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Architecture

**VISUAL ANALYSIS OF PICTURESQUE URBAN
LANDSCAPE
CASE OF SULTANAHMET, ISTANBUL**

Dalhat Dansadau SAIDU

Master's Thesis

Supervisor

Prof. Dr. Aykut KARAMAN

İstanbul, 2024

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The thesis titled VISUAL ANALYSIS OF PICTURESQUE URBAN LANDSCAPE - CASE OF SULTANAHMET, ISTANBUL prepared by DALHAT SAIDU DANSADAU and submitted on 12/06/2024 has been **accepted unanimously** for the degree of Master of Science in Architecture.

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I hereby declare that all information/data presented in this graduation project has been obtained in full accordance with academic rules and ethical conduct. I also declare all unoriginal materials and conclusions have been cited in the text and all references mentioned in the Reference List have been cited in the text, and vice versa as required by the abovementioned rules and conduct.

Dalhat Dansadau SAIDU

Signature



DEDICATION

To my beloved mother and family, your unwavering love and support have been my fuel throughout this endeavour. Your encouragement, sacrifices, and endless belief in me have fuelled my determination and sustained me through every step of this journey. This achievement is as much yours as it is mine, and I am happy to dedicate it to you with profound gratitude and love.

To my esteemed supervisor Prof. Dr. Aykut KARAMAN, your mentorship, expertise, and unwavering support have been instrumental in shaping this thesis. Your guidance, constructive feedback, and encouragement have enriched my academic growth and instilled in me a deeper understanding of my field. I am profoundly grateful for your mentorship and guidance.

Lastly, to all those whose contributions, support, and encouragement that I have received, I extend my heartfelt appreciation. Your presence in my life has made this journey all the more meaningful, and I am deeply grateful for your support and encouragement.

With deepest gratitude and humility.

ABSTRACT

VISUAL ANALYSIS OF PICTURESQUE URBAN LANDSCAPE CASE OF SULTANAHMET, ISTANBUL

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The integration of photography into architecture was a pivotal point in the journey of architectural representation, photography proved itself useful for the betterment of architecture early on, as well as establish itself as a necessary tool in the realm of architecture, from the early interactions of Le Corbusier and photography to the emergence of early architectural photographers such as Ackerman J.S., Shulman J, this thesis explores the evolution of architectural photography and draws parallels between architecture, photography and urban design specifically addressing perception. The study looked into the inquiry of knowing "What are the key picturesque locations/structures in Sultanahmet, Fatih – Istanbul, and how can their spatial distribution, and cultural significance be characterized and mapped for urban design and development?" as well as the secondary objective to "Investigate the role of perception in urban environments and how photography serves as a tool for capturing and conveying the perception of Sultanahmet's picturesque structures/locations". The study achieved these objectives by utilizing methodologies such as geo-tagged photography, sequential photography, social media metadata extraction, GIS mapping, spatial analysis, and visual analysis focusing on the historically rich and culturally significant study area of Sultanahmet, Fatih – Istanbul. By looking at approximately 30 potential structures / locations then further narrowing them down to the top 10 most picturesque and then dissecting their special distribution and cultural significance the study was able to achieve the main objective as well as unveiling a more nuance understanding of

the dynamics between Photography, Architecture, and Urban design with respect to perception.

Keywords: Perception, Architectural Photography, Picturesque, Urban Design, Geo-tagged Photography, Sultanahmet – İstanbul.



ÖZET

RESİMSSEL KENT PEYZAJININ GÖRSEL ANALİZİ SULTANAHMET, İSTANBUL ÖRNEĞİ

SAIDU, Dalhat Dansadau

Yüksek Lisans, Mimarlık, Altınbaş Üniversitesi

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Tarih: Haziran/2024

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Fotoğrafçılığın mimarlığa entegrasyonu, mimari temsil yolculuğunda önemli bir dönüm noktasıydı. Fotoğrafçılık, mimarinin iyileştirilmesi için erken dönemde kendini faydalı kıldığı gibi, mimarlık alanında da gerekli bir araç olarak kendini kanıtlamıştır. Le Corbusier'in fotoğrafçılıkla olan erken etkileşimlerinden, Ackerman J.S., Shulman J gibi erken dönem mimari fotoğrafçıların ortaya çıkışına kadar, bu tez mimari fotoğrafçılığın evrimini araştırmakta ve mimari, fotoğrafçılık ve kentsel tasarım arasındaki paralellikleri özellikle algı bağlamında ele almaktadır. Çalışma, "Sultanahmet, Fatih – İstanbul'daki başlıca resimsel konumlar/strüktürler nelerdir ve bunların mekânsal dağılımı ve kültürel önemi kentsel tasarım ve gelişim için nasıl karakterize edilip haritalandırılabilir?" sorusunu ve ayrıca "Kentsel çevrelerde algının rolünü ve fotoğrafçılığın Sultanahmet'in resimsel strüktürlerinin/konumlarının algısını yakalamak ve iletmek için nasıl bir araç olduğunu" araştırmayı hedeflemiştir. Çalışma, bu hedeflere ulaşmak için geo-etiketli fotoğrafçılık, ardışık fotoğrafçılık, sosyal medya meta veri çıkarımı, CBS haritalama, mekânsal analiz ve görsel analiz gibi metodolojiler kullanarak, tarihi zengin ve kültürel olarak önemli olan Sultanahmet, Fatih – İstanbul çalışma alanına odaklanmıştır. Yaklaşık 30 potansiyel yapı/konumu inceleyerek, bunları en resimsel olan ilk 10 yapıya indirgeyip, mekânsal dağılımı ve kültürel önemini analiz ederek, çalışma ana hedefe ulaşmış ve fotoğrafçılık, mimari ve kentsel tasarım arasındaki dinamikler hakkında algı bağlamında daha nüanslı bir anlayış ortaya koymuştur.

Anahtar Kelimeler: Algı, Mimari Fotoğrafçılık, Resimsel, Kentsel Tasarım, Geo-etiketli Fotoğrafçılık, Sultanahmet – İstanbul.



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ABBREVIATIONS

GIS : Geographic Information System



1. INTRODUCTION

For a long time, photography has been a significant medium for capturing the essence of architecture and influencing urban planning and development, the visual representation of urban spaces has been essential in shaping the understanding of the built environment. In this modern era of digitalization, Photography is the lens through which Architecture and the Urban Environments are experienced, serving as a main tool in the discourse of urban perception. At the same time, social media plays the part of wildly distributing it.

This thesis takes a look into the heart of Istanbul known as Sultanahmet, Fatih, a historic centre with a major play in the modern era, seeking to look into the question: What are the key picturesque locations and structures in Sultanahmet, Fatih – Istanbul and how can their special distribution and cultural significance be characterized and mapped for urban design and development? This inquiry comes from a place of not only looking at photography as a tool of documentation in architecture but also as a dynamic tool of shaping perception in the design of urban space. To fully understand the importance of this research one must have to first investigate the historical and theoretical context of architectural photography and the visual perception of the built environment. Beatriz Colomina's look into Le Corbusier's engagement with photography (Colomina, 1987) and James Ackerman's paper on the origins of architectural photography (Ackerman, 2002) both highlight the significant influence of visual representation in the architectural field. Furthermore, on the urban scale level, Eve Blau's investigation into industrial cities further reiterates the significance of Photography in shaping the perception of urban landscapes (Blau, 1989), While Gordon Cullen highlights the importance of perception sequentially moving through an urban environment and how it impacts Human Experience of the urban fabric with principles of urban design, such as scale, rhythm, and focal points (Cullen, 1961).

In this modern era, the influence of photography spans beyond traditional platforms, with social media and online reviews becoming significant instruments in shaping urban development. The intersection of technology and social media in urban space is seen in studies by Giaoutzi, M., & Mavragani, E. (2018), Adams, P., & Hoelscher, S. (2016), and Gretzel, U., & Yoo, K. H. (2008), shedding light on the growing importance of online content

in Urban Development and Design decision making. The use of Geo-tagged Photography and Geospatial mapping emerges as a crucial methodology approach, the benefits of Geo-tagged photography in revealing the dynamics of urban environments are highlighted in studies by Paldino et al. (2015). Furthermore, the special analysis of geo-tagged photography can provide a nuance understanding of the special preference of urban areas and this information can be used in further urban development as illustrated by Kádár, B., & Gede, M. (2013).

In pursuit of the objective of this research a systematic review of existing literature will guide this exploration, a look into Sultanahmet's picturesque urban structures was taken and to see how they impact sustainable urban planning and improve urban development. The historical context was considered, modern technology, and the role of social media in shaping the city's landscapes. By the end, hope to provide a comprehensive understanding of Istanbul's urban structures and how they can be improved for a sustainable future.

1.1 RESEARCH PURPOSE AND OBJECTIVES

1.1.1 Research Purpose

This study intends to research and map out Sultanahmet, Fatih – Istanbul aiming to discover and collect data on the most picturesque locations/structures within Sultanahmet's rich historic architecture and cultural significance, the aim is to understand which role these picturesque locations and structures play in the larger context of Urban Development and cultural heritage.

The main goal of this study has to do with mapping out the exact location of these picturesque architectural structures understanding their special distribution and cultural significance while also understanding how do there contribute to the larger development of the urban area. By using a comprehensive data collection and visual analysis methods including geospatial mapping, Geo-tagged photography, and ethnography research etc., a comprehensive database of these sites and details of their characteristics and social-cultural relevance can be achieved.

This research aims to add to the significant works that have been done in this field of urban design development and cultural heritage preservation by offering a new look into the

historic city of Istanbul and its urban tapestry. By doing this the study will also inspire a greater appreciation for Istanbul's unique urban landscape while contributing practical implementations, methods, and techniques for further Urban Development and Cultural Heritage conservation.

1.1.2 Objectives

The main research question guiding this study is: "What are the key picturesque locations/structures in Sultanahmet, Fatih – Istanbul, and how can their spatial distribution, and cultural significance be characterized and mapped for urban design and development?"

And the **secondary objective** is to “Investigate the role of perception in urban environments and how photography serves as a tool for capturing and conveying the perception of Sultanahmet's picturesque landmark/structures.”

1.1.3 Thesis Outline

Firstly, in chapter 1, The Introduction, Research Purpose/Objective and Research Question was discussed as well as this thesis outline.

In chapter 2 the Literature review will be discussed where existing literature on Architectural photography, urban design, cultural heritage, and other literature related to mapping picturesque locations in urban townscapes will be reviewed as well as studies that emphasize the significance of photography in urban spaces and their impact on urban design and cultural identity.

In chapter 3 the Methodology of this research will be discussed as well as the Data Collection, which may include:

- a. Geospatial mapping techniques to locate and record picturesque sites.
- b. Photography and social media research to capture and document the visual appeal and cultural relevance.
- c. Presenting the findings obtained through the data collection process, including maps, photographs, and relevant data about each picturesque location.

In chapter 4 Data Analysis and Discussion of results will be covered by:

- a. Data analysis methods to categorize and analyse the collected information.
- b. Analysing the spatial distribution, and cultural significance of these sites.
- c. Discussion which entails discussing the implications of the findings concerning urban development, and cultural heritage preservation in Istanbul and exploring how this research contributes to understanding the city's visual identity and its potential impact on enhancing urban spaces.

Then finally the Conclusion which will summarize the key findings and insights gained from the study and emphasize the significance of the research outcomes in the context of urban development, and cultural heritage preservation.

2. LITERATURE REVIEW

2.1 INTRODUCTION

To approach this study first one have to contextualize the historic and theoretical factors at play from the initial ideas of integration of photography into architecture as well as urban design and then further along the line with the rise of social media and how it played a part as a catalyst for the push of photography in the general betterment of Architecture, Urban Development and Cultural Heritage, after a look at some of the previous literature that discuss the historic context of photography in architecture and urban design and how the use of Geo-tagged photography in social media enhanced the widespread of this phenomenon, then look into more literature will be done in a systematic literature review going through similar studies based on the methodologies used to achieve similar goals with the use of photography and social media in urban development and cultural heritage, from then which the stance of this study will be taken.

2.2 HISTORICAL AND THEORITICAL FOUNDATION

2.2.1 Architecture's Early Contact with Photography (Architectural Photography)

Photography played a major part of how Architects perceived and articulated their designs from the get-go, and this was recognized by one of the Pioneers Le Corbusier, he saw photography as a tool to capture the essence of architectural structures and represent architectural concepts (Colomina, 1987). One of the earliest architectural photographers, James S. Ackerman laid a theoretical foundation in the origin of architectural photography, he helped establish photography as a tool for architectural expression. The major role he played in the historic evolution of architectural photography brings attention to the enduring influence, which is vital for the understanding of the contemporary urban landscape (Ackerman, 2002). Some other noteworthy architecture photographers that published are Julius Shulman who highlighted the importance of paying attention to lightening, composition and context when it comes to enhancing the visual impact of architectural photography and unveiling the true essence of the built environment in his book modernism rediscovered (Shulman, 2000) and also Iwan Baan who incorporated human activity and

context in Architectural photography revealed a more in-depth view of the relationship between people and the built environment (Baan, 2012).

2.2.2 Perception and Architectural Photography in Urban Environments

To further understand the importance of Photography in Architecture and Urban Design you need to understand the importance of perception which is the main medium of how people digest the environment. This was articulately illustrated in Hesselgren (1975) where he explained basics of perception and he explores how individuals perceive and interact with the built environment, understanding the theoretical and psychological importance of perception to an inhabitant of the urban environment informs the photographer better on how to utilize perspectives to optimize his photography in the urban tapestry (Hesselgren, 1975).

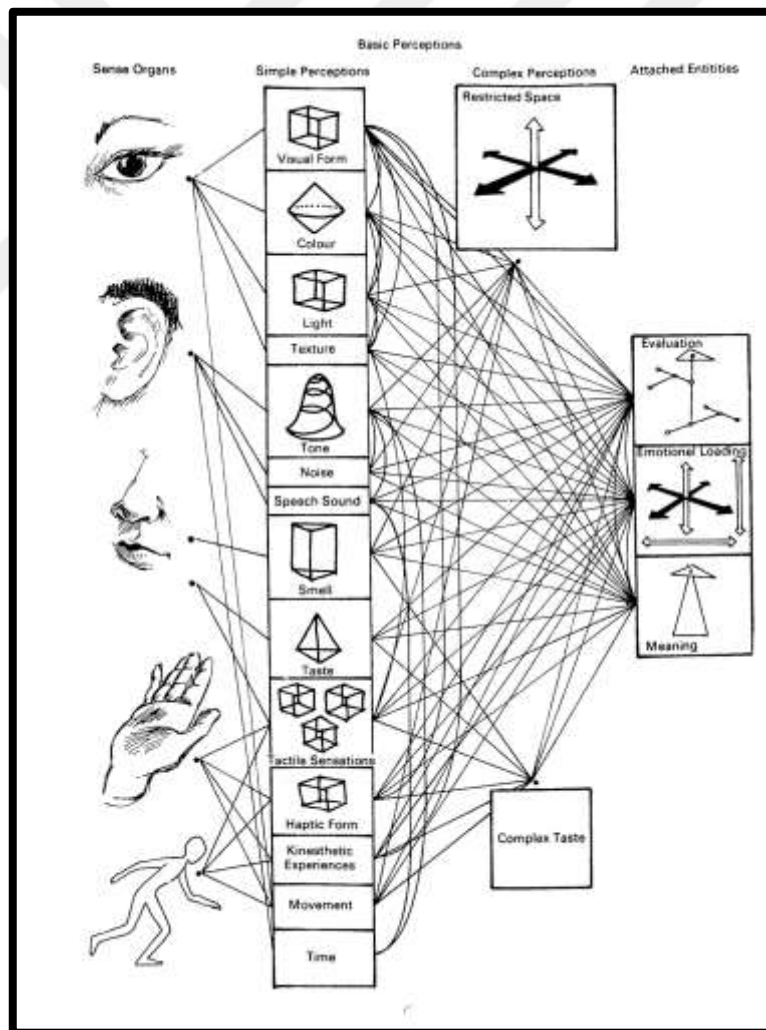


Figure 2.1: The Perceptual Process (Hesselgren, 1975).

Perception, in Cullen's (1961) opinion, is essential to developing a harmonious townscape. Urban designers can design spaces that are both aesthetically pleasing and highly functional by having a thorough understanding of people's perceptions and interactions with their surroundings. Cullen's methodology emphasises how important it is to take human perception into account as a basic component of urban planning in order to make sure that the constructed environment appeals to users' emotions. He emphasized the importance of visual qualities in urban environments in his book townscape, he explains his idea of serial vision by taking us through a narrative of perceiving a small town sequentially as you go through its buildings and various twists and turns of streets, he appreciated the subtle beauty of the elements that made up the town and he quotes "All too often we have condemned the old, rootless and romantic as 'picturesque' but no amount of heavy moralizing can alter the fact that people do take pleasure in the arrangement of buildings and in the various twists and turns of streets" (Cullen, 1961).

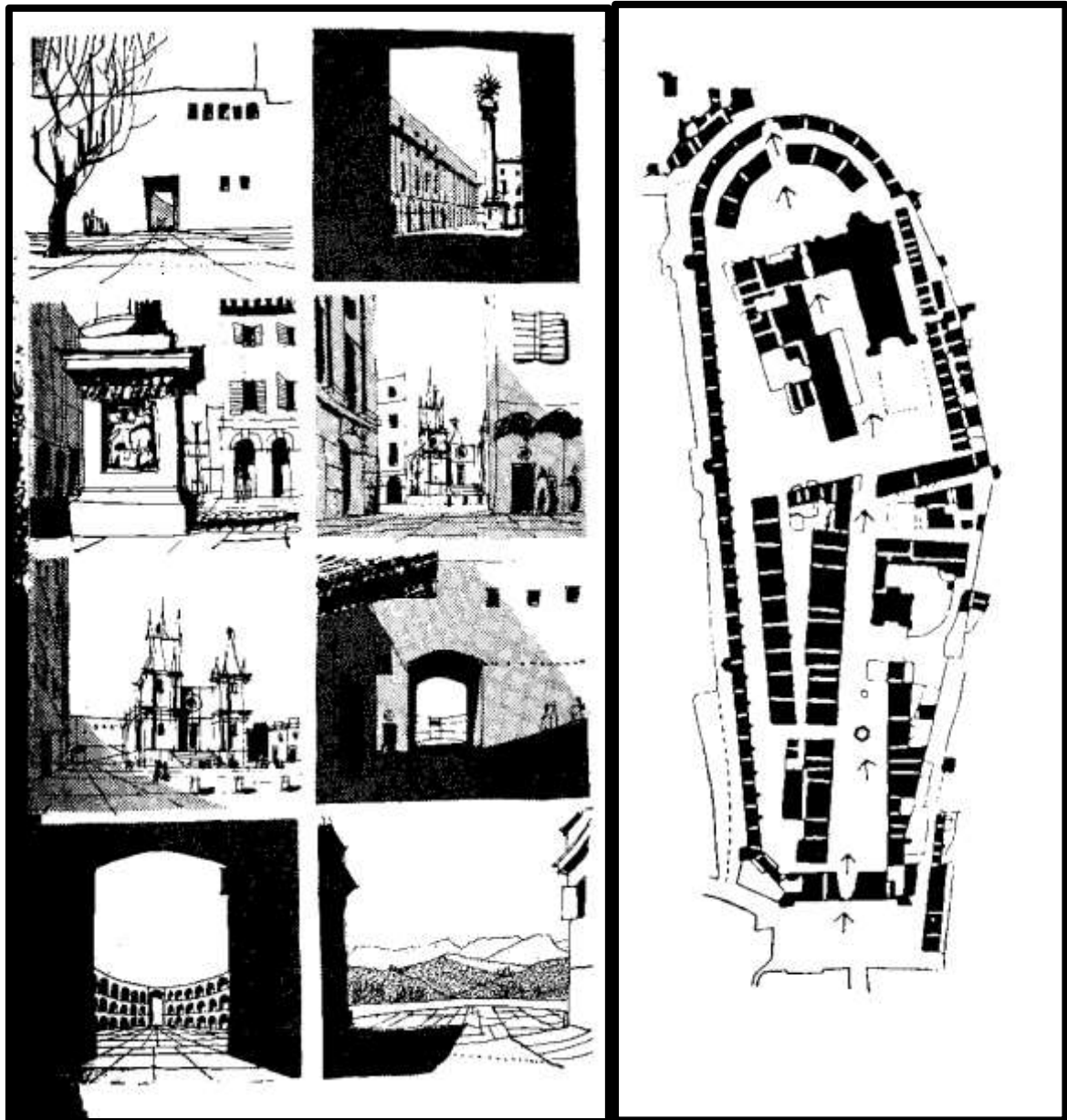


Figure 2.2a: Serial Vision (Cullen, 1961).

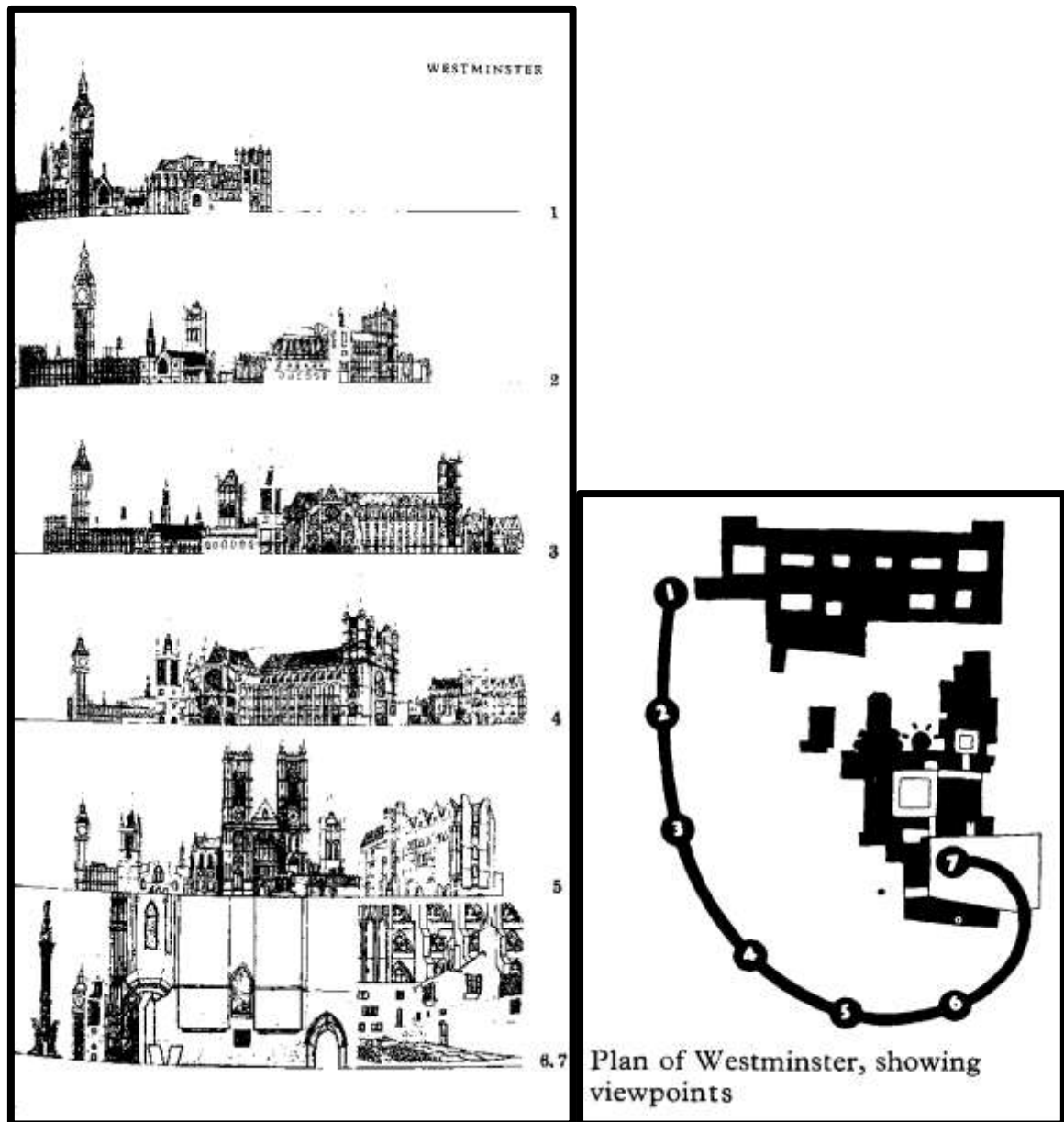


Figure 2.2b: Serial Vision Westminster (Cullen, 1961).

In "Road Form and Townscape," McCluskey (1992) expands on Cullen's concepts by concentrating on the connection between the arrangement of roads and urban perception. He argues that how roads and sidewalks are laid up has an important effect on how people perceive and navigate within urban areas. McCluskey highlights the significance of road geometry in determining the aesthetic value and functionality of a townscape. The perception of different elements in the urban environment influences the interaction with it as well as the emotions towards it, urban elements such as roads are not an exception to this, road design influences visual quality and character of an urban environment McCluskey (1992)

believed road design and how it intersects with the urban environment influences the perceivers perception as well as the visual quality of the urban environment, In Part I - chapter 4 of his book he illustrated Elements of Townscape based of the concept developed by Gordon Cullen (McCluskey, 1992)

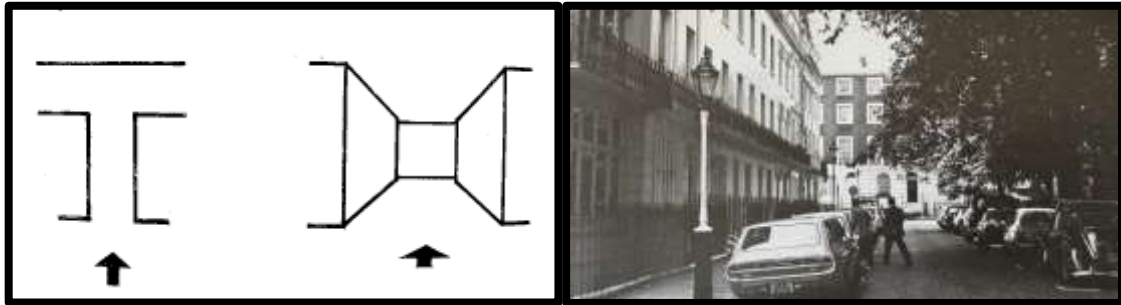


Figure 2.3: T-Junctions, (McCluskey, 1992).

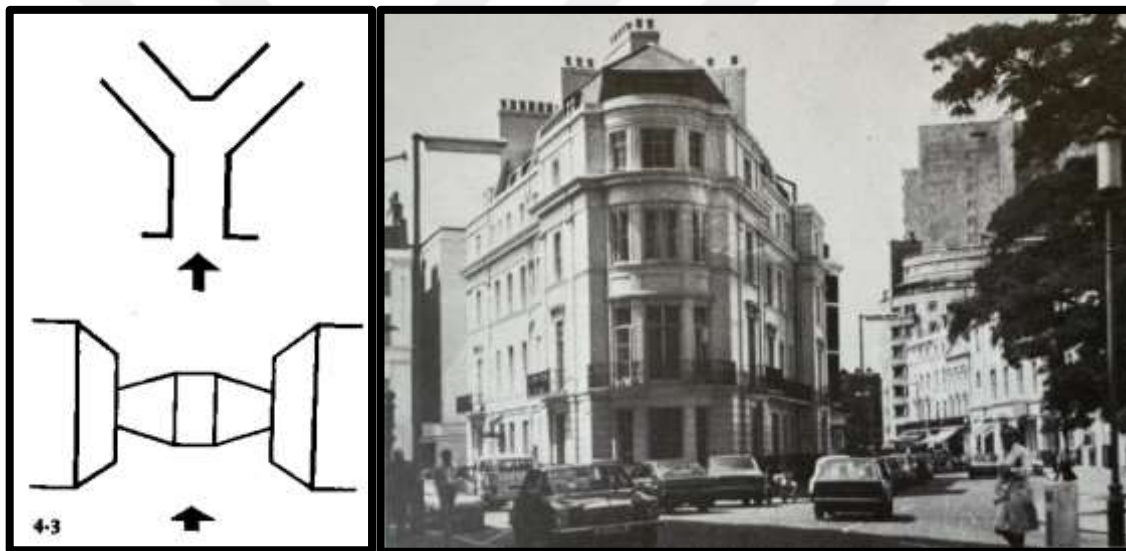


Figure 2.4: Y-Junctions (McCluskey, 1992).

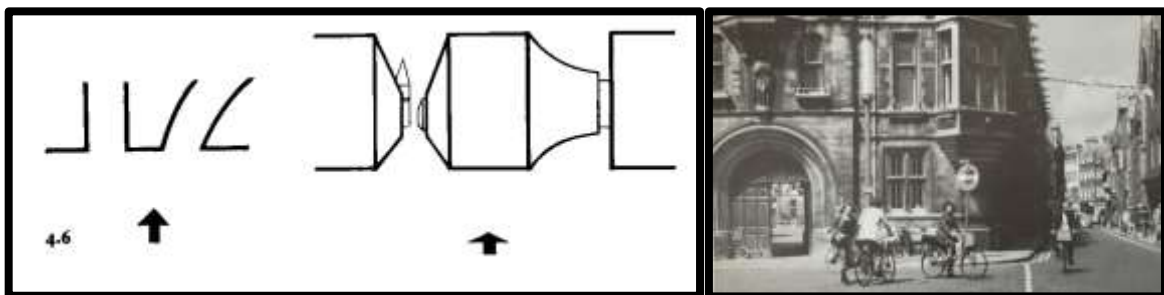


Figure 2.5: Multiple view (McCluskey, 1992).

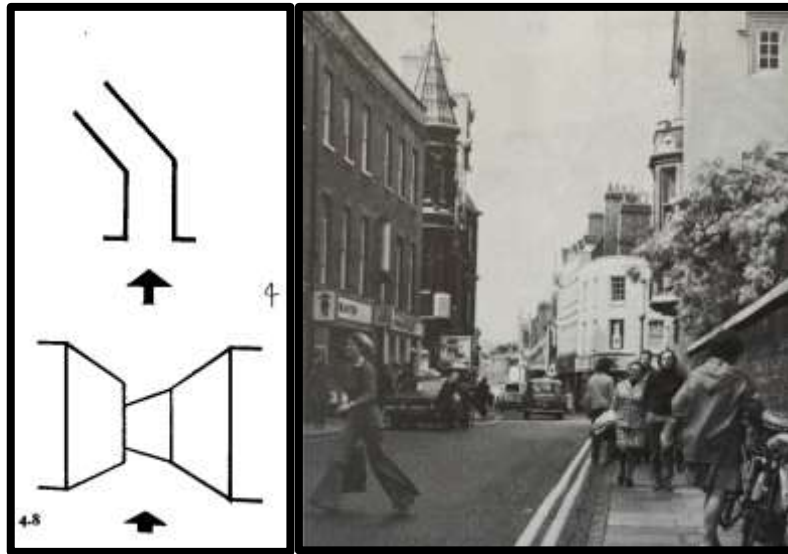


Figure 2.6: Angle (McCluskey, 1992).

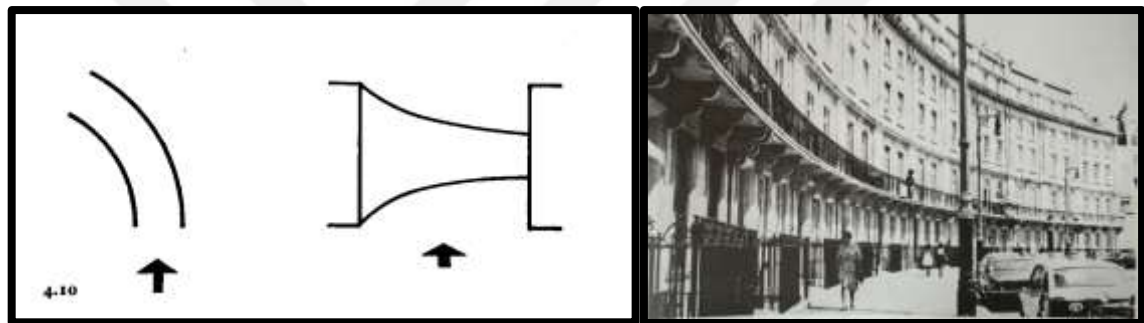


Figure 2.7: Curves (McCluskey, 1992).



Figure 2.8 Pivot (McCluskey, 1992).

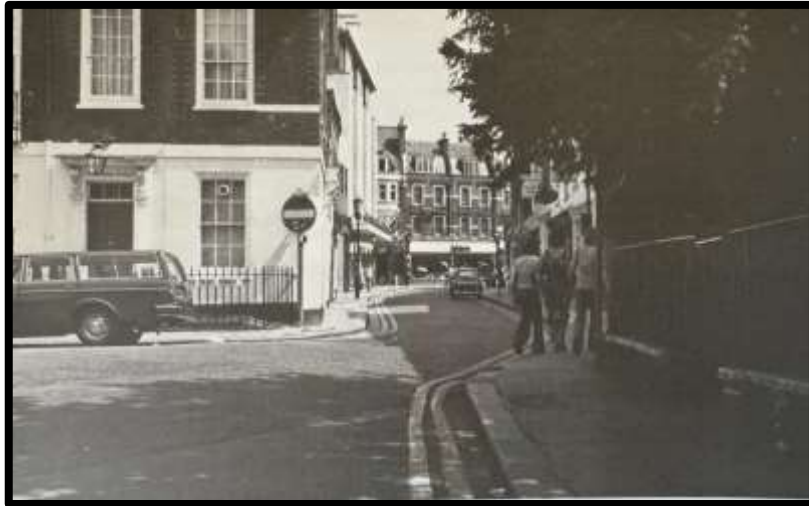


Figure 2.9: Deviation (McCluskey, 1992).



Figure 2.10: Deflection (McCluskey, 1992).

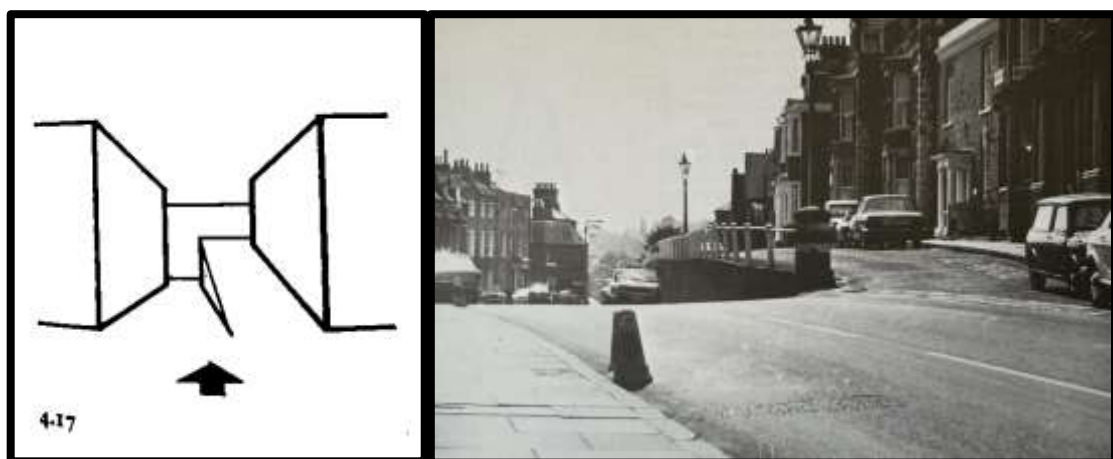


Figure 2.11 Level Change (McCluskey, 1992).

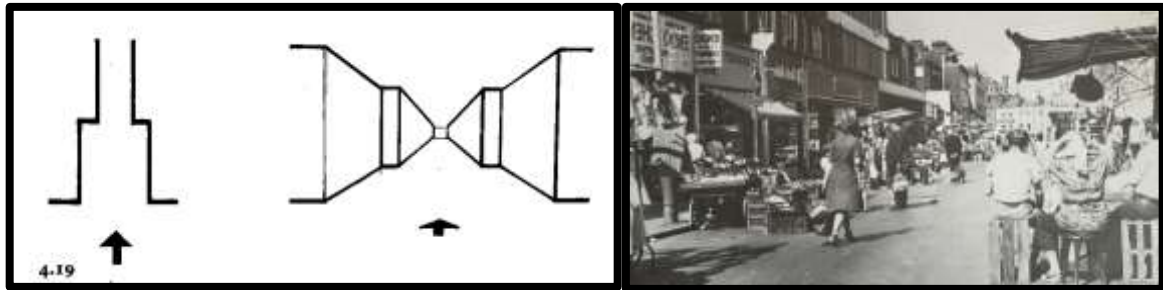


Figure 2.12: Narrowing (McCluskey, 1992).

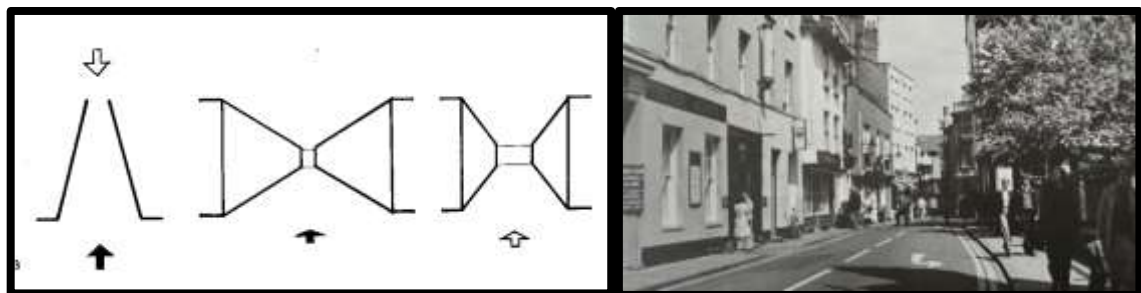


Figure 2.13: Funnelling (McCluskey, 1992).

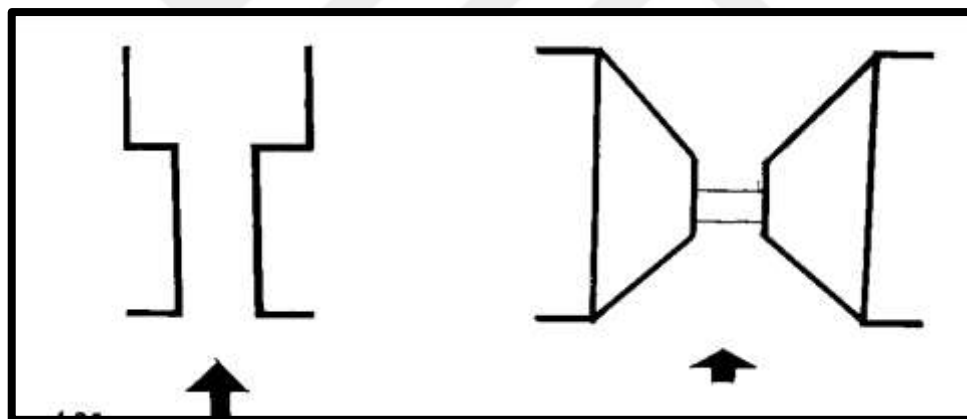


Figure 2.14: Widening (McCluskey, 1992).

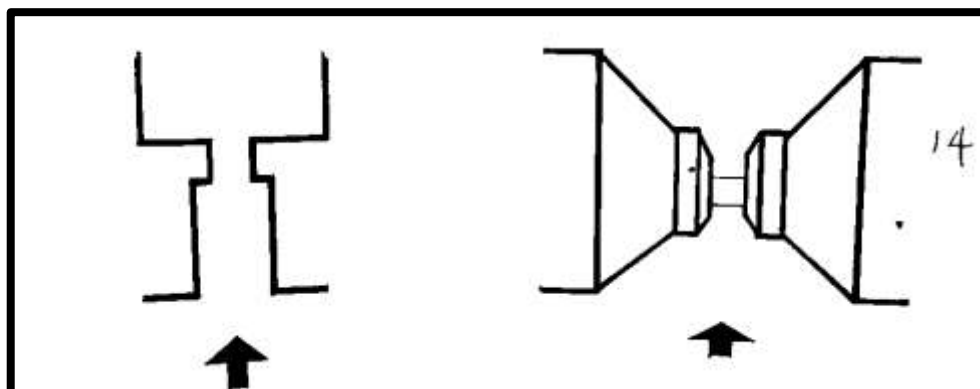


Figure 2.15: Constriction (McCluskey, 1992).

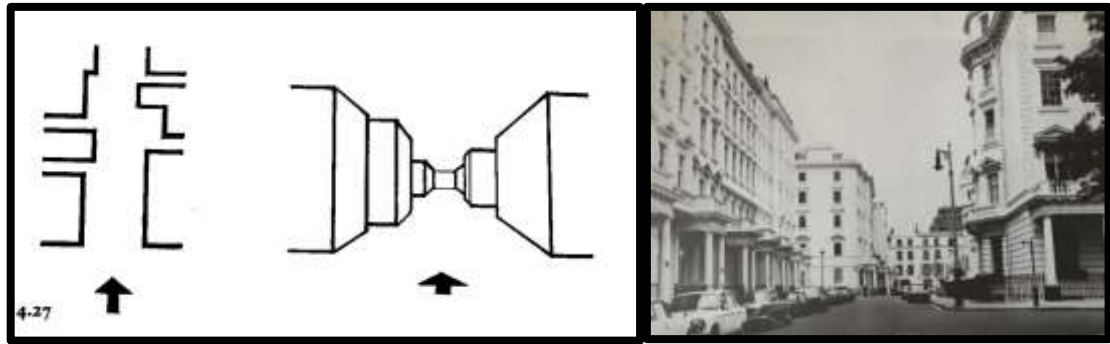


Figure 2.16: Wings (McCluskey, 1992).

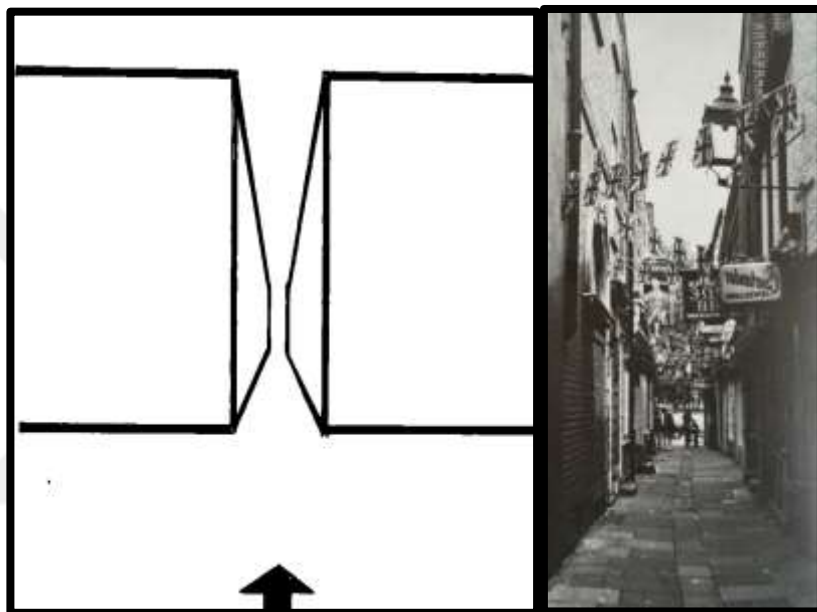


Figure 2.17: The Chasm (McCluskey, 1992).

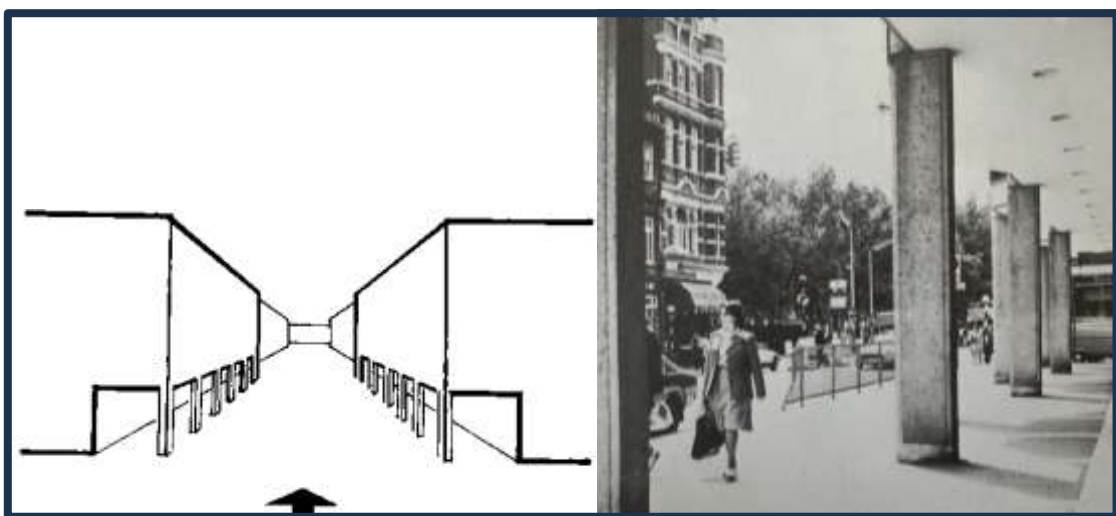


Figure 2.18: The Colonnade (McCluskey, 1992).

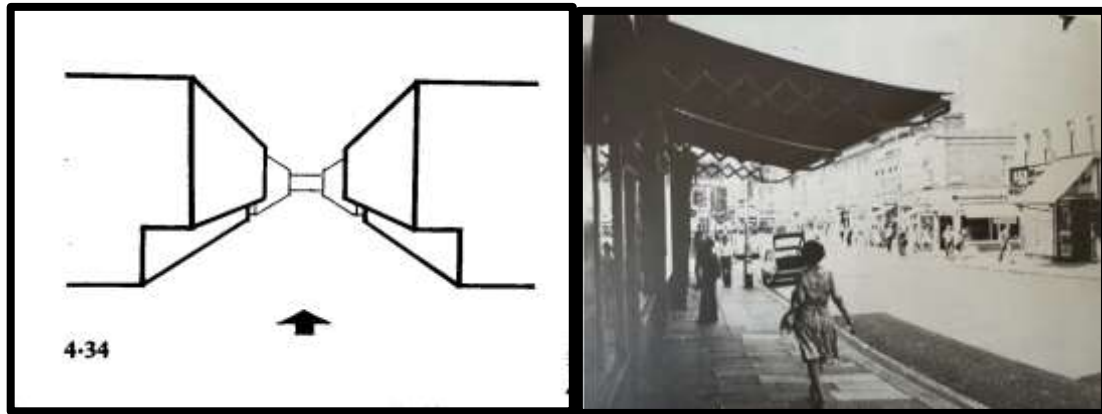


Figure 2.19: The Overhang (McCluskey, 1992).

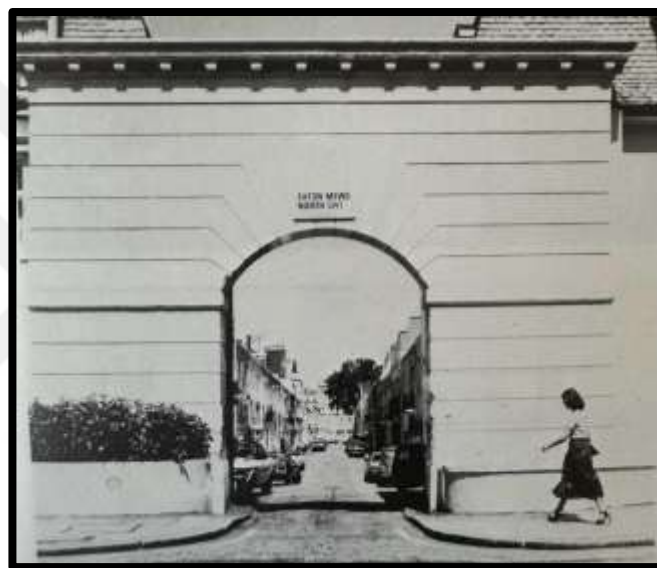


Figure 2.20: The Arch (McCluskey, 1992).



Figure 2.21: The Bridge (McCluskey, 1992).

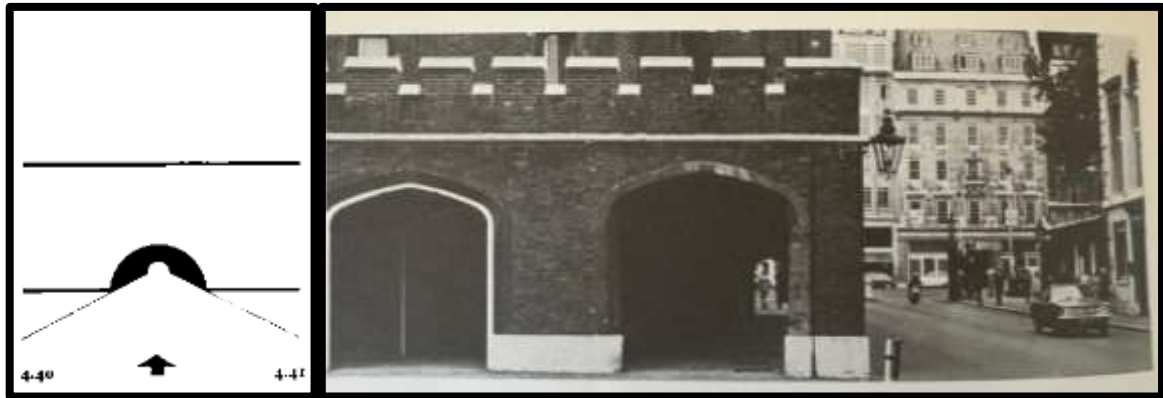


Figure 2.22: The Maw (McCluskey, 1992).

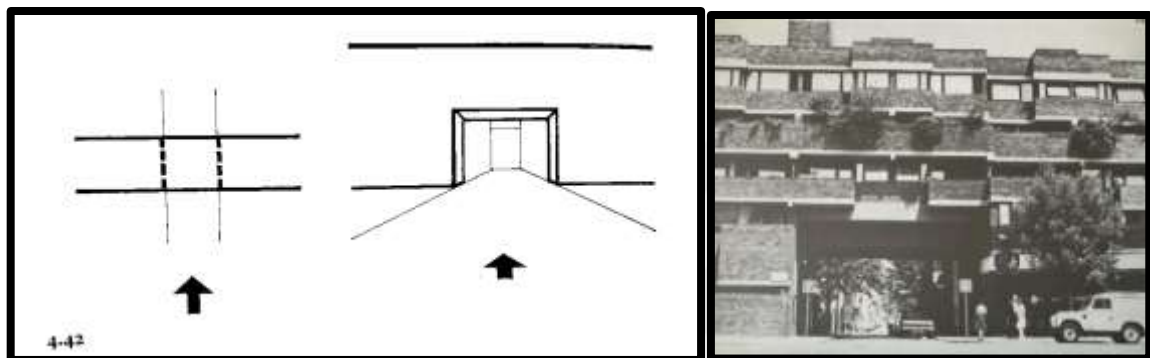


Figure 2.23: Going Through (McCluskey, 1992).



Figure 2.24: Closure (McCluskey, 1992).



Figure 2.25: Enclosure (McCluskey, 1992).

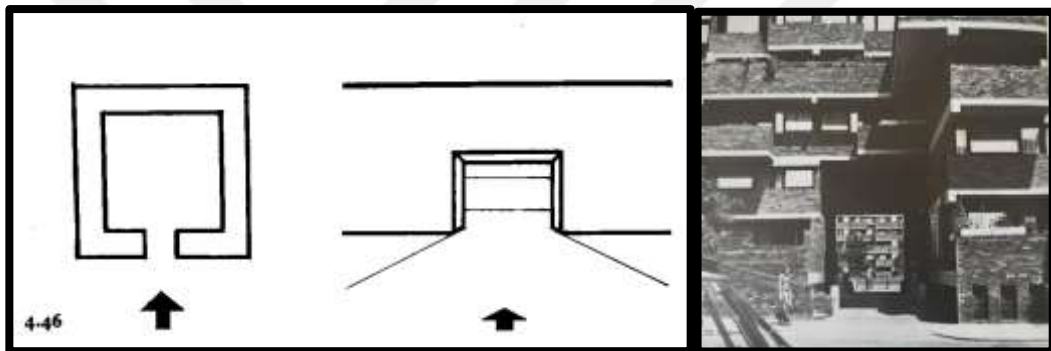


Figure 2.26: Going Into (McCluskey, 1992).



Figure 2.27: Dead-end (McCluskey, 1992).

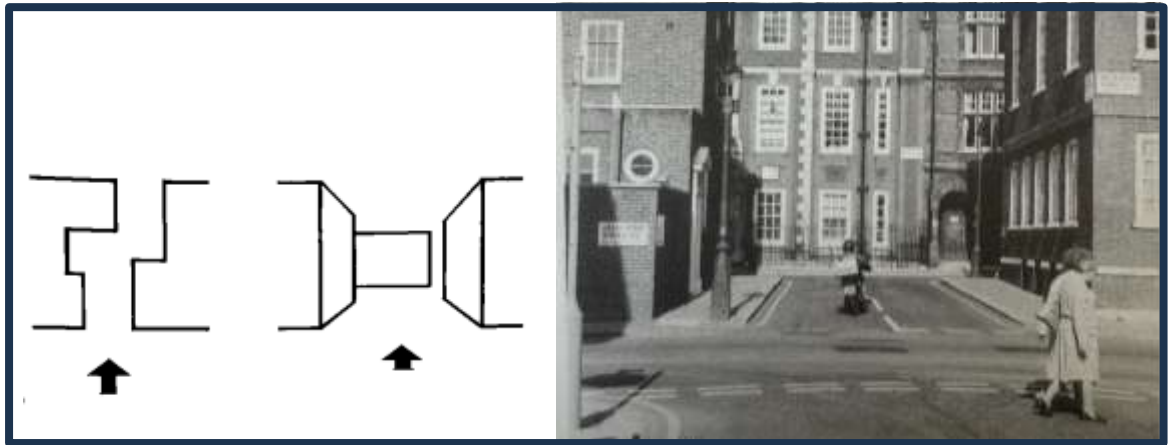


Figure 2.28: Hinting (McCluskey, 1992).



Figure 2.29: Enticing (McCluskey, 1992).



Figure 2.30: Isolation (McCluskey, 1992).

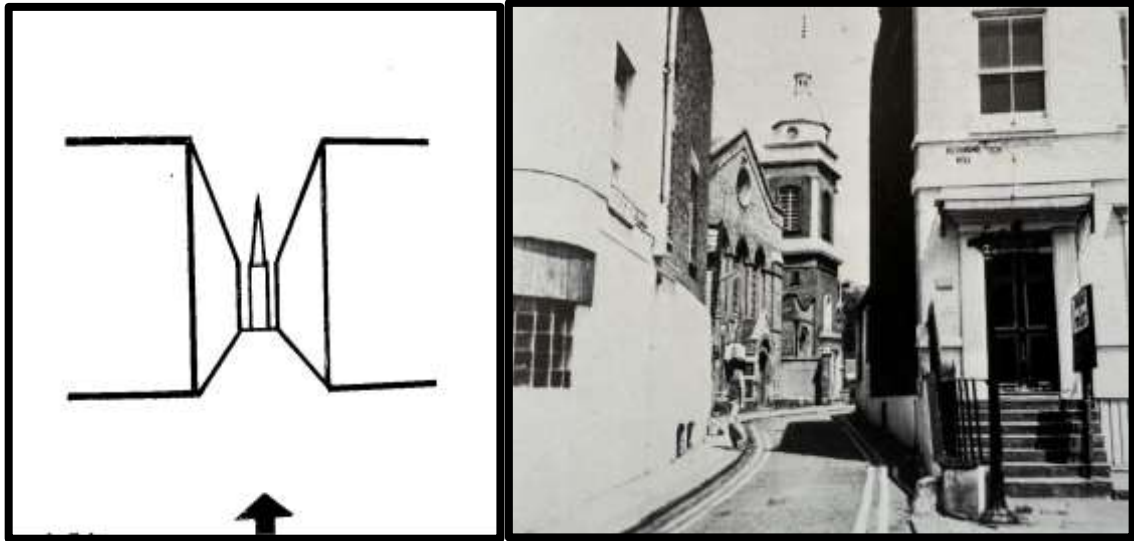


Figure 2.31: Framing (McCluskey, 1992).



Figure 2.32: Vista (McCluskey, 1992).



Figure 2.33: Incident (McCluskey, 1992).



Figure 2.34: Punctuation (McCluskey, 1992).

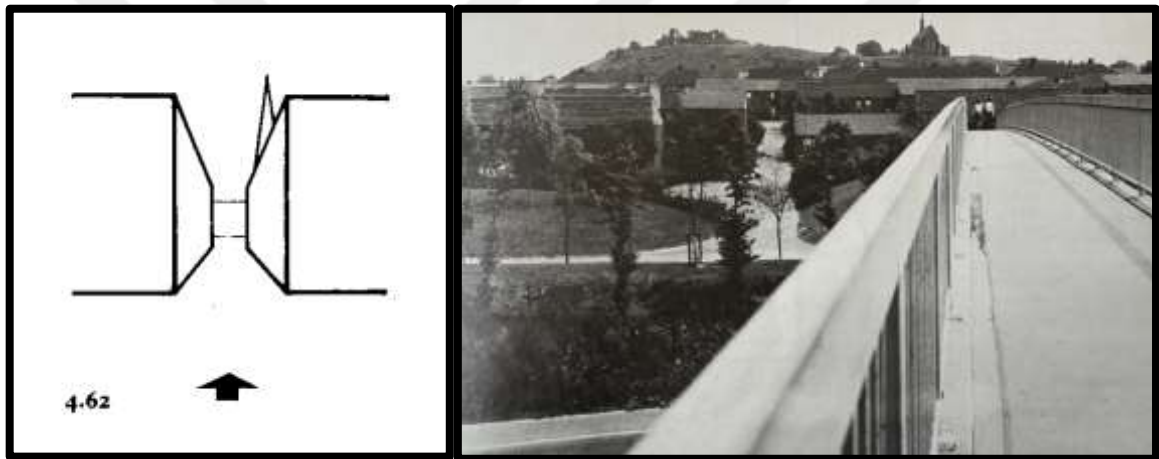
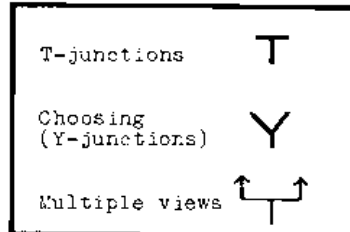


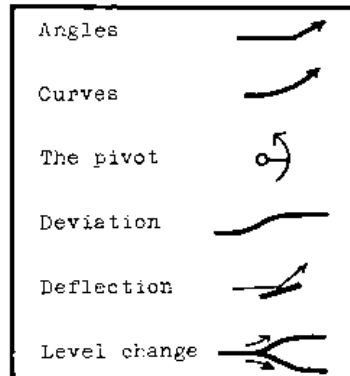
Figure 2.35: Landmark (McCluskey, 1992).

Elements of townscape—summary

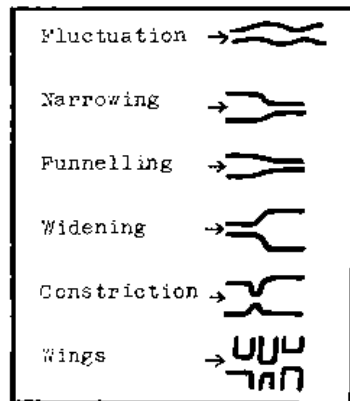
Junctions



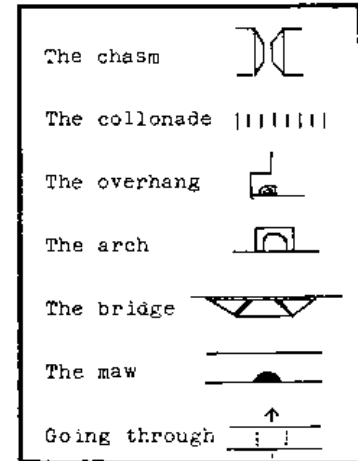
Line



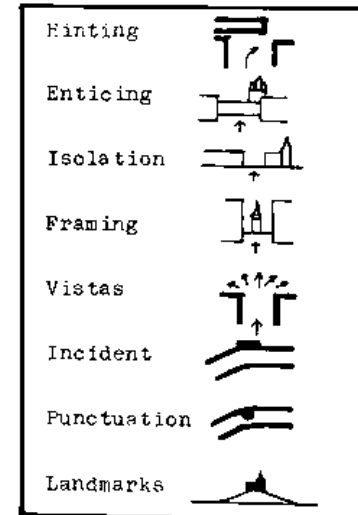
Width



Overhead



Features



Containment

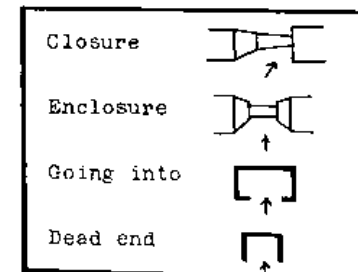


Figure 2.36: Elements Of Townscape (Mccluskey, 1992)

Cullen and McCluskey both emphasise how perception is an active interaction with the built environment rather than just a passive process. Their creations highlight the necessity for urban designers to take into account how individuals and neighbourhoods would interpret various design components. Through the integration of perception studies, findings into their urban design methodologies, planners and architects can create more human-centred and adaptable environments that improve the standard quality of life for residents and visitors.

One can also see similarity in axis of discussion when it comes to important elements that elevates the beauty and sophistication of Photography and Urban Design such as in the *College City* by Rowe, C. & Koetter, F. (1978) where they discussed Rowe's theory on the city as a collection of diverse architectural and urban elements that come together like a "collage" to make up the city which highlights the importance of juxtaposition and contrast in elements (Rowe & Koetter 1978). Similarly, by understanding more theories in Urban Design one can utilize this information in approaching photography in a way that benefits Urban Development, a look into Christopher Alexander's book *A Pattern Language* shows that by utilizing design patterns, one can help photographers identify and capture the essence of urban landscapes systematically (Alexander, 1977).

As the Industrial Revolution came along and urbanism was on the rise, photography played a vital role of documenting and understanding the rapid Urban changes at the time. This was well illustrated by Blau, E. (1989), in his examination into the early industrial city where he highlights photography's pivotal role in portraying industrial cities and the societies perception of urban development and transformation this laid a steady foundation for understanding contemporary urban changes, he also stated how "Photography represented the most immediate and visually powerful form of documentation, providing not only concrete facts about the city but also powerful visual images" (Blau, 1989). These works highlight the importance of considering the historical and theoretical context when studying the relationship between photography, architecture, and urban development.

The complexities and dynamic nature of cities have been explored through urban photography and it has revealed the cultural significance of spaces, objects and events offering a nuance understanding of the urban environment, by examining how urban photography reflects cultural meanings attached to spaces, objects and events (Hunt, 2014)

furthermore ariel photography served as a tool for a sustainable urban Development process in the recent urban development in Gijón, Spain (Muñiz & García, 2017) as ariel photograph provided significant advances in understanding the land cover changes and land use over time, and this information derived from the photographs was used for the urban development of the city.



Figure 2.37: Aerial Photos Showing Development Over Time (Muñiz & García, 2017).

Such cases better help us understand that by examining the role of photography on capturing urban spaces one can highlight its impact on social perception, and its role as a tool for understanding urban spaces which can better help us explore similar study (Tucker, 2012). And lastly on setting a foundation of understanding how photography can benefit urban development, the book *Cities and photography* by Tormey, J. (2013) offers a comprehensive dive into the relationship between urban cities and photography in various perspectives.

2.3 RISE OF SOCIAL MEDIA

With the development of Technology and emergence of social media in the public's daily lives architectural photography is not excluded in this, social media propelled the widespread of architectural photography especially in the urban scale, playing a major role in Urban Development and Cultural Heritage in many instances. This is seen being done through Geo-tagged photography alongside online reviews and digital footprint all thanks to social media.

Social media used with data visualization is used for sourcing knowledge on urban planning, management, and development which foster a sustainable development process (Ciuccarelli et al., 2014). A new approach at the time of coupling mobile phone and social media data

revealed a nuance understanding of urban function and pattern which provided valuable insight of the urban environment which further prove the benefits of social media as a valuable means for study (Tu et al., 2017). Similarly, this idea was reinforced in the next year by Ilieva, & McPhearson, (2018) in their study, they reviewed research that used social media data to access different aspects of urban sustainability and development including energy use, water quality, green spaces, transportation, air quality and population Dynamics.

Specifically social media photos can be utilized to explore the relationship between cultural ecosystem services and the urban landscape features, and by using social media photos as similarly done in several European sites one can have a better understanding of Istanbul's urban landscape (Oteros-Rozas et al., 2018). Social media such as Flickr and Instagram have been used to investigate social media photography however Zappavigna (2016) argued Instagram constructs subjectivity which in the long run will shape perception of an urban environment, one could disagree with this while looking at the other hand on how social media is a representation of the society just like how Gerodimos (2018) explored reflective photography as a tool of urban voice for youth and or public which basically serves as a platform for self-expression, meaning by looking at social media you can not only understand the urban landscape but also the social and cultural elements at play in a society expressed by the public on social media.

2.4 GEO-TAGGED PHOTOGRAPHY AND URBAN DYNAMICS

The come up of Geo-tagged photography within social media platforms changed the way people looked at urban imagery, geo-tagged photography provides an interesting insight into the special patterns and intensity of public use in natural treatment systems, and this helps in the analysis and understanding of urban environments (Ghermandi, 2016). A similar method can be used of taking a look at geotagged locations on social media within Istanbul to get an insight into the intricacies and dynamics of the urban area and this will exponentially help this research. Hotspots in an urban area can be detected using geo-tagged photography on social media which can highly contribute to the spatial analysis in a study and hence contribute to the urban development and cultural heritage (Hirota et al., 2014).

A quick location-based search on the internet or any social media platform will more often than not provide visual feedback on the searched area therefore such benefits brought by the

age of social media should be taken advantage of, especially in the case of such studies as this one, As stated by Hu, Y et al. (2015) "Geotagged photos on social media platforms provide an opportunity to understand human behaviours and preferences in urban environments". Therefore, these will serve as a guide for this study and data collection of the urban landscape of Istanbul.

2.5 A SUMMERY OF RELEVANT METHODOLOGIES AS A SYSTEMATIC LITERATURE REVIEW

There are more papers that give us a better idea of how this study can be approached and they take a series of different methodologies to achieve a similar goal, with that being said, this will be a systematic literature review going through these papers in order of their methodology and how they better inform us about how to approach the study. Some of these methodologies are Literature Review, Geospatial Mapping/GIS Analysis of/or Geo-tagged Photography, User Generated Content Analysis (Digital Footprint), online reviews analysis and photograph analysis.

Firstly with every research a literature review is required however in some studies more than others a literature review could be the main methodology of achieving the objective, specifically when it comes to Urban Development literature review can serve as a main source of knowledge in understanding different views and approaches in studying the dynamics of the urban tapestry, So by looking at previous literature one can uncover findings in the respective field of search in the case of this study, looking at literature related to photography as a tool of Urban Development one can have a better understanding on how to approach the study on the Dynamics of Istanbul's landscape in order to develop it and push forth cultural heritage (Marques et al., 2020). As previously illustrated by Smith, M. and Clark, G. in 2019 a thorough review of literature on Tourism and Urban Development helps understand the interplay between the main factors that contribute to having a sustainable urban design, and this information can be widely beneficial to urban planners as well as city officials in boosting the economy by encouraging Urban Development and cultural heritage (Smith & Clark, 2019).

In this age of social media people are always posting about where they are and what they're up to, you can derive a lot of beneficial information from it, you can understand the role

social media plays in urban tourism development with a literature review that dives into this topic, hence getting an insight into the existing knowledge as well as lack thereof when it comes to the usage of social media for understanding the urban tapestry (Giaoutzi & Mavragani, 2018). Another paper that leverages literature review as a tool to understand how one can look into online communication and Technology interplay with social interactions and culture within the urban environment was written by wood, L. and Smith, W. in 2001, a good understanding into this paper further supports the idea of utilizing literature reviews for beneficial research as such information about the urban dynamics is easily derived from it (Wood & Smith, 2001). This paper as well as the previous mentioned highlights the importance and benefits of a literature review in this study and how it can help better understand the factors that contribute to a well-designed Urban Environment that Fosters Urban Development and encourages cultural heritage.

Geo-spatial mappings/GIS analysis of/or Geo-tagged photography has been widely used as a methodology to achieve the objective of multiple research studies and upon review of these literature one is inclined to employ similar methods to achieve a similar objective of mapping out the urban area of Istanbul in order to foster urban development and push forth urban heritage. Geo-tagged photography was successfully used as a tool to explore urban hotspots and show patterns of attraction and places of intrigue within the urban landscape and the results imply that geo-tagged photography can be a useful tool for urban landscape dynamics and studies, real-time urban dynamics can be uncovered through simply analysing geo-tagged photos, therefore it can be used in this study's case study area to achieve the objective (Paldino et al., 2015). Another paper that Paldino, S. was involved in also utilized the analysis of geotagged photography, it states "Temporal analysis of geo-tagged photographs offers a rich source of information to understand the dynamics of urban areas" (Paldino et al., 2016), The paper is relevant and important as it explores the use of unconventional data sources, specifically geo-tagged photographs shared through social media platforms such as Flickr, to measure urban dynamics and understand the temporal patterns of residents and visitors in major cities, the study also provides insights into the periodicity of urban value, with strong weekly and monthly patterns observed for visitors, which can be valuable for urban planning, business decisions, and public stakeholder processes related to attracting more visitors and estimating the impact of special events in the city. The proposed

methodology of using geo-tagged photographs as a measure of urban dynamics and applying indices to analyse spatial and temporal activity pulsations provides a novel approach to urban planning and decision-making processes for urban development (Paldino et al., 2016).

Table 2.1 Heterogeneity Of Flickr Usage: Total Number Of Photographs Taken Worldwide By Residents Of Different Areas Versus Their Official Population In 2008. (Paldino Et Al., 2016).

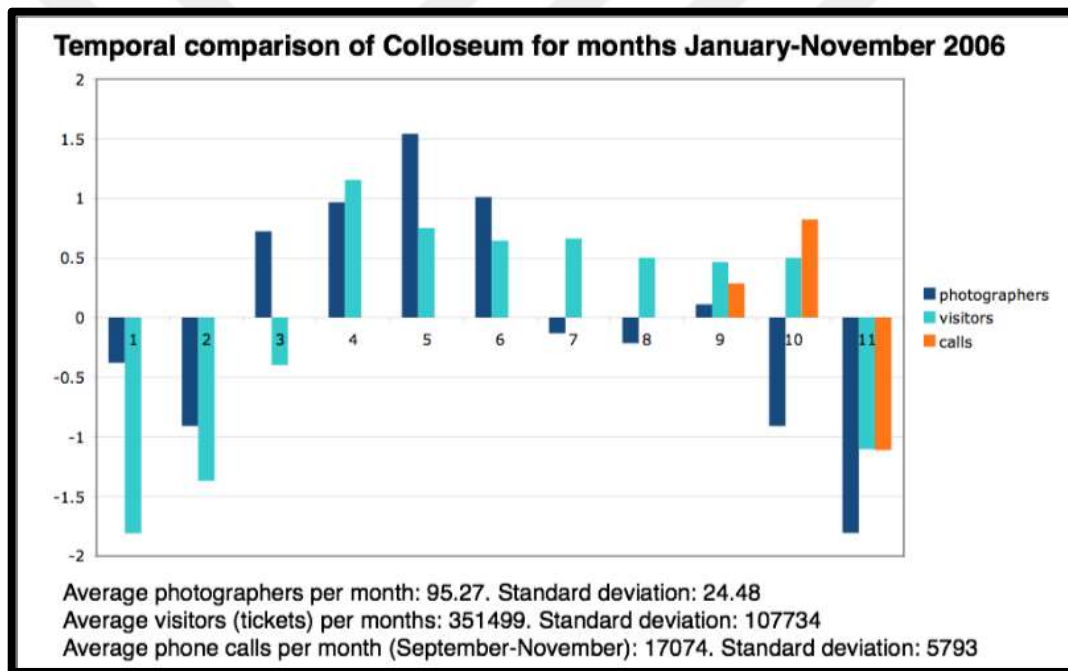
<i>City</i>	<i>Population (mln)</i>	<i>Photographs taken</i>	<i>Photographs per 1000 residents</i>
<i>New York City</i>	8.36	1,026,199	122.75
<i>London</i>	7.81	1,151,799	147.48
<i>Paris</i>	2.23	534,092	239.50
<i>San Francisco</i>	0.81	851,425	1,051.14
<i>Washington DC</i>	0.59	525,313	890.36
<i>Barcelona</i>	1.62	255,038	157.43
<i>Chicago</i>	2.85	412,246	144.65
<i>Los Angeles</i>	3.83	289,810	75.67
<i>Rome</i>	2.71	126,011	46.50
<i>Berlin</i>	3.43	182,325	53.16
<i>Rest of EU</i>	4,82.61	8,637,148	17.90
<i>Rest of the US</i>	2,87.61	7,347,003	25.55
<i>Rest of the world</i>	5,905.14	6,877,894	1.16
doi:10.1371/journal.pone.0165753.t001			

Geo-tagged photography alongside GIS analysis has been proven to be even more of valuable tool for understanding visitors flow or pattern of movement in natural/urban areas and helped with sustainable urban development, by integrating GIS analysis with geo-tagged photography one basically analysis the special distribution to geo-tagged photographs on covering and even better understanding of the intricacies of the urban dynamic, this can prove valuable in this research (Orsi & Geneletti, 2013). With spatial analysis of geotagged photography, you are able to access the visual representation of hotspots within the urban environment which gives a nuance understanding of the spatial preference of an urban area (Kádár & Gede, 2013). Furthermore, geospatial analysis and mapping techniques that have been applied to cultural heritage sites have provided an understanding of the value of geographical information system (GIS) when it comes to sustainable urban, cultural and Heritage management and development (Bevan & Conolly, 2017).

In a society where each individual walks around with a smartphone, the digital footprint of an individual becomes as prominent as the footprints left behind by a prey in the wild, that is to say a lot can be derived from the digital footprint left behind by smartphones in the modern urban environment. By analysing the user-generated content one can dive into the

understanding of the presence and movement of the public and by studying this one can further understand the behaviours of people through the urban landscape of cities (Girardin et al., 2008), with user-generated content, such as georeferenced photos and aggregated records of wireless network events this paper by Girardin et al. (2008) captured and presented a comparison of the amount of visitors in the Colosseum area based on the number of tickets sold, phone calls, and active photographers, showing variations from the monthly average scaled by the standard deviation, as shown below, it highlights how you can tell the popularity or amount of traffic a location has by the number of photographs found or digital footprint left (Girardin et al., 2008)

Chart 2.1: Uncovering The Presence And Movements Of Tourists From User-Generated Content (Girardin Et Al., 2008).



As seen from the Chart/graph above, the number of photographers correlates with the number of visitors in a general sense because most of these tourists and visitors that go to these locations often take pictures there in addition to other digital footprints that are left.

From another perspective Wang et al. (2012) believed that smartphones and digital footprint are not only used to analyse the behaviour and interaction with the urban environment, but it also influences the behaviour and the way people interact with the urban environment, Analysis of information from smartphone mediated tourist experience can provide an

understanding to how technology that people carry around influence travel behaviour (Wang et al., 2012). Furthermore, on the prevalence of social media in the public's daily lives most people receive their word of mouth through online means which come in the form of online reviews, with a proper online review one can have a general idea of the experience of a certain location hence you can see and have an idea of the most popular attractions or hotspots in a city by looking at online reviews by the general public. In a sense these can also be considered as user-generated content, with the investigation of the impacts and wide use of online travel reviews it is easily revealed that they can influence the travel decision-making of tourists as well as the urban design development and decisions of city officials when it comes to the betterment of the urban development and cultural heritage (Gretzel & Yoo, 2008). So a pattern appears here of online presence and technology can influence as well as used as a tool to study the urban development of a city in this study's case, Istanbul, more on that which supports this narrative is the study that took place in 2017, and it conducted a comprehensive look into several major online review platforms also highlighted the implications of social media Analytics and data in guiding the perception of picturesque Urban landscapes (Xiang et al., 2017)

Lastly but definitely not the least, there is the most straightforward but also subjective approach to the problem which is visual analysis of the photographs. This approach mainly has to do with the visual appeal of the photographs of these architectural structures and locations, the paper written in 2019 by Wang, D., Li, X. R., & Liang, Y. Investigated the predictive power of online photographs and identifying hotspot areas within cities it highlighted the potential for using visual content in online platforms as a tool to predict hotspots (Wang et al., 2017). In this case the aesthetic value or photogenic desirability of these locations play a major factor in bringing in tourists and photographers.

2.6 CONCLUSION

The historic integration of Photography into architecture laid a foundation to its major contributions into urban development, with the rise of social media propelling photography to a new level affecting the Public's perception and dynamics with the urban environment with tools such as geo-tagged photography which have proven to be valuable in understanding the nuance of urban dynamics and offering a new look into special distribution

and cultural significance in urban development, alongside other methodologies that have proven successful for such use, such as literature review, geospatial mapping of geo-tagged photography, user generated content, digital footprint and photograph analysis.

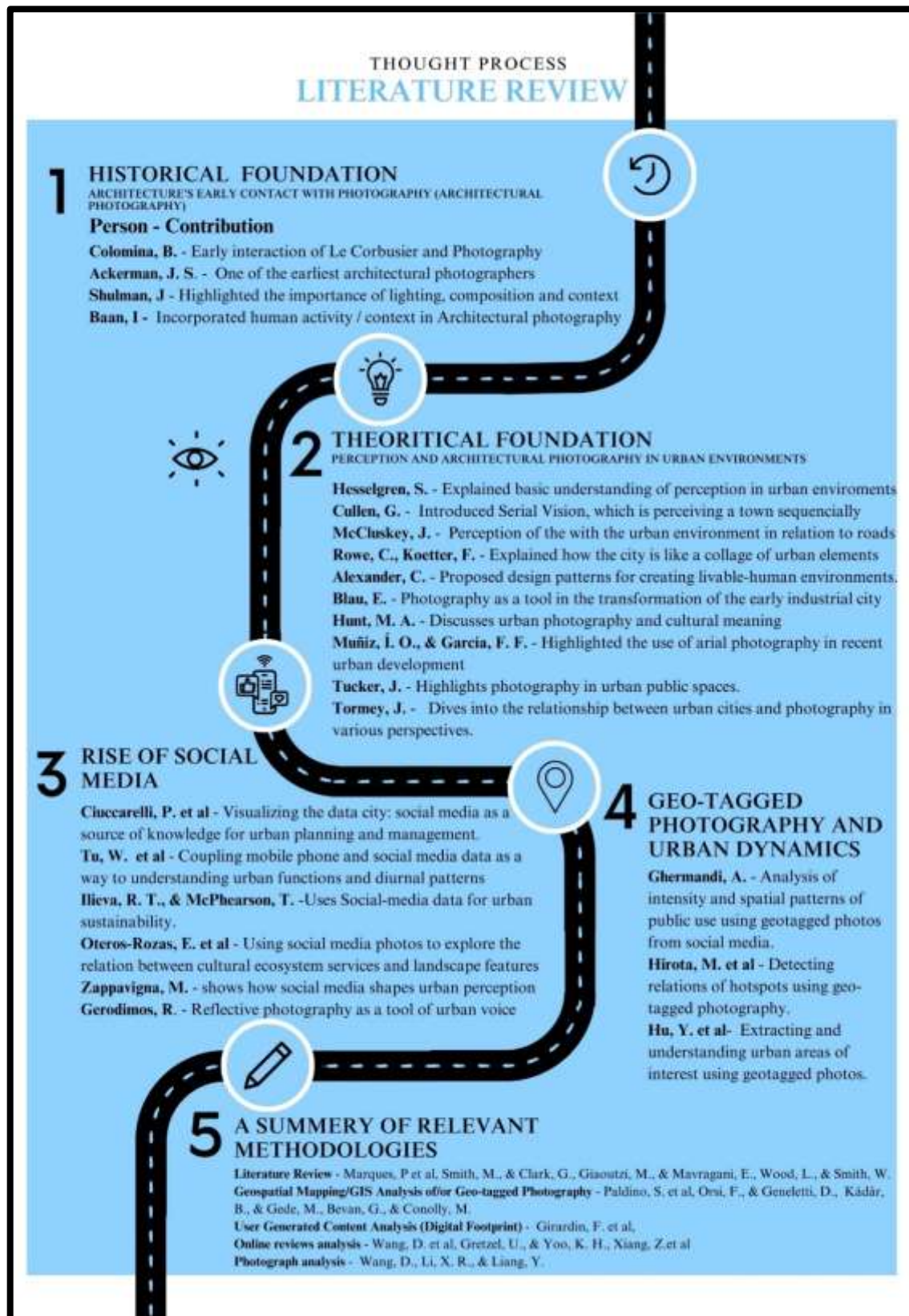
With all this in mind a stance that properly defines the approach of this study on the matter can be taken. Upon reviewing all previously stated it becomes apparent that there are significant parallels between Architecture and Photography in multiple axis, perception being the main one of them and by optimising one of them one can translate it into the other, furthermore the perception of an inhabitant of an urban environment to his surroundings is the main medium to which he interacts with it both physically and psychologically hence elevating the importance to which utilizing perspectives in photography can influence the experience of the urban environment. So, by taking a look at the urban environment through the lens of photography one can extract beneficial insights to Urban Design and Development. Therefore, one can investigate and prove this further by pursuing the objectives for this thesis which are to answer the question:

"What are the key picturesque locations/structures in Sultanahmet, Fatih – Istanbul, and how can their spatial distribution, and cultural significance be characterized and mapped for urban design and development?"

And

“Investigate the role of perception in urban environments and how photography serves as a tool for capturing and conveying the perception of Sultanahmet's picturesque landmark/structures.”

Chart 2.2 Summary Of Literature Review.



3. METHODOLOGY

3.1 RESEARCH METHODS

The methodologies involved in are research involves a combination of Qualitative and Quantitative approach:

Quantitative: Analysing numerical data from social media platforms to quantify the popularity of locations/structures based on the number of geo-tagged pictures, likes, and other engagement metrics.

Qualitative: Evaluating the visual appeal and quality of these same locations/structures through visual analysis of the pictures.

3.1.1 Tools, Techniques, and Materials

Data Collection	Data Analysis	Visual Analysis	Integration of Data
Social Media Extraction (Geo-tagged Photography)	Quantitative Analysis GIS Mapping	Manual Evaluation of Photos	Correlation Analysis
Metadata Extraction			
Sequential Photography			

Data Collection

Social Media Extraction: Utilizing APIs to collect data from platforms like Flickr, to retrieve Geo-tagged pictures of Istanbul's picturesque locations/structures.

- a. Metadata Extraction: Extracting relevant data from pictures (likes, comments, location information) as well as online reviews.
- b. Sequential Photography: inspired by serial vision, taking pictures in increments while going through a path of the urban fabric.

Data Analysis

- a. Quantitative Analysis: Visualizing frequencies, likes, and other engagement metrics using excel to create charts.
- b. GIS Mapping: Employing Geographic Information Systems to map out the locations of these picturesque structures.

Visual Analysis

Manual Evaluation: Visual inspection and analysis of the collected pictures to assess the visual appeal of the locations/structures.

Integration of Data

Correlation Analysis: Exploring correlations between social media metrics (number of pictures, likes, etc.), online reviews and the perceived visual appeal of locations/structures.

3.1.2 Variables Chosen for Research Inquiry

Dependent Variable

Visual appeal/rating of locations/structures

Independent Variables

- a. Frequency of Geo-tagged Pictures on Social Media Platform (Flickr)
- b. Number of Likes, Comments, and Shares of Pictures
- c. Location-based Popularity Metrics from social media (Trending)
- d. Geographic Information System (GIS) Data (for mapping and spatial analysis)

3.1.3 Methodology Description

Step 1: Data Collection from Social Media Platform:

Retrieve geo-tagged pictures of Istanbul locations/structures from popular social media platform.

Step 2: Metadata Extraction and Quantitative Analysis:

Extract relevant data (likes, comments, etc.) from the collected pictures as well as online reviews.

Perform quantitative analysis to determine the popularity of locations/structures based on social media metrics.

Step 3: GIS Mapping and Spatial Analysis:

Utilize GIS tools to map out the locations of identified landmarks based on the collected data.

Analyse spatial distribution and clustering of picturesque locations/structures.

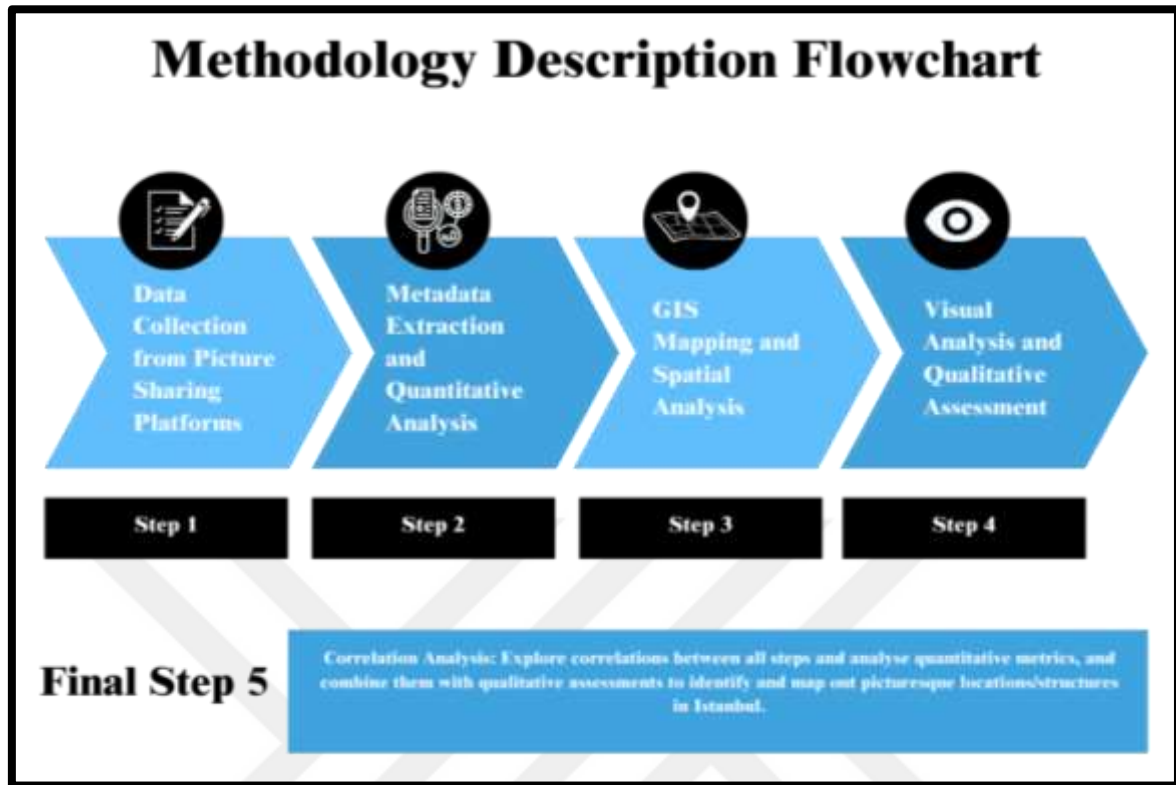
Step 4: Visual Analysis and Qualitative Assessment:

Conduct visual analysis of the collected pictures to assess the aesthetic quality and visual appeal of landmarks.

Integrate qualitative assessments with quantitative data to evaluate the relationship between social media metrics and perceived visual appeal.

This methodology aims to comprehensively gather data from social media platforms, analyse quantitative metrics, and combine them with qualitative assessments to identify and map out picturesque locations/structures in Istanbul.

Chart 3.1 Methodology Flowchart.



3.1.4 Reasoning behind Choice of Methodology

Geo-tagged Photography

The decision to incorporate Geo-tagged photography as a primary methodology comes from its unique ability to capture and unveil the dynamics of urban landscape, geotagging directly provides geographical context to photographs, which will allow us to identify picturesque locations/structures in Istanbul and also it highlights a pattern of attraction and concentration of people. By using geo-tagged photography, one can ensure a real time and realistic representation of the urban environment that can help us analyse the distribution of the public in the urban tapestry.

Geospatial Mapping/GIS Analysis

Geo special mapping and GIS analysis will serve as an essential tool for digesting raw geo-tagged photography data into proper information that gives insight, by mapping out these locations / structures one can visually see a representation of the special preference of the

public in Istanbul, GIS analysis also allows the measurement of attraction, helping in the identification of hotspots and assessment of urban dynamics. This methodology paired with geo-tagged photography proves essential in this research to understand Istanbul's urban fabric.

Social Media Metrics and Online Reviews Analysis

As deduced from the literature review, in an era dominated by digital communication, the analysis of social media metrics and online review provides a significant means to gauge the impact of picturesque locations/structures in Istanbul, Digital footprint left by the public on social media serves as an insightful source of information, revealing the popularity and cultural significance of urban spaces, by looking into these social media metrics and online reviews one can achieve a valuable insight into the perception and experiences of individuals interacting with the urban environment, contributing to the general society in urban development and cultural heritage

Visual Photograph Analysis

Photograph analysis, focusing on visual attributes of the pictures captured, complements the quantitative data obtained through geo-tagged photography and GIS analysis. This methodology allows us to take a look into the subjective visual appeal and qualities of photographs of Istanbul's urban landscape. Given that the aim is to map out the picturesque locations/structures of Istanbul therefore it is only natural to do a visual analysis as it will give more insight into this research as well as provide supporting data to the previous methods by improving the qualitative dimension of the study, which overall will improve the nuance understanding of Sultanahmet's Urban landscape.

3.2 CASE STUDY AREA

Study Area: Sultanahmet, Fatih – Istanbul



Figure 3.1: Map of Sultanahmet District, Drawn by Author.

Sultanahmet, located in the historic district of Fatih in Istanbul, it is a lively and cultural hub that displays the core of Turkish historical and Architectural heritage. It is known as the old city or the historic peninsula, Sultanahmet tons as a testament to Istanbul's historic influences, blending the impacts of multiple civilization does have occupied the region.

This significant neighbourhood hosts some of the world most renowned historic landmarks opening a portal into the diverse history of Istanbul. One of these architectural masterpieces is known as the Hagia Sophia and right adjacent to it is the Blue Mosque (Sultan Ahmed

3.3 DATA COLLECTION

3.3.1 Data Collection from Social Media Platform

Geo-tagged Photography

Here is a step-by-step guide used to visit Flickr.com and search for geotagged photographs related to a specific location along with their tags:

- a. Access Flickr.com: Open your web browser and navigate to Flickr's official website at www.flickr.com.
- b. Sign In or Sign Up: If you have an existing Flickr account, sign in using your credentials. If not, sign up for a new account
- c. Explore the Search Bar: Locate the search bar at the top of the Flickr homepage. Click on it to activate.
- d. Enter Location: In the search bar, type the name of the location you are interested in studying. This could be a city, landmark, natural feature, or any specific area of interest. For instance, if you are interested in studying Central Park in New York City, type "Central Park, New York" into the search bar.
- e. Filter by Geotagged Photos: After typing the location, press Enter or click on the magnifying glass icon to initiate the search. Once the search results page loads, look for the filter options on the left side of the screen.
- f. Select Geotagged Photos: Within the filters, locate the option for "Additional Filters" or "More Filters." Click on it to expand the options. Look for the relevant filter to narrow your search as desired.
- g. Browse Search Results: After applying filters, browse through the search results displayed on the page. These images are now specifically tied to the location you are interested in.
- h. Analyse Tags: Click on individual photos to view them in detail. Explore the tags associated with each photo. Tags are keywords or labels assigned to images by users,

describing various elements depicted in the photo. Analyse these tags to understand the themes, subjects, or characteristics of the photographs.

- i. Document Findings: Take note of the geotagged photographs you find relevant to your research question or thesis objectives. Record the tags associated with each photo as they can provide valuable context and insights for your analysis.
- j. Repeat and Refine Search: Refine your search criteria as needed to find a comprehensive selection of geotagged photos relevant to your study. You may adjust the search terms, explore different filters, or refine the geographic scope to ensure you capture a representative sample of geotagged photography for your research.

After following these steps, the following Locations came up to have the most pictures posted with their respective tags:

Hagia Sophia (1)

Blue Mosque (Sultan Ahmed Mosque) (2)

Topkapi Palace (3)

Basilica Cistern (4)

Hippodrome of Constantinople (5)

Grand Bazaar (6)

Archaeological Museums:

Istanbul Archaeological Museums (7A)

Museum of Turkish & Islamic Arts (7B)

Museum of Great Palace Mosaics (7C)

Istanbul Museum of the History of Science & Technology in Islam (7D)

Sultanahmet Square (8)

Little Hagia Sophia (Küçük Ayasofya) (9)

Sokollu Mehmet Pasha Mosque (10)

Serpent Column (11)

German Fountain (Alman Çeşmesi) (12)

Gülhane Park (13)

Obelisk of Theodosius (14)
Arasta Bazaar (15)
Rough-Stone Obelisk (16)
Sphendone (17)
Soğukçeşme Sokak (18)
Sokullu Şehit Mehmet Paşa Mosque (19)
Tomb of Sultan Ahmet I (20)
Caferağa Medresesi (21)
Sublime Porte (22)
Imperial Gate (Bâb-ı Hümayûn) (23)
Fountain of Sultan Ahmet III (24)
Aya İrini (25)
Seraglio Point (Sarayburnu) (26)
Saraçhane Archaeology Park (27)
Yeni Camii Mosque (28)
Suleymaniye Mosque (29)
Mecidiye Pavilion (30)



Figure 3.3: Picturesque Structures/Locations on the map (Google Earth, n.d.) and added annotations by Author.

3.3.2 Metadata Extraction and Quantitative Analysis

Table 3.1: Data Metrics (Flickr, n.d.) (Tripadvisor, n.d.) as of March, of 2024.

Picturesque Structures/locations	No. of Pictures (supported by likes and comments)	No. of Reviews	Review Rating (5)
Sultanahmet (Area District)	82,524	16,794	4.5
Hagia Sophia	110,535	44,941	4.5
Blue Mosque (Sultan Ahmed Mosque)	106,182	35,169	4.5
Topkapi Palace	68,915	28,013	4.5
Basilica Cistern	20,953	31,978	4.5
Hippodrome of Constantinople	2,183	847	4
Grand Bazaar	35,691	338	3.5
Istanbul Archaeological Museums	14,409	4,488	4.5
Museum of Turkish & Islamic Arts	1,228	690	4.5
Great Palace Mosaics Museum	2,634	672	4
Istanbul Museum of the History of Science & Technology in Islam	102	212	4
Sultanahmet Square	5,371	3,499	4.5
Little Hagia Sophia (Küçük Ayasofya)	2,416	1,187	4.5
Sokollu Mehmet Pasha Mosque	438	165	4.5
Serpent Column	432	244	4
German Fountain (Alman Çeşmesi)	292	248	4

Table 3.1: Data Metrics (Flickr, n.d.) (Tripadvisor, n.d.) as of March, of 2024 “Table Continued”.

Gülhane Park	3,189	3,325	4.5
Obelisk of Theodosius	2,228	620	4
Arasta Bazaar	902	881	4
Rough-Stone/Walled Obelisk	123	38	3.5
Sphendone	338	101	4.5
Soğukçeşme Sokak	53	76	4.5
Sokullu Şehit Mehmet Paşa Mosque	21	40	4.5
Tomb of Sultan Ahmet I	567	25	4.5
Caferağa Medresesi	86	110	4.5
Sublime Porte	217	94	4.5
Imperial Gate (Bâb-ı Hümayûn)	63	?	?
Fountain of Sultan Ahmet III	196	143	4
Aya İrini	863	409	3.5
Seraglio Point (Sarayburnu)	3,699	?	?
Saraçhane Archaeology Park	?	6	3.5
Yeni Camii Mosque	7,022	1,225	4.5
Suleymaniye Mosque	16,328	12,655	4.5
Mecidiye Pavilion	35	3	4.5

Chart 3.2: Number Of Pictures Vs Reviews Of Picturesque Structures/Locations.

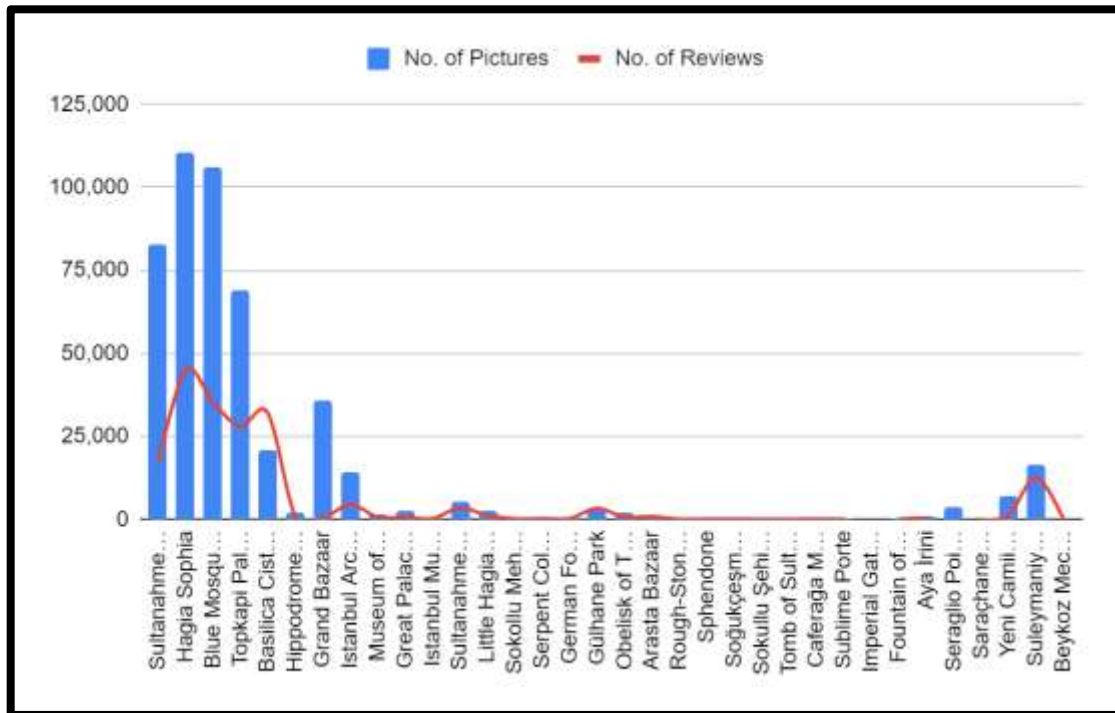
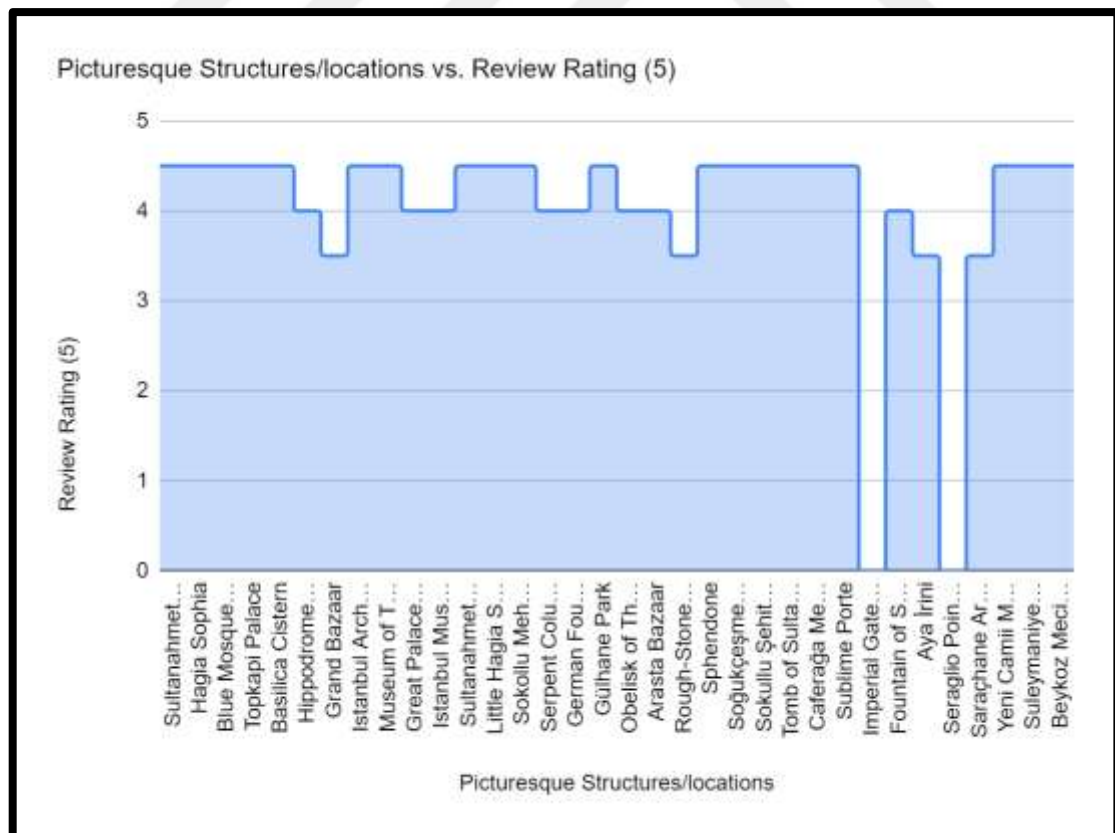


Chart 3.3 Review rating of Picturesque Structures/Locations



3.3.3 GIS Mapping and Spatial Analysis

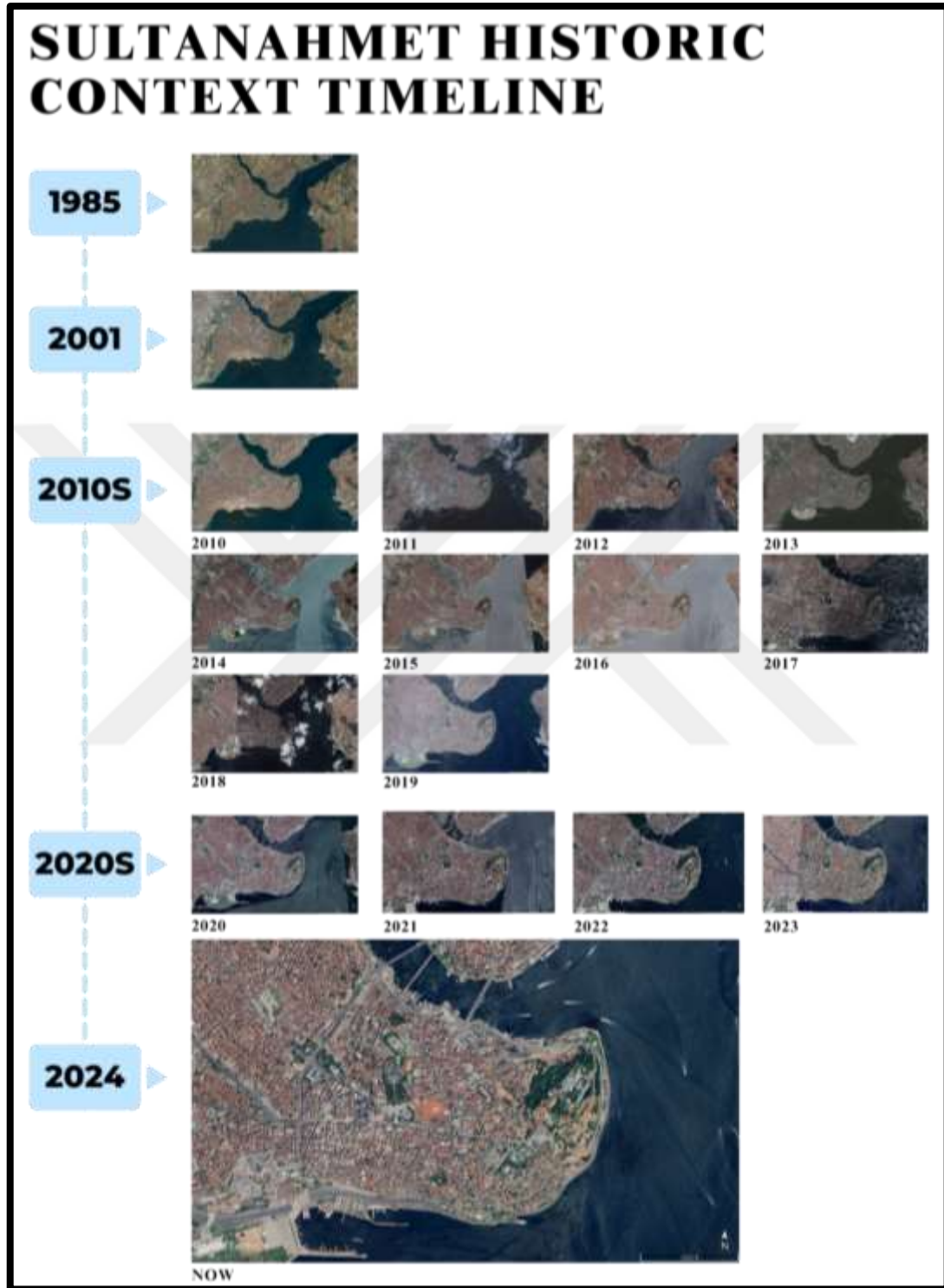


Figure 3.4: Aerial Maps of Sultanahmet District From 1985-2024 (Google Earth, n.d.) And Added Annotations by Author.



Figure 3.5: General Site Context of Sultanahmet with Picturesque Structures/Locations Indicated,
Source: Drawn by Author.



Figure 3.6: Site Zoning of Sultanahmet (Gehl Architects, 2010) (Data Extracted, Drawn, And Adapted by Author).



Figure 3.7: Topography of Sultanahmet with Picturesque Structures/Locations Indicated (Gehl Architects, 2010) (Data Extracted, Drawn, And Adapted By Author).



Figure 3.8: Ottoman Monuments on Hills (Gehl Architects, 2010).

Transportation (Roads and Railways)



Figure 3.9: Transportation (Roads and Railways) Of Sultanahmet with Picturesque Structures/Locations Indicated (Gehl Architects, 2010) (Data Extracted, Drawn And Adapted by Author).

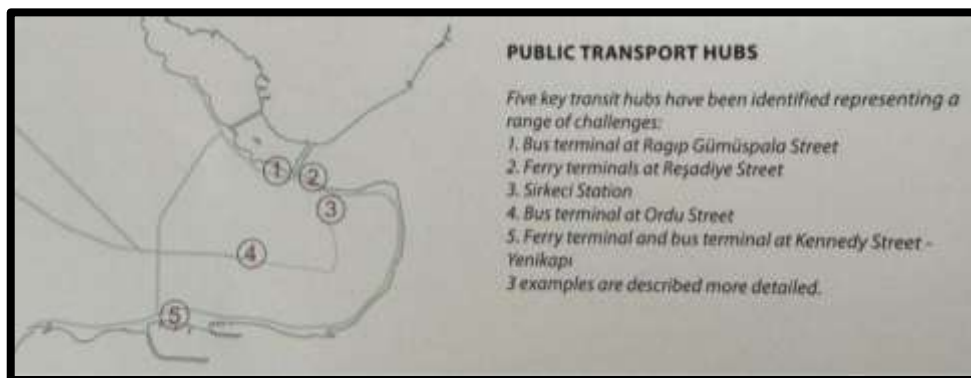


Figure 3.10: Public Transport (Gehl Architects, 2010).

Walkability

The case study area provided access to easy Mobility via foot as it hosts many pedestrians moving through interesting working routes with a lively atmosphere during the day and a successful trans system the T1 that goes through the area. However, challenges also arise within the case study area when it comes to Mobility via foot such as crowded footways and vehicles which park on the work path which overtime causes poorly maintained footways alongside, unclear pedestrian networks and difficulty crossing roads and also at night could be a safety hazard (Gehl Architects, 2010).



Figure 3.11: Walkability (Gehl Architects, 2010).



Figure 3.12: Voids and Solids with Green Areas (Gehl Architects, 2010) (Data Extracted, Drawn, And Adapted by Author).

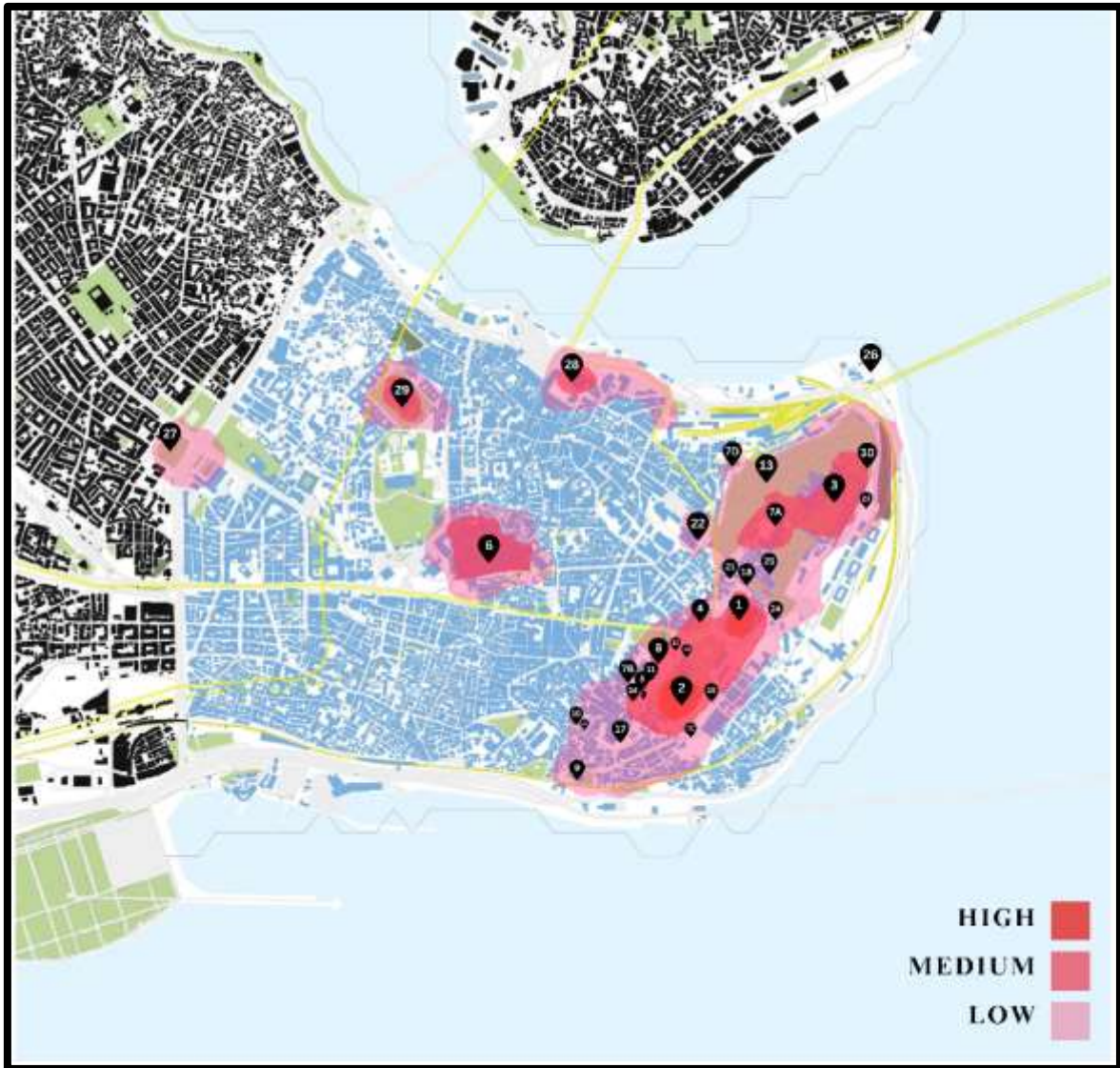


Figure 3.13: Spatial Patterns (Hotspots) (Gehl Architects, 2010) (Data Extracted, Drawn, And Adapted By Author).



Figure 3.14: Movement Patterns of Average Visitor of Sultanahmet (Gehl Architects, 2010) (Data Extracted, Drawn And Adapted by Author).

Activities

The case study area provided plenty of potential for recreational activity such as amazing tourist locations a good climate to enjoy several seating facilities to observe the environment and the multiple of visitors it gets however some challenges such as barriers at the waterfront as well as integrated parks and unexplored public squares prove to be a challenge for sultanahmet alongside noise and air pollution as well as lack of proper facilities to host children (Gehl Architects, 2010).

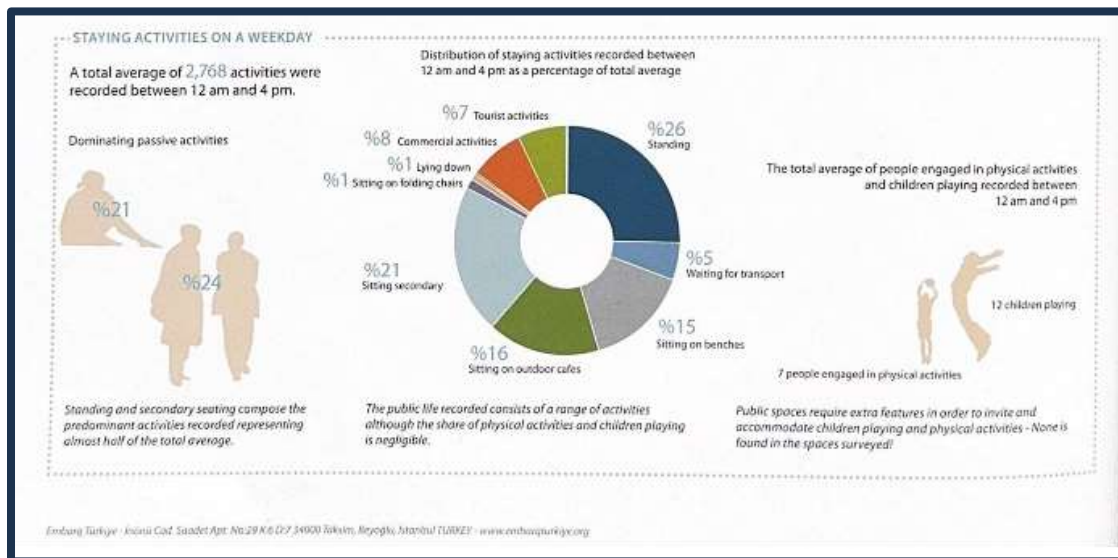


Figure 3.15: Weekday Activities (Gehl Architects, 2010).

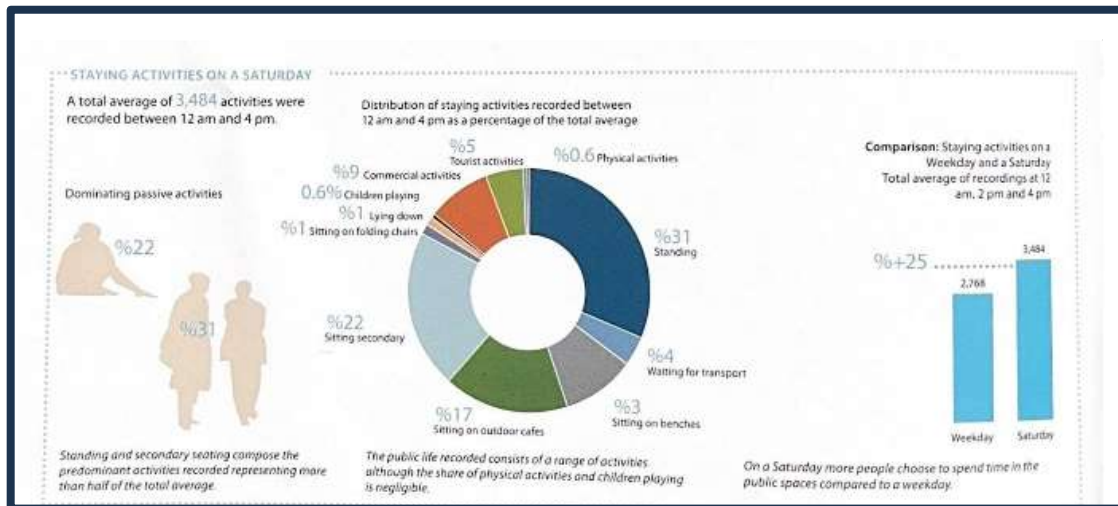


Figure 3.16: Weekend Activities (Gehl Architects, 2010).

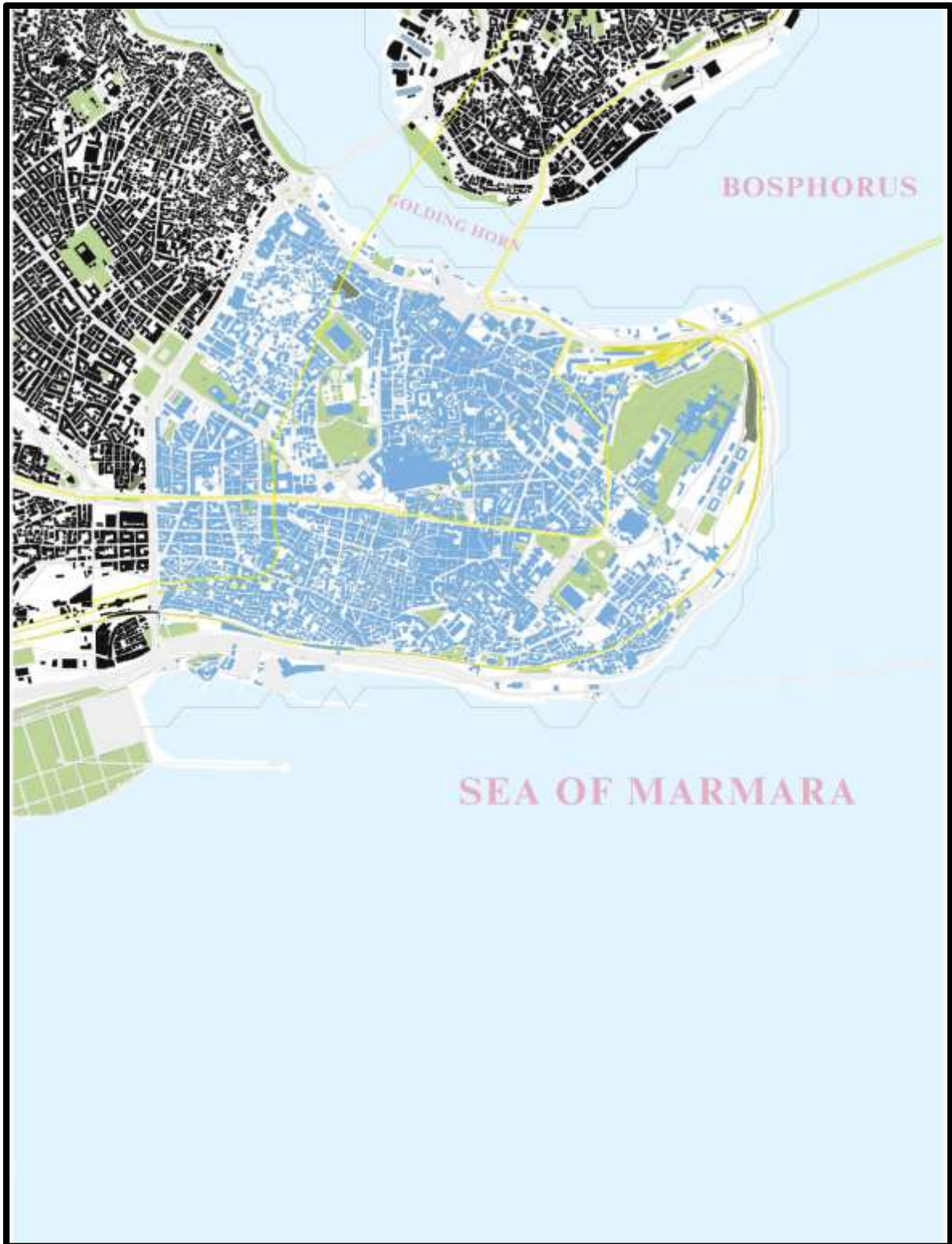


Figure 3.17: Body of Water Around Sultanahmet (Gehl Architects, 2010) (Data Extracted, Drawn and Adapted by Author).

3.3.4 Visual Analysis and Qualitative Assessment

Due to logistics, A deeper look was taken into just the top ten location based on previous metrics ranking, the following are the top ten Picturesque Structures/locations in Sultanahmet in order:

Structures/locations Number of posts with the Tag on Flickr.com

Hagia Sophia	(1)	110,535
Blue Mosque	(2)	106,182
Topkapi Palace	(3)	68,915
Grand Bazaar	(4)	35,691
Basilica Cistern	(5)	20,953
Suleymaniye Mosque	(6)	16,328
Istanbul Archaeological Museums	(7)	14,409
Yeni Camii Mosque	(8)	7,022
Sultanahmet Square	(9)	5,371
Seraglio Point (Sarayburnu)	(10)	3,699
Honorary mention: Gülhane Park (G)		3,189



Figure 3.18: Top 10 Picturesque Structures/Locations on The Map, Source: Drawn By Author.

3.3.4.1 Pictures of the most picturesque structures/locations in Sultanahmet

In the significant tapestry of Istanbul's urban landscape, Sultanahmet emerges as a prominent historical and cultural centre, located in the district of Fatih, Sultanahmet stands as a testament to the Magnificent Legacy of architectural value, cultural heritage, and historic significance. With that in mind a closer look was taken into Sultanahmet's urban tapestry via a lens, by capturing wide-angle exterior shots, interior shots as well as detail shots of each of the top ten most picturesque structures / locations and also a sequence of pictures through the main axis path of visitors for a visual analysis was taken.

Below are the pictures captured presented, which were discussed in detail in the following chapter:

Hagia Sophia

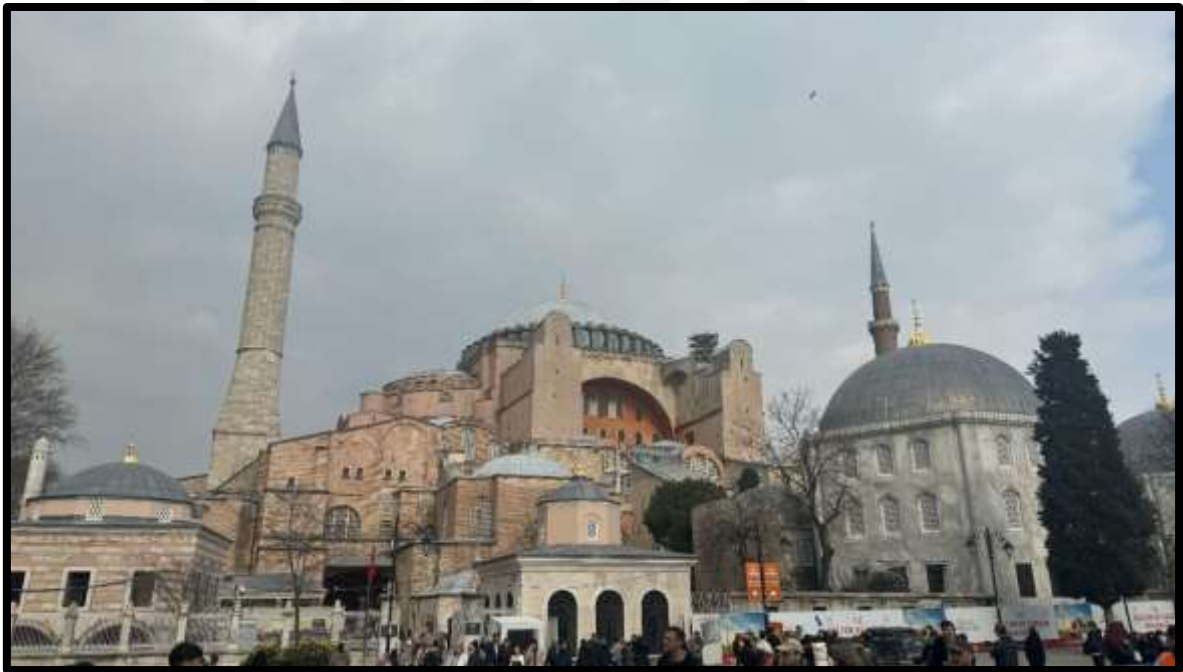


Figure 3.19: Hagia Sophia Captured by Author.



Figure 3.20: Exterior Details of Hagia Sophia Captured by Author.



Figure 3.21: Interior Details of Hagia Sophia Captured by Author.

Blue Mosque



Figure 3.22: Sultanahmet Mosque (The Blue Mosque) Captured by Author.



Figure 3.23: Exterior Details of Sultanahmet Mosque (The Blue Mosque) Captured by Author.



Figure 3.24: Interior Details of Sultanahmet Mosque (The Blue Mosque) Captured by Author.

Topkapi Palace



Figure 3.25: Topkapi Palace Captured by Author.



Figure 3.26: Exterior Garden Details of Topkapi Palace Captured by Author.



Figure 3.27: Interior Details of Topkapi Palace Captured by Author.

Grand Bazaar



Figure 3.28: The Grand Bazaar Captured by Author.



Figure 3.29: Interior of The Grand Bazaar Captured by Author.

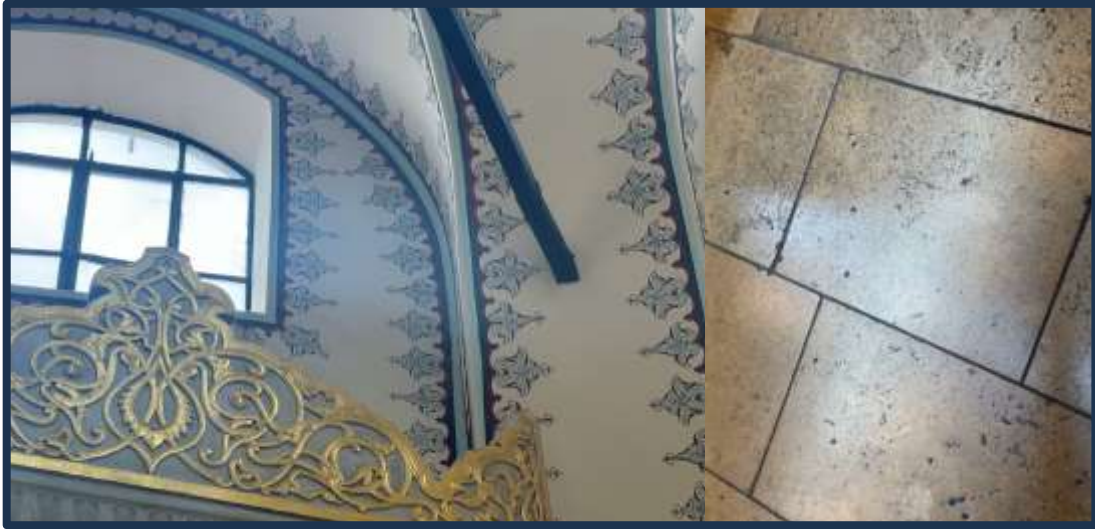


Figure 3.30: Interior Details of The Grand Bazaar Captured by Author.

Basilica Cistern



Figure 3.31: Basilica Cistern, Captured by Author.



Figure 3.32: Medusa Head Column in Basilica Cistern, Captured by Author.



Figure 3.33: Interior Details of Basilica Cistern, Captured by Author.

Suleymaniye Mosque



Figure 3.34: Suleymaniye Mosque Captured by Author.



Figure 3.35: Exterior Details of Suleymaniye Mosque Captured by Author.



Figure 3.36: Interior Details of Süleymaniye Mosque Captured By Author.

Istanbul Archaeological Museums



Figure 3.37: Istanbul Archaeological Museum Captured by Author.



Figure 3.38: Exterior Details of Istanbul Archaeological Museum Captured By Author.



Figure 3.39: Interior Details of Istanbul Archaeological Museum Captured by Author.

Yeni Camii Mosque



Figure 3.40: Yeni Camii Mosque Captured by Author.



Figure 3.41: Exterior Details of Yeni Camii Mosque Captured by Author.



Figure 3.42: Interior Details of Yeni Camii Mosque Captured by Author.

Sultanahmet Square



Figure 3.43: Sultanahmet Square Captured by Author.



Figure 3.44: View of The Obelisk and Column in Sultanahmet Square Captured by Author.



Figure 3.45: Exterior Details of Sultanahmet Square Captured by Author.

Seraglio Point (Sarayburnu)



Figure 3.46: Seraglio Point Captured by Author.



Figure 3.47: Views at Seraglio Point Captured by Author.



Figure 3.48: Details of Seraglio Point Captured by Author.

Honorary mention: Gülhane Park



Figure 3.49: Gülhane Park Captured by Author.

3.3.4.2 Sequential photography sultanahmet



Figure 3.50: Sequential Photography Path Taken, Source: Drawn by Author.

For the sequential Photos of Sultanahmet's average visitor's path captured in order refer to the Appendix B.

4. DATA ANALYSIS AND DISCUSSION OF RESULTS

4.1 FINDINGS FROM METHODOLOGIES

The Following are the Major Contribution to Understanding Key Picturesque Locations and Structures:

4.1.1 Data Collection from Social Media Platform

In this thesis significant data was extracted using geo-tagged photography which have proved itself significantly effective in collecting data from social media platforms, with the following structures and locations identified to be the most picturesque locations in Sultanahmet in order based on the number of pictures posted on the popular photo sharing website Flickr with their respective names as tags:

Table 4.1: Number Of Most Picturesque Structure's/Location's Pictures Uploaded To Flickr.Com With Their Respective Tags In Order As Of March, 2024 (Flickr, n.d.).

Picturesque Structures/locations	No. of Pictures
Hagia Sophia	110,535
Blue Mosque (Sultan Ahmed Mosque)	106,182
Topkapi Palace	68,915
Grand Bazaar	35,691
Basilica Cistern	20,953
Suleymaniye Mosque	16,328
Istanbul Archaeological Museums	14,409
Yeni Camii Mosque	7,022
Sultanahmet Square	5,371
Seraglio Point (Sarayburnu)	3,699
Gülhane Park	3,189
Great Palace Mosaics Museum	2,634
Little Hagia Sophia (Küçük Ayasofya)	2,416
Obelisk of Theodosius	2,228

Table 4.1: Number Of Most Picturesque Structure's/Location's Pictures Uploaded To Flickr.Com With Their Respective Tags In Order As Of March, 2024 (Flickr, n.d.) "Table Continued".

Hippodrome of Constantinople	2,183
Museum of Turkish & Islamic Arts	1,228
Arasta Bazaar	902
Aya İrini	863
Tomb of Sultan Ahmet I	567
Sokollu Mehmet Pasha Mosque	438
Serpent Column	432
Sphendone	338
German Fountain (Alman Çeşmesi)	292
Sublime Porte	217
Fountain of Sultan Ahmet III	196
Rough-Stone Obelisk (Walled Obelisk)	123
Istanbul Museum of the History of Science & Technology in Islam	102
Caferağa Medresesi	86
Imperial Gate (Bâb-ı Hümayûn)	63
Soğukçeşme Sokak	53
Beykoz Mecidiye Kasrı (Mecidiye Pavilion)	35
Sokullu Şehit Mehmet Paşa Mosque	21

Upon taking a gaze at the listed locations a certain amount of patterns and themes become prevalent to the viewer, when paired with the GIS data gathered of which can be seen is that proximity to one another increases the popularity of the locations/structures to visitors this is seen most obviously at the Sultanahmet Square area complex right of Divanyolu street that houses Hagia Sophia, Blue Mosque (Sultan Ahmed Mosque), Obelisk of Theodosius, Rough-Stone Obelisk (Walled Obelisk), German Fountain (Alman Çeşmesi), Fountain of Sultan Ahmet III and Basilica Cistern which all are within a 300 M radius (see figure 3.3),

and this fact increases the disability of the entire complex to visit us based of its ease of access to multiple locations at once increasing its value for time and money and also amplifies it's picturesque qualities by providing room for interesting photographic compositions with multiple locations/ structures in one shot

4.1.2 Metadata Extraction and Quantitative Analysis

A further look into the metrics that was extracted from these picturesque locations provided by the previous list such as popularity of a geotagged photo supported by likes and comments on Flickr, number of reviews and also review rating extracted from Tripadvisor give us a further understanding of the nuance of the picturesque locations/structures in Sultanahmet.

Firstly the quality in review rating further supports the idea that the most picturesque locations provided by the popularity of the locations/structures in tags from flicker holds up, and secondly approximate coloration between frequency in amount of pictures an amount of reviews posted for each of the locations / structures are proportional and this proves consistency in the hierarchy of desirability of this locations and the significant value they bring to the urban tapestry of Istanbul. (See Chart 3.2 and Chart 3.3)

4.1.3 GIS Mapping and Spatial Analysis

Looking at the spatial configuration and context of the study area in relation to all of these picturesque locations/structures found by the previous data helped us uncover several more factors that contributed to the picturesque quality of the urban dynamic in Sultanahmet.

History:

The study area has been significant in the history of the ottoman Empire and the Turkish Republic and factors such as the geography of the location were essential in making it suitable for the role it played in the play of architecture and urban design.

Zoning:

By being subdivided to several activity zones Sultanahmet access to several activities makes it more desirable by visitors with its large proportion of tourist sites, leisure locations, and commercial spaces, mixed with a hint of residential and mixed-use areas which is all

connected by several Transit amenities it creates a cohesive ecosystem for tourism and exploration in architecture and photography.

Topography:

Sultanahmet just like the general Istanbul is prone to dramatic contour on the earth's surface, which were well utilized and taking advantage of in this case, the Apex points of hills serve as a strategic location for some of the historical monuments and tourist attractions to utilize the Surreal views to the Bosphorus and Marmara sea and in placement of Topkapi palace giving it fortification as a military advantage for the base of the Ottoman Empire.

Transportation:

A network of organically connecting walkways, roads, freeways, ports and rail lines connect sultanahmet making its exploration more efficient, the path which the T1 tram line takes from Yeni Camii Mosque through Divanyolu Street the passes by the Grand Bazaar and so on is one of the best mode of transportation to easy discover all of these structures/locations with ease, Further more by excluding major roads from within Sultanahmet and keeping the freeways by the border it promotes workability within the whole case study area which is beneficial given that most of these locations are in walking distance to each other.

Special patterns and Activities:

With a look at the hotspots and movement patterns of visitors in Sultanahmet, one sees strong support of the data previously collected from all previous methodologies. The top picturesque locations directly correspond to the hotspots and movement patterns of the Sultanahmet district.

Water:

Sultanahmet's proximity to the sea of Marmara and the Bosphorus creates a set of advantages, connecting it to not just only the Asian side of Istanbul but also to the rest of the world through the sea hence also making its ports a docking point for tourist's cruise ships, also several water points such as drinking fountains and Taps are in several locations within Sultanahmet providing utility to visitors.

4.1.4 Visual Analysis and Qualitative Assessment

And lastly but not the least of our methodologies a detailed look at the raw pictures that was taken of these locations/structures was done to see exactly what makes these locations visually appealing and picturesque, upon review of all these pictures it becomes apparent that some of the factors that makes these locations stand out are:

- a. Architectural style and elements
- b. Historic and cultural significant in Urban landscape
- c. Vibrant colours
- d. Scenic landscape and greenery
- e. Intricate details
- f. Proximity to body of water
- g. The photogenic appeal of the Vintage
- h. Monumentality

Narrowing down our list to the top ten most picturesque locations / structures in Sultanahmet allows us to take a more in-depth visual analysis in each of these locations, highlighting their unique elements and contributions to the urban fabric. These are the locations/structures in order:

Hagia Sophia

Building Type: Byzantine-era church converted into an Ottoman imperial mosque, then to a museum and the now back to a Mosque

Historic and Cultural Significance: a symbol that represents religious and cultural transformation, featuring influences from both the Byzantine and Ottoman time period.

Architectural Style: Byzantine architecture with Islamic elements added during its conversion.

Architectural Elements: Massive dome, minarets, intricate mosaics, marble columns, arches and pendentives.

Colour palette: Earthy tones, warm hues, and subtle gold accents.

Greenery: Surrounding lush gardens and courtyards

Most Picturesque Feature: The grand dome, adorned with golden mosaics and illuminated by natural light, creating a heavenly atmosphere and a sense of monumentality from within (See Figures 3.19 to 3.21)

Blue Mosque

Building Type: Ottoman imperial mosque.

Historic and Cultural Significance: Iconic symbol of Istanbul's skyline, representing the peak of Ottoman architecture.

Architectural Style: Classic Ottoman architecture with intricate tilework, domes, and minarets.

Architectural Elements: Six minarets, cascading domes, elaborate calligraphy, and stunning tilework adorning the interior.

Colour palette: Dominated by shades of blue and turquoise, with splashes of white and gold.

Greenery: Limited greenery within the mosque's courtyard.

Most Picturesque Feature: Exterior facade with its six towering minarets and intricate blue tilework, especially captivating during the blue hour.

(See Figures 3.22 to 3.24)

Topkapi Palace

Building Type: Former royal residence and administrative centre of the Ottoman Empire, now a museum.

Historic and Cultural Significance: Symbolizes the opulence and grandeur of the Ottoman Empire, housing significant relics and artifacts.

Architectural Style: Ottoman palace architecture with influences from various civilizations.

Architectural Elements: Intricately decorated courtyards, ornate gates, domed chambers, and lush gardens.

Colour palette: Rich colours including shades of red, gold, and green, reflecting luxury and royalty.

Greenery: Extensive gardens and landscaped courtyards overlooking the Sea of Marmara.

Most Picturesque Feature: The Imperial Harem, featuring exquisite tilework, elegant architecture, and serene gardens, offering a glimpse into the private lives of Ottoman royalty as well as views to the Sea of Marmara

(See Figures 3.25 to 3.27)

Grand Bazaar

Building Type: Historic covered market.

Historic and Cultural Significance: One of the world's oldest and largest covered markets, representing centuries of trade and commerce.

Architectural Style: Byzantine and Ottoman architecture, characterized by labyrinthine alleys and domed ceilings.

Architectural Elements: Vaulted passageways, ornate arches, colourful storefronts, and intricately decorated ceilings.

Colour palette: Vibrant and eclectic, with a kaleidoscope of colours from the array of goods on display from various storefronts.

Most Picturesque Feature: The bustling atmosphere, vibrant colours, and unique architectural details create an immersive and lively experience for visitors.

(See Figures 3.28 to 3.30)

Basilica Cistern

Building Type: Ancient underground water reservoir.

Historic and Cultural Significance: Represents Byzantine engineering prowess and served as a crucial water supply for the city now kept with minimal water and open to visitors.

Architectural Style: Byzantine architecture with Roman influences.

Architectural Elements: Massive columns, vaulted brick ceilings, and dimly lit atmosphere.

Colour palette: Dimly lit with occasional subtle lighting, creating an eerie and mysterious ambiance.

Most Picturesque Feature: The Medusa heads, two ancient marble sculptures at the base of columns.

(See Figures 3.30 to 3.32)

Suleymaniye Mosque

Building Type: Ottoman imperial mosque.

Historic and Cultural Significance: One of the most important works of Ottoman architecture, built during the golden age of the empire.

Architectural Style: Classic Ottoman Mosque design.

Architectural Elements: Massive central dome, slender minarets, intricate tilework, elegant calligraphy, and expansive courtyards.

Colour palette: soft hues of white, grey, and light blue, with gold accents in the interior.

Greenery: Extensive landscaped gardens surrounding the mosque complex.

Most Picturesque Feature: The sweeping views of the Golden Horn and the Bosphorus from the mosque's elevated position offer a breathtaking experience.

(See Figures 3.33 to 3.35)

Istanbul Archaeological Museums

Building Type: Museum complex

Historic and Cultural Significance: Housing archaeological artifacts and showcases Turkey's rich history from prehistoric times to the Ottoman era.

Architectural Style: Neoclassical architecture with Ottoman elements.

Architectural Elements: Grand facades, colonnaded walkways, and ornate detailing.

Colour palette: Neutral tones with occasional bursts of colour from the surrounding gardens and exhibits.

Greenery: Well-maintained gardens and landscaped areas within the museum complex.

Most Picturesque Feature: The wide array of ancient statues and sculptures displayed inside as well as the Tiled Kiosk, one of the museum's buildings, adorned with exquisite tilework and surrounded by lush gardens, offers a serene and picturesque setting.

(See Figures 3.36 to 3.38)

Yeni Camii Mosque

Building Type: Ottoman imperial mosque.

Historic and Cultural Significance: A prominent landmark on the Golden Horn, serving as a place of worship and community gathering.

Architectural Style: Classic Ottoman Mosque design with

Architectural Elements: A large central dome and multiple minarets accompanied with intricate tilework, elegant calligraphy, and imposing exterior facade.

Colour palette: Warm earth tones with vibrant accents of blue and turquoise in the interior.

Most Picturesque Feature: The mosque's location along the waterfront, with its imposing silhouette reflected in the waters of the Golden Horn, creates a striking and memorable image.

(See Figures 3.39 to 3.41)

Sultanahmet Square

Building Type: Historic public square.

Historic and Cultural Significance: Central hub of Istanbul's historic district, surrounded by iconic landmarks and monuments.

Architectural Style: Eclectic mix of Byzantine, Ottoman, and neoclassical architecture.

Architectural Elements: Obelisks, fountains, and monumental gates.

Colour palette: Neutral tones with occasional pops of colour from surrounding structures and landscaping.

Greenery: Limited greenery within the square itself but surrounded by gardens and parks.

Most Picturesque Feature: The striking silhouette of the Hagia Sophia and the Blue Mosque against the backdrop of the square, especially during sunset or sunrise.

(See Figures 3.42 to 3.44)

Seraglio Point (Sarayburnu)

Location Type: Prominent peninsula overlooking the Golden Horn and the Sea of Marmara.

Historic and Cultural Significance: Historical significance as the location of the former imperial palaces and fortifications.

Architectural Style: open area with a mix of ancient and Ottoman architecture and remnants of ancient walls and fortifications.

Architectural Elements: Ruins of ancient walls, panoramic viewpoints, and waterfront promenades, Statue of prominent figures as well as landscape instalments.

Colour palette: Natural tones of stone and earth, with occasional bursts of colour from surrounding vegetation and maritime activity.

Greenery: surrounded by parks and gardens.

Most Picturesque Feature: The panoramic views of the Bosphorus Strait and the Old City skyline, offering a timeless and captivating vista of Istanbul's historic landscape.

(See Figures 3.45 to 3.47)

(Honorary mention) Gülhane Park

Building Type: Urban Park.

Historic and Cultural Significance: Once part of the outer gardens of Topkapi Palace, now a popular public park.

Architectural Style: Landscaped gardens with elements of classical Ottoman design.

Architectural Elements: Fountains, pathways, and historic pavilions as well as landscape instalments.

Colour palette: Lush greenery with seasonal bursts of colour from flowers and foliage.

Greenery: Extensive landscaped gardens with a variety of trees, plants, and flowers.

Most Picturesque Feature: The serene atmosphere, shaded pathways, and views of the surrounding historic landmarks make it a picturesque garden/park.

(See Figures 3.48 to 3.50)

4.2 INVESTIGATION OF PERCEPTION IN URBAN ENVIRONMENTS

The findings in this research further support the idea of the importance of perception in architecture and photography, from the literature review it is understood that perception is not only the main medium to which inhabitants interact with the environment around them but also serves as a key factor in determining how inhabitants feel and interact with the built environment.

A few factors come into play in the discussion of how individual visitors perceive Sultanahmet, with respects to the individual uniqueness of perspectives, the data gathered suggests there's are similarities between individual visitors or a sense of generalization in the way they perceive Sultanahmet, this is highlighted specifically from the concentration

that is seen in hotspot visited as well as the visitor's movement patterns. (See Figure 3.13 and Figure 3.14)

Furthermore, the data also suggests that the perception of Sultanahmet is not only influenced by the physical architecture, but rather historical and cultural factors accompanied with individual perspectives contribute to shaping the perception of the landmarks within the study area. Virtually all the top picturesque structures/locations in Sultanahmet that was gathered have cultural as well as historic significance, from the influence of the Byzantine era and further along the Ottoman Empire up until the Turkish Republic they have been a sense of grandeur and significant importance placed upon Sultanahmet District, so this Factor contributes to the Public's perception of the area. The rich heritage, architectural splendour, cultural significance, historic narrative, symbolism, and iconography within Sultanahmet has all contributed to the perception. However, there is a bit of nuance to it, with all these previously mentioned factors at play individual interpretation of these facts can slightly hinder the perception of the individual hence highlighting where personal perspectives come into play.

It was established how photography can be utilized for capturing and conveying these perceptions, in this study inspiration from the concept of Serial vision introduced by Cullen, G. (1961) was taken and putting a twist on it using photography to utilize what is known as sequential photography. So, by using the commonly established Pathways of visitors as provided by the previous data collected, a similar path was taken going through the movements of the average visitor and taking sequential photos in order to show how photography can take one through a similar journey without the need to physically be there (see figure 3.50 and Appendix A).

4.3 IMPLICATIONS FOR URBAN DESIGN AND DEVELOPMENT

Urban Design and Development can highly benefit from the findings of this research in various ways as highlighted by the various picturesque structures / locations investigated within Sultanahmet district.

This study has highlighted to us multiple architectural structures of great historic and cultural significance, therefore further preservation and enhancement of these structures will not only

increase their lifespan but also bring in more revenue for the city of Istanbul, and the cultural heritage can be leveraged for new proposed urban development projects as well. It is also made clear that the public perception contributed to the development of the urban landscape which in all cases for the betterment of the district, it should be taken advantage of effectively.

4.4 RECOMMENDATIONS AND FUTURE RESEARCH

A recommendation to the policymakers, architects and urban designers is to integrate more visually appealing structures that highlight cultural heritage into urban planning because it is clearly seen how effective it has been in Sultanahmet, Istanbul and places around the world should learn from this.

Further research within and adjacent to this topic can also be looked in to in the future for further understanding in the dynamics between Photography, Architecture and Urban Design with respect to the role perception plays. Of which are:

- a. Visual Analysis of Picturesque Urban Landscapes of other major cities with historic and cultural significance on the global scale
- b. Timeline studies to track changes in visitor patterns and perceptions over time.
- c. Studies highlighting how different elements of photography such as colour, texture, composition, shape, form, tone, depth, contrast, movement, and lighting and the way they affect architectural photography.
- d. Comparative Analysis of Architectural Photography Styles
- e. Cultural Perception Studies
- f. Technological Impact on Perception
- g. Socioeconomic Factors in Perception
- h. Environmental Psychology Perspectives
- i. Psychological Impact of Architectural Photography
- j. Cross-Cultural Studies of Architectural Perception
- k. Ethical Considerations in Architectural Representation
- l. Digital Preservation of Cultural Heritage and Augmented Reality (AR)
- m. Memory Studies and Collective Identity
- n. Sustainable Tourism and Heritage Management

4.5 LIMITATIONS

Just like any study hiccups are bound to arise, and the following are limitations to this research.

A substantial amount of data extracted for this research relies on online databases and social media metrics are prone to potential bias however this consciously addressed by comparing the data to other sources to support the narrative, other challenges have also arisen during the data collection and analysis process such as completeness and timeliness. And lastly inconveniences in accessing some of these historically significant picturesque structures/locations for a thorough data collection and analysis.



5. CONCLUSION

The integration of photography into architecture was a pivotal point in the Journey of architectural representation, photography proved itself useful for the betterment of architecture early on, as well as establish itself as a necessary tool in the realm of architecture. From the early point from which photography got involved in architecture it provided utility and creative benefits, from the early interactions of Le Corbusier and photography to the emergence of early architectural photographers such as Ackerman J.S., Shulman J, who highlighted the importance of lighting composition and context and Baan, I. who incorporated human activity into the context of architectural photography.

Photography's involvement in Architecture and Urban Design was bound to be inevitable upon looking at the parallels between the fields, most prominent basic one being the idea of perception, by understanding the basics of perception in architecture and seeing its level of integration in the design process for Urban Design and experience such as the concept of Serial vision coined by Cullen G. and nuanced understanding of perception in the urban environment in relations to roads illustrated McCluskey, J. the parallels becomes apparent, and even more as you look further to the works Blau. E where we see photography directly being used as a tool in the transformation of the early industrial city, and even a variation of this is seen further down the timeline where aerial photography was used in the recent Urban Development in Spain.

Architectural Photography as a whole, was also propelled with the rise of social media as it pushed forward it is wild distribution, and also increased its efficiency with the emergence of Geo-tagged photography which was one of the main methodologies utilized in this study.

The key findings of this study did not only support the narrative of photography to be an effective tool for capturing and conveying architecture but also it provided several key insights to understanding the dynamics of Photography, Architecture and Urban Design in the Sultanahmet District of Istanbul by identifying the key picturesque structures / locations in the study area.

This study revealed that proximity of a popular structure/location to one another amplifies the desirability of that location to visitors as seen in the Sultanahmet square complex. Also,

the quality and reviews as well as the quantity of those reviews in relation to the number of pictures found for each of the picturesque structure/location based on tags supports the legibility of the data extracted from either end. With GIS Mapping and Spatial Analysis portion of this study highlighted more nuance understanding to the picturesque locations / structures by looking at special configuration and context of the study area showing us how factors such as history, topography, transportation and proximity to body of water hopefully the factor in contributing to the picturesque appeal of Sultanahmet's urban landscape, it also highlights Special patterns and activities within the study area which supported data previously collected as it shows hotspots and main movement patterns of visitors going through and concentrated at the exact points where the picturesque structures are located.

A closer look at the carefully curated pictures acquired from these picturesque structures / locations made it apparent that the main factors that makes them stand out are architectural style and elements, historic and cultural significance in the urban landscape, vibrant colours, scenic landscape and Greenery, intricate details, proximity to body of water, the photogenic appeal of the Vintage, and monumentality.

It has become apparent in the findings of this research that the perception of Sultanahmet is not only influenced by the physical architecture, but rather the historical and cultural factors accompanied by the individual perspectives on these physical structures. personal interpretations, beliefs or background can all influence personal perception.

It was also revealed that with respects to individual perspectives there is still a sense of generalization in the way Sultanahmet's Physical essence is perceived by visitors as seen in the maps highlighting the hotspots as well as the main work path of an average visitor through the Sultanahmet District.

The main objective of answering the question "What are the key picturesque locations/structures in Sultanahmet, Fatih – Istanbul, and how can their spatial distribution, and cultural significance be characterized and mapped for urban design and development?" was successfully answered as well as the secondary objective to "Investigate the role of perception in urban environments and how photography serves as a tool for capturing and conveying the perception of Sultanahmet's picturesque landmark/structures".

About 30 locations / structures were added to the list to be the most picturesque within Sultanahmet to which was narrowed down to the top 10 most picturesque locations / structures which are in order: Hagia Sophia, The Blue Mosque (Sultanahmet mosque), Topkapi Palace, Grand Bazaar, Basilica Cistern, Suleymaniye Mosque, Istanbul Archaeological Museums, Yeni Camii Mosque, Sultanahmet Square, Seraglio Point (Sarayburnu) and finally Gülhane Park as an honorary mention. This study also dissected their spatial distribution and historic/cultural significance to further understand how this discovery will benefit Urban Design and Development.

This study also revealed the role of perception in urban design by highlighting the importance of it in the way inhabitants take in the urban tapestry and how photography serves as a tool for capturing and conveying the perception of Sultanahmet's picturesque landmark/structures by using sequential photography inspired by serial vision.

This study contributes to the field in various avenues such as in theory, knowledge and practice, the study further supported existing theories established by earlier works of literature in architecture and Urban Design, the study also adds to the vast archives of knowledge within the field of Photography, Architecture and Urban Design as well adjacent fields of Academia. And finally, practical implications of the findings of this study can come into play in practice, where new urban designers and developers can utilize the insights of this study and Architectural photography in their concepts and design process, as well as to the policy makers in policy decisions, community initiatives and urban development projects.

The methodologies used in this study proved effective in achieving the main objectives, from using geo-tagged photography as a main method with support from social media data to extract the key picturesque locations/structures in Sultanahmet, Fatih – Istanbul, to utilizing sequential photography inspired by serial vision to illustrate how photography can serve as a tool for capturing and conveying the perception of Sultanahmet's picturesque landmark/structures, all delivered the desired outcome with support from metadata extraction, GIS mapping, special analysis and visual analysis. All coming together to create a robust quantitative and qualitative approach.

The interdisciplinary nature of this study contributes to bridging disciplinary boundaries, the insights gathered from the field of Photography, the field of Architecture and Urban Design provide a diverse yet cohesive understanding of the research topic perfectly.

Further studies along this axis and even neighbouring ideas are highly recommended for an even better understanding of the Dynamics between Photography, Architecture and Urban Design in respects to how perspective ties them all together.

Ethical considerations were meticulously addressed during this study. Upon retrieving the pictures from the historical and cultural sites modest respect was exercised especially within the religious monuments. Also, while this study was being written thorough citation and referencing was exercised to avoid plagiarism of any degree, originality and ideas and approach was important as well as given credit when due.

In conclusion this thesis didn't only answer the inquiry of the key picturesque locations/structures in Sultanahmet and how photography serves as a tool for capturing and conveying the perception of Sultanahmet's picturesque landmark/structures, but it also took a closer look into its special distribution and cultural significance to see the intricacies of how to utilize this information for cultural heritage, Urban Design and Development all while paying homage to the important rule that perception plays in urban environments. The study also highlights the intertwined intricacies and Dynamics between Photography, Architecture and Urban Design all through perspective, Paving the way for further significant research.

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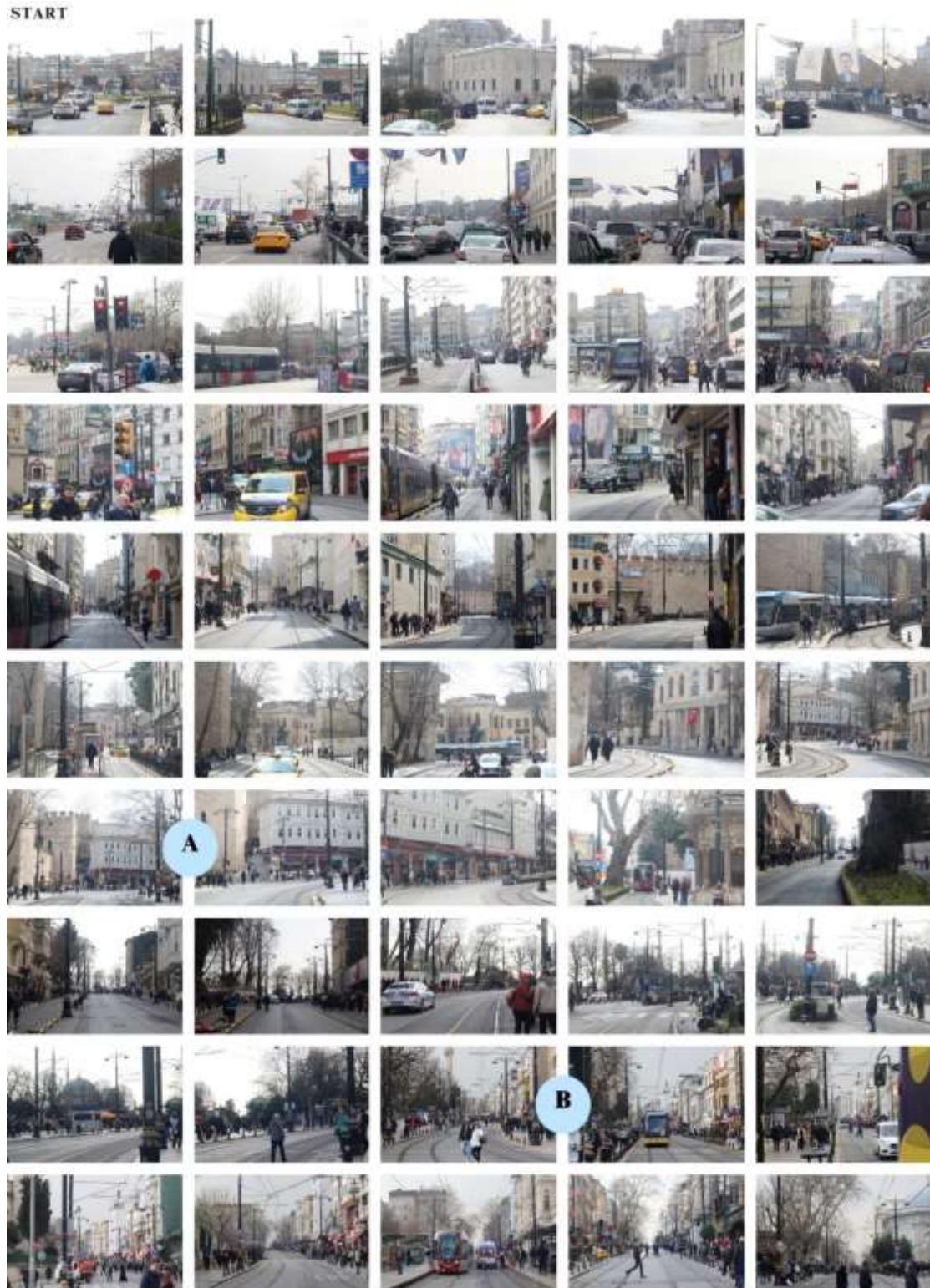
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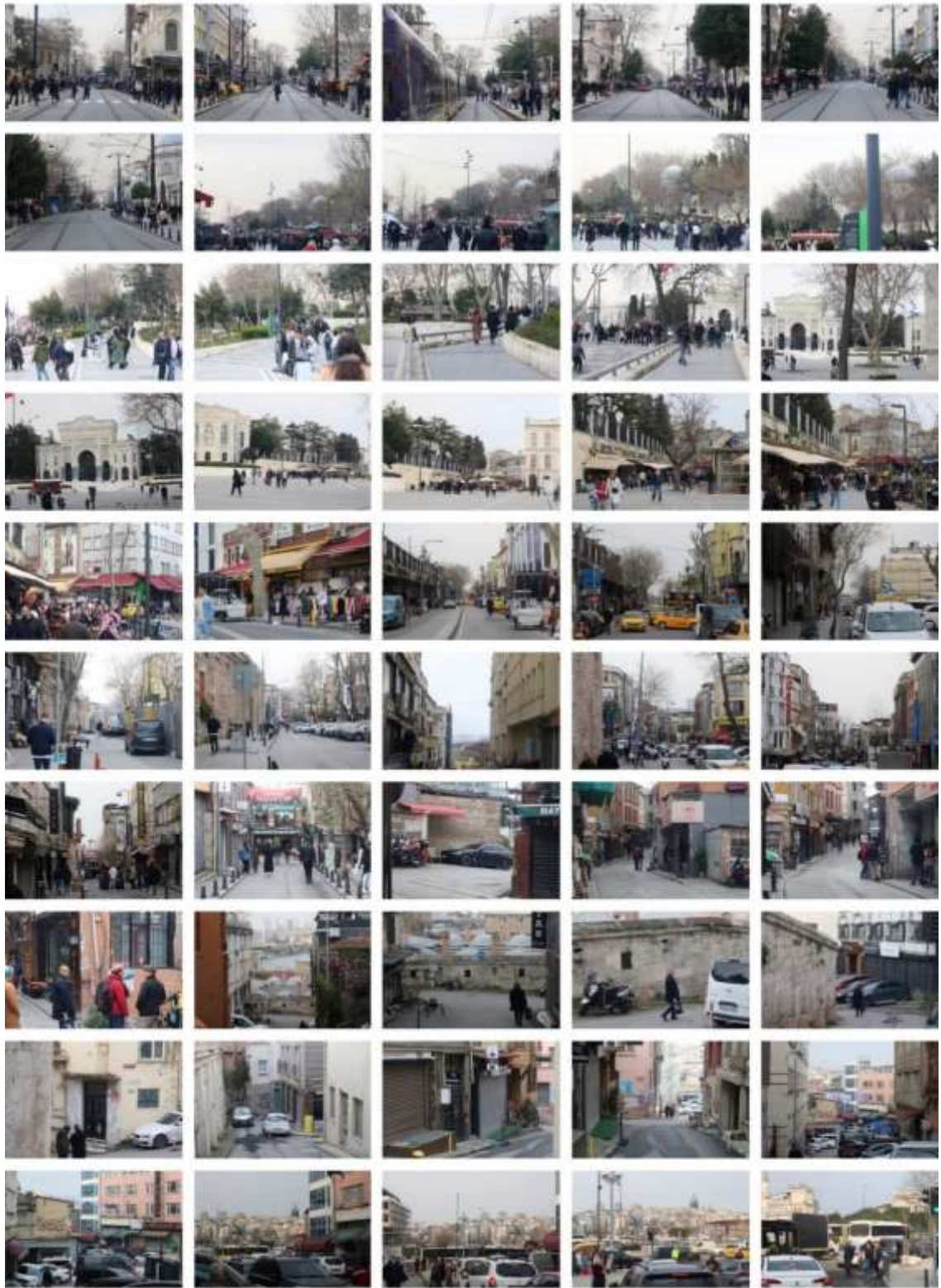
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APPENDIX A

SERIAL PHOTOGRAPHY OF SULTANAHMET







END



Sequential Photos of Sultanahmet's average visitor's path Captured by Author