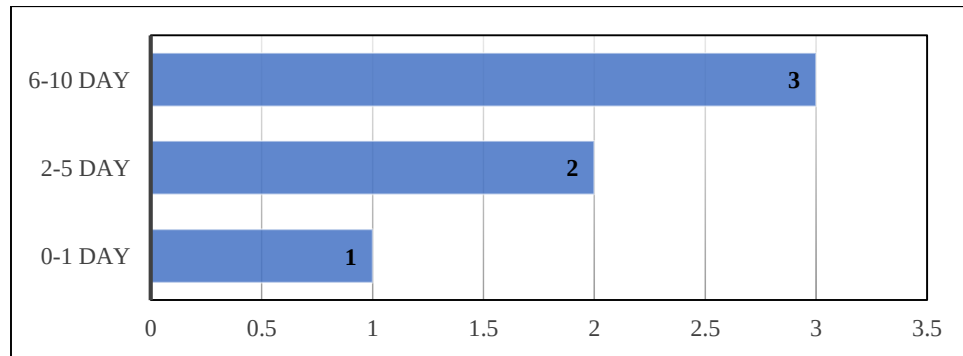


Chart 9. What is the duration of your stay in Istanbul so far?

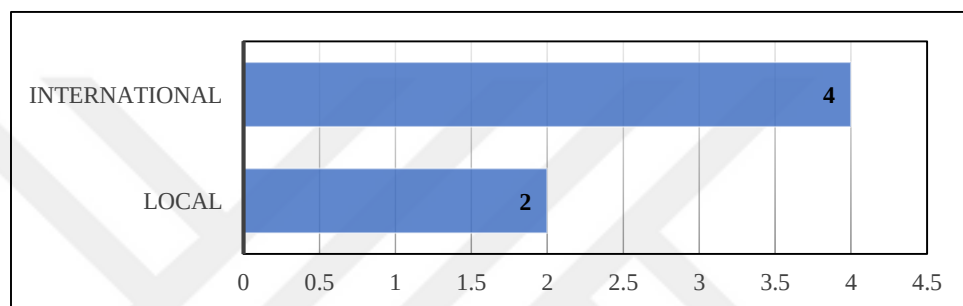


Chart 10. Where are you from?

This area comprises of three layers of space users who join at different times and have different attitudes. The first layer consists of shopkeepers who have shops on both sides of the main and adjoining streets, as well as police officers who have been working in here prior to these houses were destroyed. It is important to investigate their daily activities both before and after the 200-year-old brothels were destroyed in order to understand the sort of their spatial productions. Because this allows us to better understand how common daily activities prior to the demolition of those houses influenced spatial production of the case study.

5.1.1.2 Social and commercial production of space features of space producer groups. According to the participants' responses to the questions, prior to the removal of these structures, the biggest problem in this area was harassment of women who happened to be passing down this road, as well as extortion from sex clients (6 of participants).

Then there were people who bothered shop owners by shattering windows and stealing from them, as well as males fighting in the streets over prostitutes (4 of participants). Drug sellers and purchasers, pickpockets, and drunks (3 of participants) were also present in this location. Finally, there were older structures that, due to their age, collapsed and killed the residents (2 of participants). Before the demolition of brothels, common activities such as small trading and the involvement of human and drug trafficking mafias were documented. (Chart 11).

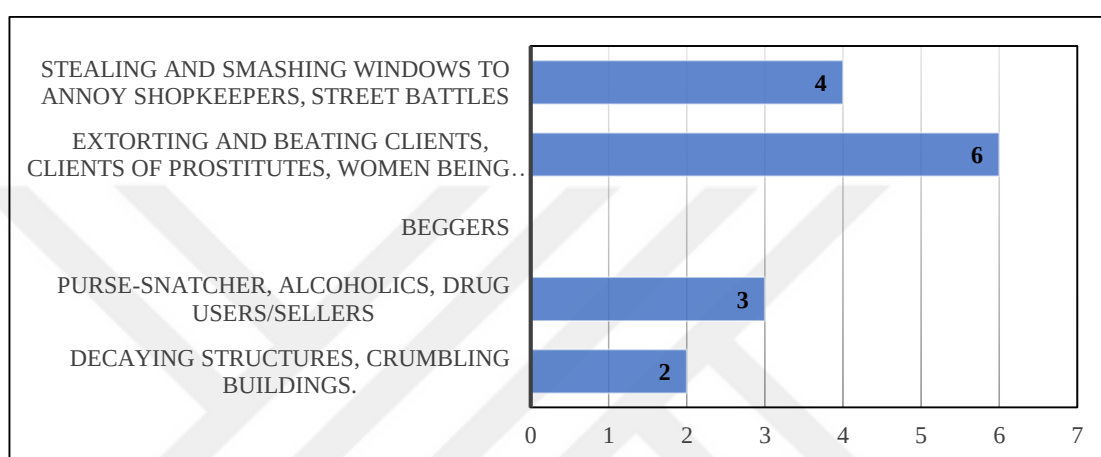


Chart 11. What were the problems related to the streets before closure of brothels?

5 of shopkeepers reported that since the closure of these residences, the number of their customers has increased due to greater security on these streets as a result of the absence of illegal activities and conduct. 3 are also quite pleased with the closure of these dwellings, therefore they have either changed their commercial use to increase profits or reopened previously abandoned workplaces. The crucial thing is that the types of insecurity and social problems in this area changed as a result of replacing brothels with urban voids.

The destruction of these houses has had a negative impact on the financial lives of those who (2 of participants) once benefited greatly from their presence. While for others, there was no difference in terms of customer count (1 participant). The spatial production of activities throughout this transformation from a brothel to a tourist destination was completed rapidly.

This demonstrates that the commercial-tourist activities in the sub-layer of the area that was involved in the brothels' activities were imprisoned in some way, and with the demolishing of these houses, they quickly found their place in the space (Chart 12).

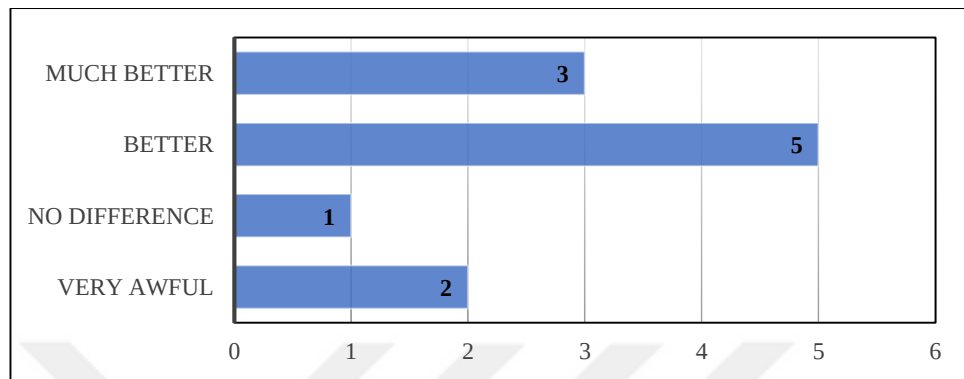


Chart 12. How has the removal of this activity (brothels) affected the number of customers?

5.1.1.3 Routine and daily activities of producers. 15 of people' activities are commercial (selling: shop owners, buying: tourists and residents), 3 (14.29%) are cultural-social (education, disciplinary), 2 (9.52%) are for entertainment and rest (small parks scattered within a 400-meter radius), and 1 (4.76%) is from other activities category. (Chart 13).

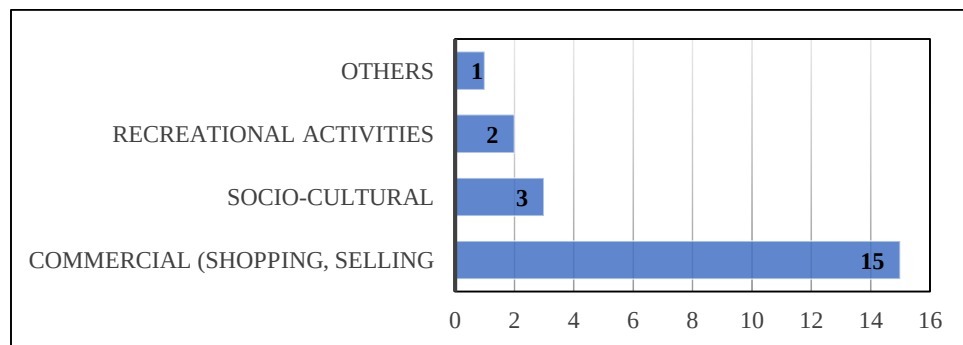


Chart 13. What activities do you engage in from the moment you enter this area until you leave it again (daily)?

According to the present economic conditions in this area, shopkeepers and visitors' everyday activities are categorized into eating, drinking coffee, resting, and having fun. 5 of those interviewed prefer to eat meals and drink coffee in the evening at cafes or restaurants near these streets because they consider the caterers and cafes are pricey and in line with tourist fees. As a result, eating outside of this neighborhood is more cost-effective for them. 3 of participants own a cafe or restaurant and do not have to leave their workplace for this activity. 2 of interviewees also order their food online and do not have to leave their shops. On the other hand, they admitted that the meals served in these restaurants is mostly dedicated to tourists (1), therefore the choice of food available to the shop owners living on these streets is limited. (Chart 14).

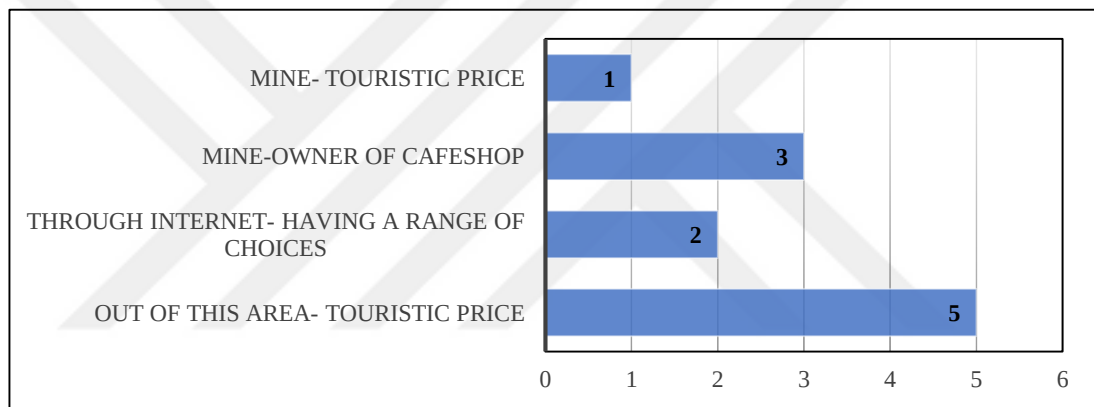


Chart 14. Where do you go for lunch, dinner, having a cafe?

The three main streets where the brothels were erected show that one of them, Alageyik Street (Zürafa Street is blocked to traffic on both sides), has a high volume of pedestrians. As a result, the goal of this question is to discover why people prefer to cross this street (despite the steep slope)-(Figure 30). 50% of people use this small street to reach to the back roads they know, while 33.33% pass through it just for curiosity (tourists), and 16.67% use this street as a bypass to go to Istiklal street and Taksim Square. This street is highly noticeable to those who use it, both visually and physically (Chart 15).

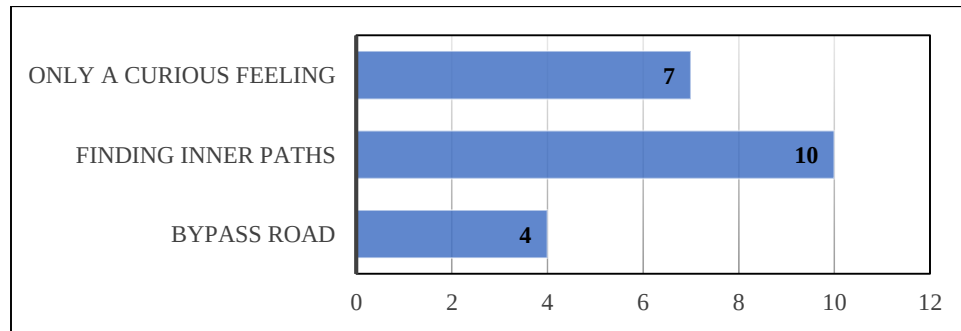


Chart 15. Why did you select this roadway (Alageyik street) to cross?

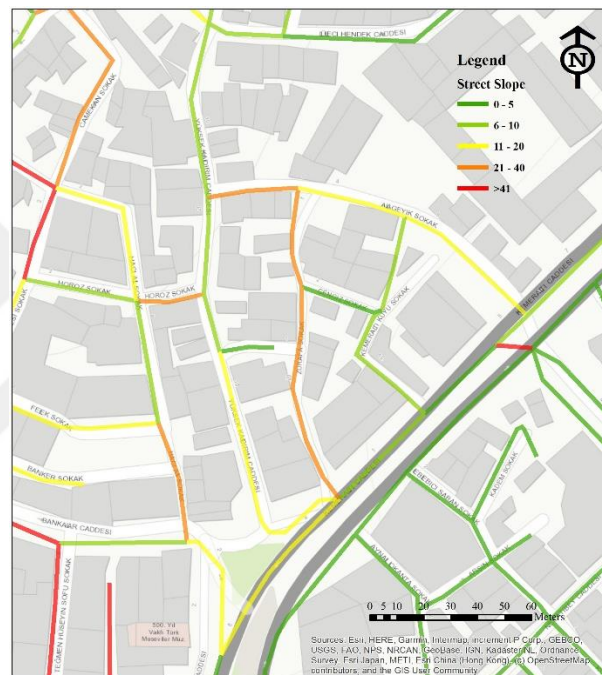


Figure 30. Street slope of case study

The choice of access route and its simplicity of use are among the variables considered in the Lefebvre's spatial triad. As a result of the participants' responses, it is clear that there are two primary points of entrance to this location. 14 (66.67%) of people use the Şişhane metro station to connect to work or home, while 7 (33.33%) take the Kemeraltı boulevard's tram. Among the participants, those from the Asian side prefer sea buses. (Chart 16) (Figure 31).

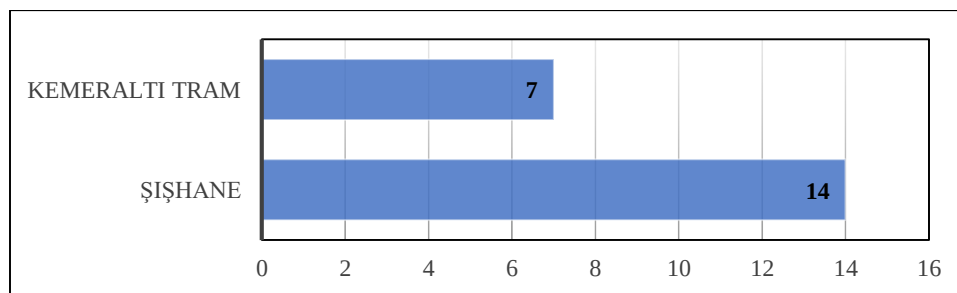


Chart 16. Which path do you think is best for getting to your location (job or tourist - Galata Port, Galata Tower, etc.)?



Figure 31. The location of the studied area to public transportation stations

According to the tourists interviewed, this neighborhood is typically appealing because of the presence of historical structures (2 of tourists), as well as the old-style streets. 1 of tourists visited this street and its adjoining alleys solely to purchase souvenirs from Istanbul. The remaining 1 declare that walking these streets and eating meals in its tiny and friendly cafés allows them to witness and experience authentic Turkish culture (Chart 17).

Local participants and tourists describe Turkish culture as follows: To local tourists, this neighborhood is where Istanbul's original culture developed. High-class and educated European Turks settled in this neighborhood, transforming it culturally (by establishing stores, libraries, and foreign schools). But to foreign tourists, beautiful and historical structures, souvenirs depicting Turkish clothing styles, foreign buildings, accessories, and so forth.

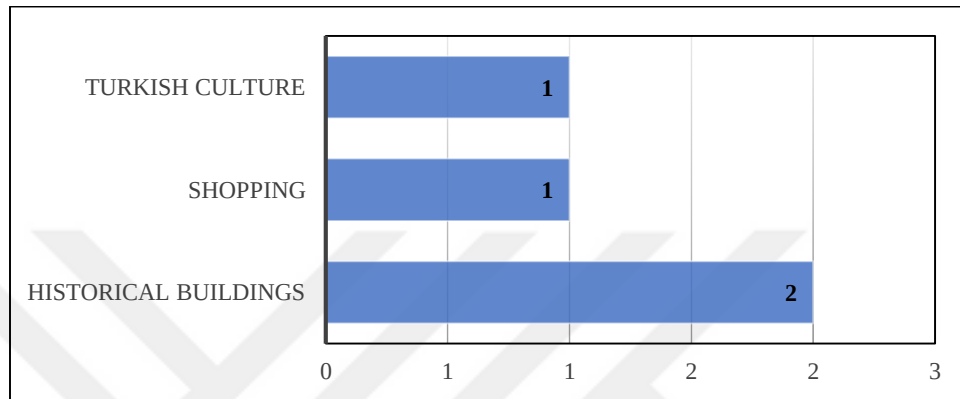


Chart 17. Why did you choose this area of city to explore and have fun?

The majority of daily activities (7 of participants) end about 7 p.m., and the remaining 5 of participants close from 5 p.m. onward. The remaining 3 of businesses working up to 9:00 p.m. are limited to cigarette, alcohol, and tiny markets. In other words, there is no nightlife on these streets, and after the shops' working hours end, they practically close (Chart 18).

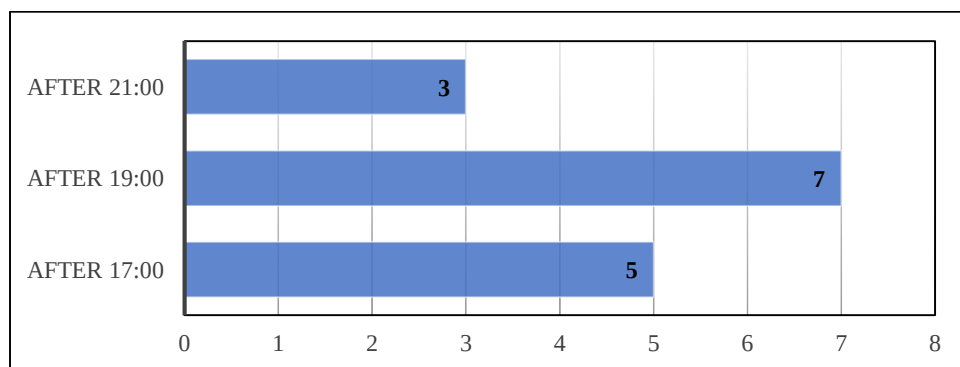


Chart 18. What times of day and night do you close your shops or avoid passing the following routes?

The following inquiry investigated how the living spaces of people who live near these streets have changed production and activity by removing brothel-related functions. 6 of participants admitted that drunks, drug dealers, and elderly sex workers occur on certain streets at specific times of day. 4 of interviewed people also complain about the appearance of beggars and working children on the streets, which bothers shops and tourists. 4 others also object to the gathering of peddlers because they consider the traffic area is too limited and congested for the passage of tourists, locals, and motorized vehicles, resulting in a spatial mismatch. 3 of participants also confess that some burglars and store invaders enter their stores during the dark hours of the night and disrupt security. 2 other of the participants are concerned about the abrupt collapse of decaying structures along these streets (Chart 19). In their experience, they had witnessed a decaying house destroyed and four people killed by its debris – (Figure 32).

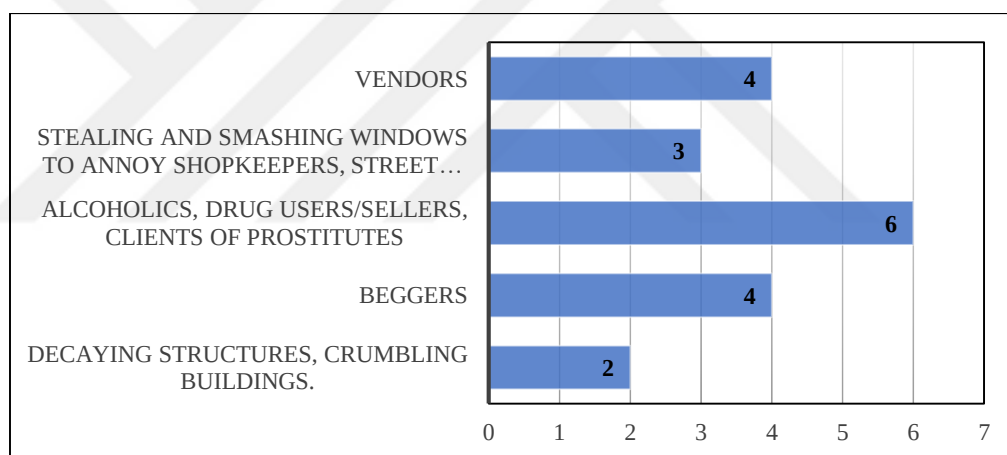


Chart 19. What were the problems related to the streets after closure of brothels?



Figure 32. The informal space producers, Author, 2024, 4 Nov

Among the distinctive features that people have identified for these streets, there are several difficulties that have impacted the visual and environmental quality of these spaces, leading to dissatisfaction among its residents. 8 of participants mention how dirty the residential and commercial buildings are on these streets, and they think that the buildings' deterioration has lessened their charm and given the impression that the streets are abandoned. 6 of participants express dissatisfaction with the state of the streets and walkways. They claim that due of the large volume of visitors on certain streets, the sidewalks require ongoing maintenance and cleaning. 5 of participants also comment that, despite the narrowness of the passageways, restaurant and café rubbish has accumulated, which makes it unpleasant to stay in this area on summer days. 2 of them believe that this roadway should be closed to motor vehicles because there is insufficient room for pedestrians.

Passing cars, on the other hand, can cause a lot of noise pollution with their loud and irritating music, and the remaining visual and environmental pollution makes the overall atmosphere in these streets intolerable (Chart 20) -(Figure 33 & 34).

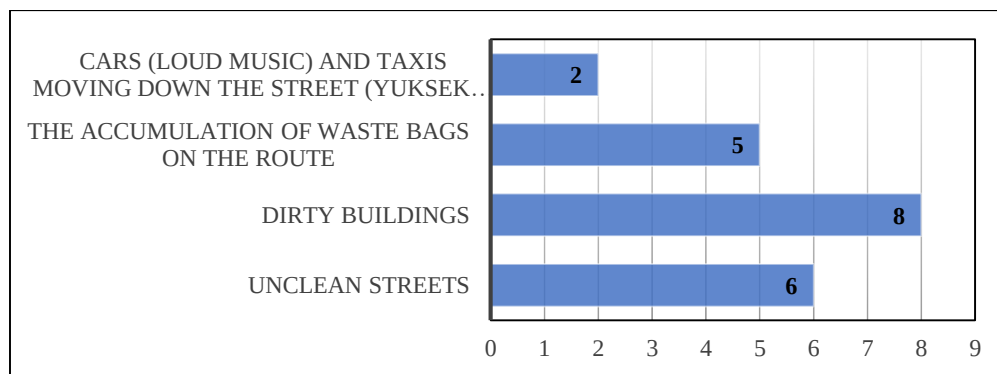


Chart 20. In terms of environmental quality, how would you describe these streets?

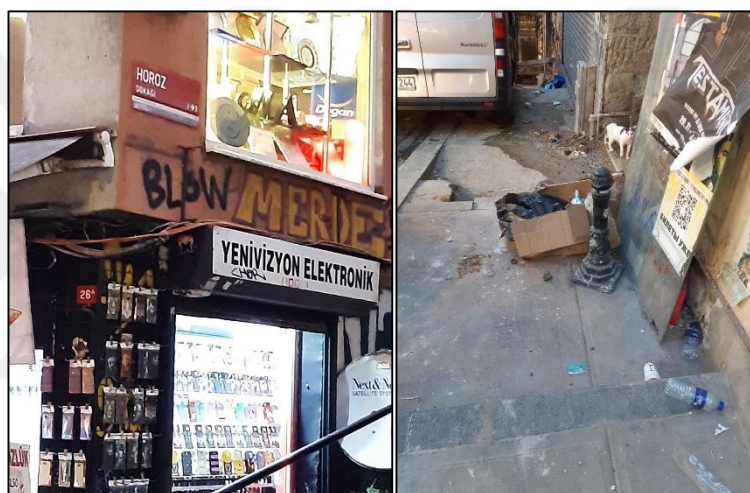


Figure 33. Dirty buildings (Left), Unclean street(Right)



Figure 34. Chaos of passing vehicles and pedestrians

Because the majority of the residents of this street and its neighboring streets are shopkeepers, one of their daily activities is a short break between work, during which they occasionally leave their stores to drink tea or eat food. Among them, 5 of the participants like the small park located at the bottom of Yüksek Kaldırım street, while 4 of them prefer not to leave their shop during their working hours (due to security issues, not losing a single client, crowded greater than the size of sidewalks and crossing streets). 3 of participants visit a friend's shop, which is typically two to three shops away. Finally, 1 of shop owners choose the tiny park across the Galata Tower for a quick rest and some coffee or tea (Figure 35) -(Chart 21).



Figure 35. Small park² location, Author derived from <https://www.openstreetmap.org/>

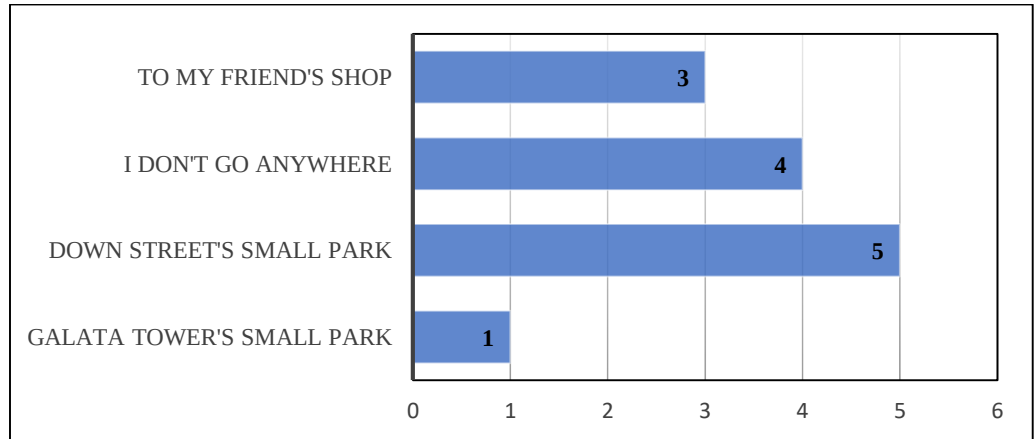


Chart 21. Where do you go for having a short rest?

² The area that was referred to is not a park literally. This is an open space adjacent to a food stand. The respondents' used word is "small park".

To understand the physical characteristics of this area from the perspective of the observers, a question concerning the most popular structure or area as reported by the interviewees was posed.

Galata Port was highlighted by 9 of respondents, who thought it was a unique and magnificent location. Furthermore, according to 7 of participants, Karaköy seashore is attractive, and they occasionally visit the seashore and spend time there after work. Additionally, 3 of respondents think that Galata Tower is the neighborhood's most notable feature and that tourists come here primarily to view the tower. The historic synagogue on this street is regarded as old and valuable by 1 of participants, while the back streets' cafes and restaurants are preferred by the remaining 1 of participations (Figure 36) -(Chart 22).

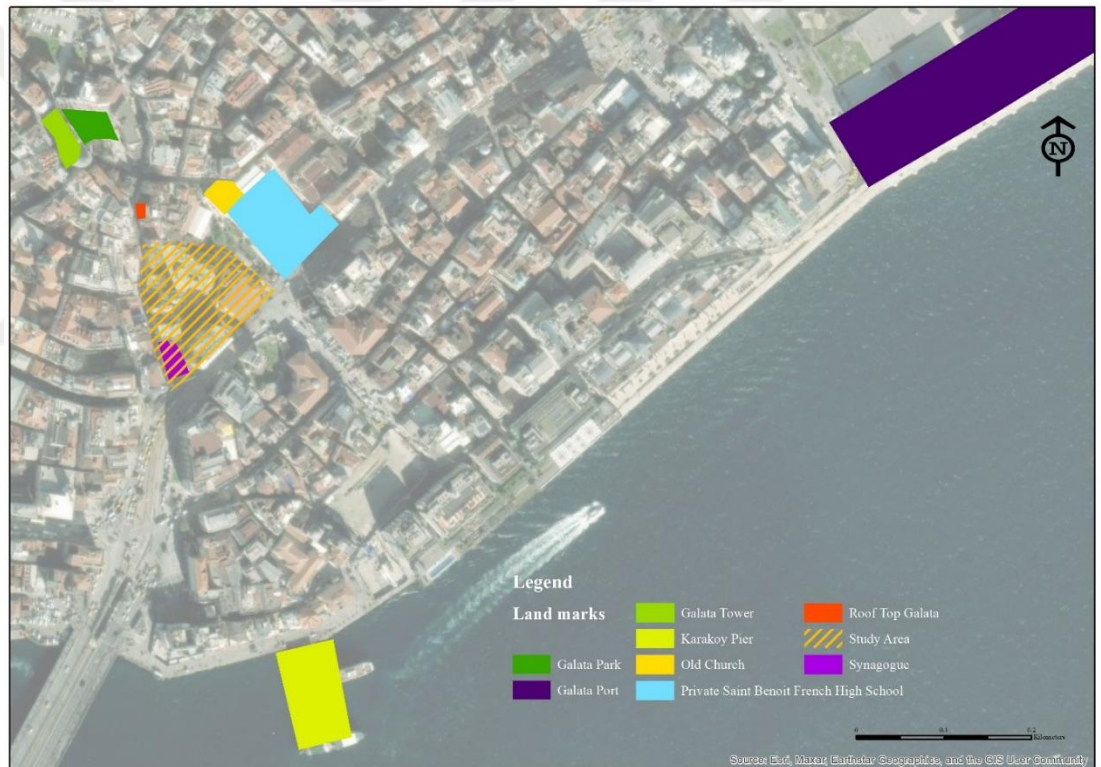


Figure 36. Locations of landmarks, Author

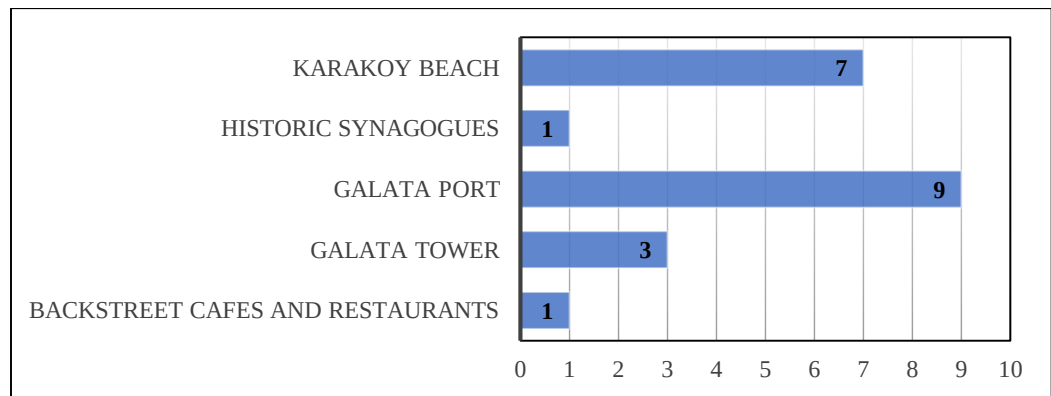


Chart 22. Please identify your favorite (or least) places

5.1.2 Perceived space. The majority of interviewees (6 people) reported no change in their ease of access to work or home. They feel better about this environment only because of security. 5 of individuals agree that by demolishing brothels and making them public, access to some secondary and main streets is now easier. 2 of the participants are also completely satisfied with the ease of access to their workplace, home, and daily activities on this street. According to their prevailing thought, the security of this place has made people feel comfortable when accessing their working places (Chart 23).

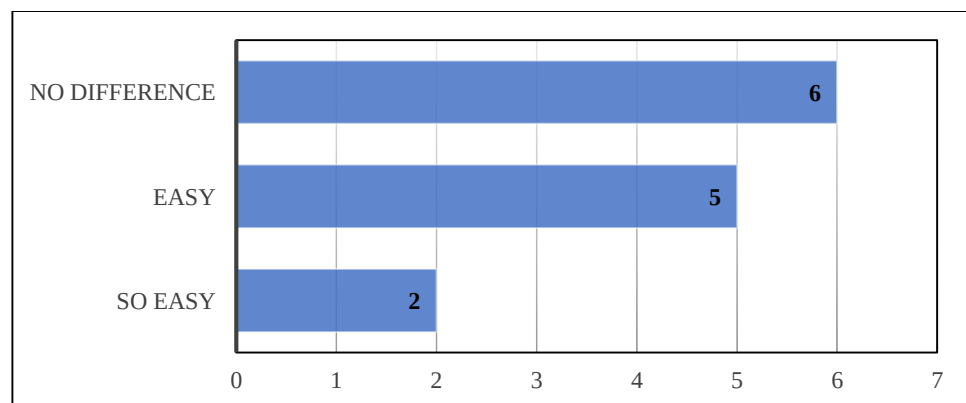


Chart 23. How has the removal of this activity (brothels) affected your access to your workplace/house?

7 of respondents agree that the identity of these streets is determined by the presence of the Galata Tower and Galata Port. In fact, this street lacks a distinct perceived identity among its users.

According to one of the respondents, "the former user of this street was like an annoying person who was expelled from here". However, 3 of them believe that this nickname will never be forgotten and will forever bring back memories of those days. Another 3 of participants recognize the cultural significance of this location and believe that by eliminating these former brothels, the lost culture has been restored. 2 of participants perceive this location as a place for young people to be cheerful. Some participants (2 people) define it as a tunnel that connects the busy streets of Beyoğlu to the Kemeraltı Road. 1 of them believe that the literal meaning of Zürafa is similar to Karaköy. Because the former clients of these brothels called it Karakoy brothels. 1 of those who have worked and lived in this neighborhood for a long time indicated that Zürafa name reminds them the former elite area. Once upon a time people with a high level of social culture resided and passed through these upper-class neighborhoods (Chart 24).

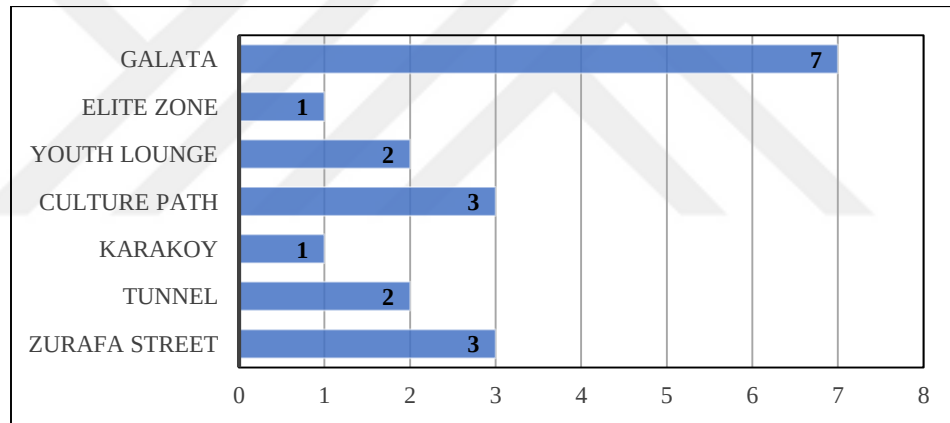


Chart 24. What is the meaning of Zürafa street in your idea?

Perceptually and emotionally, 16 of participants regard this street and the surrounding streets as mere passing places. According to them, these streets are not suitable for standing and resting due to the narrow and inadequate surfaces, as well as the presence of pedestrians and passing cars. Meanwhile, 3 of the interviewed people consider that if space for sitting is provided, it is an excellent spot to rest and watching tourists, passers-by, and historical sites. Only 2% of participants suggest these streets are ideal for linking to the major and secondary commercial lines, assuming that the retail shops sell items related to Turkish culture and Istanbul (Chart 25).

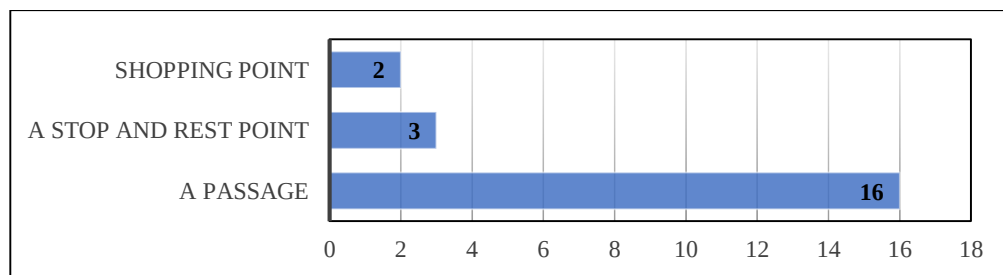


Chart 25. How would you define this area? Author

Based on the street's location, past, and present activities, participants were invited to name it. Because they felt that this street represents an extension of the history and activity of the Karakoy district, 6 of respondents thought the name "Karakoy" was appropriate. Furthermore, according to 4 of respondents, the name "Zürafa" is excellent and should not be changed because it can serve as a reminder of the 200 -years-history of these streets. "Anadolu" is the name that 1 of respondents think should be given to this street because they think its age will give these abandoned streets an extension of life and identity. 3 of those interviewed said that the neighborhood should be called "Elite" since it can be included in the restored areas surrounding Galata port and maintain the same level of environmental quality. Former sex workers call this particular street as "The pains (Acılar) Street," indicating the emotional and psychological burden it has imposed on them, to the point where some are unwilling to even pass through this neighborhood anymore (Chart 26).

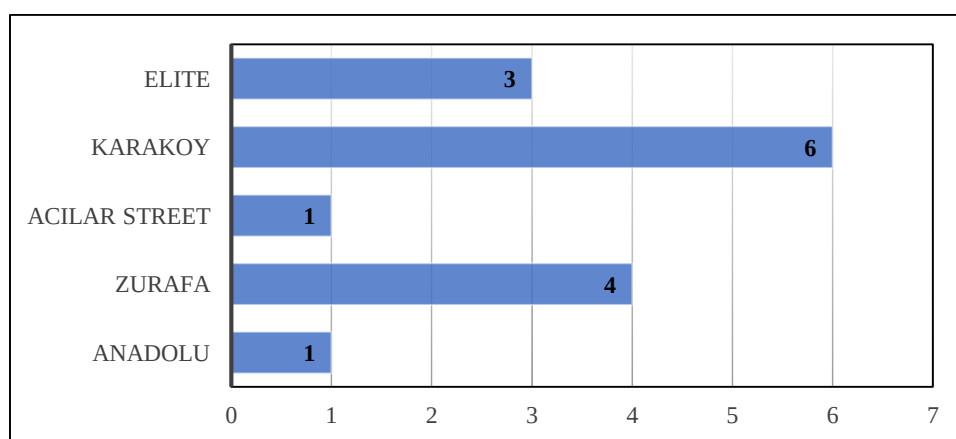


Chart 26. What would you name this street if you could?

In this section, the questions seek to determine the relationship between the mental and visual space of those using the area and the previous function of these streets (brothels). The Turkey's culture, spiritual beliefs, and human values may hinder the creation of such spaces with high levels of show and performance. 9 of the participants stated that reconstructing brothels in the style of Europe, particularly the Netherlands, was not only impossible on these streets and neighborhoods, but also unacceptable throughout Turkey. 4 of interviewed people argue that with the growth of technology and virtual spaces, there is no longer a need for these types of activities to be physically present in neighborhoods or red light districts. Meanwhile, 2 of participants think that the old activity of these streets can be rebuilt in the same way that European countries have, with increased security and supervision. They believe that the street's activity history is an integral component of the area's overall identity and cannot be separated from it. By examining the relationship between interviewees' educational levels and their responses to this question, it is possible to conclude that the majority of those who do not believe that the reconstruction of these streets in the form of a Dutch-style red light district is feasible are academically literate and have a high school diploma (Chart 27) -(Table 5).

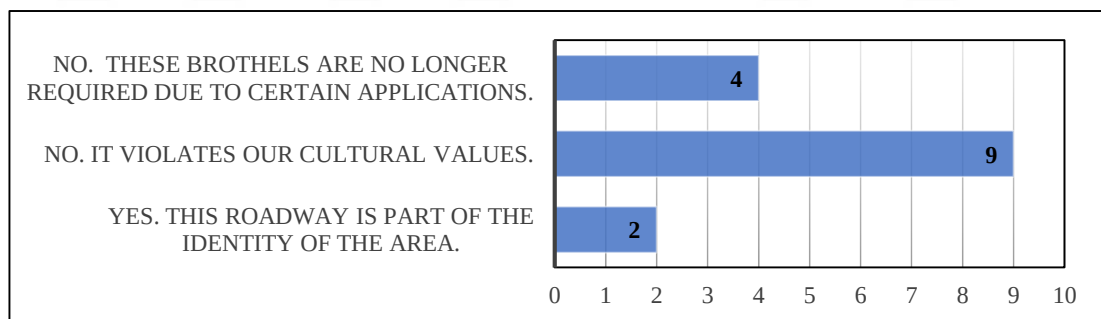


Chart 27. Do you think it is imaginable to build a Dutch-style red light district in the brothel's demolished location that might be used as a tourist attraction?

Table 5

Correlation Between Education Level and “Do You Think It Is Imaginable to Build a Dutch-Style Red Light District in The Brothel's Demolished Location That Might Be Used as A Tourist Attraction?”

	Yes. This roadway is part of the identity of the area.	No. It violates our cultural values.	No. These brothels are no longer required due to certain applications.	Total
Illiterate	0	0	2	2
Elementary	1	1	1	3
Guidance school	0	4	0	4
University left	0	1	0	1
University graduated	1	3	1	5
Total	2	9	4	15

Regarding the respondents' daily life in this space, 8 of them agree that constructing a culture and art center that provides free services to the public would be an excellent replacement for its previous function. 5 of them also believe that constructing a sports complex for young people will significantly improve the environmental condition of these roads. In addition, the other 5 participants stated that this neighborhood requires a small local park where shop owners and passing tourists can rest for a short term (waiting for a taxi, taking a break between shopping, etc.). Among them were those who strongly objected to the park's construction, believing that it would create a gathering place for criminals (addicts, street troublemakers, prostitution dealers), jeopardizing the neighborhood's security, and the former threatens.

2 of participants thought these streets were ideal for developing a hotel. They believe that building a premium hotel in the style of the Galata Port area will attract wealthy guests and improve the quality of the space. Many of those interviewed were highly opposed to the hotel's construction, believing that it would increase rents in the surrounding area and endanger historical structures.

1 of them thought that a museum and a permanent exhibition can be built on this street in commemoration of the women and girls who were kidnapped and brought here forcibly and tortured to mental and physical torment for years. (Chart 28).

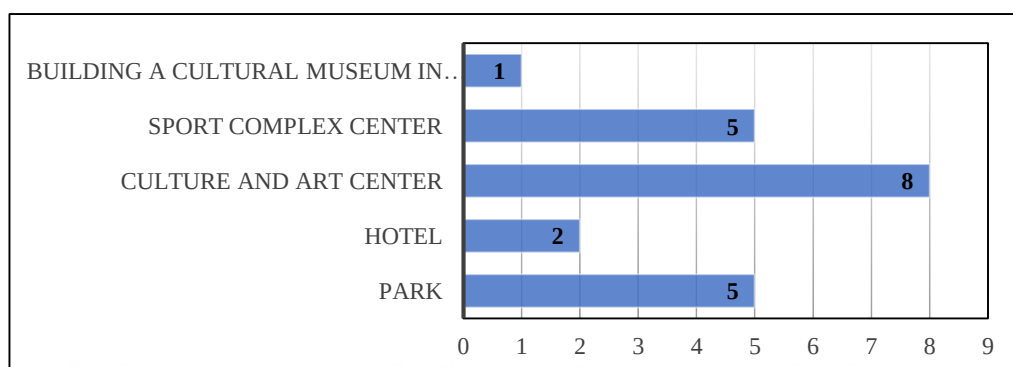


Chart 28. If you were in charge, which land use would you recommend for this area?

Many of the interviewees (18 participants) stated that this street and its activities had degraded in the years following the death of its major owner (2001) and had become a hub for various types of criminal activity (exploitation of kids, extortion). Thus, it is merely physically closed; in terms of identity, it is already outmoded. However, 3 participants believe that this street remains a gathering spot for previous players (prostitutes, clients, drug dealers, etc.) (Chart 29).

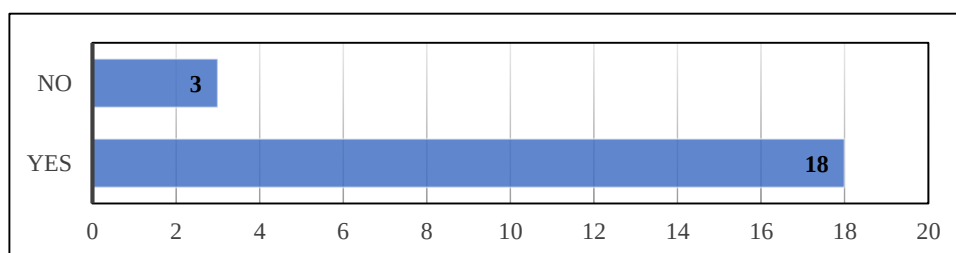


Chart 29. Do you believe that the previous 200-year activity of this space (Brothels) has been fully lost? Is it reasonable to restart it in the surrounding areas of this street?

Many participants (14 of participants) feel that the area has a long history of mercantile activity dating back to the Ottoman Empire. As a result, the productions in the areas surrounding it, such as Galata port and Karakoy pier (both of which have a commercial history), are and will continue to be business-oriented. 5 of participants consider this to be Istanbul's cultural and social center because of its proximity to historical structures, cultural landmarks (synagogue, French school, etc.), Istiklal Street, Taksim Square, and the Karakoy district in the south. 2 of people consider changing the products of these locations from commercial to recreational and touristic. They believe that the projects around Galata Port will lead to more recreational and service activity in the area (Chart 30). By evaluating the relationship between the questioned people's degree of education and their responses to this question, it is possible to conclude that 5 of whom believe that space production is transitioning from commercial to social-cultural are university graduated (Table 6).

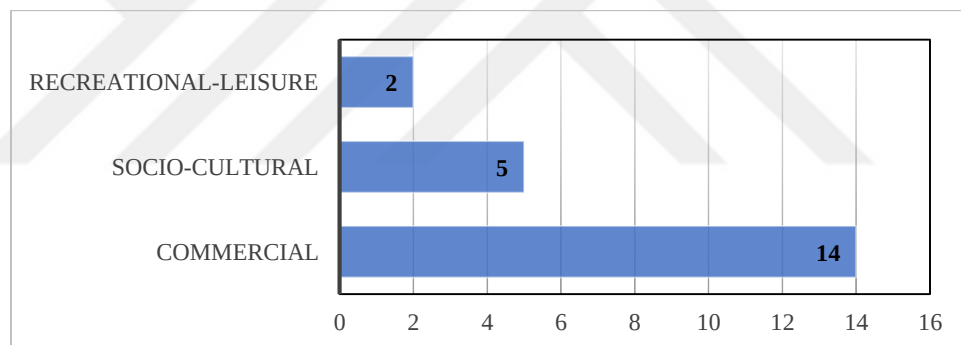


Chart 30. What do you think the future holds for this street and its surrounding areas (the radius is displayed on the map)?

Table 6

Correlation Between Education Level and “What Do You Think the Future Holds for This Street and Its Surrounding Areas?”

		What do you think the future holds for this street and its surrounding areas (the radius is displayed on the map)?			Total
		Commercial	Socio-cultural	Recreational-Leisure	
Determine your level of education?	Illiterate	2	0	0	2
	Elementary	3	0	0	3
	Guidance school	4	0	1	5
	University left	1	0	0	1
	University graduated	4	5	1	10
Total		14	5	2	21

5.1.2.1 Perceived space through officials' view. Discussions and statements about the future of this area and projects have not gone beyond "building a cultural and artistic center" (Figure 37). In some of the official newspapers, the discussion of land ownership and the lack of agreement between the real owners and the municipality is the main reason for stopping the projects and possible plans related to it (URL 1 &2&3&4&5&6&7&8).

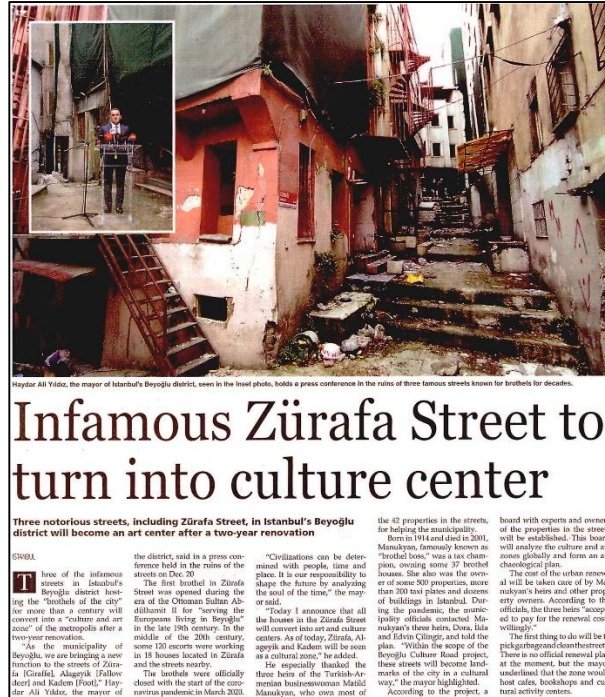


Figure 37. Mayor of Beyoğlu's first official interview after the destruction of brothels (URL 8)

5.1.3 Conceived space. The nearby approved project on case study can yield a view from conceived space by technocrats. The Beyoğlu Cultural Road project contains historical and cultural sites located between these two points, including "Galataport" and "Atatürk Cultural Center," especially Galataport, AKM, Taksim Mosque, Narmanlı han, and Emek Cinema, for which the great urban struggle is done. This project was approved in 2020-2021 and is still under discussion. The construction procedure of this project has been challenged because it is said to be a commercial and tourism project that was only announced under the banner of a cultural and artistic project to give it legitimacy (Figure 38).

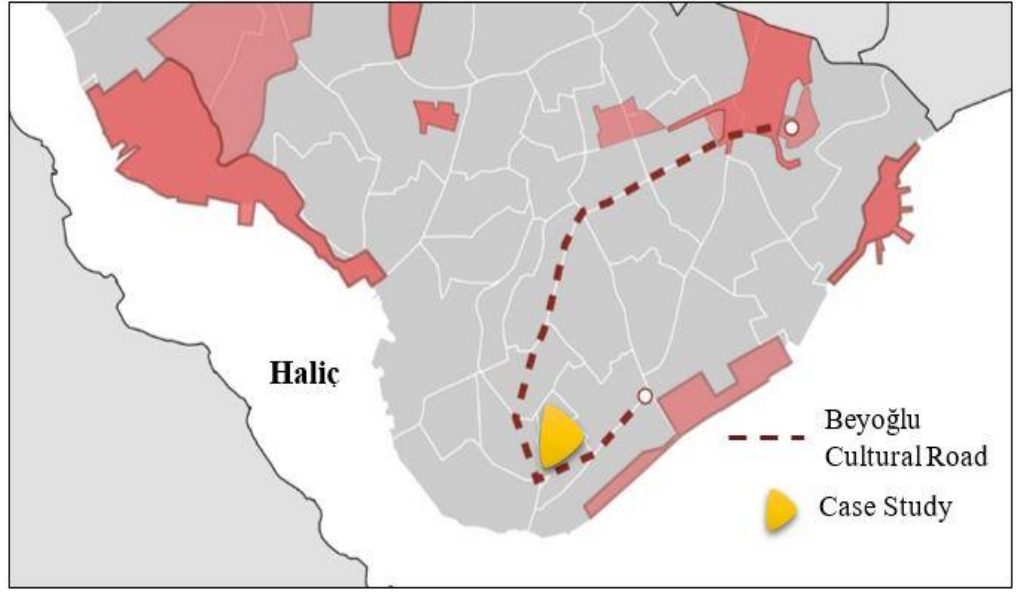


Figure 38. Beyoğlu Cultural Road Project location (Author derived from Beyoğlu Spatial Strategy Plan, 2023)

Other nearby approved projects are: IBB Beyoğlu Urban Protected Area KANİP (Kentsel Sit Alanı Nazım İmar Planı/ Urban Site Development Plan) 21.05.2009 (Partially cancelled). Ministry of Culture and Tourism, Galata Tower and Surrounding Tourism Center KANİP 21.01.2013 11.9

Galata tower polling, restitution and restoration project is another important project that have a great impact on the case study. The board has approved the poll, restitution, and restoration project for the "Galata Tower" in Bereketzade Neighborhood in Beyoğlu. The Tower's ownership has been transferred to the Foundations in accordance with the decisions made. The "Culture Road Project" in Beyoğlu District connects Galataport, Galata Tower, Galata Mevlevi Lodge, Tarık Zafer Tunaya Cultural Center, Narmanlı Han, Mehmet Akif Ersoy Museum House, Atlas Passage, Emek Cinema, Taksim Mosque, and Atatürk Cultural Center (project date: 2020-2021 project type: Culture and Tourism project phase: Ongoing).

5.1.3.1 Impact of the nearby approved project on case study. The chronological review of approved and implemented projects in the study area, as well as variations in land values, indicate that land prices have changed considerably since the Galata Port project was approved. On the other side, since the Galata project was approved, there have been serious movements to close these streets. Analysis of fluctuations in the study area's land values by street helps to evaluate one of the primary causes in changing the area's production function

Maps for land price analysis were created through GIS software using the interpolation technique (IDW). This method also estimates the price of the street-enclosed areas based on the values of nearby properties. The output evaluation of the analytical maps produced by this method has been covered in the following section. The area consisting of Zürafa, Alageyik, and Yüksek Kaldırım streets has the lowest land values, based on the 2009 map. Given that this is the main street (Kemer Altı Blv), it is reasonable to say that the southern part of the case study is in a relatively high price range.

Then, in 2010, the land value in this neighborhood and surrounding areas rose, to the extent that stayed consistent until 2013. However, a substantial rise in values from the south side of the area has been frequently observed since 2014, and this trend persisted until 2018. Price stability can be seen again between 2018 and 2023. However, unlike the fluctuations in land values near the targeted area, these streets' value ranges have remained stable. As shown in the diagrams on Appendix B, the circulation of the value zones appears to be restricted by a barrier that prevents land values from being transferred into this range.

In the second layer of land price analysis, the enclosing and enclosed streets of the study area are analyzed. The study area's significant streets include Zürafa, Alageyik, Yüksek Kaldırım, Kemer Altı, Cengiz, and Kemer Altı Kuyu. The initial and most significant increase in land prices happened between 2009 and 2010. Zürafa Street has increased to 6800 TL/square meter from 724. Also, for the streets of Alageyik (724 to 6800), Yüksek Kaldırım (1198 to 8500), Kemeraltı Kuyu (1141 to 7690), Kemer Altı (2510 to 13600), and Cengiz (628 to 6800), price hikes is between 5 and 10 times. The significant aspect is that the ten times increase in values is limited to the area's inside streets (Zürafa, Cengiz, and Alageyik).

The second value increase relates to the years 2017 to 2018. During these years, the value of land on Zürafa, Alageyik, and Cengiz streets has climbed by 1.5 times. At the same time, the streets of Yüksek Kaldırım, Kemeraltı Kuyu, and Kemer Altı Boulevard experienced a 1.4-fold increase. In fact, all of the area's internal and external streets have increased at the same rate during the years. The third price rise occurred in the years 2021, 2022, and 2023. Between 2021 and 2022, the value of all streets nearly doubled, while the price rise between 2022 and 2023 was 1.6 times.

One of the aspects that land price fluctuations indicate regarding boundary changes between the study area and its neighbors is that the initial price rise between 2009 and 2010 caused the value borders to gradually dissolve. In other words, prior to 2009, the price of land in the considered region (Zürafa Street, Yüksek Kaldırım, Cengiz, and Alageyik Street) differed greatly from that of the adjoining streets (Table 7).

Table 7

Statistical Information of Land Prices by Streets, (Author, derived from <https://www.turkiye.gov.tr/beyoglu-belediyesi-arsa-rayic>, 2009-2023)

	Statistical information of land prices by streets TL/M2					
	Zürafa	Alageyik	Yüksek Kaldırım	Kemer Altı Kuyu	Kemer Altı Boulevard	Cengiz
Mean	14837	14837	18563	16712	30046	14829
Std. Deviation	13705	13705	17112	15396	27691	13713
Minimum	742	742	1198	1141	2510	628
Maximum	55668	55668	69587	62627	112664	55668

Based on the statistical research of land values in the neighborhood, the streets with the lowest prices are Zürafa, Alageyik, and Cengiz (55,668), while Kemer Altı Boulevard (112,664) has the highest prices. Additionally, these streets have the lowest and highest prices from 2009 to 2023, respectively. According to the preceding chapter, the Galata Port project is the largest approved urban project near the study area.

By comparing the dates of “the announcement of the project allocation to the construction company”, “the approval and implementation”, and “the opening of the project” to the abrupt shifts in the land value, it can be determined that one of the main factors in the land value changes, as well as the efforts to destroy and close it, is the Galataport project's large-scale impacts (Table 8).

Table 8

Overlapping Dates

Year	Galata port project	Events in case study
2013	The bid contract won	Second protest of sex workers
2015-2018	The implementation of project is started and finished	Second land value rise (2017-2018)
2020-2022	Galata port's first ship (2020)	The closure of brothels (2021) The third land value rise (2021-2022)

5.2 Analysis of Space Configuration Changes by Years Relying on Perceived and Lived Space Analysis

This section assesses space configuration indicators in important years related to the case study. Connectivity, and integration are the indicators which are examined in space configuration. This approach rereads urban space to investigate its social-spatial, physical, and cultural dimensions and qualities. According to the principles of this approach, there is a cause-and-effect relationship between the physical and social structure of urban places. By laying functional and physical features, the space syntax method reveals urban settings' hidden potential. This method is used to assess the spatial configuration and the users' perception of it (Jana, 2014). The years of evaluation are listed below:

Pier building completed and Regular voyages begun in 1905 and access to the site from all areas (internal and exterior Turkey) was facilitated.

1927, 4 years after Ataturk declared the Turkish Republic in 1923 and prostitution was legalized.

2014 (the initial step in planning and developing the Galata Port project, the largest one near the case study)

Year 2022 (one year following the demolition of the brothels in this area).

5.2.1 Connectivity indicator. The Connectivity Index reveals which streets are better connected than others (Table 9). The streets with the highest values for this index are better connected inside the neighborhood. This indicator is analyzed for four years, as follows:

According to the 1905 Connectivity Index, Tershane and Necatibey streets have the greatest values (>29.80). Hacı Ali, Bankalar, and Kemer Altı streets are the most valuable. The regions near the Galata Tower have the highest values at the third level, while the rest of the streets have evenly distributed low scores (Figure 39).

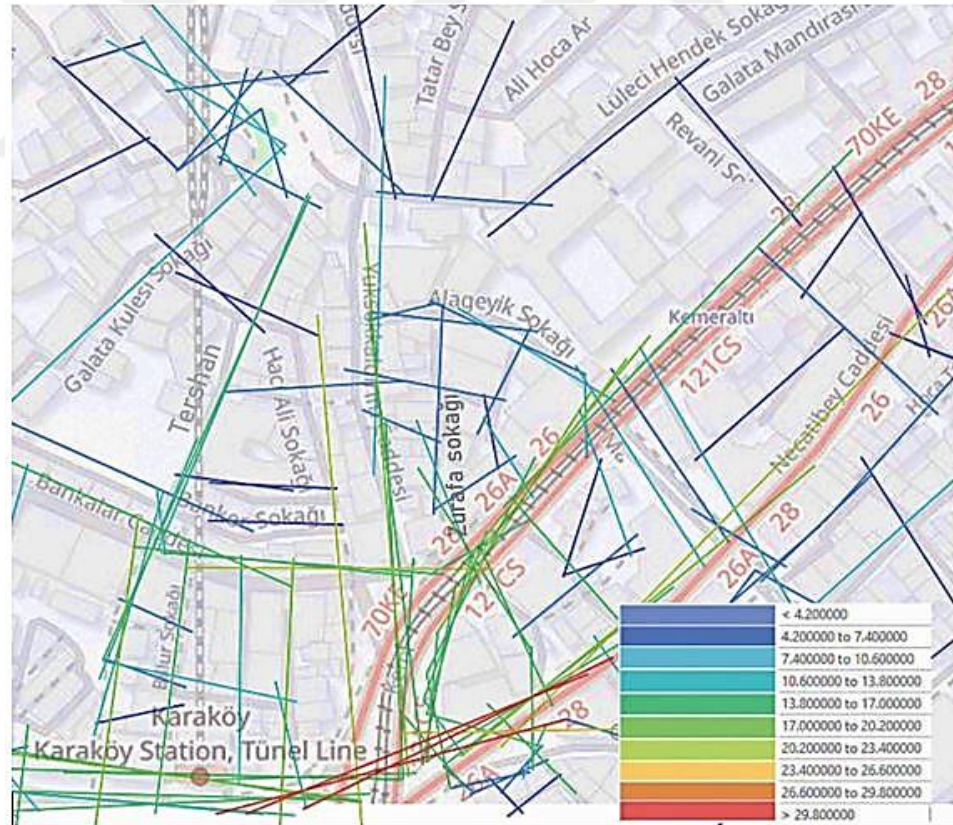


Figure 39. Connectivity 1905

As can be observed from the 1927 analytical map of the link index, Necatibey Street has the highest score while Tershane street is ranked at the second category. Besides, Hacı Ali street is on the third class while Yüksek kaldırım street has the highest connectivity rating comparing the rest of the streets (Figure 40).



Figure 40. Connectivity 1927

According to the 2014 connectivity index examination, Kemer Altı, Necatibey, Maliye, Bankalar, and Yüksek kaldırım have the highest values, respectively while the rest of the streets rank lower on this rating. According to the 2022 analysis map for this index, Kemer Altı Street has the greatest score, followed by Yüksek kaldırım and Zürafa Street. The areas surrounding the Galata Tower, followed by Alageyik street and inner streets of the demolished area of former red light district, have the highest connectivity index values (Figure 41 & 42).

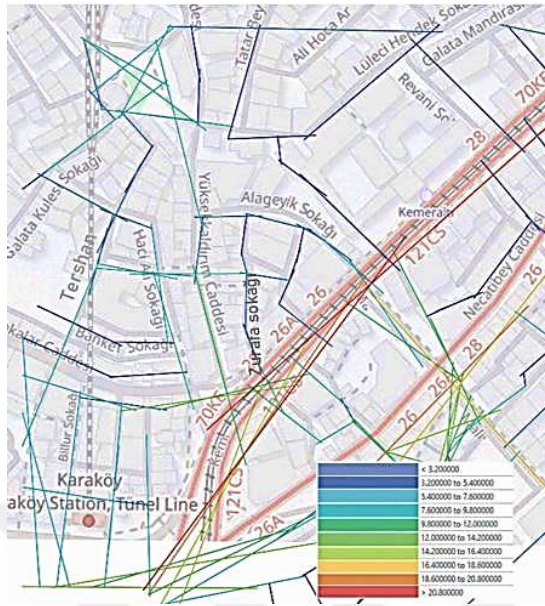


Figure 41. Connectivity 2014

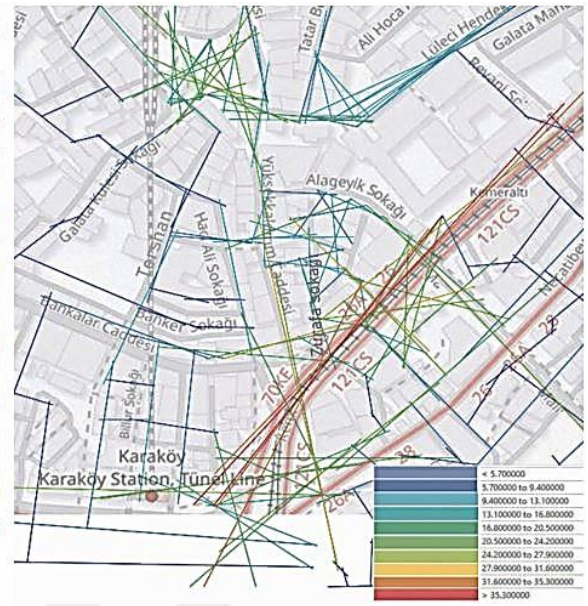


Figure 42. Connectivity 2022

Table 9

Connectivity Index Values by Street

Street	Value	Street	Value	Street	Value	Street	Value
Connectivity 1905		Connectivity 1927		Connectivity 2014		Connectivity 2022	
Tershane	33	Necatibey	32	Kemer Altı	23	Kemer Altı	39
Necatibey	32	Tershane	30	Necatibey	19	Yüksek kaldırım	29
Hacı Ali	21	Hacı Ali	25	Maliye	18	Zürafa	30
Bankalar	19	Yüksek kaldırım	19	Bankalar, Yüksek kaldırım	13, 10	Galata Tower	24
						Alageyik	23

Examining the connectivity index during the specific years reveals that the best connection between the streets that constitute this neighborhood are associated with Kemer Altı and Necatibey streets in the southern part of the study area. However, with the demolition of these streets, Yüksek kaldırım, Zürafa, and Maliye streets now have better connectivity in the neighborhood network.

5.2.2 Integration indicator. The integration index examines the links between streets. Due to the analytical maps of the Integration Index in 1905, the streets of Yüksek kaldırım, Hacı Ali, and Kemer Altı have the same values and provided the greatest score of this indicator. Bankalar and Tershane streets holding the same values fall into the second category of rating. Finally, Zürafa and Alageyik streets have the greatest value in comparison to the other streets (Figure 43).

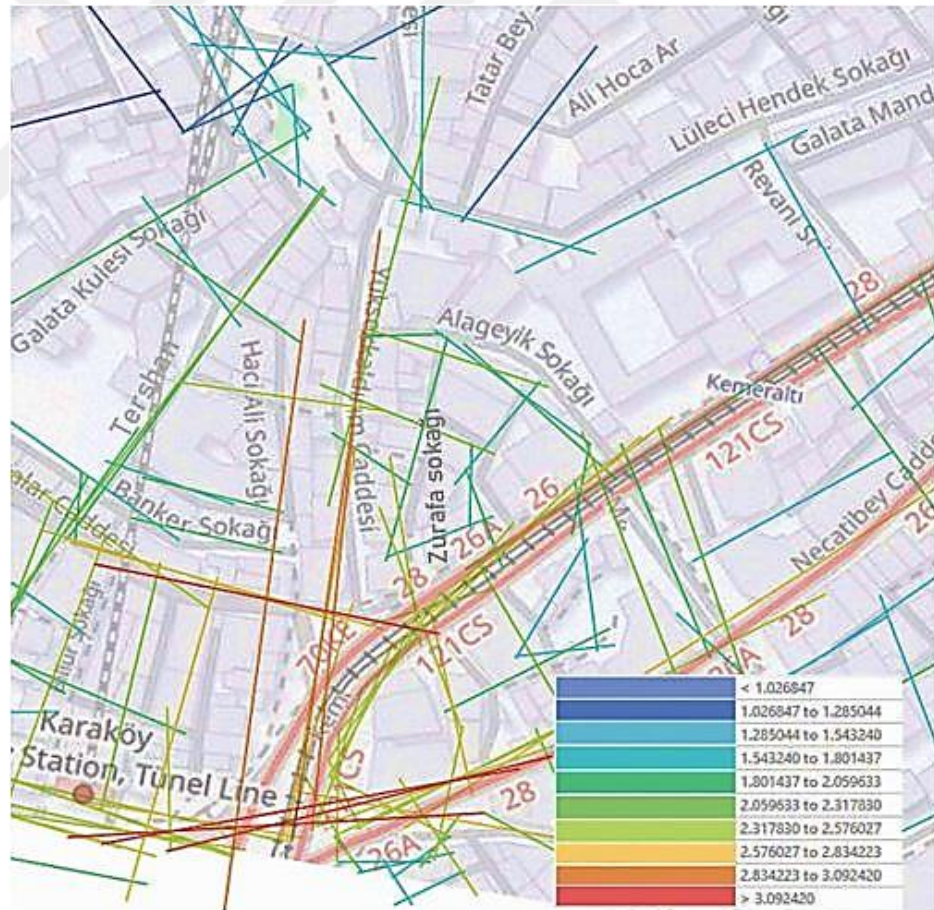


Figure 43. Integration 1905

The integration index for 1927 reveals that Necatibey Street has the greatest score. As a result, these streets are better integrated than others. Following that, the streets of Hacı Ali, Yüksek kaldırım, and Tershane have the greatest scores on this index. Kemer Altı, Zürafa, and the top half of Yüksek Kaldırım Street are ranked third (Figure 44).

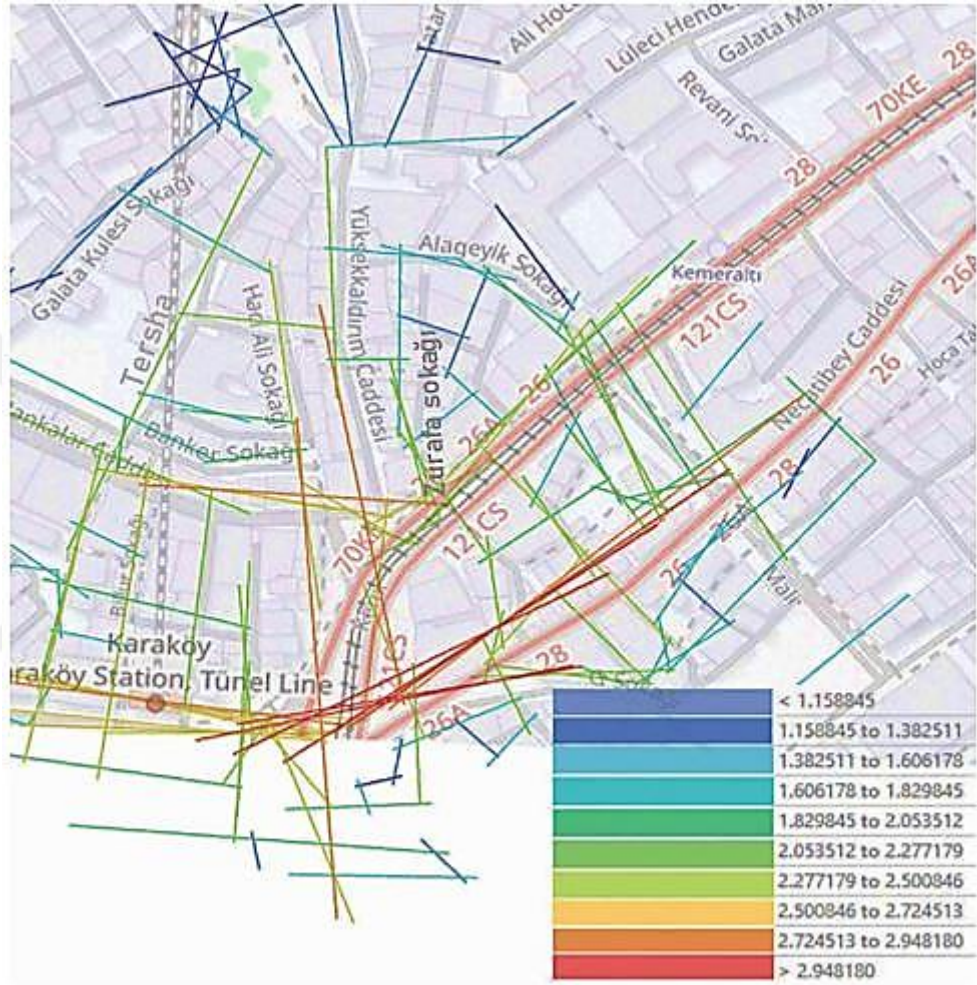


Figure 44. Integration 1927

According to the Figure 45, the integration index in 2014 indicates that Kemer Altı street has the highest integration value. Following that, the lower half of Yüksek Kaldırım street and Bankalar street have the highest values. The third-ranked streets are Maliye, Necatibey, Zürafa, and Alageyik (Table 10). According to the integration index for 2022, the streets of Yüksek kaldırım, the inner streets of the former red light district (Alageyik, Cengiz, and Zürafa streets), and Kemer Altı streets have the highest

scores. Bankalar, Hacı Ali streets, and the area surrounding Galata Tower follow next (Figure 46).

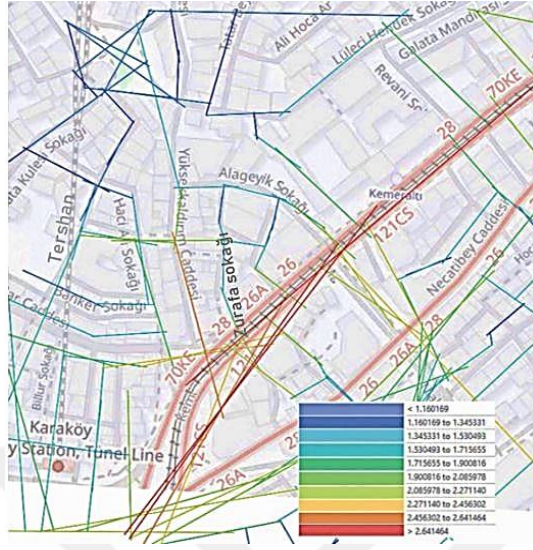


Figure 45. Integration 2014

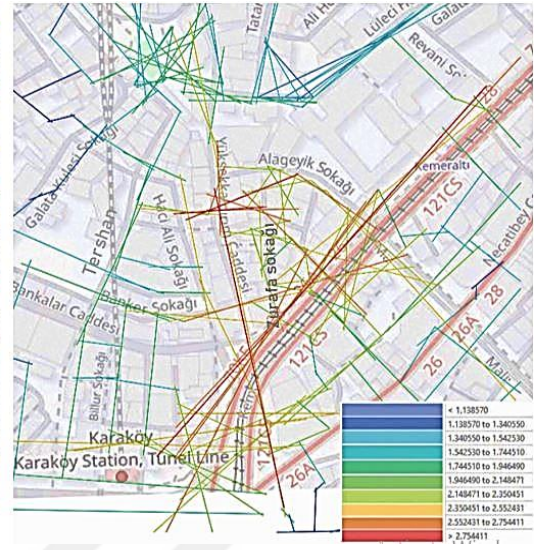


Figure 46. Integration 2022

Table 10

Integration Index Values by Street

Street	Value	Street	Value	Street	Value	Street	Value
Integration 1905		Integration 1927		Integration 2014		Integration 2022	
Yüksek kaldırım	3.35062	Necatibey	3.17185	Kemer Altı	2.82663	Yüksek kaldırım	2.95639
Hacı Ali	2.91358	Hacı Ali	2.90418	Yüksek kaldırım	2.46482	Alageyik, Cengiz, Zürafa	2.81262, 2.62884
Kemer Altı	2.85711	Yüksek kaldırım	2.90418	Bankalar	2.37917	Kemer Altı	2.76224
Bankalar	3.33546	Terşane	2.7866	Maliye, Necatibey, Zürafa, Alageyik.	2.34298	Bankalar, Hacı Ali, Galata tower	2.44802, 2.50773
		Kemer Altı, Zürafa	2.38163, 2.08573				

Table 11

Attribute Summary by Years

	Indexes	Average	Minimum	Maximum	Std Dev
1905	Connectivity	9.28205	1	33	6.38487
	Integration	1.96697	0.76865	3.35062	0.516965
1927	Connectivity	9.39189	1	32	7.29646
	Integration	1.91906	0.935178	3.17185	0.537973
2014	Connectivity	6.57353	1	23	4.37344
	Integration	1.59187	0.975007	2.82663	0.396446
2022	Connectivity	11.828	2	39	7.9921
	Integration	1.84325	0.93659	2.95639	0.454435

The changes in the integration index from 1905 to 2022 indicate that the streets on the south side of the case study at the intersection with Kemer Altı and Necatibey streets have the highest integration values.

Between 1905 and 1927, the majority of the street intersections were shifted from the south to the top side of the area. Until 2014, Kemer Altı Street served as the main integrated space. After the destruction of the former brothels in 2021, the most integrated areas transformed to Zürafa and Alageyik streets.

Summary of findings. To determine how tourists, residents, and shopkeepers live and perceive space in the research area, their everyday routines and experiences were examined. Moreover, the type and location of activities such as eating, relaxing, entertainment, etc., have been questioned. Additionally, conceived space is considered due to the approved and planned and thought projects by municipality decision makers. Based on the discussion in this chapter, Lefebvre's spatial triad assessment can be classified as follows (Figure 47):

Lived space through space producers' perspective. Referring to shopkeepers and residents, a variety of physical interventions occur in open spaces, including commercial activities, social exchanges, entertainment, and services.

The park near Galata Tower, Karakoy pier, and restaurants in the nearby streets are the only places where people go for their everyday activities (the high cost of food and drinks in these areas due to the area's touristy status forced them to go nearby). Because of the traffic, peddlers, and beggars, tourists prefer to go more quickly and avoid stopping on these congested streets. Zürafa and Alageyik streets have been opened to the public for pedestrian circulation. The majority of the shops on this street are dedicated to the selling of products related to electricity and electronics

In order to get tourists' ideas, this study was conducted across three time periods: peak tourist (July and August) and non-tourist (February and January), and observations suggest that during peak tourist season, this street is quite crowded and used by tourists. The roads' steepness and the fact that Taksim Square and Galata Tower are the primary destinations for tourists are among the reasons. Regarding the activities, it must be stated that travellers prefer souvenir shops that sell items tied to the city's culture.

Police officer. Criminal activities that used to occur no longer exist or, if they did, are not reported to the police.

Perceived space through space producers' perspective. For shopkeepers and residents, the presence of tourists and their economic activities and the removal of sexual service activities are very desirable and pleasant. Social-entertainment activities for youth are preferred by respondents (residents and shop owners) over the demolished area (e.g., constructing a municipally owned sports club). Residents and shopkeepers in this area have a positive attitude about this neighborhood and believe it holds significant cultural and historical importance.

Tourists may also experience commercial activities along these streets. There is little room for space users to move around and disperse because of the urban fabric's tightness and the small shops that are positioned next to each other along the surrounding streets. Due to police officer's view point, the Galata project has impacted the entire area and improved environmental quality. As a result, there is no longer any space for activities such as prostitution.

Conceived space through municipality officials and experts' view. The conceived space of this area, interpreted based on a meeting with municipal professionals. This area is particularly important to the municipality of the region because it is located between two touristic, historical, and cultural sites, Galata Port and Galata Tower. On the other hand, the high cost of land as a result of the Galata Port project's launch challenged urban professionals to develop an appropriate urban plan. The wrong timing of brothels' demolition and the preparation of a transformation plan has resulted in the emergence of abandoned spaces, which is also a source of concern for the municipality. Since the demolition of these structures, the municipality promised to construct a cultural center to form a cultural triangle with the other cultural centers. The issue of property ownership in this area, which has not yet been resolved, has also been brought up in various news outlets.

It should be noted that the perceived Space of this area is extremely rich and robust in terms of the variety of social and physical production sources and their distribution and interconnections. As a result, while offering an urban transformation project that is consistent with the space can be beneficial to the surrounding areas, errors in design calculations and planning can lead to complicated urban problems that cannot be addressed because of some key elements. The following elements make it harder to solve urban problems in this area: The specific form of the its urban fabric, the type of connectivity and integration of the passages, the users of this space, the former bosses of brothels who continue to follow it due to the great financial benefit they have gained from this space, and a significant number of structures that require reconstruction and buildings of high architectural value.

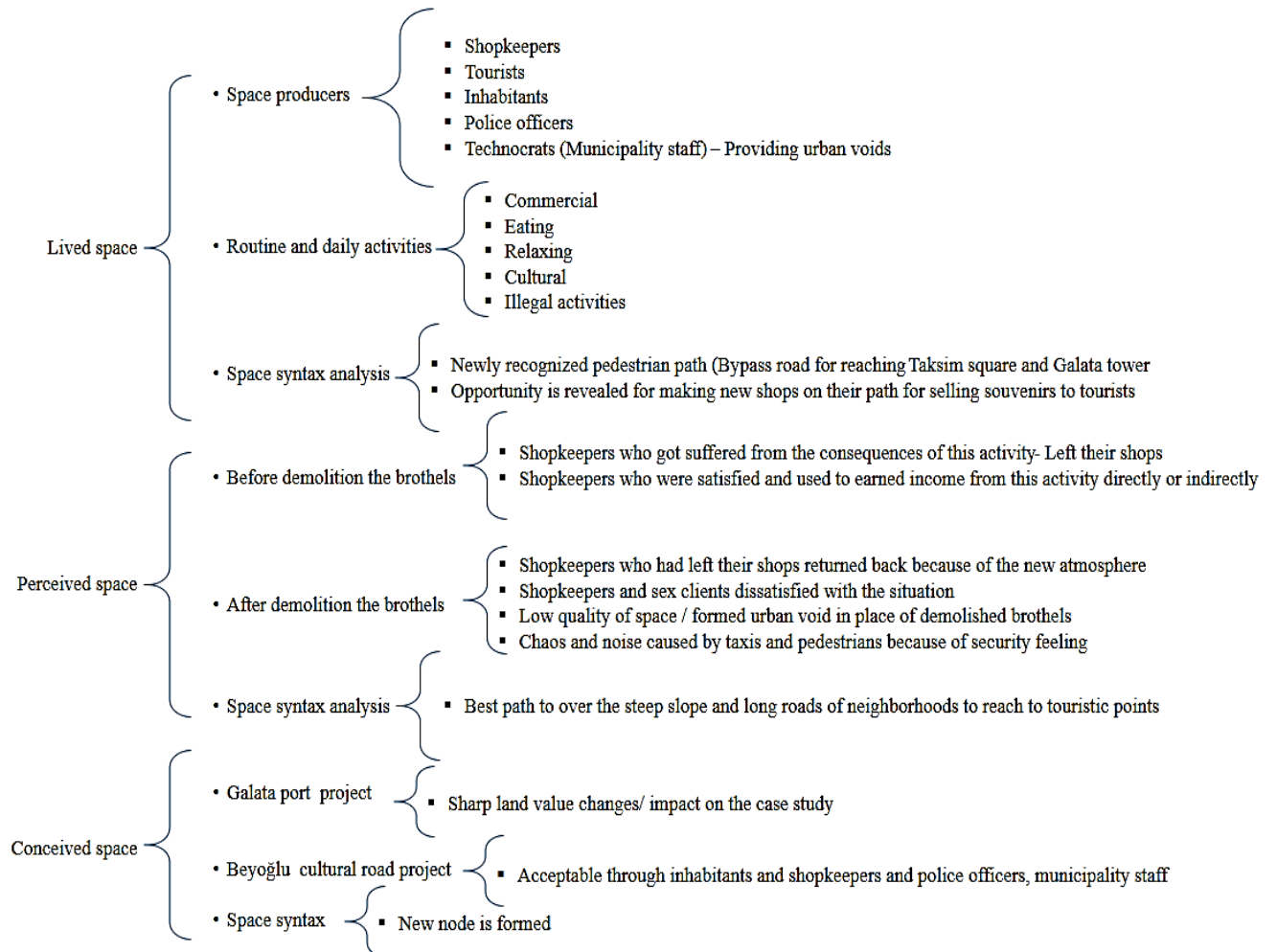


Figure 47. The current perception of Lefebvre's spatial triad in the former brothel neighborhood of Beyoğlu, (known as Zürafa Street)

Chapter 6

Discussions and Conclusions

This thesis used the Lefebvre theory in its urban space analysis process to examine the area that was a brothel for 200 years. Lefebvre's spatial triad provides the conceptual basis for this study. Currently, no plans have been made to transform these streets, so it has become an urban void. Discussions of the void space as well as transformation of brothels, which reflect the area's former character and its current spatial issues, foster the fundamental framework. The research purpose and questions have been developed to find out how much the three aspects of the area's production space have been impacted by 200-year-old usage as brothels and what factors must be considered for planning a transformation project. The Space Syntax approach was used to examine the perceived space and its modifications in physical aspect.

According to Lefebvre, urban dwellers and users own and create spatial practice (perceived space) and representational places. In addition, urban authorities (architects and urban planners) govern conceived urban settings (Merrifield, 2006; Brenner and Elden, 2009; Ndimande, 2024). Because urban experts did not make a decision for representation of spaces for three years after its destruction, void spaces were formed in which survivors of the destroyed brothels, as well as the homeless and drug users, began to product space. The question of how long these streets will be controlled by these individuals is another issue that is beyond the scope of this argument.

By removing and abandoning structures, urban planners have just replaced old issues with new ones. Dissatisfaction with the status of environmental security, as well as low visual and environmental quality, has transformed this area into a space for passing through, or escaping from the chaos of the perceived and conceived spaces.

The long-term viability of the owners of representation spaces and spatial practices in the persistence of their productions only depends on the following:

- High value of their property (sudden price increase since 2013).
- Location (the Istanbul city center has a commercial and tourist history)
- Good and simple accessibility (Karakoy pier to the south, metro tram stations 400 meters from Yüksek Kaldırım Street)

- Main and minor roadways are distributed appropriately (bus and taxi stations)
- Due to its location between three major tourist attractions (Takim Square and Istiklal Street, Galata Tower, Karaköy pier, and the enormous entertainment, business, and transportation complex of Galata Port), the area is vibrant due to the presence of permanent tourists and having regular customers in every season.

It is possible to conclude that the spatial practice (perceived space) is currently suffering from the consequences of the urban void, which has degraded the efficiency and quality of conceived space production. Even on Zürafa, Alageyik, and Kadem streets, space production is slow and blocked in some areas. Literally, the special practice aspect of this area has been infested with a parasite (urban void), disrupting its work and connectivity with its producers. However, the characteristics detected in assessing the spatial configuration of this area by Space Syntax indicate that Zürafa, Alageyik, and Kadem streets, as well as the axes connecting them, have a high degree of connectivity and integration. This is considered as an attractive opportunity for this area, since a suitable design could enhance the quality of the production of a dynamic and pedestrian-oriented space. A potential threat to the environmental quality of this area is that if the situation continues, there is a high likelihood of scattered brothels forming in the residential units surrounding these streets due to the large number of former customers and bosses of these brothels. As a result, another issue will arise under the term of underground brothels.

Galata, a massive project created at the bottom of the range, has occupied a major portion of perceived and conceived spaces, and its impacts have initiated new productions in multiple dimensions while also destroying some space producers. One of these impacts, the significantly increase in land prices, has resulted in a halt of production and the closure of brothel. The rent and the greatest exploitation of urban land are additional effects that have complicated the governing equations.

According to the official space producers of the area, perceived and conceived spaces are proceeding in the same direction. Presently, representational space is about creating a space that most of the principal owners of the two spaces (perceived and conceived) desire (Figure 48).

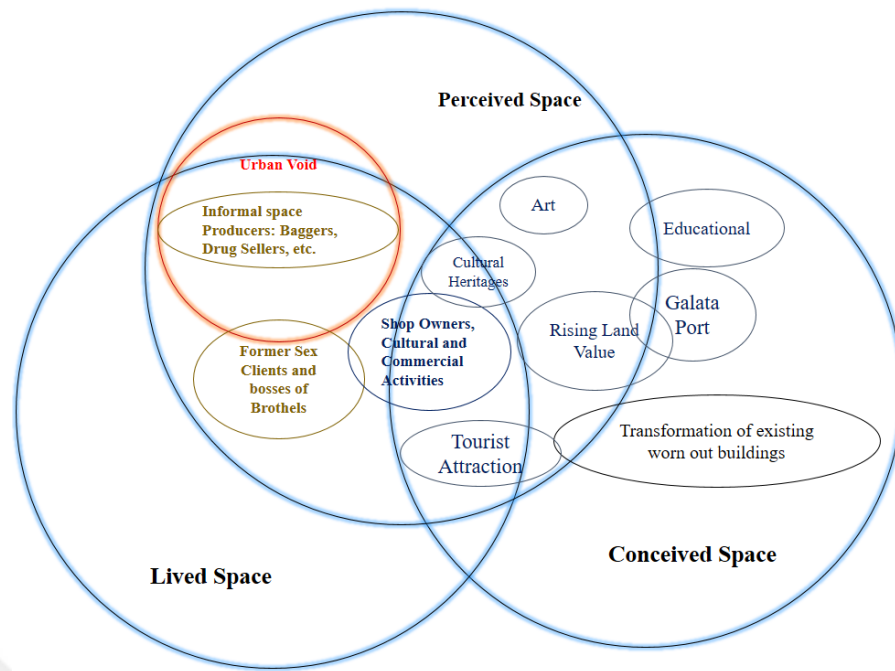


Figure 48. The extent of overlap among Lefebvre's three spaces and social spatial producers in the studied area, Author

If planning and design are consistent with the spatial conditions of this area, this space can be easily solved in this context, paving the way for the optimization of production spaces towards the problematic locations nearby. On the other hand, the rent produced by projects such as Galata Port raises the sensitivity of urban specialists when deciding on the type of transformation project and its function.

The following key questions were addressed in accordance with the goals of this study:

Main question: What appropriate functions are conceivable for the ruined former Red Light District considering its alterations in terms of urban configuration and the production space?

1. To what extent the urban configuration of Zürafa street (RLDs) got changed after being demolished?

According to the spatial configuration analysis conducted in this area during various years (2014-2014-2022-1905-1927) Yüksek Kaldırım and Kemer altı Streets, which form the western and southern axes of the studied area play crucial roles in connectivity and integration of area.

Following the elimination of the brothels, the majority of the pedestrian traffic in this area moves between Galata tower square and the upper part of Yüksek Kaldırım Street.

The findings of the field observations and questionnaire analysis within the specified time frames also support the Space Syntax analysis.

2. How the urban spatial triad altered, before and after destruction of red-light-district (Lived-perceived-conceived spaces lense)?

Interviews, and observation are the main methods used to gather data for this study. The spatial triad was developed based on the everyday routines of locals, business owners, and both domestic and international visitors in the case study. People's thinking of its prior use is rapidly forgotten because of the strong relationship between the neighborhood's spaces and its users (residents, tourists, and shop owners).

The following should be taken into account by architects and urban planners when designing and planning for the reconstruction of this area, according to the analysis of the spatial triad of case study:

1. Sex workers, former leaders of these houses, and sex customers are still attempting to find a home close to these streets, even when the brothels have been dismantled. Therefore, the government or semi-government usage is the best option for making decision for any transformation projects. Hotels and residential units are not appropriate for this area since they have a high likelihood of being used for sex service purposes.

2. Architecturally speaking, parks and other open spaces—which are unenclosed and lack walls and doors—should not be constructed. Because they produce open areas that serve as gathering spots for sex workers and their clients. Due to the observation and survey some space producers that had economic benefits from former brothels are still active in spatial practice (Perceived space) of the area.

3. This area is best suited to land uses that their visitors' inputs and outputs movements can be monitored. (The appropriate usages are museums, cultural-artistic-educational centers, libraries, and other public service settings. Space producers in the dimensions of Conceived space, which are influenced by two prominent tourist centers- Galata Tower and Galata Port- attract a great number of visitors that many of them are tourists and artists.

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