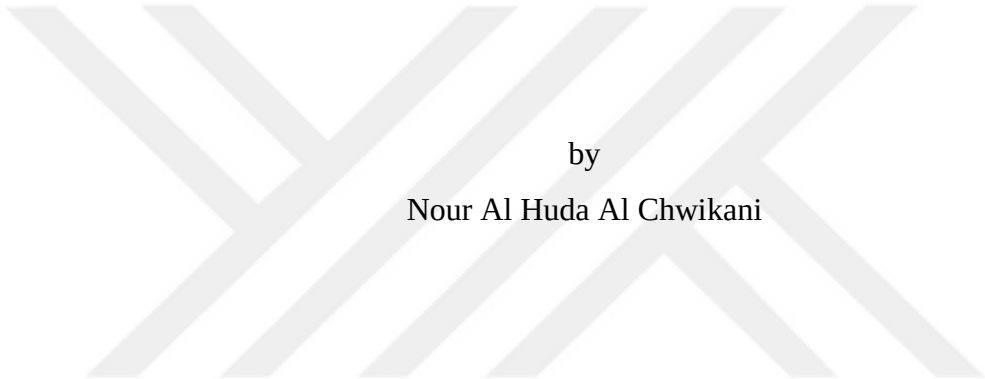


ARCHITECTURAL FEATURES IN HISTORICAL BUILDINGS THAT IMPROVE
WELLBEING



by

Nour Al Huda Al Chwikani

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WELLBEING

APPROVED BY:

Assist. Prof. Dr. Nevin Aslı Varon
(Thesis Supervisor)
(Yeditepe University)

.....

Assist. Prof. Dr. Burçin Başyazıcı
(Yeditepe University)

.....

Assist. Prof. Dr. Kaan Sağ
(İstanbul University)

.....

DATE OF APPROVAL: /.... /2021

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Name, Last name

Nour Al Huda Al Chwikani

Signature

.....

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ABSTRACT

ARCHITECTURAL FEATURES IN HISTORICAL BUILDINGS THAT IMPROVE WELLBEING

Current research papers as showcased in this research, show a connection between historic buildings and wellbeing. This connection always seemed to be a positive one. Research papers never mentioned the reason behind this increase in wellbeing. UNESCO world heritage defines a historic site or building to be an irreplaceable place important to human kind, by further more defining the term wellbeing, a deeper connection can be established. This research aims to find out which features in a historic building create this positive effect. Ten of the top historical buildings in Istanbul, in the Historic Peninsula were chosen to be analyzed. The buildings are; Hagia Sophia Mosque, Basilica Cistern, Topkapı Palace Museum, The Blue Mosque, The Chora Church, Beylerbeyi Palace, Süleymaniye Mosque, Theodosius Cistern, Dolmabahce Palace, and Fatih Mosque Complex. One hundred online user reviews of each of the buildings were scanned to create two data outcomes using text analysis. The two outcomes are; Positive feedbacks and architectural features. Results were categorized by joining similar terms and eliminating unnecessary ones. The most mentioned positive terms were linked to the most mentioned architectural features. The link indicated a complex relationship between a historic site and human welfare that cannot be reduced to one or two architectural elements. The uniqueness of historic sites or buildings lies in the combination of the many factors contributing to an improved wellbeing, a combination not found anywhere else.

ÖZET

TARİHİ YAPILARDA RAHATLIĞI GELİŞTİREN MİMARLIK ÖZELLİKLERİ

Bu araştırmada sergilenen güncel araştırma kağıtları, tarihi binalar ile refah arasında bir bağlantı olduğunu göstermektedir. Bu bağlantı her zaman olumlu bir bağlantı gibi görüldü. Araştırma makaleleri, refahtaki bu artışın arkasındaki sebepten hiç bahsetmedi. UNESCO dünya mirası, tarihi bir alanı veya binayı insan türü için önemli olan yeri doldurulamaz bir yer olarak tanımlar, refah terimini daha fazla tanımlayarak daha derin bir bağlantı kurulabilir. Bu araştırma, tarihi bir yapının hangi özelliklerinin bu olumlu etkiyi yarattığını bulmayı amaçlamaktadır. İstanbul'un Tarihi Yarımada'daki en önemli 10 tarihi yapısı analiz edilmek üzere seçildi. Binalar; Ayasofya Camii, Yerebatan Sarnıcı, Topkapı Sarayı Müzesi, Sultanahmet Camii, Chora Kilisesi, Beylerbeyi Sarayı, Süleymaniye Camii, Teodosius Sarnıcı, Dolmabahçe Sarayı ve Fatih Camii Külliyesi. Binaların her birinin yüz çevrimiçi kullanıcı incelemesi, metin analizi kullanılarak iki veri çıktısı oluşturmak için tarandı. İki sonuç; Olumlu geri bildirimler ve mimari özellikler. Sonuçlar benzer terimlerin birleştirilmesi ve gereksiz olanların ortadan kaldırılmasıyla kategorize edildi. En çok bahsedilen olumlu terimler, en çok bahsedilen mimari özelliklerle ilişkilendirildi. Bağlantı, tarihi bir alan ile insan refahı arasında bir veya iki mimari ögeye indirgenemeyen karmaşık bir ilişkiyi gösterdi. Tarihi yerlerin veya binaların emsalsizliği, gelişmiş bir refaha katkıda bulunan birçok faktörün birleşiminde yatar ve bu birleşimi başka bir yerde bulmak mümkün değildir.

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1. INTRODUCTION

Happiness is a universal desire, hundreds or perhaps thousands of researches from the field of psychology have investigated this topic. In The beginning the term wellbeing, was thought to be a synonym for happiness, but in fact it is a state that combines more than one element including the complex term “happiness”. One might think this topic seems to belong to the psychology field of studies, but wellbeing is a conclusion of many factors, for example; the built environment.

Whether people are healthy or not, is determined by their circumstances and environment. To a large extent, factors such as where we live, the state of our environment, genetics, our income and education level, and our relationships with friends and family all have considerable impacts on health [1].

Every human aspires for happiness, this initiated a search for it using multi routes. Each field at some point or another tackled the goal of happiness from a different perspective hoping to find a new way to reach it. In architecture, architects and researches developed some rules of thumb in designing in order to ensure the highest quality of life. These design rules are in terms of natural lighting, ventilation, circulation, color and space. Criteria for the optimum level of each of these design rules change with different building types and their functions. Hospitals, gyms, supermarkets, and schools, each have different design guidelines according to the countries' rules and regulations.

What about the buildings built before these health rules and regulations? Historical buildings and sites around the world are visited by millions of people every day. This is a notable indication of satisfactory man-made structure worthy of being studied.

2. LITERATURE REVIEW

2.1. HERITAGE

Heritage is our legacy from the past, what we live with today, and what we pass on to future generations. Our cultural and natural heritage are both irreplaceable sources of life and inspiration [2].

Places on planet earth that have a high value for all human kind are included in the World Heritage List. The World Heritage List has all the sites and buildings intended to be protected for the future generations. Examples of such places as mentioned by the site are: The Pyramids located in Egypt, the Great Barrier Reef in Australia, Galápagos Islands in Ecuador, the Indian Taj Mahal, the Grand Canyon in the USA, or the Greece located Acropolis [2]. The list so far has 1007 names listed.

Heritage is usually perceived differently from one individual to another because people relate to the past in various ways. a debate went on previously whether heritage is tangible or intangible, but authors agreed that is context of heritage that matter the most. This way of thinking suggested that heritage is perceived more as a process and a set of values [3]. People might have different views around an object but these views are always within a shared scope.

In the 2010 research, a study group was formed and asked a few questions about heritage. They were asked to write down a few words that define heritage according to them. Most of the study group admitted they never really thought about it before. After the thinking, answers varied from football stadiums in the neighborhood, to inherited necklaces from great grandparents. These we can consider as tangible heritage. An example of intangible heritage is the answer of one participant that mentioned the historical sense he had when he saw and old photo of his city. This according to studies is a tangible aspect that evoked intangible feelings and thus gave heritage its meaning [3].

Dictionaries like Britannica classified heritage into three types in general. The three types are cultural, natural and mixed.

“The past is opposite to the future and in contrast to the present” as Rouhi stated [4], but the present and future cannot be understood without the experiences from the past. Decisions we take in the present and for the future are based on our past. This is the true importance of our heritage and past. And as we mentioned before, the meaning of heritage can be anything to anyone.

While there are three types of heritage, in this research paper we are interested in the first type, cultural heritage.

Cultural heritage is defined by UNESCO-WHC as monuments, groups of buildings, and sites.

- a) Monuments: architecture work, paintings, inscriptions, which have exceptional features according to art and science.
- b) Groups of buildings: separate or connected buildings with outstanding qualities due to their architecture or place according to art and science.
- c) Sites: combine work of man and nature in areas with outstanding values according to historic, ethnological or anthropological views.

The exceptional or outstanding value referred to above is set by UNESCO. “The outstanding universal value” OUV are set of values discussed by specialist from around the world because each country and culture have its own interpretation of culture. This diversity also has common factors, but it celebrates all the differences in cultures. The OUV that sets the significance of the heritage are edited many times throughout the years [4].

The final criteria shown in (Figure 2.1) was set in 2014, with the first six targeting cultural heritage and the last four targeting natural heritage for a total of ten points.

Criteria No.	Definition									
(i)	represent a masterpiece of human creative genius;									
(ii)	exhibit an important interchange of human values, over a span of time or within a cultural area of the world, on developments in architecture or technology, monumental arts, town-planning or landscape design;									
(iii)	bear a unique or at least exceptional testimony to a cultural tradition or to a civilization which is living or which has disappeared;									
(iv)	be an outstanding example of a type of building, architectural or technological ensemble or landscape which illustrates (a) significant stage(s) in human history;									
(v)	be an outstanding example of a traditional human settlement, land-use, or sea-use which is representative of a culture (or cultures), or human interaction with the environment especially when it has become vulnerable under the impact of irreversible change;									
(vi)	be directly or tangibly associated with events or living traditions, with ideas, or with beliefs, with artistic and literary works of outstanding universal significance. (The Committee considers that this criterion should preferably be used in conjunction with other criteria) ;									
(vii)	contain superlative natural phenomena or areas of exceptional natural beauty and aesthetic importance;									
(viii)	be outstanding examples representing major stages of earth's history, including the record of life, significant on-going geological processes in the development of landform, or significant geomorphic or physiographic features;									
(ix)	be outstanding examples representing significant on-going ecological and biological processes in the evolution and development of terrestrial, fresh water, coastal and marine ecosystem and communities of plants and animals;									
(x)	contain the most important and significant natural habitats for in-situ conservation of biological diversity, including those containing threatened species of Outstanding Universal Value from the point of view of science or conservation.									
Operational Guidelines (year)	Cultural criteria					Natural criteria				
Operational Guidelines 2002	(i)	(ii)	(iii)	(iv)	(v)	(vi)	(i)	(ii)	(iii)	(iv)
Operational Guidelines 2005	(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)	(ix)	(x)

Figure 2.1. OUV criteria set by UNESCO [5].

The study published in 2020 by Hua criticized the UNESCO criteria due to many reasons. Hua indicated how taking into consideration aesthetic and anthropological dimensions only in the category of “sites” seem unfair. The other two categories, “monuments” and “groups of buildings” must also be evaluated according to these two factors [5]. The study indicated a few principles to be followed when classifying heritage.

First, the classification must have a clear objective since heritage left by humankind from different eras and in different forms. Second, classification must be a multilevel rather than a single class type similar to the one used in biology¹, geology and archaeology. Third, the levels of classification must obey the same standard to avoid confusion. For example, if animals were classified into three categories, in water, land and air, then they are all classified according to their movement. Fourth, the name of each level must clearly describe the characteristics of the level while being different from the other ones. Names causing confusion or misunderstanding must be avoided [5].

The study argues that the category site can be kept the same. While the second category named “monuments” must add to its meaning the third category “groups of buildings”. A third new category must be made named “tradition” or “traditional culture”. This category has both tangible and intangible cultural heritage and acts as an intermediate between them.

¹ The classification in biology is a multi-level type from general to more specific. The classes have names (phylum, class, order, family, genus, and species). The large numbers of plants in family and species created three other levels; tribe, section, and series.

Another level in it holds biological and geographical heritage, and the last level holds botanical, zoological, and zoo botanical heritage.

In summary, heritage is a complex word with many definitions and types. In this study we are considered with cultural heritage which is also perceived differently due to different cultures worldwide. Although UNESCO tried to create a system to evaluate the cultural heritage, their system has been attacked by many critics [6].

Vitruvius stated in his Architecture manual that an architect should poses a variety of historical information to understand the building entirely [6].

Cultural heritage is anything people hope to conserve, from air to Morris's dance, as well as material, culture, and nature. Heritage management usually only involves public heritage, but behind the scenes of people's lives, there are more meaningful unmanaged heritage. Identities include public inheritance and private inheritance, but only the former is the domain of professional managers and performers [7].

There are heaps of legacy, it appears that everybody needs to avoid wasting something. a corporation has simply been established in Turkey to forestall the characteristic Turkish coffee and cappuccino from being displaced into cafes. Many recent avenues are blocked in France as a result of trees are killing drivers.

Given the eagerness for saving things, it ought to come back as no surprise that Heritage Studies and Heritage Conservation are getting in style subjects at universities. there's no shortage of books regarding everything you would like to save or collect. It is all elaborated in text describing its history and characteristics [7].

The phrase 'heritage' has a clean and comparatively easy courting to the idea of inheritance indeed, the French phrase "history" continues to be used completely for 'legacy'. One dictionary offers definitions of the phrase: 'that which has been or can be inherited' which increases the region of inheritance. Which means it very well may be something not yet possessed yet may come into proprietorship sometime in the not-too-distant future.

The concept that we most effective inherit exact matters from the beyond is nonsensical - so wealth is an inheritance however poverty isn't. The other definition, "conditions or advantages embraced by past ages", keeps in touch with the idea of heritage. There must be

a "thing", but it can be a heritage, for example. Truth be told, the word is presently, which is frequently utilized from a natural perspective to identify with our qualities.

But the definition increases a query of incredible importance. Indeed, it's far extensively assumed that inheritance is 'exact'; absolutely each person must have a few [7].

The Spanish heritage comes from a similar root and focuses on the concept of family descent (and patrilinear), but also a national heritage belonging to the group. The difference between heritage and marriage is worth explaining itself, and the work of Pearce has shown that in the family is above all the woman who is responsible for receiving the identity of the family and the heritage Often inherited by the line

In Germany, the word monument maintenance focuses on another aspect that highlights the importance of built product and concepts for conservation. Very often disputes occur between those who want to keep a place or a building, and those who want to memorize it [7].

To restrict the idea of legacy just to the assembled climate, or even to material culture, basically doesn't meet the worries of the vast majority. The vast majority care more with regards to things they do than things they own.

The meaning of legacy as "anything that somebody wishes to protect or gather" is sufficiently expansive, a little special case can be made to bar the individuals who gather for simply financial reasons. In spite of the fact that we perceive that financial worth is among the many qualities that persuade authorities and preservationists and that legacy experts should address, basically purchasing things for no other reason than to make a benefit on resale doesn't appear to be a legacy action [7].

Considering legacy as an outflow of an individual's or alternately gathering's quest for character guarantees that individuals' scholarly requirements are not failed to focus on. Personality might be to a great extent a hypothetical issue, yet considering the changing translations of legacy guarantees that the unexpected idea of legacy is remembered, just like the reasonable issue of what to say to whom. This reasonable part of the issue is built up by the need to oversee legacy that enters the public space, making legacy a profoundly useful matter. This trinity of hypothesis, individuals and practice ought to be fundamental to the entire subject [7].

Every one of these methods of isolating legacy - by species, by market and by character level - just serve to support that legacy is an interaction, not an item.

The course of social legacy relies upon the qualities that individuals put resources into the marvels of social legacy, on the diverse manners by which things are seen.

World Heritage, then, at that point, stays a matter for country states and their requirement for renown to choose a portion of their favored social landmarks (however not those they might be reluctant to support or whose full protection they can't ensure) and apply for a World Heritage authentication for them. All things considered, the principal justification for attempting to acquire such status is anything but a frantic longing to ensure legacy protection, but instead to draw in more sightseers [7].

The application is considered by expert advisory groups of scholastics, the International Council on Monuments and Sites (ICOMOS) for social destinations and the International Union for the Conservation of Nature (IUCN) for normal locales, obviously with their own disciplinary plan. This demonstrates troublesome and disagreeable enough on account of archeological remaining parts and scenes without attempting to apply such qualities to our traditions. In numerous spaces of social legacy, the market chooses what turns out to be essential for worldwide personality and what doesn't. Partially, this is essentially an outcome of the globalization of incredible worldwide organizations, with the goal that the burger is presently unmistakably some portion of world character, with no guarantees Coca-Cola. The market is currently quickly venturing into the social domain, with Guggenheim, what might be compared to McDonald's, opening branches all throughout the planet. Such globalization isn't generally American. Social legacy might be purposely controlled to exhibit contrasts, yet particularly when joined with the travel industry, so many legacy destinations are practically the same [7].

2.2. WELLBEING

Wellbeing is best understood as a multifaceted phenomenon that can be assessed by measuring a wide array of subjective and objective constructs [8].

After reading many definitions about the term wellbeing, it was clear how different this term can be interpreted and comprehended. In concept it is often attached to the double terms

(doing well – feeling well). These two terms stand for three dimensions as explained. The material aspect, the subjective aspect of a person's satisfaction along with the person's health, and third, the relational aspect. The second aspect relating to the person's satisfaction is always subjective and is always related to one's context. Thus, indicating that wellbeing is interwind with cultural background.

Contrary to dominant approaches, the “home” context of wellbeing is not the individual but the community [9].

In another study in New Zealand by Peter King, it was also apparent how closely related wellbeing is to a person's location and functioning in society.

Sometimes happiness is often confused with wellbeing, but in fact it is not the same. According to psychologist's “happiness” tends to emphasis a mood or emotional state [10].

In history, psychologists and scientist who tried to define the term wellbeing end up in two categories. The first is hedonic tradition², which is an approach regarding happiness, and satisfaction in life, researches who follow this approach are Bradburn, 1969; Diener 1984 and others. The other approach is the eudemonic tradition³ that targets human development, this is the idea of Rogers, 1961; Riff 1989 and others. Regardless of these ideas, one thing all researchers agree on is how multidimensional the term is [11].

One of the earliest to define the term is scientist Norman Bradburn, who used to refer to wellbeing as happiness in his research. His interest was on the daily difficulties of individuals and how they cope with it, happiness was the most important variable as he explained. Bradburn referred mainly to Aristotle's eudaimonia⁴ (doing and living well) and how it is the goal of all human actions [12].

Researchers in social psychology have focused on dimensions or descriptions of wellbeing rather than on definitions, until shin and Johnson who tried to define that it is a person's evaluation of his own quality of life [13]. According to the world health organization definition quality of life is;

² The Hedonic approach concentrates on pleasure achievement and pain evasion.

³ The Eudemonic approach focuses on self-actualization and life satisfaction.

⁴ For Aristotle happiness is achieved through virtue. Eudemonia according to Aristotle is achieving the highest good in all things. His definition makes eudemonia an action based on reasoning rather than a state of mind.

An individual's perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns [1].

Well-being is more than just happiness. Wellbeing is not just about feeling satisfied and happy, it also means developing as a person, being fulfilled and contributing to the community [14].

The way that man isn't independent, yet should live in a related society wherein others additionally seek after their objectives and wants, unavoidably prompts a progression of relational contentions. The guidelines of public activity make a system where individuals can associate with one another and help each other accomplish their objectives. however, definitely there are circumstances when life doesn't go without a hitch and issues emerge. The capacity to manage these tough spots without making excessive damage oneself or others is one of the normal models for recognizing "psychological well-being" [15].

In the hundreds of years since Aristotle, the provisions of the discussion have changed, yet overall, there is still arrangement that joy or prosperity is the objective of human activity, and there is still conflict between the "many" and the "insightful" concerning what things satisfy individuals.

Throughout the long term, the "satisfaction issue" has been differently characterized as a moral, philosophical, political, or monetary issue. As of late has it been characterized as a mental issue.

The presence of Principles of Psychology in 1890 denoted a defining moment. Joy, regardless of court choices in actuality, was moved from the circle of law to the circle of brain research. Not the public existence of political theory and financial aspects, however the internal existence of driving forces and feelings here, in the 20th century, most Americans appear to concur [15].

The thought of satisfaction as variation and misery as maladaptation to the climate inconspicuously prompts the way that despondency is related essentially with the milder types of psychological maladjustment and joy with psychological wellbeing. For sure joy is one of the models regularly utilized in the thought of positive emotional wellbeing, however contends that it can't be an adequate measure, since there are plainly circumstances in which

joy would be unseemly and an indication of mental issue. An idea of psychological wellbeing as transformation, for example sentiments, activities and contemplations suitable to the circumstance, would be in accordance with the referenced before. In spite of the fact that joy is presently vivid as fundamentally a mental marvel, it has not assumed a significant part in current mental examination. The justification behind this disregard lies to a great extent in the impact of Freudian hypothesis, which has made therapists especially dubious of self-reports of abstract sentiments and helpless to the mutilating impact of protection systems. The overall assessment is by all accounts that unreasonable protectiveness from one perspective, or inordinate self-analysis on the other, would make self-reports of bliss become pointless as exploration factors.

Dismissing mental prosperity as an exploration variable could be an instance of discarding the good along with the bad. There is solid proof that self-reports of satisfaction measure some different option from individual protectiveness or self-analysis and that legitimate and dependable measures can be built. In a cross-country test study, Gurin, Veroff, and Feld (1960) said that self-reports of satisfaction can be utilized to quantify levels of emotional change, and they show how joy appraisals are identified with different proportions of life issues. While the writing isn't broad, the idea that it is advantageous to zero in consideration on a variable, for example, mental prosperity is surely more than borne out in the writing [15].

The utilization of direct self-reports of happiness is, obviously, no takeoff from the practice followed by the couple of other investigations inspired by the exact investigation of human happiness. It is, indeed, the need of utilizing self-reports that has deterred numerous scientists from seeking after such examinations. Clinicians, particularly those with a clinical direction, have a profound doubt about the legitimacy of self-reports. Numerous clinicians feel it use-less to try requesting that an individual rate his own satisfaction on account of the pressure put on the misshaping instruments that individuals utilize to put a decent face on things and to cover their actual sentiments even from themselves [15].

This doubt of self-reports stems from two sources: one is a conviction that individuals will most likely be unable to come clean; the second, a conviction that individuals won't come clean. Concerning first, to say that an individual can't let you know whether or not he is glad suggests that he might let you know that he is extremely cheerful and believe that he is coming clean, yet "truly, deep down," he is unsettled; or the other way around, he might say

that he is miserable when he is "truly" glad. The last option case appears to be plainly an abuse of language; as Marcus Aurelius brought up hundreds of years prior, "No man is glad who doesn't think himself so."

The opposite side of this suggestion, that a man can be "truly" troubled when he sincerely feels himself to be content, likewise is by all accounts an abuse of customary language; yet it is one that is contended earnestly by analysts keen on oblivious cycles. Instances of such markers are different articulations by the person about himself, projective mental tests, dream reports, or appraisals given by others. Along these lines, if an individual can't be an exact correspondent on his own mindset of happiness, there would be little relationship between various proportions of happiness that either rely upon more circuitous self-reports (i.e., reflect oblivious cycles) or are markers that don't depend on self-reports by any means, for example, appraisals given by companions or experienced clinical appointed authorities [15].

People reactions to their surrounding are either—positive or negative—a polarity that has been perceived by pretty much every-one who has given idea to the matter. At the point when it made an interpretation of these ideas into functional measures and gathered methodical information, it found proof that without a doubt there do seem, by all accounts, to be somewhere around two kinds of sentiments and that the contrast between the quantity of good and contrary sentiments is a decent indicator of an individual's general rating of his own satisfaction. Also, it expected that these two sorts of sentiments would have a methodical relationship to an individual's sensations of prosperity or bliss. Such assumptions are from general utilitarian ideas that have been normal since the times of the Greek rationalists.

It was found that the two kinds of emotions are not dependent of each other. At the point when it says that they are autonomous of one another, it does not imply that they can happen at the same time or that individuals move from good to negative sentiments and back again in a repetitive manner. It implies that inside a given timeframe, for example, possibly 14 days, one might encounter numerous different feelings, both positive and negative, and that overall, there is no inclination for the two kinds to be knowledgeable about a specific connection to each other. This absence of connection implies that data about the degree of good sentiments an individual has encountered in the new past doesn't give us any data on the degree of his negative sentiments [15].

To many, this absence of relationship is astonishing, not to say unbelievable. In any case, shock is a relative matter; and given man's capacities to excuse his current circumstance, it realizes that what is amazing at one time can become normal spot a brief time frame later. At the point when it considers our day-to-day existence, it notes that it has various encounters every day. Now and again, these are all around great, now and then all awful, however generally they are blended some charming, some undesirable; some alleviating, some vexing; some inner self structure, some inner self obliterating. Many individuals have more wonderful than disagreeable encounters; and others, less lucky, have more unsavory than lovely encounters. To rehash the self-evident, certain individuals are more joyful than others.

The way that individuals vary in the quantity of supplications subterranean insect and undesirable encounters, they differ in the quantity of feelings they report. Certain individuals either have a lot more encounters that produce influence of some sort, or they are differentially touchy so they report more effect. Further, contrasts in the amount of affect are not identified with the quality; that is, individuals who report a great deal of sentiments are not more joyful than the people who report not many sentiments. Hence, it finds there are various individuals who report having encountered both numerous good and many negative sentiments during the new past, while others report not many sensations of one or the other kind. Both of these gatherings, have comparable disseminations of self-reports of happiness [15].

Here it affirmed with our actions what has been reliably found in an assortment of ways to deal with the investigation of psychological well-being. The tenor of the discoveries can be expressed in not very misrepresented terms by saying that "the more one has, the more one gets." To the individuals who have the qualities that go with positions higher in the social construction, like advanced education and pay, additionally exceed everyone's expectations of more noteworthy happiness. More examination of the financial part of these properties proposes that pay has a solid connection transport with generally speaking joy, yet it isn't clear precisely how cash shows its increase. It appears to be sure, in any case, that the parsimonious delight of ownership isn't the basic component. Another interesting element of the distinctions in friendly design is that, all around, the connections between the social-structure factors and the parts of mental prosperity are more grounded for positive effect than for negative affect. Such a finding proposes that cash might empower one to build his dreams, however it can't diminish his distresses.

Some further explanation of the differential connection between friendly construction factors and positive and negative influence was seen at the point when it examined the associates of these two aspects. It observed that the proportions of negative influence associated with different measures that have been broadly utilized in investigations of psychological wellbeing and disease. These actions, like uneasiness markers, psychosomatic side effects, stress, and relational strains, had no connections to the proportions of positive affect [15].

The proportions of tensions and distresses of life did show a good correlation with all the obvious proportions of psychological wellbeing problems, for example, announcing that one had felt as though one planned to have a mental meltdown or that one had really looked for favorable assist regarding an anxious or enthusiastic issue. Then again, the positive affect measures the related with marks of social contribution and new or changed encounters. The chances for such association and encounters are, of course, a lot higher for the people who are higher in the social structure.

One of the most reliable exact discoveries in humanism is the positive connection between financial status (SES) and social interest. It isn't known in any detail why this relationship exists; however, one would doubtlessly induce that the higher portion of pay that those in higher SES positions have accessible for optional uses would be one significant element in facilitating this more noteworthy cooperation. Unquestionably it is sensible to expect that those with more cash and, maybe, those with the more extensive premium that would come from advanced education would be bound to travel, do unique or strange things, and get an opportunity to meet new individuals.

At the opposite finish of the social range, the dullness, dreariness, and ugliness of life in the space of destitution have been depicted articulately by numerous eyewitnesses. While it appears to be logical that the jam-packed conditions and disintegrated lodging would prompt expanded irritability and relational pressures, a significantly really discouraging effect on certain influence would most likely be the minimal pay of poor people and the limited and antagonistic social conditions inside which destitute individuals live. Maybe some acknowledgment of this part of joy was perceived by the Romans in their remedy for keeping the majority content "bread and bazaars." The capacity of carnivals likely could be to give the sort of incitement and curiosity that is related with the encountering of positive effect. A few eyewitnesses have noticed that, for all their savagery and obliteration, the metropolitan ghetto revolts that are turning into an inexorably recognizable summer peculiarity have an

amusement park quality for a considerable lot of the members. While riots have an excessive number of other clear contributing causes to recommend that a requirement for oddity is one reason, an idle capacity might be to give an incredibly fluctuated sort of involvement that may, in a socially dangerous way, add to expansions in certain individuals' positive effect [15].

Heritage in hospitals session outcomes	Examples in data
New perspectives	'Inspired. Very much so. It does – It does strangely reconnect you with life. They're dead objects from 1000s of years ago, but it does connect you with life.' 'I think X said something that when you're dealing with something that's millions of years old it puts your life into perspective and you've got something so beautiful here, and life you know so she felt that the group helped her put things in perspective and brings people out and removes them from their situation' Interview hospital staff member
Positive feelings (excitement, enjoyment, wonder, privilege, luck, and surprise)	'A very lovely stone ... Very lovely, I love the colours and I like the pattern.' 'It's also a point for a conversation as well. Otherwise you just keep talking about some things. You just look at things and question: 'Oh look at that! Where does it come from?' It's nice to see these things in the hospital ... It doesn't have to be just a place where you feel awful, you know. It can be a place where in a certain way people are looking after you and they help you and ... you know.'
Learning (including skills and confidence)	'It teaches you a bit more about observation, so you know, I'm sort of thinking now, what on earth can I say about this? But you've got to really look at something for a while haven't you?' 'That's it, as you come to see, as you show me, I know the history or some of it, if I came across it, another thing in the future, I would think I think I've seen this thing before, and I would make my mind up that this was something important.'
Energy, alertness	'alert, yes more alert than ever, ever, ever ... determined to go places, look up things ... that's got the active going it really has' ' – you can just sit and while the time away in the living room and not generate thoughts! A lot of people can't read, when they're here, because then your own thoughts come in, but this it's a way of stimulating thoughts but an easier way, because you're talking.'

Figure 2.2. Heritage in hospitals session outcome [16].

The double design of mental prosperity shows up additionally in fairly adjusted structure when it explores individuals' encounters in two of the significant jobs of grown-up life marriage and work.

For marriage, it had the option to show a practically correct parallelism between the design of positive and negative effect and a structure of positive fulfillments and pressures in marriage.

The elements of positive fulfillments and negative dissatisfactions with work have effectively been exhibited by Herzberg and his associates [15]. Obviously the positive and negative influence aspects are imperative to various parts of work.

2.3. HERITAGE AND WELLBING

In research titled Heritage, health and wellbeing, Erica Andera, Linda Thomson and other researches ran an experiment. They visited four different hospitals in the UK with patients either being elderly or have psychiatric problems. The researches collected small portable museum artifacts from UCL Museums and Collections or other museums in the UK and let the patients admire and handle them. After a 15 – 75 minutes sessions with each patient, the interviews were analyzed for findings. The recordings, some shown in (Figure 2.2) showed that the objects acted as a distraction, and stimulation. Heritage objects with social interaction provided a learning opportunity, increased energy levels and triggered memories and thus improved their wellbeing [16].

The same authors and researches have then written a guide to use in heritage healing in hospitals, they casually assigned two hundred and fifty hospital patients into two groups. They gave the first group small materialistic artifacts and the second group was given images of the same artifact. They used (PANAS) which is a Positive and Negative Affect Scale to measure wellbeing. They used ten positive and ten negative mood descriptive terms, and the Visual Analogue Scale (VAS) they were able to conclude their results. More significant positive effects on wellbeing were noticed in handling the artifacts objects than in viewing their photographs [17].

A study published in 2014 by Daniel Fujiwara [18], discussed the impact of visiting historical areas. They used values to study the impact of the historical sites on the society. The values used varied, one of them is the wellbeing valuation (WV) approach.

This approach infers money related values for non-market products and administrations, like wellbeing, legacy and instruction, by assessing the sum of cash required to keep people fair as upbeat or fulfilled with life within the nonattendance of the great (i.e., to keep their prosperity consistent) [18].

Eight different types of historical sites were included in the study; archaeological sites, historical buildings, historical industrial plants, historical parks, historical places of worship, historical city, monuments (castles / fortresses) and sports heritage sites [18].

The main determinants of life satisfaction were controlled and accordingly it was found that visiting any of the 8 heritage sites over the last 12 months significantly increases life satisfaction. the main determinants of life satisfaction that were under control, where age, employment, education, income and relationship status, along with a few more.

People tend to visit heritage locations more than arts and sports events. The top visited and influential site was a historic town followed by historic building, historic industrial site, historic place of worship, and archaeological site. These were statistically more significant. While visits to historic parks or gardens, monument, and sport heritage sites showed insignificant result but nonetheless positive ones. The reason for this preference or outcome is unknown [18].

In the “Wellbeing and Historic Environment Journal”, a list of possible advantages for visiting historic sites was indicated. Seven main points were listed. The first is the physical activity aspect with the outdoor when visiting a cultural heritage site. The second is the creation of new perspectives and meaning caused by reconnecting to the past. The third is the feeling of contribution when combining the past with skills and meaningful feelings. Point number four says when connecting to the past new social interactions and creativity forms. The fifth point is the increase in self and place awareness. The sixth point discusses the increase in conducting the longitudinal observation study which is the review that includes the perception of a similar variable of an extensive stretch of time. The last point is elevating the sense of community, belonging and stability in a place [19].

These points can be a result of many other activities, but visiting a historical site combines them all uniquely and this is the main reason behind the increase in wellbeing. The journal stated these seven objects are a result of six routes towards health in heritage.

- a) Heritage as a process: volunteering along with other people from all level in society results in higher social engagement, self-esteem, usefulness and competence.
- b) As participation: forming groups while volunteering helps increase positive feelings. Group or team work makes learning a faster process and opens more routes for sharing knowledge.
- c) As a mechanism: visiting cultural places acts as a mechanism to connect, share experience, and reminiscence with others.

- d) As a healing process: relating with other people and viewing things from different perspective helps with self-expression, and cultural inclusion.
- e) As place: heritage creates a sense of belonging and promotes pride feeling.
- f) As environment: finally connecting with nature is always beneficial because of the resulting positive feelings. It induces physical activity, and provides a fresh air opportunity.

According to, *the wellbeing and historic environment journal*, in 2015 people were asked to rate their wellbeing out of 10. They rated themselves a 7.8 out of 10, but after they visited a heritage site, they ranked their wellbeing at an increase of 8.1 out of 10. This study contributed to more future research [19].

2014 Fujiwara research also examined the relationship between heritage and well-being. They studied the impact of cultural heritage sites on society. Visiting the cultural heritage had the same or a greater impact on wellbeing than other activities such as sport.

Oxford city council mentioned that visiting heritage is people based rather than asset based by saying that:

There is a direct link between heritage and health. It is the relationship between people and the historic environment that makes it meaningful and gives it value. This meaning and value are arguably a contributory factor in people's sense of belonging, identity and their motivation to engage proactively with the historic environment. Remembering that heritage is the result of interaction between people and their environment and that heritage is as much about people as it is about places makes it easier to understand the relationship between heritage and health [19].

In 2010 research of CABA (commissions for architecture and the built environment) people's relation to places was investigated. It was studied whether or not the public perceived architecture as a good thing. The responses showcased how the city's town hall was built differently from nowadays buildings. The buildings that survived to this date were built to do so, and their design was made to appeal to vast and varied mindsets.

Heritage helps increase community cohesion, when volunteering in heritage locations, 23 percent of young people stated they have a better understanding of people above 65 years old as seen in (Figure 2.3) [21].

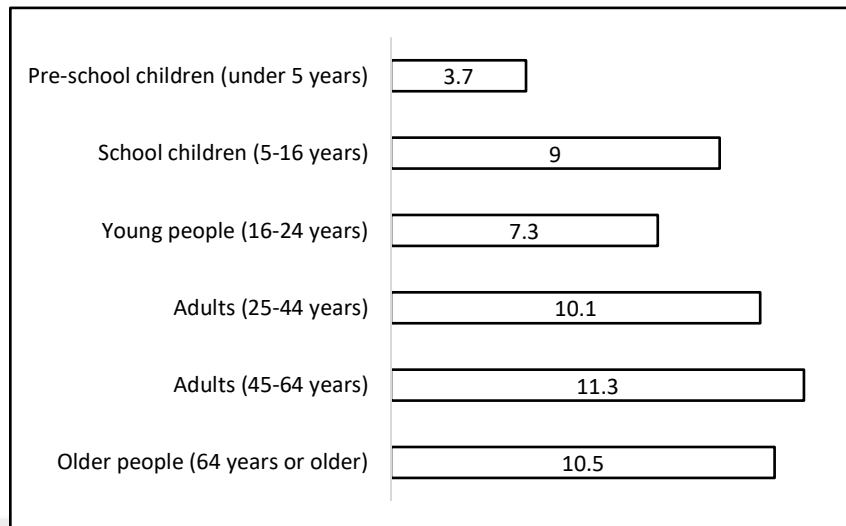


Figure 2.3. Intergenerational understanding: proportion of volunteers who made any increases in their understanding of different age groups [21].

Individuals who live in memorable regions are bound to know and trust their neighbors [20].

Heritage can also increase sense of place and civic pride, as noted in people living in a densely historic area [20].

According to research done to measure the social impact of volunteering, it was found that the highest increase of mental health and wellbeing are people who volunteered in heritage sites [21].

3. METHODOLOGY

Text analysis is a research method used by researchers to research news published in various media. The data generated for text analysis can be obtained from documents, movies, newspapers, paintings, websites and more. Data in these formats act as the "text" to be investigated and are used to evaluate meaning, value, and messages. It will be sent through them [22].

Text analysis, which is qualitative, makes use of various theoretical traditions that fall under the umbrella of interpretation. The theoretical foundations of text analysis within communication scholarships rely on symbolic interactions, phenomenology, critical theory (such as race and feminist theory), and ethnography, to name just a few.

The sources can be magazines, films, newspapers, or webpages. Meaning, values, and messages are extracted from the texts and an outcome is given. Text analysis can be either qualitative or quantitative, the quantitative works in the use of numerical counting to assess the text [22]. Nowadays, software programs are available for this kind of analysis, giving the opportunity of a large more comprehensive data assessment.

Despite the fact that text investigation is generally utilized in the field of correspondence, it is an interdisciplinary methodology that likewise exists in numerous sociologies and humanities, including social science, brain research, political theory, wellbeing, history, and media studies. Likewise, text investigation strategies might remember varieties that concentration for more specific techniques inside these disciplines, like substance examination, semiotics, intuitive examination, and expository analysis. Content examination might differ upon quantitative or subjective techniques, yet it is normally identified with assessing the material in a given text (simply counting the quantity of events or searching for more profound significance). Semiotics is the investigation of signs and images and how to give them meaning; this is comparable to an intelligent examination that attempts to see how members use text in various settings [22].

3.1. SCOPE

To limit the scope of this research, the city of Istanbul was chosen due to its rich historic environment. Ten buildings are chosen belonging to three different architectural styles. Byzantine, early/classic Ottoman, and late Ottoman - Baroque - Rococo style. The three architectural styles are all involved and focused on aesthetically pleasing construction.

3.1.1. Byzantine Architecture

Byzantine architecture in the 7th century BC Two new settlements were founded. on the banks of the Bosphorus as a Megarian province on the European coast. Now it is referred to as Sarayburnu but was named Byzas Byzantium after its author. Trade flourished through its conventional port (Golden Horn), and the city expanded rapidly. Before the Roman Empire annexed the city in 196 AD, the Persians, Athenians, and Spartans defeated the city [23].

After the Roman Caesar Constantine gave Christianity full religious freedom, he made Byzantium his home in 330 AD and named it Constantinople. It has become the Roman's Empire second biggest city after Rome itself and the Byzantine Empire. Christianity had developed rapidly throughout the Roman Empire, that is, in Byzantium, and this is where Byzantine engineering traced its beginnings [16].

At first, Christians needed a fitted home only to praise the Eucharist, but in the fourth century the needs of churches, the homes of divine beings, arose. Initially, the Roman market basilicas were used as a model due to their three-aisled aisles, later the cross-shaped basilicas were also used as a model [23].

The design from Constantine to Justianus in the early Byzantine period (324-610) is still very Romanized, such as the water system, the arena, Theodosius wall, and the huge axis of rotation of the city plan [m]. The most common characteristic of Byzantine engineering is its workmanship. From the beginning the Byzantine processing is basically the same as with Roman bricks, both used square stones, in the light of the Roman "Bidepales" about 1000-1300 cm² and between 35 and 50 mm thick [23].

The early Byzantine blocks had at times stamps, similar to the Roman blocks in the main century BC. Byzantine design also used vaults and rounded curves. In any case, in Roman engineering, masonry was used for the backfill of panels, while Byzantine design used blocks for the entire wall. For what reason is not certain, but it is very likely that the Byzantines did not trust their concrete without pozzolan or that earlier Eastern societies were still compelling. In any case, the use of bricks for the entire divider has fundamentally influenced the technique [23].

Houses of worship played an important role in Byzantine engineering, as Byzantine architecture has its foundations in the Christian East. The Byzantine houses of worship have a strong typology consisting of the Roman market basilica and the arch. Most church structures consist of the Greek plan with a cross frame and a vault in the middle, the cross arch. The apse is on the east side and the narthex on the fountain side [16].

Sometimes the apse and vestibule consist of three naves and are usually well coordinated in the Greek cross and an exo-narthex is added every now and then. The cross vault was not only used for civic sanctuaries, but also for burial chambers and castle services, as the cross dome with an arched circumference of 3. It was seen as extremely helpful especially for the design of small rooms up to 5 meters, valuable for small gatherings and for alternation in private and public areas.

Regardless of a similar structure, these structures cannot be clearly identified with Hagia Sophia, which was built in the early Byzantine period and has an arched range of 33 meters. Often the vaults were raised to let the glorious light inside. The vaults were added to the portico, the lobbies were inside the buildings (Aya Irene) and some buildings consisted of more churches and sanctuaries or different rooms (Pantokrator Church). So, there is no such thing as an average Byzantine church. Despite a specific construction in the orchestration of spaces and volumes, the Byzantine strict design was an engineering art that responded to its surroundings in capacity, improvement and space-explicit representation, thus leading to specific arrangements.

The center and the late Byzantine chapel were embedded in the organic morphology of the city, arranged directly between the houses. For such open buildings as in the early Byzantine period, there were no longer any planned axes or spaces.

Decorations also played an important role in Byzantine engineering. Frescoes and mosaics were occasionally used in chapels and castles. Mosaics were thought to be extremely helpful in depicting paradise because, given the lack of contour lines, they render a two-dimensional image very well. Frescoes and mosaics interpreted biblical texts and holy people. The afterlife was demonstrated using gold mosaics. A mosaic design was created through a "Creation Tessellate" (construction of marble, tesserae or glass pieces) or a "Creation Sectile", which implies a pattern [16].

A layer of mortar wood is applied to the partition in which the pieces are inserted, from unpleasant to very fine. The combination of metal oxide and glass powder colored the mosaic. The mosaic processing is based on the late Roman mosaic [23].

To an outside viewer, it might give the impression that Byzantine engineering consists only of places of worship and monasteries. He is only reminded here and there of how the Byzantines also built houses, royal residences and showers, fortifications, annexes, water channels and storehouses. Through a mixture of recorded factors, such secular or utilitarian designs would generally have disappeared or, if worthwhile, would not have been given much consideration given the fact that they are utilitarian rather than "imaginative". Manuals of Byzantine engineering usually mention the neglected cities of northern Syria, some castle structures of the later Middle Ages (the alleged Tekfur Sarayi of Constantinople, the Lascarid royal residence of Nymphaeum and the royal residence of the despots in Mistra), the dividers of Constantinople, Nicea and Thessaloniki, and some of the more fantastic reservoirs of Constantinople, especially the Basilica of Sistema and that of Philoxenos (Binbirdirek). After doing this, dedicate 95 percent of their space to church development [23].

- **Hagia Sophia**

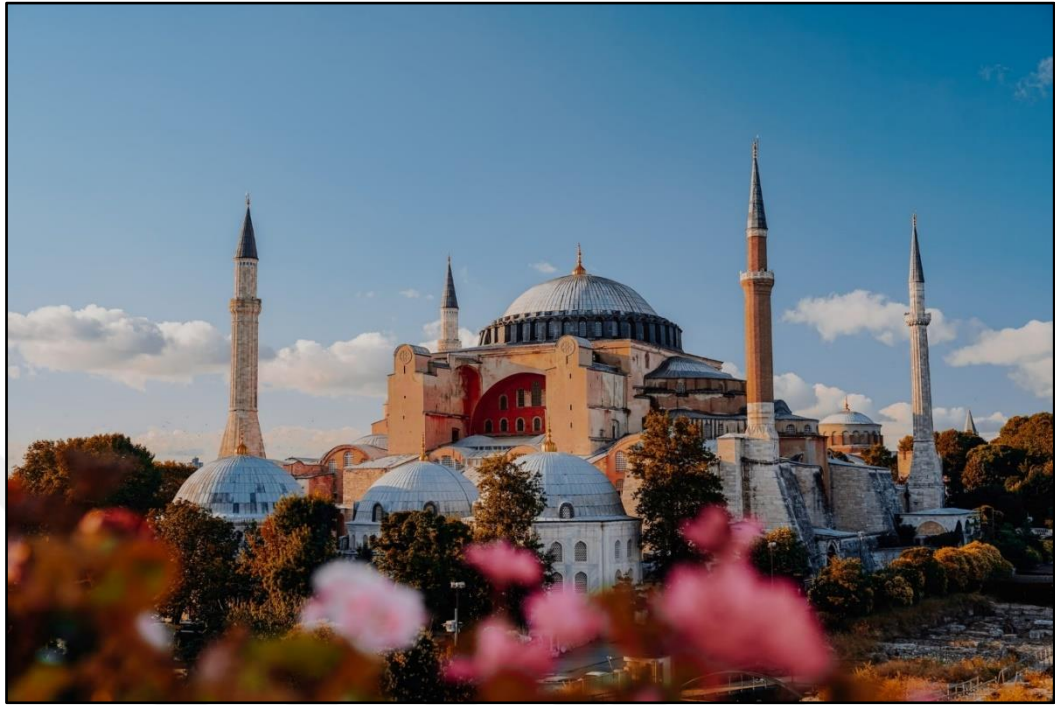


Figure 3.1. Hagia Sophia [24].

We will start the list with the number one attraction in Istanbul. Hagia Sophia (Figure 3.1) was the fourth largest historical church, and was once the first for a long time. The name “Hagia Sophia” means “Holy wisdom” in the Greek language [25]. Hagia Sophia was ordered to be constructed under Emperor Constantinus I time of the Byzantine Empire in 350 and was not finished until Emperor Constantinus II era came in 360. This original structure was then burned to the ground and a new structure was built by Architect Rufinos under Emperor Theodosius II [25]. The church was ready for worshipers in 415. Unfortunately, it was also burned to the ground. The third and last build was done by Anthemius and Isidoros under Emperor Justinianus. The construction started in 532 and was finished in 5 years, 11 months and 10 days later in 537.

It has a basilica plan, containing a nave, two side aisles, an apse on one end and a narthex on the other. The central part, nave, is covered by a large dome with a height of 55.60 meters and it has a half dome on each of the left and right sides. Entry from the north is via an exterior and interior portico, and the congregation comprises of a rectangular nave encompassed by a hallway and an exhibition on different sides and a side of the road safe-haven, showing the southeast [99].

Every portico includes nine vaults; At first, the narthexes went by a huge room surrounded by a corridor, parts of which remained throughout the 1870s. The inner portico is longer than the outer portico and about twice as wide, it also has a level connected to the exhibitions of the nave. The portico is illuminated by a line of windows facing north. Entryways attached to one or the other side of the interior gallery allow entry to the gallery. The section towards the south was additionally filled as the opulent entry for the kings; Its entrance is enhanced by two intricate bronze entryways with 9th-century unicorns. The dome was destroyed twice by earthquakes and built again with an addition of 7 cm to its height. The dome structure (Figure 3.2), the most obvious image of Hagia Sophia, is to make an enhanced visualization and give the deception that a cloudy vault hangs in the sky with a brilliant chain. This is on the grounds that the justification behind opening windows in the vaults and half vaults isn't related with compositional plan alone [25].

Its interior entry has a tenth century mosaic on its half-moon segment, portraying Constantine and Emperor Justinian giving models of Constantinople and Hagia Sophia, committed to the Virgin and Christ. The external lobby is by and large undecorated. The allotments of the inward corridor are fixed with painted marble chunks, fixed with profound lintels, and the vaults are improved with science themed mosaics, and crosses are put on a gold establishment.

The entrances are nine leading from the inner vestibule to the nave. The high entryway in the center is known as the Imperial Gate and is addressed by a mosaic portraying the head distending before Christ Pantocrete, flanked by delegates of the Virgin and the Archangel Gabriel. The length of the nave is typically double the width without side showcases. It is assessed to be 73.5 meters long and 69.5 meters wide including the displays. It has four elements around the bend, cut into the walkway and show.

As for the used materials, it was built using columns and stone from various temples. yellow, green, pink, and light marble was collected each from a different country and brought to Istanbul. Structures not covered by marble, were covered by colored mosaics, like the domes and the tympanum walls [25].

The nave is uncovered with marble sections that were uncovered after the floor covers were deleted in 1934. Its porphyry and antico fragments, totaled from pragmatist organizations in western Anatolia, are improved with complicatedly cut capitals bearing the monogram of

Justinian I. The moldings that separate the path and the arcades provide a support for the plan. After the Iconoclastic Period (726-842), some were lost to tremors, water injuries and explorers. The Virgin and Child mosaic is the most popular one [25].

Archangel Gabriel is the right-side angel in a two-angel mosaic figure. The top mosaics of neighboring holy persons, arranged under cantilever windows, and frescoes depicting seraphim complete the pendentives. A ton of mosaics remain covered in the vault, the material of which has actually been upgraded to prevent water damage while they are being secured. Probably the most famous mosaics, including a plaque and outstanding representations, are in the southwest exhibition, which was used for serious social events and administrations.

After the conquest of Fatih Sultan Mehmet in 1453, the church was converted to a mosque with an addition of a wooden minaret on the small western dome, then a brick minaret was added. A mihrab was also created along with a sultan section. In 1934 it was converted again to be a museum by President Kemal Ataturk [99].

The amazing arch of the Hagia Sophia, a noteworthy specialized accomplishment frequently thought to represent the vastness of the universe. In Istanbul in 557 an earthquake caused the breakdown of focal arch in May, 558. It took five years to produce a taller vault made of 40 ribs. This vault was steadier, just requiring fractional remaking after the of 859 and 989 earthquakes. The congregation was reestablished under Andronicos II reestablished the congregation during Palaeologan rule after the fourth crusade in 1204. Following the 1344 quake, the southeast curve was remade. The triumph of Constantinople in 1453 after conquering the byzantine empire started the period of Islamic love in the sacred design, which Mehmed II changed over into a mosque following his victory [25].

Fossati altered many elevations seen in the nave. The Holy Kaaba and the Prophet's burial chamber are represented in early ottomans tiles from the 16th century on one of the mihrab sides. A strip of blue tiles with Qur'anic inscriptions, inscribed in 1607, wraps the apse of the sanatorium below window level. Also from the 16th century is the marble pulpit. The docks are joined by four marble stages these along with the muezzin foundation (muezzin mahfili) were constructed at the end of the 16th century by Murad III. A marble ministerial platform (kürsü) was added near the eastern specialty by Murad IV in the 16th century.

The mihrab and the Königshütte were designed in a contemporary style by the Fossati siblings between 1847 and 1849 under Abdülmecid II and rebuilt the royal tribune (hünkâr köskü) in the north of the community, which provides access to the hotel from the outside. The names of two children, God, the Prophet, the four caliphs were inscribed on eight giant circles bearing that held the pier in place, these works were kept after secularization. Other calligraphy tablets were brought to the Sultan Ahmet Mosque and the Museum of Turkish and Islamic Art. Iron crystal accessories and stained-glass windows in the facility are also due to Fossa's refurbishment. The four minarets of Hagia Sophia were added on various occasions. The block minaret on the south corner was by Mehmed II, and the second stone minaret was added by Mimar Sinan during its reclamation to the north. The remaining two minarets are indistinguishable and date back to the time of Murad III [99].

The Republic of Turkey secularized Hagia Sophia in 1934 after it was a major mosque in the capital of the Ottoman Empire. There was little change during the radical changes when mihrabs, and wooden minaret were added to the development. A madrasa close to the mosque was established along with a coordinated a waqf for its costs was arranged by Mehmed II. Mimar Sinan was ordered to start reconstruction during the rule of Selim II. In 1577, Mimar Sinan gathered the tomb of Selim II in the southeast of the mosque, and the tomb offices of Murad III and Mehmed III were nearby in the 1600s Work. The restoration of the mosque was ordered by Mahmud I in 1739, adding a washing fountain, a Quran school, a kitchen and a library, making the mosque a meeting point for a social complex.

Under the rule of Abdülmecid II between 1847-49, the largest rebuilding of the Hagia Sophia was finished. Combining the vault and vaults and fixing segments, the two planners' siblings modified the enrichment of the outside and the inside. Relatives of Fossati disclosed the character mosaics in Hagia Sophia after its secularization.



Figure 3.2. Hagia Sophia interior [26].

In terms of geometry, and lighting composition, they were skillfully designed to create a proportional space. A study model was made in 2007 of all the mosque's architectural features. The integration of geometry was discovered in the design of all the features [27].

The structure of Hagia Sophia is perceived as a symbol beyond the architectural value. It has an eminent symbolic relationship with power. As the Byzantinist art history professor Kleinbauer said;

From the beginning, it was designed to showcase a utopian structure and used for both religion and politics. When going to the church for worship, man immediately realizes that this structure was built in such a beautiful way, not with human power or ability, but with a divine effect. The visitor's idea is directed to the high heavens and feels that he is not far away. He feels glad being in this place of his choice [25].

The ability for this monument to change and shape political powers and social relations is what sets it apart from others [27].

- **Basilica Cistern**



Figure 3.3. Basilica Cistern [28].

The Basilica Cistern, southwest of Hagia Sophia is one of Istanbul's most important outdated buildings. This huge underground water supply is popularly known as the "Yerebatan Cistern" was built for Justinian I, the Byzantine Emperor (527-565). It is called the basilica cistern because there was a basilica in the same area. The dimensions of the rectangle are 140 m by 70 m wide. The area has 336 sections with 9-meter height.

Raised from one another to a span of 4.80 m, the sections consist of 12 lines with 28 segments each. The straight line of the housing of the reservoir is passed on through the curve sections. Most of the sections, most of which appear to have been put together from ancient constructions and etched from different types of marble, are made up of a single part and one in two parts. The upper side of these segments partially carries different elements, there are 99 columns 98 of them Corinthian style and one has Doric style. The Cistern is 4.8m high on a total area of 9,800 m², the reservoir has an expected water reserve limit of 100,000 tons [28].

A cistern is a typical building from the Byzantine architecture constructed to collect and store rainwater. Water is then retrieved from the surface using a bucket and through a hole reaching the bottom [29].

The Basilica Cistern (Figure 3.3), also known as the Yerebatan palace is the biggest in Istanbul. Like many old structures, the current one is a result of two previous structures destroyed by fires [29].

But two or three of the angular and notched segments of the memory, most of which are chambered. Segments have two supports in the form of a Medusa heads. What guests consider most is that the construction that the Medusa heads came from is in the dark. It is often believed by those skilled in the art that at the time the memory was designed, it was brought into the section for use as a support. In any case, this did not prevent fantasies for the minds of Medusa [30].

Like the alleged Medusa, is one of the three Gorgonas who, in Greek folklore, are female beasts in the underground world. Medusa, one of the three sisters, has the ability to swallow everyone who looks at her. Fittingly, Gorgone's artistic creations and models were used to secure enormous designs and extraordinary environments during this period. In addition, the Medusa head was placed in the reservoir for safety purposes. As another gossip suggests, Medusa was a young woman who flaunted her hair and body. She was appreciative of the son of Zeus [30].

Perseus, the son of loved Athena making Medusa desirable. Consequently, Medusa's hair was turned into snakes by Athena. At present, anyone who saw Medusa was eaten away. Then Perseus took Medusa from and defeated numerous opponents by using her Poitr. In Byzantium, for example, in the needles of the sword and in other collective, the head of Medusas was engraved. The engraver who sculptured medusa made her into three different positions. The basilica cistern was rebuilt many times through the years [30].

Architect Mehmet Agha fortified the cistern during the Ottoman Empire under the reign of Ahmad III and continued in the 19th century under the reign of Sultan Abdulhamid II. Some columns could have collapsed during the expansion work in the 20th century which led to covering them in concrete and changing their appearance.

The Basilica cistern provided the water requirement for the surrounding areas as well as the royal residence during the Byzantine period. After the victory of Istanbul in the 15th century, it was used briefly to supply water to the Topkapi Palace where the ruler lived. The Ottomans did not like the usage of the still water and the reservoir was no longer used until it was rediscovered in the 16th century.

It was between 1544 and 1550 that the Dutch explorer Gilius, who came to Istanbul to study the Byzantine ruins and came across the cistern. Gilius went underground through partitions placed on top of a huge underground reservoir when he was told that the residents there were pulling water with containers into the huge circular openings like fountains from their house's ground floor and surprisingly, they were fishing there [30].

Father Gilius circled the camp on a boat assessed it and differentiated the sections. The data gained from the experience were disseminated in the travel guide, and he influenced numerous explorers. The reservoir has likely been redesigned since its creation. The granary, reconstructed twice during the Ottoman rule, was interestingly renovated by the Kayserili architect Mehmet Agha during the Ahmed III standard (1723). A subsequent correction was also made during the standard of Sultan Abdulhamid II in the 19th century. In 1987, during the conservative period, the Istanbul City Council cleaned the camp and opened it for visits to organize courses. Another major purification was carried out in May 1994 [30].

This Cistern plays an important role in Istanbul's culture, the area was visited by Presidents, prime ministers, and important personals from around the world. The Basilica Cistern acts as the historical center and is home to a number of public and global events [30].

- **The Chora Church**

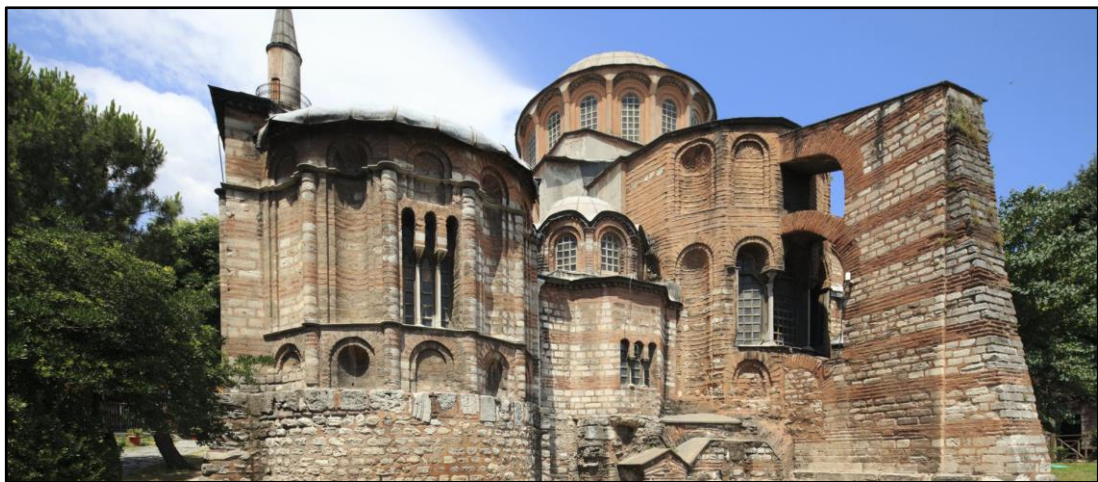


Figure 3.4. The Chora Church [31].

The name of the church "Chora" means country or land outside city walls in Greek. The church (Figure 3.4), The Kariye Museum, historically as Chora Monastery, is located within dividers east of Edirnekapi, a major entrance. "Chora" means "in the nation or in the country"

is a magical idea or representation of the monastery area in the city near the Theodosian dividers.

The Chora church is situated on the seventh slope of the city overlooking the golden horn. Early 3rd century there seemed to be a monetary in the same area. Empress Theodora ordered the construction of the church in the 6th century and it was rebuilt again after an earthquake. The rebuilding and renovation occurred in the 14th century under the order of Theodore Metochites. Ali Pasa the prime minister at the time transformed the church into mosque and had the mosaics darkened and plastered to make it suitable for a praying hall. He also added a in the southwest corner [31].

After these changes the mosque became a major city attraction visited by many tourists in the 19th century. It was announced as an exhibition hall in 1948, the introduction of 11 extended reconstruction programs jointly organized by the Byzantine Institute in Washington, DC and the Dunbarton Oaks Center for Byzantine Research was coordinated [32].

The structure of the monastery did not serve its purpose, but the community as a mosque was one of the friends of the Madrasa, tekke, soup kitchen, Sibyan Mektebi, and Prophet (Sajabe). Due to the burial chamber (Turb). With the exception of the burial ground, which was rebuilt after the 1766 earthquake, work was done on various occasions and the structure of the complex disappeared.

The parish is arranged in a Greek cross, with a square dome-shaped nave and apse to the south, a hall to the north, and inner and outer narthexes to the west. Basic access is via the outer narthex on the west side, surrounded by a covered courtyard during the 1876 landfill. A lonely entrance, at the pivot point with the basic entrance, leads into the internal anteroom with four entrances in front of the nave [32].

Its vaulted space is dimly lit by windows in the arch drum on one side or the other. The square nave, which is delegated with a solitary vault, is extended with an apse in the direction of the institution that contains the institution. Its development goes back to the 11th century. The curves that hold the vault and the high drum light up the room from now on. The four huge quays that transport the pendants are allowed to protrude from the partition walls and make flat specialties on three sides.

The interior is covered with valuable marble slabs below the curves and the first marble mihrab remains in the safe haven. Various elements of Islamic love, the minbar, the evangelist's lectern, carpets and calligraphic tablets, were removed during the 1948 reconstruction. Entrances on one side or the other of the safe harbor lead into small adjoining prayer houses with polygonal apses, which is all the more evident on the east facade, where pieces from earlier establishments can also be seen under the apse [32].

The northern area of the nave was designed by Theodoros Metochites in the 14th century as a prayer burial house. Surrounding the west side with an apse, it crosses the length of the nave and the inner narthex, and joins the outer narthex at one corner.

This corner inlet is provided with openings that form a visual separation of the two extensions. An entrance here gives access to the minaret stairs. The area has an entrance leading to the inner narthex and an exit opposite, which is currently fortified. It has a domed roof with a vault in the middle, where the space is divided by a triple passage on docks and two segments [31].

This arch is a more modest form of the nave vault; a short entrance with a complicated entrance connects the two vaulted rooms. In the south of the nave there is a passage that connects a side prayer house with the inner narthex. The Chora church is known for its mosaics that explain artistically the story of Jesus Christ. The existence of Christ and the Virgin Mary are demonstrated using mosaics on the vaults on the inner and outer porch. Theodore Metochites, the benefactor who helped redesign the congregation, is depicted above the entrance to the nave, presenting the congregation to a Christ enthroned. The church is decorated with frescoes explaining the circle of life and decay of the Orthodox religion [32].



Figure 3.5. The Chora Church, The Death of the Virgin [33].

In the 14th century, the main dome, narthex, beltry Orbell tower, along with marble decorations and mosaics were all built. The narthex (Figure 3.6), is an outer part and an inner part, on the inner, the life cycle of Virgin Mary (Figure 3.5) is painted, while the life cycle of Jesus Christ is painted on the outer [34]. The outer narthex is a corridor 4 meters wide and 23 meters long. The inner narthex is a 4 meters wide and 18 meters long rectangular plan with lunettes and vaults [32].



Figure 3.6. The Chora Church interior [35]

The number of mosaics and illustration in the church are unlike any other, making it a cinematographic space. This is accomplished by the Palaeologan Dynasty artists, in this dynasty the byzantine art reached its peak [36].

- **Sherefiye - Theodosius Cistern**

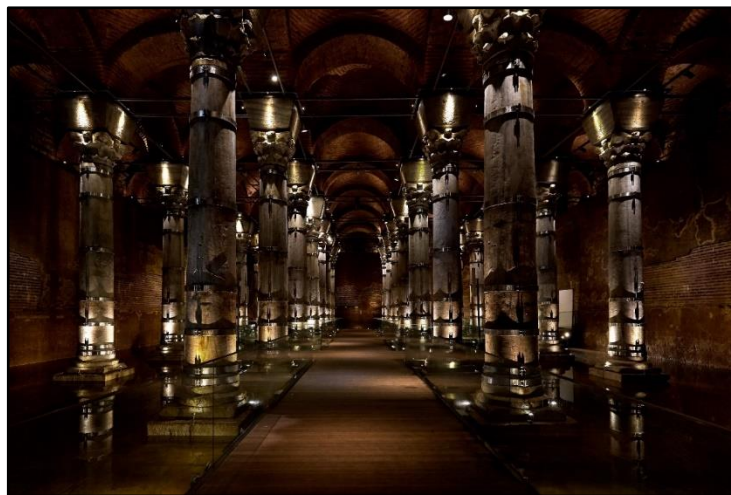


Figure 3.7. Theodosius Cistern [37].

This underground cistern just like the previous basilica cistern is one of hundreds under Istanbul used to store water to fulfill the city's needs. Theodosius Cistern (Figure 3.7), was built before the basilica Cistern between 428 and 443 under the Roman Emperor Theodosius II.

A few meters away from the Basilica Cistern lies the Theodosius Cistern but is not as famous and known. It is one of the earliest cisterns in the city built in the 4th century. The most known cistern was later built in the 6th century. The cistern is named after Emperor Theodosius who was the ruler at the beginning of the 5th century. The emperor is known for building the Theodosian Walls of Constantinople and other structures as well, Hagia Sophia was first erected under his rule [38]. Although no records can show the connection of the emperor to the cistern. This water reservoir is situated on the old road of Constantinople according to some records.

This water reservoir is discussed by the Latin historian, Marcellinus Comes who referred in the 6th century during the Roman Empire to the reservoir as Maxima Cistern. Despite this fact, Theodosius cistern is still being used to describe this reservoir even by the Municipality of Istanbul. In Turkish language it is referred to the cistern of goodwill, “Serefiye Sarnıcı”. [38].

The Cistern is a rectangle of 45m by 25 m and has a height of about 9 meters. The structure is held by 32 columns covered with marble, so it is considerably smaller than the magnificent Basilica Cistern (138m x 65m). Bricks are the building material for the vaulted system used, supported by four rows of 9 m high columns. The columns are made of marble and have a Corinthian capital. Brick was also used for the 5 cm thick walls extending to 35 cm long [38].

The Theodosius cistern is not the biggest in terms of dimensions but it is still worth the visit because it is filled with water unlike the Basilica cistern. The water provides a unique environment and thus experience [38].

The cistern opened mid-year of 2018 so it is relatively new to the tourists of Istanbul since it was only discovered in 2010 after demolishing the Eminönü City Hall building. Under the demolished building lied this forgotten cistern. After the discovery it was renovated and opened for tourists and started being used as an exhibition and cultural event hall. Above it is a new café designed of steel and glass making an interesting contrast between the old cistern and the new [38].

3.1.2. Early/Classic Ottoman Architecture

The victory of the Ottoman Empire over the Byzantine empire quickly expanded the Ottoman territories. Bursa, a city near the south shore of the Marmara Sea became the capital in the 14th century during the rule of Orhan Gazi. During the rule of Murad I afterwards, Edirne was announced the capital city [39].

These two capitals hold many early Ottoman structures. These low-scale but aggressive constructions can be viewed as an Ottoman slight departure from traditional themes.

Some might say, these structures must contain some ideas from their previous empire, the Byzantine Empire. While the Turkish rulers adopted the financial and regulatory designs of the blurred domain for functional reasons, they also sought to imitate the quality and continue the tradition of an ancient Mediterranean royal practice [39].

They strove for the success of Constantinople, a final Roman royal city of the east. Footstool developers took advantage of the Byzantine collection of compositional structures and strategies that tire of the structures in their conquered countries [39].

The style of the vaults found in Ottoman engineering is both an Islamic Customs of the Seljuks and Byzantine influence. In either case, the Ottoman ingenuity and Byzantine heritage are better illustrated in the treatment of the space under the vault and in the methods used to do so. The most punctual remaining Ottoman mosques tire cubic structures delegated with somewhat huge vaults that lie on pendants or squinches that cross the three-sided spaces between the sides of the partitions and the edge of the arches.

In any case, it was a constant concern of the developers to enlarge the space under the vault without severing its connection with bulky rear walls or visually impaired partitions. A simple arrangement was to expand the number of vaults and find them on curves that lay on sections or pillars [n]. The Ulu Cami (Great Mosque) in Bursa, which was built in 1396–1400 for Sultan Bayezid I (ruled 1389–1402), is the most representative illustration of this multi-domed type. Despite its critical soil region, the backwoods of 12 sections, which were important for 20 vaults, defaced the ideal sense of space. A similar problem had been faced thousands of years before by the early Christian timeframe. Creating an arched square of 8 squares in a dome arrangement is one solution suggested [39].

In Edirne for example, The Eski Cami mosque might be considered a replica of Ulu Cami but has nine vaults supported by four pillars, or as a variant of the nine-tone arrangement, which Islam does not hide remains architecture, but rather created within the Byzantine world [40].

The size of traditional Ottoman mosques is not so dull because of their enormous size, floor plan, and height, but it is on top of the inner ornamentation. There is a harmony between the contrasts, between light and dark, curved lines and straight line, and spaces and voids, making the experience more worthwhile. The tiles used are brought from the city of Iznik in the 16th century and thus named Iznik tiles.

Not every original material used is preserved, as they are constantly restored just like the glass windows. Contrary to common practice, it is conceivable that the cleaned marble floors tire in the hot middle of the year to reflect the light falling through the windows. Be that as it may, the awkward Istanbul winters required hotter blankets, and the few historic blankets still standing vouch for the lush, beautiful flowers added inside the mosque [39].

Sinan the architect started working in the 16th century, his main work is the light-flooded, gently punctuated Selimiye Mosque that he built to outcast Hagia Sophia in terms of scale. He and the engineers pushed the limits in terms of materials and calculations as much as possible. The engineering of the late sixteenth and seventeenth centuries did not add much variation to the previous work by Sinan [39].

- **Topkapı Palace**



Figure 3.8. TopKapı Palace [41].

The TopKapı Palace (Figure 3.8) construction started after Fatih Sultan Mehmet conquest in the 15th century. The major parts were built under the rule of Sultan Mehmet II, the construction continued until the 19th century by the orders of subsequent sultans. It was the center of the Ottoman government until 1856 where they gradually moved to the Dolmabahce Palace [42].

Eski Saray, was demolished to be replaced by the Suleymaniye Complex. Before Topkapı Sarayı the palace was referred to as the New Imperial Palace (Sarayı Cedid-i Amire). Construction work on Topkapı began in 1459/863 AH and was completed in 1473/878. Topkapı Palace was the residence of the Ottomans until Abdülmecid I moved in 1853 to the Dolmabahce Palace. In 1950 Topkapı Palace was opened to tourists and visitors [42].

The royal residence is located on (Sarayburnu), a on one of Istanbul's remarkable promontory hills and the location of the city's oldest acropolis. The slope, which slopes down towards the water, was terraced in three levels in order to consolidate the Byzantine support dividers. When first developed, the center of the royal residence consisted of a collection of buildings spaced two meters based on the level at the highest point of the slope along a pivot running from southwest to east.

Of the two courtyards, the first courtyard had government and judicial executive branches, and the second courtyard was thought to be the school of royalty and castle. A land divider or fort more than two kilometers long is built to form a huge kindergarten area surrounding the royal residence center, in which booths with views of the city and the water were worked on. The front partition wall behind Hagia Sophia and the door to the courtyard house a zone that hosts government and judicial parts. This became known as the "main court" while the court became known as the public authority and the bailiffs as the "second court" and the "third court" is the private courtyard in the far east [42].

Outside (to the upper east) of the third courtyard, is an area which housed terraced gardens and kiosks, became known as the "fourth courtyard." The living area where the female residence stayed is called "the Harem", the harem was expanded along the western partitions of the second and third courtyards.

- The first courtyard:

The first courtyard is entered through the Bab-I Humayun, which is located at the corner of the southwestern end of the site directly behind the Hagia Sophia. When the courtyard is not used for hunting gatherings, the entrance remains open and is monitored by the samurai living in the bedroom behind the door. This courtyard consists of a huge tree-lined green area with some administrative structures [42].

The Church of St. Irene is one of the administrative structures, which was used as a decree by the Ottoman Empire. Another structure is the Royal Mint (Dar'ül-Zarb-I Enderuni). Both structures have been preserved to this day. In addition, the First Court had dormitories for representatives of the external royal residence administrations (birun), the hospital for the pages and janissaries, corrals, distribution centers, studios, a courtyard and a marketplace for garden products to be available for everyone. People also used it to petition to the divan, the main courtyard was the location of most of the imperial functions.

- The second courtyard:

The central gate or (Bab-ül-Salaam) leads to the second courtyard, which was developed since the royal residence entered during the reign of Mohammed II. By the end of the 16th century Murad III built the entrance. After restoration, there is no longer its unique layered entrance or colonnade. Since the 16th/10th, the courtyard surrounded by porches on all sides has been closed. There were only minor changes in the AD century. On one side is the stable yard (Has Ahır Meydanı) and the braided halberd barracks (Zülüflü Baltacılar Koğuşu)- which includes the provision of consumable wood for the harem-and the carriage door (Araba Kapısı) near the harem, on both sides the (Divan Hall) and the (Dış Hazine) or outer vault [42].

The right half of the courtyard is occupied by the kitchens (mutfaklar). The courtyard was treated as a mini forest where gazelles, peacocks and other animals were allowed to roam freely.

- The third courtyard:

The royal residential and schools reside in the third courtyard which is entered through the Gate of Bliss (Bab'üs Saadet). The Sultan consistently met the individuals from the divan in the Petitions Chamber (Arz Odası), a huge lobby with a veranda that was promptly behind the door [42].

On one side is the Harlem aviary gate and the Sultan's elite kitchen near the Agas mosque, which had separate areas for pages and groups of women. In front of Mehmed II's royal pavilion on the corner is the dormitory of 39 senior pages who managed the Sultan individually. Various relics of the Prophet lies in the royal pavilion, which Selim I had brought from Cairo after the rulers moved their condominiums from here to the group of concubines after the second half of the sixteenth century had relocated.

Opposite to the Holy Mantle Pavilion is the (İç Hazine) or Mohammed II's Pavilion. Ahmed I (1603-1617) Here and in the adjacent room, the bathhouse with the pages was recently placed, and about a quarter of the imperial wealth is deposited on the expeditionary poet known as the Battle Hall (Seferli Koğuşu) [42].

Ahmed III's three-story library forms the middle part of the courtyard which hosts a pool pavilion (Havuzlu Köşk) in the center. The residences of the high school students, who are responsible for the depot and the basement. The third and fourth courtyard are separated by the treasure hall (Hazine-I) and the department of pantries and shops (Kilerli Koğuşu). A long patio goes all along the corridors of the third courtyard.

- The fourth courtyard:

The fourth courtyard is entered through the treasury and the pantry. To one side is Ibrahim I's terrace, which overlooks the Golden Horn and the Bosphorus. The Holy Mantle pavilion (Hirka-I Serif Dairesi) has an L-shaped corridor that joins the kiosk (Sünnet Köskü) and the Revan kiosk (Revan Köskü) [43].

The corridor ends where the harem starts from the southwest side. On the opposite side of the porch is the Baghdad kiosk built in 17th century. Between the courtyard two levels is the terrace and the main doctor's tower.

The Mecidiye Kiosk (Mecidiye Köskü) is the newest addition in structures built by Abdülmecid I on the eastern edge. Near the mosque is the small sofa or balcony (Camii sofa)

and wardrobe (Esvap Odası). The door next to the Majidiyeh kiosk leads to the outside tree nurseries and Saray Point [43].

One of the most decorated rooms in the palace, is the bedroom “Has odası” of Murad III (Figure 3.9), it was the work of the architect Sinan. Iznik tiles covered the walls along with decorative motifs, and Koran verses [44].



Figure 3.9. TopKapı Palace Has Odası [45].

- **The Blue Mosque**



Figure 3.10. The Blue Mosque [46].

The commonly known blue mosque is also referred to as Sultanahmet Mosque (Figure 3.10). The mosque is the central part of the complex built by Ahmed I. Construction of the mosque started in 1609 and was finished in 1617. Mehmed Aga was a worker of Sinan and Davud Aga, he was nicknamed “Sedefkar” for his work using the mother-of-pearl. These designers and makers shaped the style of that time with their work. This mosque is believed to be the final illustration of traditional Ottoman design. The mosque consists of a huge petition’s corridor tied together under a solitary arch that previously went around a courtyard to the northwest.

The structure is located 39 degrees east of the south. An outer area, which is surrounded by a stone wall with windows, covers the mosque and the courtyard on all sides except for the qibla side. Three entrances lead to the mosque area with three doors. The north door leads to the school which architect Fossati later built the Ottoman University on in 1854 [47].

The Ottoman Parliament occupied the building in 1876. In 1933 a fire destroyed the Ministry of Justice. The Quran school is connected to the outside of the room divider and accessed by the third door.

The qibla veranda, which consists of a walled inner garden and an outdoor terrace with rental accommodation. The outdoor terrace has an entrance on one side leading to the market and the neighborhood.

A fire started in 1912 that caused the redesigning of some parts. The inner courtyard of the mosque is entered from the surrounding area through three entrances with sloping approaches. The front door heads northwest and is at Pivot Point, where the central door of Sultan Ahmet Square is located. Arcades close the courtyard from three sides. [47].

A door with a hexagonal spring lies at the center of the courtyard held by a roof supported with 6 marble columns. This roof was recently replaced by a small arch. The floor tiles along with the columns are both made from marble [47].

The courtyard has two rows of columns with windows one above the other - rectangular at the bottom and angled at the top - which are arranged on each of the three outer sides with a normal span and are closed with a marble arcade.

The courtyard is surrounding by a two-level arcade hosting an exhibition. The exhibition starts narrow then expands as it reaches the prayer hall. It is covered by a slanted roof that extends to be covered by a dome.

A marble board with Quran engraving sets the main entrance apart from the other entrances. The main area has a rectangle more than a square shape with an open space [47].

The vault rest on pendentives, which are supported by four large columns referred to as elephant feet, which represent the central area. A corridor stretches behind the courtyard and is covered by porticos. The dome is supported by four half domes under it. The half-vaults are supported on both sides by struts, which are explained with hipped roofs and vaulted towers. This underlying way of acting takes on a spacious and open interior and works outwards through falling arches.

The pieces come together to form a pyramidal progression. On sections in front of the southern dock is a muezzin foundation with mathematical examples carved into its marble balustrade. There is an elaborately crafted wooden platform near the quay opposite. Behind this dock is the imperial cabin (hünkâr mahfili), a shielded stage that is raised on curved, continued valuable marble sections and has the inlet under the eastern corner vault. It can be accessed not only from the mosque, but also from the outside empire booth [48].

The portico runs all across the courtyard excluding the qibla wall. It is divided into sections by the protruding docks below and the load-bearing quays of the more modest semi-arches, displacing the passages of the passages down.

The qibla divider has been separated from different dividers in its plan to suit its unique capacity. Where the edge expansions are covered on three sides with three semi-vaults, the qibla fracture arises with two semi-arches on the sides, which open in the middle to a straight partition, on which the high marble cladding of the mihrab specialty is located. The docks supporting the building, which protrude into the mosque's interior join the qibla partition wall to form a complementary shape.

The mihrab has minbar made of marble on one side. The Turkish Mosque of Sultan Ahmed I, the mosque was named "blue" by an unknown explorer who relied on Kutahya tiles in the main shades of blue, green, and turquoise, which covered interior surfaces.

The motifs are specialized in gardens with overhanging planks, cypress, flowers and organic wood. The marble columns are also decorated with plant motifs but in gold [48].

The way the interior colors and design is made to make the sunlight coming through the windows give a different ambient in the room. The dome has 28 windows in its drum and has 4 semi arches. The four semi arches each contain 14 colored windows imported from Venice. The entrance areas and shutters of the evangelist podium (minbar) show the dominance of wood carving and mother-of-pearl decoration of the time. The mosque harbors many assets, for example Quran tablets from the hand of the respected Ameti Kasim Gubari, while numerous others have been lost or placed in historical centers.

The interior of the mosque (Figure 3.11) has been rebuilt many times throughout the years. The mosque has 6 minarets, 4 are placed one at each corner, and the remaining two are at the front of the courtyard. The minarets all have fluted shafts and have balconies. In 1955 the northeast minaret was restored. In the southeast of the mosque there is an illustrious booth (hünkâr kasrı), which was recently changed after it was extinguished by fire.

Southeast of the mosque lies the royal kiosk. It is entered through a ramp that reaches a hall overlooking the Bosphorous with a room on each of its sides. Now the kiosk is an exhibition for historic objects from around Anatolia [48].

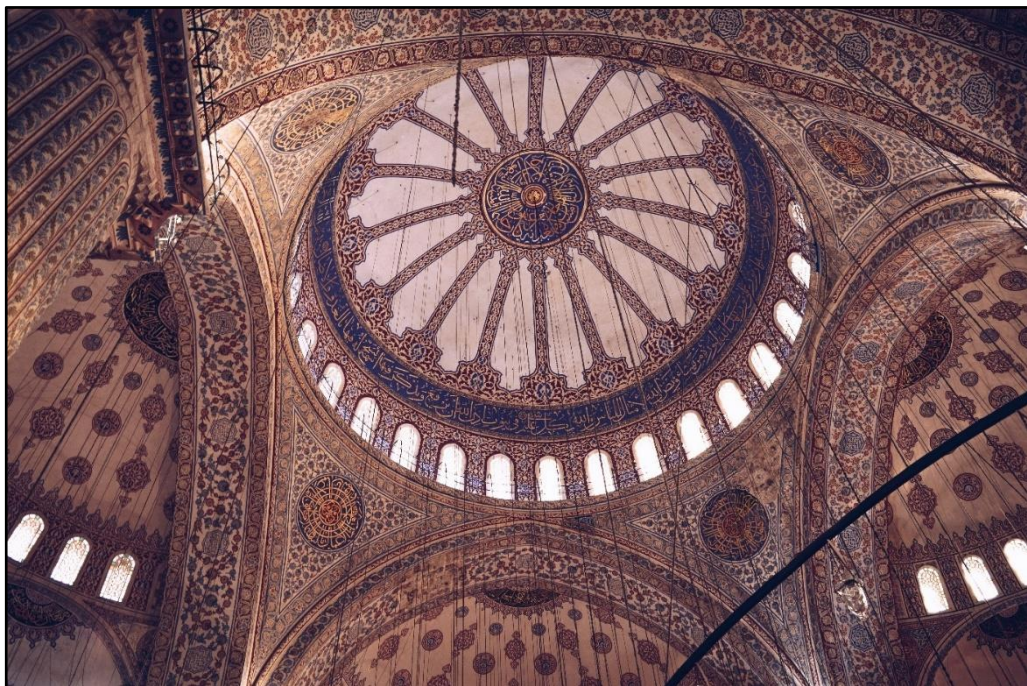


Figure 3.11. The Blue Mosque interior [49].

“The Blue Mosque has the largest number of different marble types among Ottoman mosques and it owes its acoustic uniqueness to architect’s choice of marble. The use of marbles in carved walls and columns as surfaces, in the minbar and mihrab where the sound is prominent during prayer, and to the ceilings of the gathering place to which the sound hit and rebounded within the interior space maximized the acoustics of the structure and made it a unique place of prayer for the Islamic world” [48].

- **Süleymaniye Mosque**



Figure 3.12. Süleymaniye Mosque [49].

The Süleymaniye mosque (Figure 3.12), is part of a large complex built on a slope overlooking the golden horn. The complex was built in the 16th century as ordered by Sultan Suleyman and the architect was Sinan. It is the largest structure built in the ottoman empire covering more than 70,000 m² [46]. One of the hills in Istanbul overlooking the Golden Horn and the Marmara sea was chosen as a location for it.

The complex was education oriented, it had five schools and a the sixth was a medical school. It also had kitchen, restaurants, guesthouse, baths, and shops.



Figure 3.13. Süleymaniye Mosque interior [51].

In the middle of the complex lies the mosque with an almost square domed plan (69mX63m) and large courtyard with porticoes [52]. The design of the mosque represents the final developed style of the Ottoman architecture. the courtyard is entered through a monumental muqarnas portal. The courtyard has marble floors surrounded by porticoes from three sides. At the center of the courtyard lies a rectangular marble fountain.

The mosque has four minarets. Two of them are 76 m high and the other two are 56 m high. A large dome covers the central area that is 49.50 m high. Inside (Figure 3.13), the prayer hall consists of a nine-bay portico with two windows under each bay. The large dome is held by buttresses that sits in two semidomes and two arches. Below the semidomes are 5 small domes.

The complex also contains a Türbe which was added later to host the tombs of Sultan Süleyman and wife Haseki Hürrem Sultan [52]. Architect Sinan's tomb was also added. The two tombs of the Sultan and his wife are marked by domed octagonal pavilions.

- **Fatih Mosque Complex**



Figure 3.14. Fatih Mosque [53].

Mehemet II ordered the Fatih Mosque complex to be built by Atik Sinan between 1463 and 1470. This was the first building of this kind in the ottoman period setting the style for others. It covered an area of 320 square meters [54].

Sultan Muhammad II, known as Fatih (Conqueror) built the Fatih Kulesi complex in Istanbul, after his successful city became the Byzantine capital of Constantinople at the time. Construction started in 1463 and lasted for 7 years. The main designer was Atik Sinan, he started the construction with the mosque (Figure 3.14), then continued to add more structures; two mausoleums (Türbe), two religious' schools (medrese), a clinic (darüşşifa), a hospice (tabhane), a soup kitchen (imaret), and a caravan (han), A library (kütüphane), a Koranic school (mekteb) and bathrooms (hamam). The complex was affected by the two earthquakes in 1509 and 1766 [54]. Most of the structures were lost, like the soup kitchen, hospice, and caravansary. As for the mosque, it was renovated and rebuilt in 1771 [54].

The Church of the Holy Apostles in Byzantine was probably built in the same location in the Byzantine before the Fatih complex existed. Even though the empire declined, the area is a rectangular shape but the mosque is built tilted 32 degrees to face the qibla direction. The

tombs and mosque lie in the middle surrounding by an open space attached to the school buildings [54].

The floor plans of the buildings are unique as drawings show the guest house and emergency room showing square angles. This is the primary illustration of an Ottoman majestic complex with such an unmistakably planned and balanced arrangement. The Fatih Mosque remains in the middle of the rectangular property arranged to the southeast. It is surrounded by an almost square fenced area, which is delimited by partition walls from the north and south and by the school from the west and east.

Four gates provide an entrance to the complex. The first is the Painter Gate (Boyacı Kapısı). The other gate from the north is Candy Gate (Börekçi Kapısı). The other two gates are named Tomb Gate (Türbe Kapısı) and the Tang Gate (Çorba Kapısı). On the east and southwest sides in the horizontal direction, the area is entered by the input between the schools. After the 1766 earthquake, the two tombs holding royals were restored with stone. The tombs are elaborated with decorations and stripes and pilasters from the outside, one of the tombs belongs to Mohammed II [55].

Entering east from the lower porch, the tomb remains standing during the rule of Abdulaziz I (1861-1876). The wife of Mehmed II is Gulbahar, a mausoleum was built for her with a hexagonal dome shape. The third tomb was built for Naksidil Sultan, the mother of Mahmud II in 1817. The graveyard, where many important figures were buried, was soon walled. The madrasa is organized in four rows and two rows to the southeast and southwest of the mosque region, known as the Black Sea Madrasa (Karadeniz Medreseleri) and the Mediterranean Sea. Each school complex has 4 senior schools next to the mosque and 4 junior ones [54].

In 1928 some of the junior schools were restored according to plans while the rest were not to be replaced by new routes and streets. In 1958 the schools left were further modified and had their walls align with the streets surrounding them. The school has 19 vaulted study rooms along with other supporting rooms, they also have two iwans in the portico courtyard [55].

Living rooms have mihrab specialties and are recognizable by the intricate masonry on the outside of the windows. The smaller madrasas are of the same length but are longer and less wide than the older madrasas. All of the eight schools are entered through the mosque side.

The other structures like the hospice, and the hospital are outside the fence of the mosque and schools.

In 1766 the earthquake destroyed the hospital of the Fatih Complex. It as a square shaped courtyard with surrounding arcades and rooms. The hospice underwent some renovations in the nineteenth century and it was converted into a madrasa. The new school built instead has a rectangular courtyard with ten single-story rooms surrounding the arcades of the courtyard [55].

The kitchen and shelters are in the north and west, they are entered from the front of the courtyard. The other two are side cabins leading to adjacent lounge areas. The huge iwan adorned with muqarnas pendants has cave rock specialties on the entrance portal and on the qibla partition. The mezzanine is accessed through the stairs located in the southwest region. The hospice is built of stone, with the exception of parts of the southeast divider, which has been restored in block and stone.

Soup kitchen (imaret) and caravanserai (khan) were once located in the southwestern part of the complex. The kitchen was three small u-shaped rooms. Food was served twice a day for visitors to the caravanserai, madrasah students, and the difficult and low-income population of the area [55].

The caravanserai is there until 1930, it was a rectangular structure made up of barrel-vaulted rooms. In the hospice area there is also a building that was operated by Mahmud II (A.D. 1254) as a police headquarters (karakolhane) in 1838. The complex had a library (kütüphane) and a Koran school (mekteb), which consist of individual units that are probably located along the partition walls between the painter's gate and the gate of the confectionery.

The current library of the complex was created by Mahmud I in 1742/1155 AD and is located southwest of the mosque, adjacent to the wicker corridor. There is no reference to the Quran school. The complex also had a hammam called Karaman or Irgatlar Hamami, which was located in the Malta Bazaar (Malta Çarsisi) in the northwest of the complex. It was dismantled in 1928 [55].

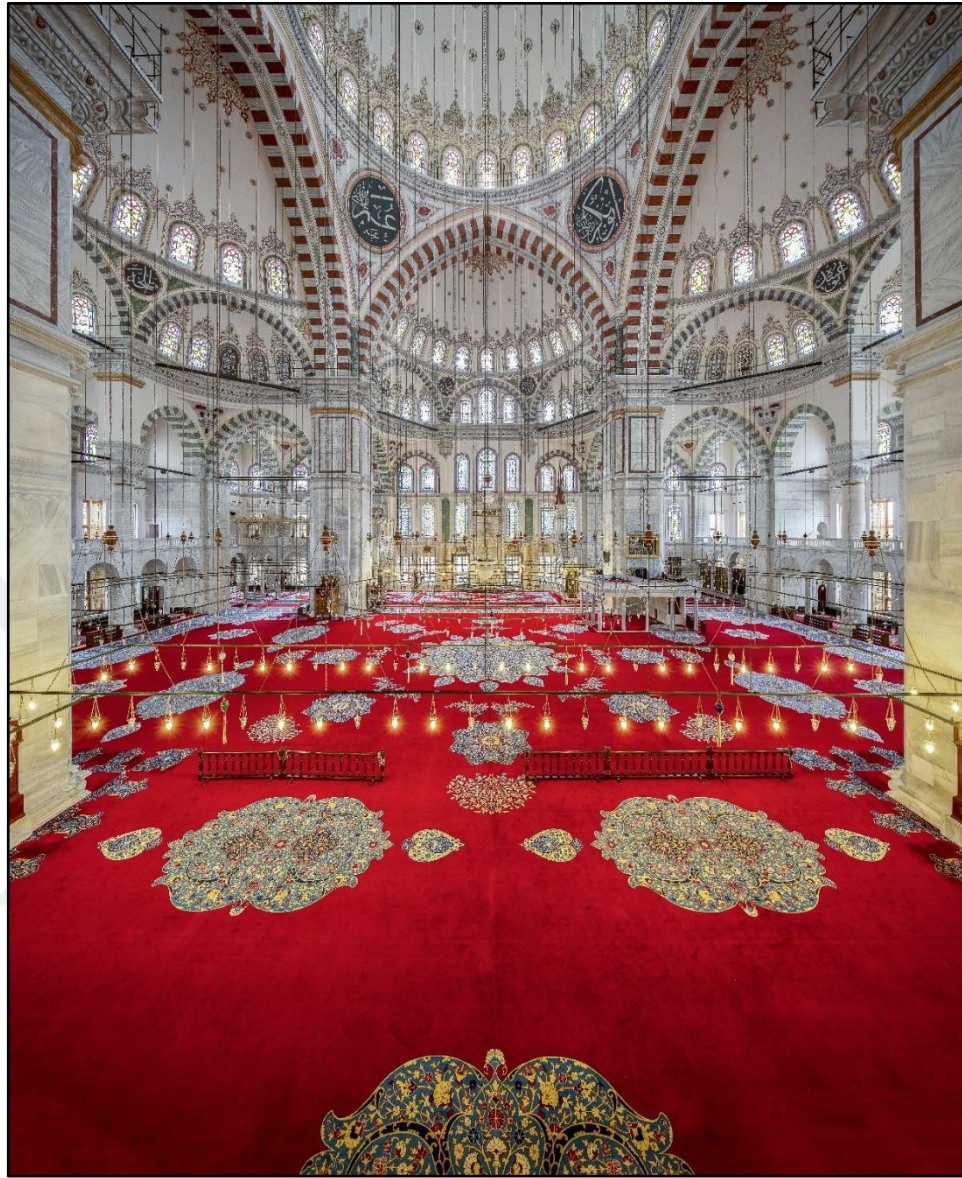


Figure 3.15. Fatih Mosque interior [56].

The current mosque has a greater area than the previous one. The courtyard has three entrances, A main entrance and two supporting ones. At the center of the courtyard lies an ablution fountain. The prayer hall (Figure 3.15), is covered by a main large central dome carried by semi-domes held by four piers.

Materials of the columns are granite, white marble, and green stone [57]. The mosque is decorated in qur'anic inscriptions, muqarnas, and decorative paintings on the interior resembling the baroque influence on ottoman architecture.

3.1.3. Late Ottoman – Baroque - Rococo

From the conclusion of the Mannerist age, the Baroque was against the workmanship that prevailed in Italy, both elaborately and as far as its understanding. Gotten from the Portuguese word "Barroco", which implies "a peculiarly molded, slanted and flawed pearl", the name of the Baroque style is said to come from the family name of the Italian craftsman Federigo Baroccio. Ornate workmanship likewise alludes to a self-important and overstated style that ignores the standards [58].

The ornate style contains a metaphorical component of the “bizarre, clever and contradicting. The craftsmanship that was utilized in France around the center of the seventeenth century, notwithstanding, lost this undertone toward the finish of the nineteenth century and started to address the Counter-Reformation, which expected the personality of an absolutist fine art. , which started toward the finish of the sixteenth century and proceeded into the eighteenth century, is set apart by a takeoff from the decent request and old style types of the Renaissance and an aggravation of equilibrium and quiet.

The Rococo style created from the Baroque, which started in France and spread across Europe. The extravagant style won until the center of the eighteenth century. In insides, the style was described by lavish volumes and stylistic layout to accomplish a mind-blowing impact. The image of "triumph" is important for the collection of this pretentious beautification program [58].

engineering took on an alternate shape with the creative ideas that rose up out of Europe in the eighteenth century. One of the social elements that shifted the direction of Ottoman engineering was the surge of imported compositional styles from Europe. The impact of Western craftsmanship kept on affecting Ottoman engineering from the mid eighteenth century to the late nineteenth century. This western Ottoman design, the impacts of western patterns and the charm with styles in France made ready for an expanded interest in European culture during the tulip period during the rule of Ahmed III (1703-1730), prompting the rise of substantial models drove. In 1715 Mehmed Çelebi was shipped off Paris as the Turkish representative to the court of Louis XIV. At the point when he returned, he offered Ahmed III. furthermore, the sumptuous depictions to the Grand Vizier of Versailles, Fontainebleau, Marly Palace and his nurseries turned into the motivation for the westernization development

that started with Cedvel.i Sim, the Kağıthane Stream and the waterworks. Mehmet Çelebi's impressions of the castles and nursery scenes in France and the utilization of the building component of water lastingly affected the utilization of in fact prepared water engineering [58].

From 1740 the influences of the tulip period gave way to the Rococo and the Baroque. The Rococo style became widespread in the time of Mahmud I (1730-1754). The cheerful floral patterns, fruit basket motifs, bouquets of flowers in vases, which made up the decorative elements of the tulip era, were replaced by Rococo motifs in the architectural ornamentation. The "Fruit Room of Ahmet III" in Topkapı Palace reflects the decorative Conceptualizations of the tulip time, as can be seen on the oil-painted decorative wood panels in the chamber.

The tulip era, which marked the first stage in the westernization of Ottoman architecture, saw the installation of many new waterworks, particularly in Istanbul. There was an upsurge in new water channels and attached wells. A pronounced Rococo-Baroque style can be seen in fountains and water dispensers after the tulip period. Years after the tulip period up to the time of Mahmud II, over the period 1720-1830. The most creative period with western cultural elements was the time after Ahmed III, at the times of Mahmud I, Mustafa III, Abdülhamid I and Selim III [58].

These pioneers of Ottoman Westernization introduced a higher quality of education, made innovations in the military, and generally helped to create a technical and scientific environment. The Ottoman Baroque designates a style that developed in the years after the tulip period up to the time of Mahmud II. This period, which corresponds to the end of the 18th century, represents what the well-known art historian Semavi Eyice defined as the period of the "Turkish Baroque" or the "Ottoman Baroque. Eyice chose this name for this era of Ottoman architecture because the trend, although inspired by the West, clung to some fundamental features of its own unique style. As the eastern neighbor of the west, the Ottoman Empire showed a unique concept of baroque art within its wide borders. Ottoman architects took the Western Baroque and Rococo elements that inspired them and created a synthesis that incorporated the classic Ottoman architectural style. The baroque forms were in a certain way adapted to Ottoman design patterns. However, this style did not exactly follow the influence of the Western Renaissance in Ottoman architecture, although it was of Western origin, but was instead interpreted in an original style that became unique to the Ottomans architecture [58].

- **Beylerbeyi Palace**



Figure 3.16. Beylerbeyi Palace [59].

An old structure was built as two stories by Mahmud in 1826 and finished by 1832 and was named Beylerbeyi Palace (Figure 3.16).



Figure 3.17. Beylerbeyi Palace interior [60].

North of Uskudar lies the Beylerbeyi Palace on the Bosphorous bank. A Byzantine settlement is said to have existed on this majestic beach domain on the wooded slopes of Çamlıca in the 6th century, when Emperor Constantine II named the region.

The imperial family owns the known terraced gardens known as Istavoz Bahcesi. Ahmed III in the 17th century built the Sefkabad Pavilion on the hillside. After him Murad IV and Mehmed IV are thought to have come here to hunt. Used as often as possible. Ahmed III and Mahmud I in the 18th century newly founded and expanded, the garden complex comprised tiled and vaulted structures around a pool, petition rooms and administration building. Stool dignitaries also fabricated locks here [60].

The name Beylerbeyi, which was only adopted at another point in time, is said to allude to the leading representative of the Rumelian territories, Mehmed Pasa. Some areas demolished by him were acquired by Mahmud I in order to build a royal residence in the Istavroz Gardens in the middle of the year. The 'Yellow Palace', planned by the imperial draftsman Krikor Balyan, was finished between 1829 and 1832. It is a main building with decisive and a group of concubine segments, cabins, workers' quarters, showers, kitchens, reservoirs and corrals.

Applauded by Field Marshal and Miss Pardoe in the records of notable explorers, in 1851 this wooden castle surrendered to a fire and its location was abandoned. In 1864 Sultan Abdülaziz asked for the reconstruction. Beylerbeyi was then designed by Sarkis Balyan and his sibling Agop Balyan in the 19th century using a French neo-lavish style with a conventional Ottoman arrangement. The palace is a rectangular shape facing the Bosphorus. It holds 6 lobbies and 24 rooms, divided into upper and lower floors [60].

There are 3 corridors on each of the two floors going from west to east. In front of the two segments are obscure tree nurseries with pines, red beeches and magnolias surrounding huge oval pools. Even though the garden area around the pools is designed, a wall is placed to separate it from the royal residence. The entrance lobby is accessed from the stair in the Mabeyn area, another stair is situated at the back of the entrance to lead to the conference room on the second floor [60].

The two corridors are illuminated by iwans who face the Mabeyn gardens in the southwest. A group room with a gorgeous wooden frame, called Ahsap Oda, is located on the coast, with a seating area on the land side, adjacent to the meeting room, also known as the "Mother-of-Pearl Room". The hall with the swimming pool is accessed from the side passage in the entrance hall [61].

The main and central areas are the swimming pool hall and the blue lobby (mavi salon) above it, both connect the Mabeyn and the Harem areas. The Blue Hall is named after its 16 blue columns that create an iwan and sidewalks, the hall is sometimes called the Ceremony Hall.

The roof of the blue hall is held by the 16 columns and has windows that illuminate it from a high position. On the ground floor, the admiral's room (Kaptan Pasa Odasi) is similar in style with much of the furniture brought from Europe, including precious stone ceiling lights from Bohemia and containers from Sèvres; In addition, a range of Chinese and Japanese jugs is shown in the castle. The painter Migirdic Civanyan directed the interior decoration that reflects the Ottoman diversity of the 19th century [60].

The floor without parquet is covered with Egyptian straw mats and Herrick carpets. The castle was lit by a gas factory, and no food was prepared in winters. The corridors from the two halls lead to the living room or a group of concubines, they are simpler than Mabeyn, and the decoration is not so gorgeous.

Rooms surround the two corridors connected by a double staircase along with the entrance lobby and a focal lobby above. Some rooms can be seen today when Abdul Hamid II used them when he took away the house from 1912 to 1918. The furniture was printed with his monogram or initials. French ruler Eugenie (1853-1870) lived with Beylerbeyi, a concubine group, during a visit to Istanbul in 1869 as well as many other emperors and royalty figures and personals [60].

Two ocean doors cross the partition walls and close the passages of the Mabeyn and the collection of mistresses. Next, halfway up the children's room, there is a sea shack (Yali Köskü) with a sloped roof on each side. An inner courtyard leads to the cabins to form an 8-sided projection. Behind it, the castle and its tree nurseries are secured by a high land wall, which is transformed into terraced gardens. Two entrances serve the royal residence on the land side, one leads into a corridor built by Mahmud I, which leads under the garden terrace to the south-western end of the Mabeyn Gardens. Here a slope runs close to a high partition that separates the castle from the auxiliary and military buildings and gives access to the al three and inner courtyards on the left and the pens halfway [61].

The verandas of the nurseries were built by Mahmud II in 1830. The five courtyards of varying width are in some places divided into seven levels and are 35 meters above sea level.

There is a huge pool on the porch that was neglected by the Serdab and Sari stalls, the pool and the Serdab stall edited by Mahmoud II. The stairs and slopes as they appear today were added by Sultan Abdulaziz, who also remodeled the kindergartens in a naturalistic style. The Serdab or depressed grandstand (Serdab Köskü), also called marble cabin (Mermer Kösk), is a three-room marble structure that is partially embedded in the holding mass of the courtyard above [61].

With a view of the pool in front of it and the Bosphorus past, the booth is intended to provide consolation in the middle of the year; a focal source, connected with channels to two separation sources on one or the other side of the base room, humidifies and cools the marble inside. On a similar level east of the basin is the sari, or yellow grandstand, a two-story building with a storm cellar arranged to provide perspectives of the lower Bosphorus and the slopes of Çamlica above. The Corrals (Ahir Köskü), the last riding facility in an Ottoman castle, is an elongated rectangular building with an octagonal entrance hall that protrudes outward in the middle.

The entrance corridor, which is entered through a spacious pair of glass entrances, leads into the main room, which has been cleared from the block, with a small marble pool. Artistic pony creations adorn the roofs of the stand entrance corridor, whose curved windows look like horseshoes [61].

A significant part of the castle administration structures have not become due, such as the kitchens, The larg gardens, including the deer forests, are being handed over to local schools, while keeping some structures in the garden as is, just like: the Sultan's or Hünkar booth (Hünkar Köskü), the musical structure (Muzika Dairesi), the deer house (Geyiklik), lion house (Aslanhane), dovecote (Güvercinlik) and bird house (Büyük Kusluk). The royal residence showering up the hillside was demolished to make way for road construction. Today the surplus castle structures on the Bosphorus Bridge built in 1974 over the mainland; the backs for the huge technology transfer are quickly arranged under the bays [62].

The interior (Figure 3.17), can be described as nineteenth century Ottoman eclecticism. Furniture and details were chosen from various countries and from different styles and eras. Halls and rooms are decorated with muqarnas, bursa arch, and Arabic calligraphy. Crystal chandeliers were brought from Bohemia, vases from China and Japan, and furniture from

Europe. Straw mats from Egypt were used to line the palace floors and then covered with carpet.

- **Dolmabahce Palace**



Figure 3.18. Dolmabahce Palace [63].

The Dolmabahce Palace (Figure 3.18), is located overlooking the Bosphorus in Istanbul. Under the ruling of Ahmed, I and Selim II 1566-1603, the coast was used by the Ottoman navy and thus a pool and kiosk were built in this area. Later large buildings were built under the rule of Ahmed II [51]. It was until Mahmud I during (1730-1754) that he lived in the complex and added the Bayildim Kiosk [65].

In 1846, at the request of Abdülmecid I (1839-1861), more established palatial structures were destroyed in order to build another castle in their place, designed by the imperial architect Garabet Balyan. In 1855 Construction was completed and the first service was held after the War in 1856. The death of Abdülmecid I changed the castle to be a residence for Abdülaziz I. Abdülhamid II (1876-1909), decided to expand the Yildiz palace complex on the slopes of Besiktas. During the reign of Mohammed V (1909-1918), the royal family once again moved into the Dolmabahce Palace, and the last Ottoman Sultan, Mohammed VI, also moved in from here. The Turkish National Assembly declared the Sultanate invalid in 1921 [66].

Abdlmecid stayed in the royal residence until the caliphate was annulled in 1924; Some of his own compositions even enrich the castle dividers today. Mustafa Kemal Atatrk stayed in Istanbul away from the new capital Ankara and visited Dolmabahce with unfamiliar tourists Palace, and died in the royal residence in 1938 as a public exhibition hall.

The palatial complex covers an area of nearly 250,000 square meters and consists of a walled inner castle along the waterfront and a number of administrative buildings in the backwoods outside the land walls. The long belt between the highland dividers and the embankment promenade runs from west to east. Treasure Gate and Imperial Family (Hazine-I Hassa), Furniture Ledger (Mefrusat Dairesi), State Garden (Mabeyn Bahesi), Basic Administrative Castle (Mabeyn-I Hmayun or Resmi Daire), Stylized (Muayede Salonu). Bendegan Dairesi) and Porter (Baltacilar Dairesi) and a magnificent kitchen (Matbah-I Amire) [66].

The stately quarters of the mistresses of the basic castle have separate back gardens, which are secured by high partition walls; the previous nursery has a glass stand (Camli Kşk) and seating (Kusluk) worked by Mehmed IV along the land wall, while the last option has the indoor warehouse (I Hazine Dairesi), a nursery (Fidelik), small kitchens and the various condominiums of the ladies in the group of concubines who were deeply cherished, called the higher top selections (Gedikli Cariyeler Dairesi).

The Crown Prince's palace has a huge garden behind the house with two wooden houses, the starter cabins (Hareket Kskleri), the quarters of the chief eunuchs (Kizlaragasi Dairesi), a Hereke cover studio (Hereke dkmhanesi) and a sun house (Seren). Two wonderful entrances, the Treasure Gate (Hajinkapi) and the Imperial Gate (Sartanatokapi), lead to the nursery in the administrative district to the west. On the other hand, seven small gates along the land wall lead to the nursery behind the various areas. The iron fence along the bank has five large doors visible from the surface of the water. Outside the west treasure gate is the clock tower built by Abdulaziz II and the Dolma Bahase Mosque (or Bezm-I-Alem-Valide-Sultan Mosque). Also served as a royal palace [65].

The work of the Ottoman Supreme Commander (Serasker Dairesi) between the mosque and the clock tower and the royal boat shelter (Hamlacilar Dairesi) just west of the mosque do not do their job. place. To the north, the Royal Mansion Theater (Tiyatro) was wiped out in 1937 due to road construction, and the famous enclosure (Istabl-I Amire) behind it was demolished in 1947 for the development of the Innonu Soccer Arena. I did. Outside the walls

of the eastern and eastern lands were distribution presses, drug stores, bedroom enclosures, clothing, basements, plants, specific kitchens, and ancillary buildings to house the enclosures. The wreckage of these designs is used by the Turkish army [65].

The rapid development of Swiss hotel buildings in the castle forest on the slope behind the main royal residence has also damaged the chronological surroundings of the royal residence. The main palace the main castle is an L-shaped structure with a long facade along the Bosphorus, which from west to east the administrative district (Mabeyn-I Hümayun), the stylized lobby (Muayede Salonu) and the magnificent concubine group [66].

(Harem-I Hümayun); The mistresses' collection expands inland with a wing that houses the "top selection". The regulatory quarter and the collection of mistresses are two floors high with an assistant tower cellar. Their indistinguishable exterior is well-balanced, with a two-story courtyard being the focal point of one segment or another. Placed in the middle, the stately lobby rises to a double stature compared to the flanking segments.

The royal residence is coordinated around a series of huge focal lobbies that adjust the longitudinal pivot, which is surrounded by more humble rooms and connected by hallways. The relevant area is entered through a conventional nursery towards the west. It has an exceptionally formalized and balanced layout, consisting of four significant corridors on two floors, connected by a large staircase in the middle [65].

The entrance corridor (Medhal Salonu) and the embassy lobby above (Süfera Salonu) have indistinguishable cruciform floor plans with precious stone chimneys at the inner corners. The embassy corridor and the more modest rooms around it was used for the gathering and entertainment of unknown visitors and officials; they are probably the most amazingly embellished rooms in the castle. The two corridors lead to the jewel staircase, a double-decker staircase hall with a glass roof named after the jewel pillars on the railing.

On the opposite side of the stairs are two indistinguishable oval corridors on two floors. The lower corridor, called the men's assembly room (Selamlik Binek Salonu), has a kindergarten entrance. Directly above is the "Lobby Facing Two Sides" (Zülvecheyn Salon), a meeting room named after its two iwans, who face the Bosphorus in the south and the kindergartens in the north to the north. From this lobby you can reach the study, library and prayer rooms, which are used by the Sultan, as well as the royal shower system, which is illuminated from

a higher point. The stylized segment consists of a large, square lobby that housed significant convention functions and rigorous government services [66].

The corridor is connected to the management segment and the collection of mistresses, with passageways on both the ground floor and the exhibition level. Inside, the partitions of the vaulted space are pushed outwards to create shallow passages. The passageways are isolated by a triple arcadian continuation of four sections on the sides and the edge space is additionally developed through the use of semicircular specialties along the path dividers. Underlined with thick moldings and rich moldings, the technology gives the impression of a huge, limitless space, simply characterized by a sequence of sloping sections and drifting curves. The line of mistresses, indistinguishable from the authoritarian quarters, consists of a progressive organization of condominiums, rooms, and three showers casually arranged around ten huge lobbies, five on each floor.

The portion of the concubine group facing the Bosphorus has the lineups of the Sultan, Queen Mother, and the Sultan's true wives, although the landside wing facing the collection of the Gardens of the Mistresses was essentially used to be the "top pick." "(Cariyeler) to accommodate. The four corridors facing the Bosphorus have intricate and peculiar invigorating plans. The assembly chamber of the concubine group (Harem Binek Salonu) has steps at both ends that lead to the front and back gardens; the blue hall (Mavi Salon) above has arched iwans facing the two camps [65].

Located at the end of the passageway that connects the row of mistresses to the stately lobby and authoritarian quarters, the Blue Hall was the main meeting place for the concubine group, notwithstanding the more modest Pink Hall (Pembe Salon) nearby. which opened to the colonnade of the concubine group. The construction of the castle is in the neo-rococo style, although the layout mirrors the components of traditional Turkish houses to a tremendous extent. Séchan, the interior designer of the Paris Opera designed the interior. Ahmed Fathi Pasa the ambassador in France imported the building materials from Europe. They include containers from Sèvres, silk from Lyon, precious stones from Bacarat and candle holders from Great Britain, glass from Venice and crystal fittings from Germany. The Palace of the Crown Prince is another design that is located immediately to the east of the Harem area. It is almost indistinguishable from the beloved's Bosphorus wing. The two designs are separated by a partition and, closer to the water, by a fence; however, from the water it appears as an extension of the primary castle [66].



Figure 3.19. Dolmabahce Palace interior [65].

The façade architecture of this palace complex is neo-baroque style. The interior design (Figure 3.19), is done by Sechan, the decorations and furniture came from Europe including things like vases, silk, glass, and chandeliers [65].

3.2. DATA ANALYSIS

Although the data on which it shall be relying in the study are entirely based on self-reports, they do involve reports on many different types of behavior and subjective feelings that have been widely accepted as reflecting states related to what it has been calling “psychological wellbeing-.” As it hopes to show in succeeding chapters, the meaningful way in which these diverse measures are interrelated would not be consistent with the hypothesis that people cannot accurately report on their own state of happiness. The second source of distrust about self-reports—that people will not tell the truth about their feeling is more difficult to answer. The seriousness of this objection is partially a function of one’s prior beliefs concerning the amount of lying that occurs in ordinary sample surveys. Since it is impossible to ascertain the amount in any precise fashion, it must be relied on several different strategies to estimate the possible effects of lying [15]. This is the side effect of questionnaires and why voluntarily written reviews were chosen as a data source.

The world's top travel site "TripAdvisor" is being used as source for user's review. To analyze the reviews, the scope of research must be set [67].

Over the past twenty years, web-based media stages have developed rapidly as clubs and business entertainers. Starting as websites that deal with customer availability, web-based media destinations have evolved into huge and discrete business environments.

A large number of these places have become huge information cultures that bundle appreciation from the information impression of the customers of the exercise on the web, for example, love, rate, label or follow, which they usually adjust through income from commercial funds. The new advancement of business benefits that depend on information other than that created by engaging customers (e.g., abandoning customers and reclassifying the situation of web-based media stages in the computerized economy. [P]web-based media are a variant of business phases (e.g., music, travel, contact with companions, appointments, etc. [68].

The TripAdvisor Evolution Examples TripAdvisor is a stage that features a range of motion-related indecency, the majority of which have been linked to customer-generated audits and suggestions by custom partners. Customers take part on the stage by sharing their encounters, posting reviews, and commenting on a variety of locations or vacation destinations. It was founded in 2000 as an internet travel engine. TripAdvisor has grown to become the world's largest web-based travel destinations, making an indelible mark on the exercise industry [68].

It is the first search social network site to combine 20 million monthly visitors, it has 6 million members. There are over 10 million reviews and opinions travel related. A "featured a TripAdvisor article in 2007 (TripAdvisor June 15, 2007), referring to another recently introduced feature of the motion network The presentation of this element marked a greater success in developing TripAdvisor towards greater availability. It enabled TripAdvisor customers to connect with their organizations and offer travel dates, demonstrating a distinctive step towards wide-ranging informal communication. TripAdvisor began in 2007, collecting information on objections in order to expand and capture important content and information, TripAdvisor began contacting other online media stages.

The stage published its Local Picks application on Facebook in the fall of 2007 and in the spring 2008 on myspace easy e sharing of food feelings between companions, demons of

finding the best restaurants in each area, by people who were there effectively and went viral quickly. As a result, TripAdvisor increased its café presentation from fewer than 100,000 foundations to almost 500,000 in around 15 months. Urban Communities I Visited and Traveler IQ Challenge were applications run on Facebook and Myspace. From Myspace (and Facebook) applications, TripAdvisor applications on this platform had the opportunity to access a public profile for accessible data, including records of companions, interests, photos and collections, videos, as well as status and temperament [68].

First, the number of reviews were limited to one hundred per building, as this is some buildings' maximum available reviews. Second, the text is copied from the site leaving out the name, date and any other unnecessary words that might affect the outcome of the analysis. Third, after all the one hundred reviews belonging to a building are combined in one document, the document is then spell checked and corrected due to many spelling mistakes written by people. This step ensures outcomes are more reliable.

The tool used in this is an online tool named “Voyant-tools” (Figure 3.20) [69]. In this tool, an unlimited word count can be analyzed, and word repetitions, relations, correlations, and many more data is given as a result.

The 10 chosen buildings along with their word count from 100 reviews were collected (Table 3.1). After the text is analyzed, the top 10 descriptive words (Table 3.20) and the top 10 architecture features (Table 3.3) are counted.

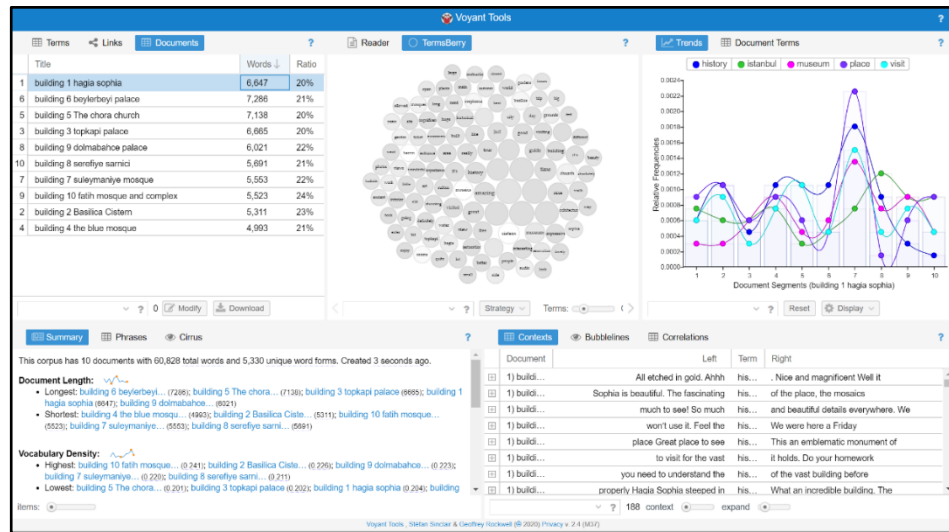


Figure 3.20. Voyant tools interface [69].

Table 3.1. Total word count per 100 reviews.

Total word count per 100 reviews		
Building number	Building name	Total word count
1	Hagia Sophia Mosque	6,647
2	Basilica Cistern	5,311
3	TopKapı Palace	6,665
4	The Blue Mosque	4,993
5	The Chora Church	7,138
6	Beylerbeyi Palace	7,286
7	Süleymaniye Mosque	5,553
8	Şerefiye/ Theodosius Cistern	5,691
9	Dolmabahce Palace	6,021
10	Fatih Mosque and Complex	5,523

Table 3.1 combines all the top ten different words mentioned from the ten chosen buildings and lists them under categories, which means different words with the same meaning are joined together under one. And words only mentioned by two or less buildings are eliminated. This process makes sure only the most relevant words are kept.

Table 3.2. Top 10 descriptive words in all buildings.

Top 10 descriptive words in all buildings		
Order	Word	Count
1	Beautiful	410
2	Amazing	194
3	Nice	162
4	Great	146
5	Good	132
6	Interesting	84
7	Impressive	78
8	Stunning	62
9	Lovely/wonderful	39
10	Peaceful	30

Table 3.3. Top 10 architecture words in all buildings.

Top 10 architecture words in all buildings		
Order	Word	Count
1	Scale	127
2	Mosaic	122
3	Statue/sculpture	71
4	Lighting	42
5	Dome	29
6	Space/Hall	25
7	Gardens	24
8	Columns	23
9	Courtyard	16
10	Marble	15

Usually, an approach of Mehrabian and Russel (Figure 3.21), is used to assess the human environment experience [70]. The dimensions in the approach are pleasure, arousal, and dominance. This is highly used in the field of environmental psychology.

They connected pleasure to evaluation or broad terms such as good and bad. Arousal indicated activity such as alertness to drowsiness. Finally, dominance meant potently or the feeling of control.

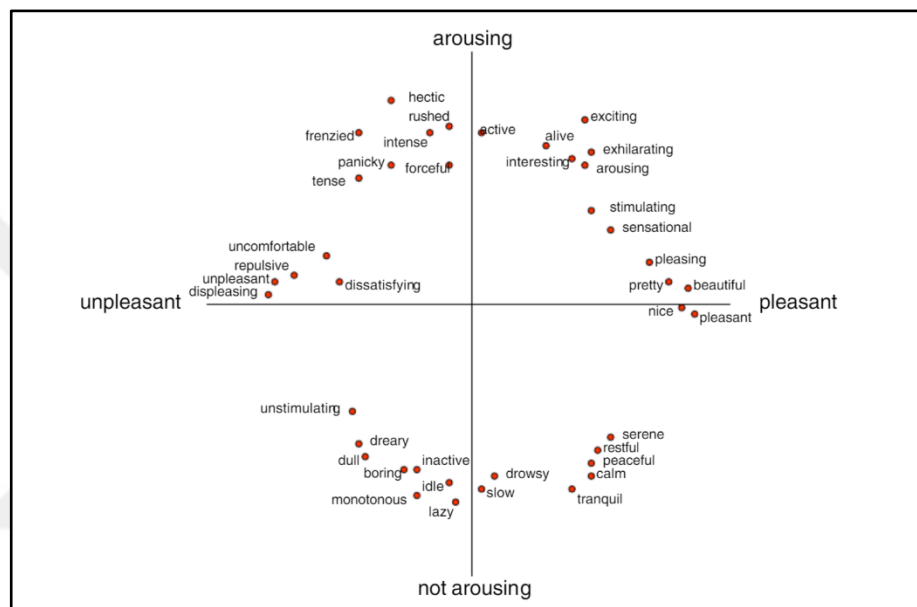


Figure 3.21. Example of an environmental psychology model with two axes that show various adjectives to indicate the level of pleasure and arousal [70].

This type of studies is important, because for example, if contemporary buildings, which are supposed to be designed to show qualities such as new, clean and distinct, when presented to the public, they described them as plain, hard and impermeable. This choice of words tells us many things regarding their feelings towards these designs.

This approach shows how many adjectives and terms can lead to a single feeling. A similar approach was used to categorize the outcome of the data analyzed. A total of 1337 times the top ten descriptive words were mentioned, while the top ten architecture features were a total of 494.

To further understand the terms and categorize them correctly, definition from the Cambridge dictionary were used. Beautiful or “having an attractive quality that gives pleasure to those who experience it or think about it”. Amazing “making someone feel

extremely surprised”. Nice “pleasant, enjoyable, or satisfactory”. Great “very good”. Good “very satisfactory, enjoyable, pleasant, or interesting”. Interesting “holding one’s attention”. Impressive “causing someone to feel admiration or respect”. Stunning “extremely beautiful or attractive”. Lovely/wonderful “attractive and beautiful, or pleasant and enjoyable / extremely good”. And finally, peaceful means “calm and quit” [71].

According to their definitions all the words eventually described only three aspects in the visitor. Beauty, self-actualization, and spirituality.

Beauty was the response of 81 percent of the people who wrote descriptive reviews. While 16.8 percent felt a self-actualization type of experience, and 2.2 percent had a spiritual one.

In terms of architectural features, whether it was paintings, mosaics, columns, or statues, art was the major focus of visitors. Where 43.7 percent of the people that mentioned features have commented about it. The overall scale of the space was mentioned 30.8 percent among the rest, and the lighting 8.5 percent. Domes were also a prominent feature indicated by 5.9 percent, gardens 4.9 percent, and courtyards 3.2 percent. The least mentioned but nonetheless notable, is the marble, where 3 percent mentioned it.

4. RESULTS

After acquiring the data in the previous chapter, further analyses connecting each aspect and wellbeing is required to reach a full conclusion. After obtaining quantitative results from qualitative data, the quantitative results will now be interpreted to produce qualitative results.

4.1. EMOTIONS RELATIONS

4.1.1. Beauty and Wellbeing

In these times of pervasive misery, blind violence, natural or environmental disasters, speaking of beauty can be inconsistent, inconvenient and even provocative ... But our duty is to examine the two mysteries that constitute the ends of the living universe: On the one hand, evil; on the other, beauty [72].

Beauty can mean a variety of things. The first most apparent, is the natural environment beauty. When choosing a location to build, an added landscape view is worth a lot of money. According to the research published in 2017 by Colin Capaldi, engaging with natural beauty increases one's satisfaction towards life [69]. This is mainly due to the fact that humans tend to respond positively when they connect with any living things because they have a need for relatedness. Extending interactions beyond human-to-human ones just like in connecting with the natural world increase the source of relatedness. Another reason for an increase of wellbeing when around nature, is that nature gives a feeling of belonging to a larger functioning system. This is called the biophilia hypothesis [72].

The Biophilia hypothesis, suggests that people long and seek for nature and other life connection. The psychoanalyst Erich Fromm who is a German-born American first mentioned this term in his book in 1973 "Anatomy of Human Destructiveness". In the book is this definition of the term "the passionate love of life and of all that is alive." After Erich, an American biologist named Edward O. added in his book "Biophilia" in 1984 that people tend to do that due to a genetic basis [73].

Aesthetic experiences can arise from the appreciation of human artifacts, such as artworks (e.g., poetry, sculpture, music, visual arts, etc.) or aesthetic natural objects like sunsets or mountain vista [74].

Man-made objects and structures therefore can also be considered a form of beauty alongside nature. Many sources can be the cause of a pleasing experience such as museums, galleries, and churches. These experiences are considered by psychologists as rewarding process that can cause pleasure. Art can even specifically raise the psychological wellbeing and promote health. If we return back to the biophilia hypothesis, engaging with an object result in a mindfulness meditation.

The actual process of how these beauty engaging experiences affects the emotional state varies among scientists.

The most apparent and scientific answer is using neuroimaging studies. When images are analyzed before and after seeing beautiful and ugly rated images, it was found that the beautiful images caused an activity in the orbitofrontal cortex. The orbitofrontal cortex is part of the prefrontal cortex. The OFC along with other parts in the PFC work with the striatum (nucleus responsible for voluntary motor control), making a network for processing of reward information, reward related learning, goal-oriented actions, and habit formation [75].

According to the research by Leder concerning information-processing of aesthetics, it was found that the pleasure produced by aesthetics depends on the cognitive understanding of the artwork [75].

If the artwork is understood and there is low ambiguity about it, the probability of positive aesthetic emotion increases.

Not only does artwork increase positive emotions but also increase wellbeing and thus promotes health by reducing stress according to Clow and Frehoy research [76]. In their research, 28 individuals visited an Art gallery in London, and it was found out that their cortisol levels significantly reduced afterwards.

In Another research conducted by Mastandrea in 2018, 64 females visited the art museum in Rome, their blood pressures were measured before and after the visit. After the museum visit, their Systolic blood pressure was reduced, which results in a relaxing effect [77]. These

arts and artifacts allow recollection of memories and which improves the mood and self-worth [78].

4.1.2. Self-actualization and Wellbeing

The second category of words visitors used to describe historical locations they visited, are words indicating a new explored space. These emotions are under the umbrella of the term self-improvement or self-actualization.

Self-determination theory assumes that humans have a natural need to pursue self-actualization (i.e., gain knowledge, seek challenges, explore the environment) [79].

Hedonia (seeking pleasure and comfort) and eudaimonia (seeking to use and develop the best in oneself), these two are approaches influence wellbeing. In a study done in 1996, it was proved that activities that improve self usually increase satisfaction and wellbeing [80].

4.1.3. Spirituality and Wellbeing

Spirituality definition is, multilayered and can have a variety of experiences as explained by research in India. Meaning and purpose of life, belonging, connection, and acceptance are all some experiences of spirituality [81].

Most often faith, religion and spirituality are thought to be synonyms. Research have indicated that spirituality decreases stress and thus contributes to an increase in wellbeing. Spirituality can be religious and non-religious. Following a religion and a belief of a greater power is a religious type of spirituality. Many others find this peace in doing positive acts that feed their souls and gives them a sense of satisfaction. This is an example of a non-religious spirituality. Other examples can be through yoga, music, and sharing problems [82].

After getting to know the social and cultural effects have on well-being, it also seems that architecture may probably share some of the reasons behind these positive effects.

The impact of architecture, urban space and landscape on people's mentality has been accepted in environmental psychologists' studies, but there is not enough evidence in terms of design style and quality impact on experience, perception, and affection. Architecture, urban spaces, and landscape all affect people's mentality as seen in the previous explanations [83].

4.2. FEATURES STUDY

4.2.1. Scale - Space

Few people are able to feel indifferent to the massive scale of St. Peter's in Rome, or to the intriguing beauty of Ronchamp. The responses are similar because [I think that] there are not many past experiences that can really prepare you for these two buildings. Architecture is concerned with producing an effect in people. Space is then, described as having an effect on people and... this must be one of the main concerns of architecture [84].

All spaces, and places in architecture are designed to give a feeling and an experience. Psychologists have seen a positive effect on people who constantly change locations, and settings. In 1960 a term called "situational personality" was given to this condition. Each and every different environment permanently changes our brains and nervous systems [85].

Space is perceived through premotor neurons that map the visual space. Constantly changing a space from an ordinary setting to a non-ordinary setting cause a new premotor neuron perception [86].

A study in the UK proved a linear relationship between satisfaction and large houses after following British families before and after changing their houses [86].

Another study investigated crowded homes and mentioned that the increase size of the space positively affects wellbeing [87].

4.2.2. Art

In general Art has always been thought to cause happiness and many research results prove this outcome. One might raise the question what is considered art? and whether taste has an effect on the results. It is explained that a good taste has no particular effect. it is rather the perspective that matters most.

“From the vantage point of well-being theory, our taste is “good” if it leads us to activities that fit our sense of purpose and generate the upward spiral to the higher end of our hedonic range. It is “bad” if it undermines our well-being” [88]. In 1982 about 10,609 people were interviewed ages ranging from 25-74. After 916 men and 600 women died, a higher mortality rate was found in people who rarely visited a museum, cinema, or art exhibition. While no effect was measured in people that visited a theatre, church or sport event [89].

Another study was attempting in Scotland to examine the relationship between health and satisfaction and participation in culture and sport events. It was found that people who attended cultural event were 60 percent healthier than those who did not.

The art council in the UK had similar results after making the study, where 60 percent of the people who visited a cultural site in the last month, reported better health [89].

Arts and culture have always enriched our lives and this is the most significant role they play. If so, then Architecture is the largest form of art.

4.2.3. Lighting

A well-lit atmosphere requires a good environment understanding. Knowing the capabilities of the visual system, visual proportions, and light properties is crucial. Eye adjustment to light levels, color characteristics, and compositions of light must also be studied along with brightness contrast and luminance gradient. After having all the previous knowledge, it must also be taken into consideration that lighting the surrounding along with the central object is equally important [90].

what makes daylight better than all the fluorescent and electric light sources, is the visual response humans have created to it through evolution. People are affected by all the types of

light psychologically and physiologically. Daylight improves mood, lowers fatigue levels, and reduce eyestrain.

In a school in North Carolina, teachers and student underwent an experiment regarding daylight effects. They found that teachers that spent over a year in the school felt better mentally and physically. While the children had less dental decay, had improved eyesight and immune system and increased growth [91].

4.2.4. Domes

One of the most important features in the architectural of mosques is the centralized dome. Mosques in different era each have their own different style. A dome is a hemisphere roof usually built from wood, glass, metal, concrete, or stone. Before the Islamic architecture, romans used to use this hemisphere shape to cover their buildings like the Pantheon. The first Islamic domed structure is the Dome of the Rock in 691. Afterwards, during the different Islamic empires like the Fatimids, Mamluks, and the Ottomans, domes started becoming the main feature in mosques and public buildings.

The importance of the domes lies in it being a symbol to signify power, or a powerful city, or as a focal assembly point.

Earlier the domes were situated above the Mihrab to indicate the Qibla direction to Mecca. Later on, it moved to the central position above the prayer hall.

The symbol of it is considered to be a vault to heaven by some scholars, just the way gardens surrounding Islamic structures usually represent paradise.

Even in the byzantine times, the dome represented standing in the middle of an open field and the sky above surrounding every side [92].

Another aspect in using domes is the acoustic advantage of it. According to a study done by the University of Dammam, four dome shapes were used a variable parameter with a fixed mosque volume. The acoustic effect of each was tested, two of the domes showed a positive acoustic impact while the other two showed a negative one [93].

4.2.5. Gardens

Healing qualities of nature is known for many centuries. Recently in the twentieth century it is considered a medicine and an alternative to drugs or technology-based treatments. More healing gardens are emerging in an attempt to improve health. Reduction of after surgery recovery time, improvement of cancer patient's health, reduction of hypertension, are some of the few evidences from studies showing how healing nature can be.

Not only does nature have psychological improvements but it has shown physiological ones also. Another compelling study on 8-10-year-old children living in New York was conducted. The study found that children with indoor or outdoor gardens were more able to deal with stress and had lower amounts of it than children with no vegetations [89]. Even positive improvements in the mood of people who constantly visit gardens is reported in one study [94].

The last evidence is from a study of a healing garden in a California children hospital. The garden had positive effects on users where 54 percent said they were more relaxed, 24 percent said they were more refreshed, and 18 percent more positive. The visits to the garden lasted as little as five minutes at a time [95].

4.2.6. Columns

Columns is a worldwide important architecture feature. It has changed many times throughout history, from structural to functional, aesthetic, or symbolic ways.

All these changes along centuries created various forms of columns, the most known are the orders or the Egyptians, Greeks, and Romans.

In historic buildings they are mostly visible and were used as structural or functional, with some aesthetical elements to it. As the same column moves from century to another, the perspective it is perceived in changes. Since columns in the twentieth century changed to be a construction pillar hidden in walls. Nowadays those historic columns are seen as a decorative artistic object [96].

4.2.7. Courtyards

A courtyard is a common architecture design applied thousands of years ago throughout the world. It served many purposes and was used and adjusted to serve many functions. Being located in the central site of an urban fabric is what gives a courtyard its importance. The space is filled with many different functions from social to leisure. The open space is surrounded by porticoes, and contains some plants, water features, and a shaded area. These courtyard structures provided climatic, and visual protection. The geometry of the space is made to provide the best climate possible [97].

This type of space design has been used nowadays to create a healing environment. In 2010 a group of architects suggested the placement of healing components in a courtyard with a building, this allows natural light to enter all the spaces. The availability of all the shade, water features, vegetation, wind, and colors create a positive effect on all the human senses.

In hospitals, courtyards were mostly used as gardens, to add or increase healing properties in patients [98].

In a study in a Kuwait house, the impact of an interior courtyard was investigated. The public was asked about the advantages and disadvantages of a courtyard house. Most of the responses, about 78.5 percent said that living in a courtyard house has positive effects on wellbeing physically and mentally [3].

4.2.8. Marble

Marble is a widely used stone used in architecture and sculptures. It is wanted across the world because of its final polished appearance. The stone has a high potential in the polishing and grinding processes. One main reason marble is considered pleasant is because of the variety of hues and colors it has. Not only does it contain different colors but also a range of veins and striation that create a wide range of patterns as well. It was said that these patterns form a sort of an abstract image joining different slabs of marble creates a painting or a unique configuration. These extraordinary visual effects created by the marble stone were mentioned in old Byzantine script to resemble a flowing river, or a green meadow [4].

5. CONCLUSION

In Conclusion, people's reactions to their surrounding are either—positive or negative.

At the point when it made an interpretation of these ideas into functional measures and gathered methodical information, it found proof that without a doubt there do seem, by all accounts, to be somewhere around two kinds of sentiments and that the contrast between the quantity of good and contrary sentiments is a decent indicator of an individual's general rating of his own satisfaction.

Also, it expected that these two sorts of sentiments would have a methodical relationship to an individual's sensations of prosperity or bliss. Such assumptions are from general utilitarian ideas that have been normal since the times of the Greek rationalists.

Text analysis is a research method used by researchers to research news published in various media.

To limit the scope of this research, the city of Istanbul was chosen due to its rich historic environment. Ten buildings are chosen belonging to three different architectural styles. Byzantine, early/classic Ottoman, and late Ottoman -Baroque - Rococo style. The three architectural styles are all involved and focused on aesthetically pleasing construction.

Examples TripAdvisor is a stage that features a range of motion-related indecency, the majority of which have been linked to customer-generated audits and suggestions by custom partners. Customers take part on the stage by sharing their encounters, posting reviews, and commenting on a variety of locations or vacation destinations around the world. Founded in February 2000 as an internet travel search engine, TripAdvisor has grown to become one of the world's largest web-based travel destinations, making an indelible mark on the exercise industry [59].

First social networking tool combining 20 million monthly visitors, 6 million members and 10 million travel reviews and opinions, "featured a TripAdvisor article in 2007 (TripAdvisor June 15, 2007), referring to another recently introduced feature of the motion network The presentation of this element marked a greater success in developing TripAdvisor towards greater availability. It enabled TripAdvisor customers to connect with their organizations and offer travel dates, demonstrating a distinctive step towards wide-ranging informal

communication. TripAdvisor began in 2007, collecting information on objections in order to expand and capture important content and information,

The tool used in this is an online tool named “Voyant-tools” (Figure 3.20) [59]. In this tool, an unlimited word count can be analyzed, and word repetitions, relations, correlations, and many more data is given as a result.

The 10 chosen buildings along with their word count from 100 reviews were collected. The text is analyzed, the top 10 descriptive words and the top 10 architecture features mentioned in each building were counted.

After acquiring the data in the previous chapter, further analyses connecting each aspect and wellbeing is required to reach a full conclusion. After obtaining quantitative results from qualitative data, the quantitative results will now be interpreted to produce qualitative results.

The positive feedback given was translated into an increase in wellbeing in three aspects; 81 percent through beauty encountering, 16.8 percent self-actualization, and 2.2 percent due to spirituality. These are from many architectural features; the most influencing feature is art taking 43.7 percent. While from the scale of space 30.8 percent, from lighting 8.5 percent, from gardens 4.9 percent, from courtyards 3.2 percent, and finally from marble at 3 percent.

The results indicate that not every historical building can improve wellbeing. A building must possess a combination of features that allow it to have a positive effect on the users and visitors.

As mentioned previously, heritage and culture benefits are gained when the story behind them is known. Story telling brings people closer towards the culture and history. Pleasure produced by aesthetics depends on the cognitive understanding of the artwork, if the artwork is understood the probability of positive aesthetic emotion increases.

While the world is going through overpopulation and homelessness, perhaps some may raise a question of why keep old useless buildings rather than replace them with housing.

This research proves that historical buildings are a major addition to a society similar to sports. Keeping cultural buildings adds to a country’s tourism and value, and increases the overall wellbeing of visitors.

It was stated before those arts and culture were kept and preserved to enrich our lives and this is the most significant role they play. If so, then Architecture is the largest form of art, and historical architecture is the biggest culture we have.

In conclusion, this research states which features in historical buildings increase wellbeing. A building should contain at least some of the following features; large scale, mosaic art, sculptures, natural lighting, domes, gardens, columns, courtyard and marble material. Most importantly, the story behind the building must be understood for a full experience.



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