

Temporal and Spatial Evolution of Architecture

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Abstract

Architectural styles are dynamic phenomena in which different walks of life work together to find common ground. Trends, directions, innovations or the waning interest in old styles have led to the emergence of new styles over time. In this way, relationships between culture, influences, region, and time could be established after considering them chronologically and regionally. In this research, the transformations and changes of architectural movements over time and space were examined. In addition, influential historical events are given in relation to the periods in which the movements emerged in order to form an idea. In order to do this, 76 major architectural styles, 4 urban planning principles that influence architecture, 2 philosophical approaches in architectural theory, and 4 significant architectural practices in the world were brought together, listed chronologically, and the geographical locations where they emerged and developed were evaluated. For this reason, architectural movements were examined on the basis of design patterns, locations and time period. However, it was intended to draw attention to important historical events in the periods when architectural movements emerged. In addition, scenarios for possible future architectural styles were created.

Keywords: Architectural styles, architectural characteristics, architectural development, trend.

Mimarinin Zamansal ve Mekânsal Evrimi

Öz

Mimari stiller, farklı yaşam kesimlerinin ortak bir zemin bulmak için birlikte çalıştığı dinamik olgulardır. Trendler, yönler, yenilikler veya eskilere olan ilginin zamanla kaybolması, yeni tarzların ortaya çıkmaya başlamasına neden olur. Kültür, etkiler, bölge ve zaman arasındaki ilişkiler kronolojik ve bölgesel olarak incelendikten sonra kurulabilir. Bu araştırmada, mimari akımların zaman ve mekân içinde geçirdiği dönüşüm ve değişimler incelenmiştir. Ayrıca, etkili tarihsel olaylar, bir fikir oluşturması açısından akımların çıktığı dönemler ile ilişkilendirilerek verilmiştir. Bunu yapabilmek için, dünyadaki 76 büyük mimari akım, mimariyi etkileyen 4 kentsel planlama ilkesi, mimarlık teorisinde 2 felsefi yaklaşım ve 4 önemli mimarlık pratiği bir araya getirilmiş, kronolojik olarak sıralanmış, ortaya çıktıkları ve geliştikleri coğrafi konumlar değerlendirilmiştir. Bu nedenle mimari akımlar, tasarım kalıpları, konumlar ve zaman dilimi bazında incelenmiştir. Bununla birlikte, mimari akımların ortaya çıktığı dönemlerdeki önemli tarihsel olaylara dikkat çekilmek istenmiştir. Ayrıca, gelecekte ortaya çıkması muhtemel mimari akımlara ilişkin senaryolar üretilmiştir.

Anahtar kelimeler: Mimari akımlar, mimari karakteristikler, mimari gelişim, eğilimler.

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1. Introduction

Historical events and circumstances influenced the development of the characteristics of architectural styles. Moreover, some of the styles emerged either with the development of the construction and production methods used as a reaction to another style or as an improved version of an earlier style. This diversity contributed to improvements in living spaces in terms of standards, comfort, and aesthetics.

According to Leach (2017), art lives longer than artists and architecture lives longer than architects. Art and style have always been the indisputable expression of the ideal of beauty of a productive age. The usual task of artists is to create new forms that reflect the artistic forms of their era, based on the forms they have inherited (Wagner, 2019). However, there is a shift between the history of architecture and plastic visual arts. This is even more pronounced today. This is because old styles are imitated much more carefully (Sitte, 2020). However, any criticism of architectural will, no matter how obsessively repeated, falls into romanticism if there is no formal style or method (Karatani, 2006).

The development curves of the different eras of the world do not necessarily coincide. People and generations differ from each other. Slower development in one place is faster in another. Directions can fork and one direction can evolve. The parallelism between the individual arts is not exactly a parallel (Wölfflin, 2018). Architecture is shaped by legislation, technology, preferences, tradition, and usage. Therefore, it provides assessments for the broader historical conditions under which they were produced and used (Leach, 2017).

This study aims to compare all globally significant or commonly recognized and used architectural styles and movements chronologically and regionally according to their motivation for their emergence to the present day. The aim is to examine both how the architectural styles concerned have influenced each other and how they have been influenced by each other, historical events, and regional conditions. The mutual influences of the styles and cultures relevant to architecture and cities are therefore presented in this article. An analytical approach to architectural cultural trends in a temporal and regional context has been chosen.

2. Material and Method

According to Ching et al. (2017), our post-19th-century tendency to view history through the lens of the nation-state often complicates our understanding of such global imagery. Moreover, the tendency of historians, and often architects, to nationalize, localize, regionalize, and even microregionalize history - perhaps as a significant act of resistance — can blind us to historical synchronicity and interconnectivity in the face of today's increasingly hegemonic global economy. For this reason, the study looks at architectural movements from a global scale and framework.

Important references in architectural history research have examined the history of architecture in terms of chronological and the same and differentiating characteristics of architectural styles. However, these references have mostly focused on the historical development of architecture, detailed descriptions of architectural movements, or examples thereof. These sources do not contain such a concentrated and comprehensive comparison of architectural movements. This study presents comparisons based on chronology and architectural trends. In addition, it presents the relationships of the architectural movements to each other, their interaction with the time periods of the movements, and the impact of the movements on possible future trends from a collective perspective. However, it provides a comprehensive and complete comparison of the architectural movements with their publication dates, origins, motives, brief characteristics, keywords, and events in their time period.

Various sources also made different assessments and classifications of periods and trends in different ways. One source classifies the classical tradition and the Renaissance, classicism, neoclassicism and the Enlightenment, the 19th century and industrialism (Collective, 2019). Monier (2006) examined them from primitive architecture through tradition, classical antiquity, the Middle Ages, modernism, neoclassicism and contemporary architecture. Dempsey (2019) has examined art movements such as avant-garde, modern art, new order, new disorder and beyond the avant-garde.

In this study, 76 globally significant or widely recognized architectural styles, 4 urban planning principles that influence architecture, 2 philosophical approaches in architectural theory, and 4 significant architectural practices are evaluated. In selecting architectural trends, preference was given to dominant trends that have been influential in most parts of the world, are still influential today, and have an important place in the history of architecture. In this context, the styles were examined in terms of the periods and places in which the architectural styles emerged. They were also compared in chronological order, taking into account the countries in which they emerged and the time periods. In this study, five steps were taken to analyze all the data.

First, to understand and evaluate the architectural styles in this study, the period in which they flourished, the region in which they emerged, the motivation, and the characteristics of the styles were analyzed in chronological order. Charts were created to examine all styles based on these categories that influence architectural styles (Table 1).

Based on the data obtained in the study and the information from the literature, the motivations and characteristics of the architectural styles were identified as follows. There are 11 motivations. The motivations of architectural styles: development, learning, necessity, reaction, religion, preservation, revitalization, architectural quest, recycling, cultural curiosity, and economy. There are 47 characteristics. The characteristics of architectural styles; monumental, classical, cultural, exotic, avant-garde, transitional, natural, historic preservation, blend, universal, modern, high-tech, traditional, eco-friendly, nostalgic, simple, asymmetrical, symmetrical, harmonious, geometric, proportional, chaotic, dramatic, functional, sustainable, climatic, practical, abstract, flexible, order, stylized, nostalgic, simple, dynamic, formal, structuralist, exotic, rational, irregular, transitional, unpredictable, eco-friendly, universal, pure, unique, novel, rich.

Secondly, the styles were evaluated according to the region in which they flourished. All countries in which architectural styles are native were represented with the numbers of how many styles emerged from the country of origin (Table 2). In this way, the distribution of all styles, the contribution of the countries to architecture, and the connection between them were determined. Thirdly, it showed how many architectural styles emerged in the same period and how they were distributed. (Table 3). Next, we examined how the styles were influenced by historical events, taking into account 50-year periods (Table 4). In other words, events that were influential worldwide during these fifty years and their effects were discussed.

Finally, after all major architectural styles are categorized and they are thoroughly reviewed on a global scale, assumptions are made on the future architectural styles based on the trends so far. Within this context, seven different future scenarios are prepared within the six determined titles of important historical events that occurred in the past, motivation, reaction, development, style characteristics, and countries. There is no specific statistical analysis to provide an answer to a question about future trends and styles. So, all the assumptions, frequencies of the data, and percentages are calculated and interpreted thoroughly to create the assumptions for scenarios according to all-time (all periods) information and the highest percentages of the data.

3. Overview of All Architectural Styles in the World

3.1. Chronological Overview

The styles are presented in Table 1 in chronological order according to their date of origin and the period in which they were used. Based on the evaluations, it can be seen that there are a certain number of countries that are home to some architectural styles that were very influential over a long period of time in wide areas. When styles are examined chronologically, symmetrical, detailed, and monumental features were considered significant in the earlier phases of history. Ancient Roman and Greek architecture, dating back centuries, is commonly considered a classical style. It is worth noting that the idea of classical architecture originated years ago, has been used for centuries, and is still as influential as ever. This shows that classical styles were designed in response to people's needs, taking into account perception, genius loci, perceived esthetics, and usability as well as functionality. Thus, architectural endeavors that respond to needs and expectations in an adaptive manner became

architectural styles and influenced large areas in different parts of the world. Moreover, today it can be seen that the new styles are far removed from details and esthetic aspects and focus more on functions and meeting needs. The newer styles are also more focused on the world, nature, and the environment (Wölfflin, 2018).

People developed and perfected all forms according to their abilities, expressions, and views until they corresponded to the ideal of beauty of their time. Each new style was based on the previous one. However, it combined new constructions, new materials, new tasks, and designs of people with the existing ones. In this way, the styles developed step by step until they created new forms (Wagner, 2019).

People do not only enjoy what is obvious. Because after a short time, people move away from what is obvious and demand what is never backed up with concrete information. Many eras have moved away from each other in this way (Wölfflin, 2018).

Table 1. Chronological list of architectural styles

(Aymelek & Yıldırım, 2015; Eleishe, 1994; Çizgen, 2012; Lampariello, 2018; Chapman et al., 2014; Designing Buildings, 2024; Aytıs & Polatkan, 2010; Taşdemir, 2011; Wilkinson, 2015; Margolin, 2003; Dempsey, 2019; Erdoğan & Sorguç, 2011; Yeler, 2012; Garlan, 1995; Craven, 2016; Asabere et al., 1989; Curtis & Curtis, 1996; Benovolo, 1977; Sadler, 2005; Söderqvist, 2011; Belluschi, 1955; Karakiewicz, 2006; Murphy, 2016; Wang & Yu, 2012; Bardzinska, 2017; Bridge, 2019; Howard E., 2019; Roth, 2019; Weston, 2015; Taricat, 2016; Erginöz, 2012; Hasol, 2019; Ching et al., 2017; Benyus, 2003; Çakmaklı et al., 2022, Turan et al., 2021, Vitruvius, 2018)

ARCHITECTURAL STYLES						
Style	Date	Origin	Motivation	Motivation Category	Characteristics	Characteristics Category
Ancient Egyptian	BC. 3000-200	Egypt	The form of ancient art evolved with time	Religion	Massive walls, flat roofs, posts and lintels, columns, sunbaked mud bricks and limestone, pyramids, temples, tombs, symbolic ornaments, plant motifs	Monumental, symmetrical, harmonious
Ancient Greek	BC. 590-25	Greece	Development in construction methods and use of permanent materials (stone) instead of ephemeral materials (wood, mudbrick, thatch)	Development	Orders (Doric, Ionic, Corinthian), columns and decorations (entablature, pediment), intricate details	Classical, structuralist, symmetrical, formal, harmonious
Roman	BC. 100-AD. 395	Italy	New construction techniques, large public buildings	Necessity	Arch, dome, and vaults	Classical, structuralist, symmetrical, formal
Byzantine	AD. 527-565	Eastern Roman Empire	Transfer of the capital from Rome to Byzantium and religious reasons	Religion	Realistic nature, use of brick instead of stone, heightened dome, square base, mosaics, ecclesiastical	Classical, structuralist formal rich, stylized
Moorish	AD. 8 th -16 th C.	North Africa and the Iberian Peninsula	Developed as articulated Islamic architecture (mostly mosques and fortifications)	Development	Variety of arches (Horseshoe arches, crenelated arches), domes, intricate calligraphy, vegetative design, courtyards, decorative tilework, muqarnas (honeycomb vaulting)	Cultural

Romanesque	AD.11 ^t h C.	West Europe France Germany	Combining features of Byzantine and Roman. Romanesque architecture can be seen as a base for Gothic architecture.	Development	Large spaces, massive quality (solidity and strength), heavy, thick walls, small windows, dimly lighted, round arches, sturdy pillars barrel vaults, decorative (plants and flowers) arcading	Classical, structuralist, symmetrical, formal
Gothic	AD. 1122- 1220	France	Religious reasons. In order to increase the influence of Churches	Religion	Large stained glass windows, pointed arches, ribbed vaults, flying buttresses, clustered columns, intricate sculptures, ornate decorations, stone structures, rose windows, pinnacles	Classical, structuralist, symmetrical, formal
Renaissance	AD. 1426- 1521	Italy	Reaction against Medieval architecture	Reaction	Revitalization of the classical forms used by ancient Greeks and Romans, the façades of the buildings are symmetrical to the vertical axis, columns, arches, and domes	Classical structuralist, symmetrical, proportional, geometrical, formal.
Tudor	AD 1485- 1558	England	Transition from Gothic to Renaissance	Development	Known as Perpendicular Gothic in elements of Renaissance architecture with a Gothic style. Brickworks and Half timbering, steeply pitched gable roofs, masonry chimneys, embellished doors, grouping of windows	Classical, structuralist, symmetrical, formal
Orientalism	AD. 15 th C.	West Europe	Increasing interest in Eastern especially Chinese and Indian Architecture	Cultural curiosity	Chinese and Indian cultural architectural details are static, uniform, passive, emotional, chaotic	Cultural, exotic, rational, chaotic
Mannerism	AD. 1520- 16 th C.	Italy	Emphasis on the development of society. The search for answers to the problems of the period.	Development	Increased ornamentation, individuality, elegance, relief. It is based on the renaissance.	Modern, avant-garde
Palladianism	AD. 1556- 1738	Italy	Influenced by Ancient Roman Architecture and Vitruvian ideas.	Revitalization	Strict classical style, proportional and symmetrical buildings, and porticos, Corinthian columns, decorative motives (masked faces or scallop shells), pediments over doors and windows	Classical, structuralist, proportional, symmetrical, formal
Baroque	AD. 1624- 1746	Italy	Religious reasons and Reaction against religious reformation (Counter-reformation)	Religion	Exaggerated motion, clear details in order to produce drama and grandeur curving forms, massing of elements, new explorations of form, light and shadow, distortions and illusions, decorative elements	Classical, structuralist, symmetrical irregular, formal, dramatic
Industrial Architecture	AD. 1709- 1797	The United Kingdom	Emerged during the Industrial Revolution.	Necessity	Design for industrial buildings, factories, warehouses, train stations, retail stores. New construction materials and metal frames	Transition, symmetry, classical

Rococo	AD. 1730- 1764	France	Reaction against Baroque architecture	Reaction	Vertical lines were avoided, curved lines, soft angles, elegant and ornate furniture, ornamental mirrors, elaborate ornamentation (scrolls, vines, shell shapes), asymmetrical, ivory, pastel, and gold-based colours, airy and light	Natural, asymmetrical, classical, simple
Genius Loci	AD. 1731- 1764	England	Reaction to Baroque architecture	Reaction	Designing according to the protective spirit of a place considering atmosphere, environment and nature.	Natural, asymmetrical, simple
Neoclassicism	AD. 1748- 1817	Italy	Derived from palladian architecture as a reaction against the excesses of Rococo.	Reaction	Ancient Greek and Roman architecture, the grandeur of scale, sober colours, huge structures with symmetry, minimal decorations, columns (particularly doric), blank walls	Nostalgic, classical, simple, pure
Restoration	AD. 1786- 1886	The United Kingdom	Emerged from the necessity of renovation for buildings	Necessity	Process of returning a building from the Medieval ages to its former state by using appropriate methods	Historical preservation, rich, natural
Romantic Arch Romanticism	AD 18 th C.	England	A reaction against the rational and classical ideals of the style of architecture of the past	Reaction	Strong emotions. Exotic, simple, classic, and interesting shapes. Ancient-looking structures. Emphasis on folk art, nature and traditions	Exotic, classical, mixture
Polite architecture (The Polite)	Late 18 th , Early 19 th C.	England	Reaction against vernacular architecture	Reaction	Rejects traditional structure styles, national or international architectural fashions, styles and conventions, aesthetics, and decorative (bricks, metals, plastics, glass). Stylistic and romantic features.	Universal, mixture
Eclecticism Eclectic architecture	AD 19 th and 20 th C.	France, England, Germany	Around the same time period as Neo-Classical architecture. Born from the need for novelty	Necessity	Universal, a mixture of different architectural styles while each style reflects its features (harnessing of styles to create something novel and original), traditional motifs and styles, decorative, ornaments	Mixture, novel
Beaux-Arts	AD. 1803- 1903	France	Taught at the Ecole des Beaux-Arts in Paris and emanated from France.	Learning	Classical and Neo-classical details, grandiosity, elaborate ornamentation, hierarchy, symmetry, arched doors and windows, subtle polychromy	Classical, structuralist, symmetrical, formal, order
Neo Gothic	AD. 1833- 1889	England	Desire for Gothic style revitalization and reuse of the same features	Revitalization	Gothic architectural style (pointed arch, flying buttresses, tall buildings, etc.)	Nostalgic, classical, structuralist, symmetrical, formal
Art Nouveau New Art Stil 1900	AD. 1833- 1907	England	Reaction against chaotic, formal, and imitative historicism	Reaction	Asymmetrical shapes, arches and curved forms, mosaics, stained glass, organic lines, linear rhythm, synthesis of ornament and structure	Natural, asymmetrical, simple, novel

Prefabricated Architecture	AD. 1836-1944	England	Emerged from the necessity of reducing the amount of labour, quick construction, less waste, standardization, and consistency,	Necessity	Panelized and skeletal structure, load bearing elements, precast cladding	Avant garde, simple
Victorian	AD 1837-1910	The United Kingdom	Evolved from Gothic style with the addition of French, Italian, Tudor and Egyptian styles	Revitalization	Dollhouse-like (gingerbread houses), bright colours, beautiful rather than functional, two-three storeys, wood/stone exterior, decorative trim, textured walls, one-story porch, steep/multi-faceted/mansard roof, towers	Asymmetrical
Art and craft	AD 1850-1900	England	Reaction against Industrialization. Inherent beauty of the material principle	Reaction	Revival of craftsmanship, inspired by nature, porches and fireplace, low pitched roofs, exposed beams, simplicity, utility and beauty	Cultural, nostalgic, simple, natural
Skyscraper	AD. 1854-1931	The United States	Increase of population density of urban areas led to the necessity of more buildings. Taller buildings brought the solution.	Necessity	Steel frame, structure of columns and girders, curtain walls, modern lines, ornate decorations	Modern, avant garde
Antiscrape	AD. 1877-1955	England	Reaction against exaggerated style of restoration	Reaction	Restoring historical buildings without scraping plaster with 'existing fabric', reverting to some point in its past	Historic preservation
Functionalism	AD 1896	The United States	Designing a building based on the purpose of it, nothing more	Necessity	Minimum or no ornamentation or decoration, display of raw material, design or craftsmanship is not important, it is possible to design identical, industrially-produced elements as long as functional aspects are fulfilled	Simple, structuralist
Vienna Secession	AD 1897	Austria	Reaction against Conservative and Classical architecture, closely related to Art Nouveau	Reaction	Rejects historicism, no unifying characters, decorative and functional approaches, geometric forms, abstraction	Modern, avant garde, geometric, abstract
Modern Architecture (Modernist Architecture)	AD 1950s - Present	Europe and the United States	Influenced by the Enlightenment and a desire to break away from historical approaches	Development	Emphasis on volume, simplicity and clarity of forms, industrially-produced materials (steel, concrete, glass), minimal ornamentation	Avant-garde, functional, formal, flexible, simple, asymmetrical
Rationalism	AD. 1900-1928	Italy	It argues that Baroque architecture uses the concept of beauty by deceit and that classical beauty will be with honesty and rationality.	Reaction	It is distinguished by thoroughness and simplicity of form. The main patterns it uses are geometric shapes: straight lines, squares, rectangles.	Avant-garde, symmetrical, geometrical, formal, simple
Mimetic architecture (Novelty)	AD 1900-1950	The United States	When cars became widespread, roadside architecture started to be used for advertising to passing cars	Economy	Mimicking the function of the building or designing buildings in the shape of the product it is sold there	Modern, avant garde

Rustic	AD 1900- 1950	The United States	Influenced by the American arts and crafts style, to be able to protect natural areas by building basic facilities	Necessity	Wooden, rough, aged, casual, natural, and organic materials (wood and stone), nature-inspired textures, earthy colours, unpretentious, heavy, dark, and lack of modern materials. Landscape and buildings are in harmony.	Natural, simple
Futurism	AD. 1909- 1933	Italy	Motivated antihistoricism	by Reaction	Chromaticism, long dynamic lines, the notion of speed and motion, concrete, glass, and steel material, unique forms, sharp edges	Modern, avant garde, asymmetrical, dynamic, high-tech
Organic Architecture	AD. 1909- 1944	The United States	Promoting harmony between man-made structures and the natural surroundings	Preservation	Designs are shaped by the nature of the component material, texture, or color. Harmony with the surrounding landscape not imitation of it, ornamentation as an integral part of the structure, clear forms. Shelter, space, nature, peaceful	Natural, asymmetrical, simple, unique, harmonious
Nationalist Architecture Neoclassical Turkish Style	AD. 1910- 1930	Türkiye	Using local and old architectural examples by reviving them	Revitalization	Wide eaves, pointed arch, dome, column, muqarnas, tile covering	Nostalgic, classical, cultural
Cubism	AD 1912	France	Rejection of traditional techniques and preparation of Modernism. Displaying an object from many angles and points of views at the same time	Development	Transparency, asymmetry, sharp and clean lines, often cuboid shapes, subtle colors (brown or gray), modern materials, simple geometric exterior, open space interior	Natural, asymmetrical, geometric, formal, modern, simple
Expressionism	AD. 1913	Germany	Formal innovation inspired by natural biomorphic forms and new technologies	Development	Distorted forms, curved geometrics, vertical or horizontal dramatic effects, innovative building techniques using concrete brick, steel and glass, organic, sculpture-like and symbolic forms	Natural, asymmetrical, geometric, formal, avant-garde, simple, abstract
Constructivism	AD. 1913	Russia	After the Russian Revolution of 1917, new social demands and industrial tasks required of the new regime	Necessity	Incorporation of lines, cylinders, cubes and rectangles, steel structures, advanced technology, mechanistic dynamic, minimal, geometric forms, spatial	Avant garde
De Stijl Neo-plasticism	AD. 1916- 1924	The Netherla nds	Reaction against decorative excess. Aimed at the development of Modernism	Reaction	Straight lines, squares and rectangles, strong asymmetrical, primary colour with black and white, aesthetic balance	Modern, avant garde, harmony, geometric, asymmetrical, abstract
Purism	AD 1918	France	Born from a criticism of Cubism, Post-cubist style.	Reaction	Objective, universal, reject over embellishment, rational forms, simple and pure, geometric shapes, golden ratio	Mixture, simple, pure
Bauhaus	AD. 1919- 1937	Germany	Composition of craftsmanship and technology. Pioneering	Development	Industrialised Arts and Crafts, function and directness over	Cultural, asymmetrical,

			modern design developed from Arts and Crafts		ornamentation, geometric forms, flat roofs, modern materials, simplified colours (white, gray and black), no decorative ornamentation, cubic shapes, some rounded corners and balconies	simple, practical
Organism Architecture	AD 1920-1950	Germany	It was born against eclecticism. It is the advanced stage of organic architecture.	Reaction	It creates architectural forms from the motion scheme. The interior is reflected in the exterior.	Modern, avant garde, asymmetrical, dynamic
International Style Internationalism	AD. 1923-1932	The United States, Europe	Search for an honest, economical, utilitarian architecture without decorations	Reaction	Steel and glass, less visible reinforced concrete, visually weightless, open interior spaces, flexible, regular, volume of space, rectilinear forms, light, no ornamentation or decoration	Modern, avant garde
Surrealism	AD 1924-1959	France	Emerged from the quest of illogical and startling effects	Architectural quest	The juxtaposition of uncommon objects, a combination of elements not normally found together	Modern, avant garde structuralist
Art Deco	AD. 1925-1934	France	Desire for a modern style for details and decorations	Development	Strong vertical emphasis, stucco, concrete, stainless steel, decorations with opaque plate glass, chrome and aluminum, everything points up, zigzag lines, lightning bolts, stylized images from nature (waterfalls, sunrise, palm tree leaves)	Modern, natural, asymmetrical, simple, geometric
Minimalism	AD. 1929-1988	Spain, Germany	Origin is based on Modernism from reduction, simplification and unification and influenced by Japanese architecture	Development	Simple design elements, no ornamentation or decoration, bare essentials, pure geometric forms, clean lines, repetition for a sense of order and unification, plain materials	Modern, avant garde, simple
Dymaxion	AD. 1930-1967	The United States	Invented to address shortcomings in home-building techniques and constructing sustainable autonomous mass-produce single family dwellings	Architectural quest	Geodesic dome, space frame energy-efficient, sustainable	Modern, natural, avant garde
Googie Architecture	AD 1930	The United States	A different interpretation of Futurism	Architectural quest	Tailed, boomerang shaped, angled and cantilevered structures and designs	Modern, avant garde, asymmetrical, dynamic
Streamline Architecture	AD 1930s	The United States	A new aspect of Art-Deco	Architectural quest	Long horizontal lines, curved forms. Especially transportation buildings.	Modern, simple, geometric
Brutalism	AD. 1954	England	Emerged during post-war era as part of reconstruction projects, a form of modernism	Development	Bare building materials (raw concrete and brick), visible structural elements over decorative design, fortress-like, visually heavy, monolithic, blocky, large-scale	Modern, avant garde structuralist

Organic abstraction	AD 1940-1950	France	The idea of rounded lines and shapes are more comfortable and familiar to people. Reaction against figurative art.	Architectural quest	Inspired by nature, abstract rounded lines and shapes, (smooth, free-flowing), diverse, conserving, flexible	Natural, Simple, sustainable
Biomorphism	AD 1950	England	Focus on the naturally occurring patterns or shapes	Learning	Inspired by nature, abstract, organic shapes, vaguely spherical	Natural, simple
Archigram	AD. 1958-1969	England	The aim was exploring extreme alternatives to urban design	Learning	Modular, colourful, high-tech, mobile and miniaturised alternatives, walking cities, living pod, instant city	Modern, avant garde
Metabolism	AD. 1958-1972	Japan	Post-war Japanese movement with the idea of buildings and cities should be designed imitating living beings (metabolisms)	Development	Flexible, modular, natural, practical, futuristic	Modern, natural, avant garde, simple
Land Art	AD. 1960s-1970s	The United States	Reaction to industrial development and technological speed. To make nature visible and to raise awareness about nature.	Reaction	Working in harmony with nature with artistic materials and transferring them from nature to art. digging in nature, burying in the ground, soil, manure, stone or human-made eco-friendly objects in the gallery space	Modern, avant garde, natural
Structuralism	AD. 1960-1972	The Netherlands	Reaction against Rationalism	Reaction	Logical pattern, modern, changeability, user democracy, space-structuring constructions, visible skeleton, flexible, extensible, liveable	Modern, avant garde
Regionalism	AD. 1960-1984	Anonymus	Reaction against internationalism of modern architecture (and lack of identity)	Reaction	Inspired by culture, design by knowledge related to a region, modern buildings materials and technologies. Regional climate and material	Cultural
Neo-Futurism	AD 1960s	The United States	Belief to a better future	Development	Impossible forms created with new materials and high tech	Avant-garde, modern, asymmetrical, dynamic, high-tech
Postmodernism	AD. 1963-1980	The United States	Reaction against austerity and formality of modern architecture (and lack of variety)	Reaction	Curved forms, decorative elements, asymmetry, bright colours, humor, fragmentation, complex	Modern, avant garde, asymmetrical,
Megastructure	AD 1964	Japan	A response to the need of larger spaces and big structures with multiple functions	Necessity	Modular, massive, repeating components, interconnected structures, a huge building or connected buildings	Avant garde
Neo Rationalism	AD. 1966-1993	Italy	Reaction against modernism and postmodernism	Reaction	Both historical and recent forms, shapes and plans	Mixture, universal
Vernacular Architecture	AD 1970	The United States	Emerged as the pure response to individual's or society's needs, architecture without architects	Necessity	Local and cultural structures and materials, often built by the users, trial-and-error testing, less specialization, tailored to wants and needs, low-tech	Cultural, climatic, functional

Neo expressionism	AD 1970	West Europe and The United States	Reaction against Minimalism and expressionism	Reaction based on	Asymmetrical, sculptural, innovative materials and methods, unconventional roofs, vivid colors and contrasts, abstraction, motion and emotion, recurring formal themes, organic and non-geometric forms	Traditional, simple
Earthship	AD 1970s	The United States	Recycling and conservation of energy	Recycling	Recycling materials (old tires, soil, stone, glass bottles etc.) and renewable energy sources (solar panels, wind turbine, water purification etc.)	Natural, simple
Green Architecture (Green Design)	AD. 1970-1993	The United States	Aiming green and sustainable architecture	Preservation	Eco-friendly, natural, local materials, sustainable, efficient use of space, using natural resources, renewable energy...etc	Natural, asymmetrical, simple
Kinetic Architecture	AD. 1971-1985	The United States	The idea that architecture should develop dynamic solutions against the stagnation of architecture.	Reaction	Products that are dynamic, adaptable, can be added, reduced or even eliminated.	Modern, avant garde, dynamic
High-Tech	AD. 1971-1992	The United Kingdom	To enhance Modernist architecture, link between modern and postmodern architecture	Development	High-tech, avant-garde, functional as well as aesthetics, sheer surfaces, lightweight materials, skeletal structures, colourful pipework	Modern, avant garde, asymmetrical, high-tech
Alternative Architecture	AD. 1972-2004	Mexico	Aiming sustainability and environmentalism, balance between nature and design	Preservation	Using recycled material, economical, different from accepted standards, national	Environmentalist approach, natural, simple, sustainable, eco-friendly
Deconstructivism Neo-modernism Post-structuralism	AD. 1977-1989	The United States	Opposed to traditional perception of architecture and ordered rationality geometry	Reaction	Fragmentation, non-rectilinear shapes, distorted and dislocated elements, surface manipulation	Modern, avant garde, asymmetrical, unpredictable
Biomimicry	AD 1990s	The United States	Inspired by nature not only forms but also processes, models and systems	Learning	Nature-inspired, natural, based on systems, sustainable, imitate nature in terms of systems and processes	Environmentalist approach, natural, simple
Parametricism	AD 1990s	The Netherlands The United States	A successor to Modern and Postmodern architecture.	Development	Design by numbers and algorithms	Avant-garde, modern, geometric, high-tech
Blob (blobitecture)	AD 1995	The United States	Computer-aided design tools allowed flexible and wide design exercises	Development	Curved and rounded buildings, organic and aerodynamic forms, soft, free-flowing, freeform surfaces, pre-fab plastic, modern, inflatable buildings	Modern, avant garde, asymmetrical
Parasitic Architecture	AD 2015-Today	The United Kingdom	Developed to offer solutions to urban problems in densely populated areas by attaching buildings to existing larger ones	Development	Low-cost, attached to larger structures, pod-like additions, scrap material, efficient space use, inclusive, feasible, affordable (for disadvantaged), small scale,	Simple

PRINCIPLES OF URBAN PLANNING THAT INFLUENCE ARCHITECTURE						
Principles	Date	Origin	Motivation	Motivation Category	Characteristics	Characteristics Category
The City in the Landscape/ Townscape (The New City)	AD. 1944- 1961	England	Emerged as an alternative to Modernist style	Preservation	Aesthetic subjects and systems, organic cities using aesthetic	Natural, asymmetrical, Simple
Segregated Planning	AD 1929	The United States	Necessity to separate pedestrian and vehicle traffic and ensure pedestrian safety	Architectural quest	Causeway/elevated streets, covered pedestrian crossings, pedestrian and functional areas away from vehicle traffic	Avant garde
Garden City	AD. 1875- 1919	The United Kingdom	Idea of creating self-sufficient cities with greenbelts, proportionate areas of residences, industry and agriculture	Necessity	Large scale planning, limited size cities, personalization of homes. Open spaces, public parks, radial pattern, central civic institutions, rural belt (agricultural recreational area), peripheral ring for industry	Natural, symmetrical, geometric, simple
City Beautiful	AD. 1893- 1909	The United States	Shaping American urban landscape similar to European manner	Necessity	Balanced composition, recreational areas, open spaces, diagonal boulevards, limited building heights	Classical, structuralist, symmetrical, formal
PHILOSOPHICAL APPROACHES IN ARCHITECTURAL THEORIES						
Theories	Date	Origin	Motivation		Characteristics	
Contextualism	AD 1960	The United States	Reaction architecture		Structure should be designed (form and features) in response to urban and natural environments, adaptive, genius loci, context-appropriate architecture	
Feng Shui	Since BC. 4000	China	To situate the human-built environment with an invisible form of energy exist in nature or to harmonize living spaces with the environment.		The belief that everything has energy. Inspiration is nature. Design ensures movement and flow of energy. Five elements (fire, water, tree, metal, soil) and colors, environment, directions, history, forms and geographical factors in nature are important in this philosophy.	
SIGNIFICANT ARCHITECTURAL PRACTICES						
Practices	Date	Origin	Motivation	Motivation Category	Characteristics	
Grand Tour	AD. 1705- 1840	Europe, The United States	Privileged young (architects, scholars, writers...) travelled across Europe in search of art and cultural experiences as part of their education.	Learning	Cultural exchange, Impressions and thoughts on Classical art and architecture were recorded through painting and sketching	
The Picturesque	AD. 1774- 1812	England	Reaction against palladian architecture and neoclassicism	Reaction	Asymmetrical, natural design approach, combined with landscape, awe-inspiring, irregularity of form, colour and light, cottages	
Taste	Early AD 18 th C.	England	Simplicity and purity of classical architecture influenced this style. Revitalization of Palladianism	Revitalization	Successful design is possible with morality and specific artistic features. Parallel to Palladianism. Sense of grandeur	

Heritage AD. Greece Emerged to preserve Preservation Made law
 1894- structures with their
 1984 original form

3.2. Country-specific Review

All important architectural styles that come into question are classified according to the countries of origin of the styles (Table 2). This shows how many styles can be found in which countries. This is important because it provides information on how countries have contributed to the history of architecture and its development. It also provides an opportunity to examine the correlation between the number of architectural styles and the countries' level and pace of development. At the same time, the architectural styles, their motivations and construction techniques provide information about the needs, expectations, lifestyles and cultures of the countries in which they originated.

When looking at the table, it can be seen that countries with a deep-rooted architectural history follow either a classical or traditional approach. Other countries with more recent architectural traditions, on the other hand, follow a trend towards modern styles. In particular, the United States, which is home to the most styles in this context, is the country where most styles are considered modern. However, countries that are home to only one or a few styles also have a tendency to develop modern features. Table 2 shows that most styles originate from the United States, the United Kingdom and England. France and Italy follow them in terms of numbers. It should be noted that styles that are local and have not spread to other places or countries have not been included in this evaluation. It is worth noting that all of the major and influential architectural styles originated either in the United States or in one of the European countries. The United Kingdom and England have adopted more natural trends.

Table 2. Number of styles by country of origin of architectural styles (Original)

Country	Styles			Dominant Characteristic
Eastern Roman Empire/1 style	Byzantine			Classical
Egypt/1 style	Ancient Egyptian			Monumental
Greece/1 style	Ancient Greek			Classical
France/10 styles	Eclecticism	Surrealism	Beaux-Arts	Classical
	Gothic	Art Deco	Cubism	
	Organic abstraction	Rococo	Purism	
	Romanesque			
Italy/7 styles	Palladianism	Neo Rationalism	Roman	Classical
	Neoclassicism	Mannerism	Rationalism	
The United States/25 styles	Modern Arch.	Green Arch.	Postmodernism	Modern
	Segregated Planning	Biomimicry	Neo expressionism	
	Skyscraper	Blob (blobitecture)	Deconstructivism	
	City Beautiful	Contextualism	Organic Arch.	
	Functionalism	Vernacular Arch.	Dymaxion	

	Mimetic Arch.	International Style	Parametricism	
	Earthship	Neo-Futurism	Streamline Architecture	
	Googie Architecture	Rustic	Kinetic Architecture	
	Land Art			
The United Kingdom/7 styles	Industrial Arch.	High-Tech	Garden City	Preservation, Natural
	Victorian	Restoration	Brutalism	
	Parasitic Architecture			
England/13 styles	Genius Loci	Archigram	Prefabricated	Natural, Classical
	Romanticism	Townscape	Arts and Crafts	
	Polite architecture	Tudor	Anti-scrape	
	Biomorphism	Eclecticism	Neo Gothic	
	Art Nouveau			
Europe/6 styles	Orientalism	Internationalism	Neo expressionism	
	Romanesque	Modern Architecture	Byzantine	
The Netherlands/3 styles	De Stijl	Structuralism	Parametricism	Modern
Germany/6 styles	Bauhaus	Minimalism	Expressionism	Modern
	Eclecticism	Romanesque	Organism Architecture	
Türkiye /1 style	Nationalist Architecture			Classical
Russia/1 style	Constructivism			Modern
Spain/1 style	Minimalism			Modern
Japan/2 styles	Metabolist Arch.	Megastructure		Modern
Mexico/1 style	Alternative Arch.			Natural
Austria/1 style	Vienna Secession			Modern
North Africa/1 style	Moorish			Cultural
Chine/1 style	Feng-Shui			Harmonious
Anonymous/1 style	Regionalism			Cultural

Table 3 shows that almost all styles have emerged in the last 500 years. If we take a closer look at the last 200 years, we see that most of the styles emerged during this period. The most remarkable observation in this evaluation is that the countries that lead the architectural foundations, traditions, and trends for a millennium, both before and after Christ, do not have much influence on the later improvement of architecture.

Table 3. Country-specific architectural styles by time period (Original)

Time period	Number of styles	Country
BC	2	Egypt, Greece
0-500	1	Italy
500-1000	2	Eastern Roman Empire, North Africa
1000-1500	5	France, Italy, England, Germany, Europe
1500-1600	2	Italy
1600-1700	1	Italy
1700-1800	7	Italy, France, UK, England
1800-1900	11	France, US, UK, England, Austria, Germany, Europe
1900-1950	21	Italy, France, US, UK, England, The Netherlands, Türkiye, Russia, Germany, Spain, Europe
1950-2000	23	England, US, UK, Italy, Mexico, Japan, Anonymous, Europe, The Netherlands
2000-2020	1	UK
TOTAL	76	

3.3. Historical and Chronological Review

In order to be able to examine the effects on architecture, periods of 50 years are defined, and important historical events of this time are noted. Finally, it is examined whether there is a connection between the architectural styles and the historical events in the same period. Table 4 shows the defined time periods and important historical events and their possible influences on the styles and the relationships between them are examined below.

It is thought-provoking to confront one age with another. Nevertheless, each public sphere has a unique revelation of its national virtues in its art history (Wölfflin, 2018).

Table 4. Influential historical events and architectural styles in the same period (Original)

Population (million)	Time Period	Style	Country	Important Historic Events
14-100	BC 3000-200	Ancient Egyptian	Egypt	BC 9000: Gobekli Tepe was built BC 3000-AC 476: Ancient Age BC 3500 The first wheeled vehicle BC 3500 The invention of writing BC 3000-2000: Stonehenge was constructed. BC 1250 The Abu Simbel was built. BC 490: Battle of Marathon, Greeks resisted Persian invasion and survived Foundation of Western civilization was laid.
	BC 590-25	Ancient Greek	Grece	BC 327: Alexander the Great launched Indian campaign and his empire extended to the Indus River, Asian culture and European classics were linked. BC 202: Hannibal was defeated by the Romans. The Roman culture and civilization expansion BC 27: The Roman Empire was established. BC 1: Arches, vaults and domes were constructed after the introduction of cement (Rome) BC 1 Vitruvius' book, De architectura
180	0-100	Roman	Italy	1.C: Christianity began 165-180: Antonine Pandemic

190-200	500-600	Byzantine	Eastern Roman Empire	200-700: Migration Period in Europa 200-1519: Classic and Postclassic Era 300-900: Dark Age 476: Beginning of European Middle Ages (Fall of the Western Roman Empire) 541-542: Plague of Justinian 7.C: Islam began
210-220	700-800	Moorish	North Africa and the Iberian Peninsula	735-737: Variola pandemic in Japan 750-1300: Islamic Golden Age
265-320	1000-1100	Romanesque	Europe France Germany	
320-340	1100-1150	Gothic	France	900: Agriculture was introduced into Europe 1000: Growth of European towns 1088: The first modern university was founded in Italy Bologna
350-385	1400-1450	Renaissance	Italy	1337-1453: Hundred year wars 1347-1351: Black plague 1350-1650: The Renaissance in Italy 1440: Printing Press 1453 or 1492: End of the Middle Ages and the Modern era began (1453 Fall of Constantinople/ 1492 Christopher Columbus discovered America)
		Orientalism	Europe	
385-480	1450-1550	Tudor	England	16-18.C: Age of Discovery 16.C: The Protestant Reformation
	1500-1550	Mannerism	Italy	
480-545	1550-1600	Palladianism	Italy	1520: Variola pandemic in the world
545	1600-1650	Baroque	Italy	1618-1648: Thirty Years Wars 1629-1631: Plague in Italy 1642-1648: British Civil War 1640-18.C: Scientific Revolution 1665: Plague in London
610-720	1700-1750	Industrial Arch..	UK	1650-1780: The Enlightenment Age 18-19.C: Industrial Revolution 1700-1950: Age of Imperialism
		Rococo	France	
		Genius Loci	England	
		Neoclassicism	Italy	
720-900	1750-1800	Restoration	UK	1750-1917: Age of Revolution 1765-1783: American Revolution 1776: Declaration of Independence in The United States. 1789: French Revolution 1775-1783: American War of Independence 1789: End of New/Modern era and Beginning of Contemporary age
		Romanticism	England	
		Polite Arc.	England	
900-1.200	1800-1850	Eclecticism	France, England, Germany	1790-1850: Romantic Era 1817-1923: Cholera pandemic
		Beaux-Arts	France	
		Neo Gothic	England	
		Art Nouveau	England	
		Prefabricated	England	
		Victorian	UK	

1.200-1.625	1850-1900	Skyscraper	US	
		Arts and Crafts	England	
		Garden City	UK	1853: The invention of the elevator
		Antiscrape	England	1885: The first car with oil/gasoline was produced by Benz. 1885: 3. Plague pandemic
		City Beautiful	US	1861-1865: American Civil War
		Vienna Secession	Austria	1880-1945 Machine Age
		Functionalism	US	Late 1800's: Yellow fever pandemic 1889-1890: Russian Flu
1.625-2.500	1900-1950	Futurism	Italy	
		Organic Arc.	US	
		Expressionism	Germany	
		De Stijl	The Netherlands	
		Constructivism	Russia	
		Bauhaus	Germany	
		International S.	US	
		Art Deco	France	
		Minimalism	Germany/Spain	
		Dymaxion	US	1901- present: Age of Oil
		Brutalism	UK	1914-1919: World War I
		Modern Arc.	Europe/ US	1918-1919: Spain Flu 1918-1939: Inter-War Era 1919-1929: Roaring Twenties
		Rustic	US	1929-1939: Great Depression/World Economic Crisis 1939-1945: World War II
		Townscape	England	1940's: Jet Age
		Purism	France	1945- present: Atomic Age
		Segregated Planning	US	1945: The Atomic Bombing of Hiroshima and Nagasaki 1945-1991: Cold War
		Organic Abstraction	France	1950- present: Nuclear Age
		Mimetic Arc.	US	1950- present: Digital Revolution
		Cubism	France	1957- present: Space Age
		Surrealism	France	1971- present: Information Age
Nationalist Architecture	Türkiye	1996- present: Social Age		
Organism Architecture	Germany	2001-present: Big Data Age		
Googie Arc.	US			
Streamline Arc.	US			
Rationalism	Italy			

		Biomimikri	US	
		Archigram	England	
		Metabolism	Japan	
		Structuralism	The Netherlands	
		Regionalism	Anonymous	
		Neo-Futurism	US	
		Postmodernizm	US	
		Neo rationalism	Italy	
		Green Arc.	US	
		High-Tech	UK	1957-1958: Asian flu 1968-1970: Hong Kong flu 1969: First human landing on the moon 1981-present: HIV 1989: Tearing Down of The Berlin Wall
2.500-6.115	1950-2000	Alternative Arc	Mexico	
		Deconstructivism	US	
		Biomorphism	England	
		Contextualism	US	
		Megastructure	Japan	
		Vernacular Arc.	US	
		Earthship	US	
		Neo expressionism	Europe/ US	
		Blob	US	
		Kinetic Architecture	US	
		Land Art	US	
6.115-7.780	2000-2020	Parasitic Architecture	UK	2002-2003: SARS pandemic 2009-2010: Influenza pandemic 2011: World Trade Center Attack 2011: Great East Japan Earthquake 2014-2016: Ebola epidemic 2015- present: MERS epidemic 2020: COVID 19 pandemic 2020: Great fire in Australia

Analyzing the time before the birth of Christ, it could be found that outstanding buildings were erected. It is still a mystery how these structures could have been built with the technology and knowledge of the time. The ancient Greeks, who built fascinating structures, were concerned with safety and struggled to maintain their existence, so they may have ushered in a new era for the fate of architecture. The architectural features of that time are still considered captivating in the conditions we have now, thousands of years later. At the same time, the book 'de Architectura' was written by the Roman architect and military engineer Vitruvius and published in ten books on architecture. In these books, he explains architecture and the importance of the factors that influence architecture esthetically and practically, such as science, geometry, mathematics, meteorology, and so on.

As the Roman Empire reached its peak, the magnificent architecture of this period and its influences began to strongly influence the trends and styles that followed for centuries. Similarly, Gothic architecture emerged in the Middle Ages in the wake of increasing urbanization in Europe. It could be interpreted that the Gothic style was adopted as an expression of the rise of European cities. When the Renaissance movement began in Europe, art, and science reconnected and focused on people and their way of life. This cultural and artistic enlightenment inevitably had an impact on architecture and led to the Renaissance style and designs that were oriented toward the human dimension. The realistic and rational perspective led to rationalism in the 17th and 18th centuries. Also, during the Industrial Revolution, especially between 1700 and 1750, there was a strong diversification compared to earlier styles. Industrial architecture also emerged to meet the needs of this period.

In the years between 1750 and 1800, when revolutions took place in Europe and the United States, countries underwent many changes and transformations. During this period of radical change and development, emerging styles rejected the previous ones, and local trends or revitalizations of earlier styles began to emerge under the influence of their time.

Styles based on urban and regional development stand out clearly in the 50 years, especially between 1850 and 1900, which could be explained by the impact of three major epidemics in three different regions of the world and the consequences of the questioning of people's living conditions. In addition, the number of skyscrapers and multi-story buildings increased greatly, especially after the invention of the elevator and its widespread use in the industrial age.

Architecture was very dynamic and progressive, especially in the years 1900-1950, a period of 50 years in which most (twenty-two) architectural styles emerged. Nature and environmental, futuristic approaches became one of the key factors of the styles of this period. The designs were mostly simple, plain, and rather functional. The period between 1950 and 2000 is the second period in which most architectural styles emerged after the first 50-year period. The styles in this period were also related to nature and the environment and were more functional than the previous ones. It should be noted that the number of new architectural trends has decreased in recent times. This could be interpreted to mean that architecture has entered an unproductive resting or digestive phase after the rapid and extremely productive period of the last century.

The growing population also influences the styles and trends in the different eras. The more the population grew, the more styles emerged. As the population grew, functionality began to take precedence over esthetics. The peak in the number of styles that emerged was observed during the rapid population growth in the last century.

3.4. Future Assumptions and Scenarios

Architecture must be able to adapt to modern humans. To this end, all modern forms must meet the new requirements and new materials of our time. However, modern forms must take into account the practical and uninterrupted development of humanity as well as technical and scientific achievements (Wagner, 2019).

Although it is not possible to have exact ideas about the characteristics of future styles and how they will look and function, it might be possible to make some assumptions. Many factors influence the diversification of architecture. Examining these factors from the past to the present, we can make some assumptions, which are shown in Table 5.

Table 5. Potential future architectural style assumptions (Original)

Scenario	Date	Origin	Motivation	Motivation Category	Characteristics	Characteristics Category
1						Natural Eco-friendly High-Tech Mix

2			<i>Reaction Development Necessity</i>
3	2020-near future	Epidemics, environmental disasters, advances in science and technology	
4			
5			Avant-Garde Modern Natural
6		US UK France	
7			<i>Reaction Development Necessity</i> Avant-Garde Modern Natural <i>Natural Eco-friendly High-Tech Mix</i>

Scenario 1: Event-based scenario according to influences;

Looking at recent history, diseases, and catastrophes that lead to changes in architecture stand out. Therefore, it could be assumed that future styles will be influenced by the same reasons and evolve to provide solutions to the problems associated with disasters. The state-of-the-art technology and scientific progress would also affect the understanding of future styles. From this point of view, the following styles could have characteristics: “natural”, “environmentally conscious”, “high-tech” or a “mixture” of all of these.

Scenario 2: Motivation-based scenario;

The causes of all architectural styles, and how they emerged and changed over time, provide background information. Analyzing this information would allow us to make assumptions about the styles to come. Earlier styles usually arose out of needs, emerged in response to other styles, or developed versions of them. According to the data collected, the motivations of the styles can be identified in a ratio of 27.85% ‘reaction’, 21.52% ‘development’, and 16.46% ‘necessity’. In this data analysis, the top 76 architectural styles, 4 urban planning principles that influence architecture, 2 philosophical approaches in architectural theory, and 4 significant architectural practices were considered, so it seems possible that future styles will emerge from one of the three styles above and follow the same trajectory.

Scenario 3: Reaction-based scenario;

Throughout history, many styles have emerged in response to other styles or to significant events. Thanks to the contrasts, different perspectives, and different construction techniques have been used. With this in mind, it is not difficult to suspect that a new style will emerge in the near future in response to recent events in the styles in use today. A look at recent events and trends shows that they are quite diverse. It is therefore to be expected that future styles will be just as diverse as the events and styles in question.

Scenario 4: Development-based scenario;

All architectural styles influence each other directly or indirectly. This influence sometimes served as a model, other times a style was modified by improving the features currently in use. The newer styles offer a range of different features, so in the future, it is possible to develop new styles from those already in use by redesigning them.

Scenario 5: Feature-based scenario;

When taking a closer look at the styles, it could be characteristics of them vary to a great extent realized that they differ greatly in their features. Some also have common features that share ideas and views.

Throughout history, the characteristics of the styles can mostly be categorized as 'avant-garde' with 34.17%, 'modern' with 27.85% and 'natural' with 22.78%. Because of these values, it can be assumed that the following styles have one of these most common characteristics.

Scenario 6: Country-based scenario;

Throughout the history of architecture, 19 countries have pioneered and actively contributed to the development of the main influential styles, as they are home to most of these styles. The countries with a share of 30.66% in the US, 26.66% in the UK (16% in England, 10.66% in the UK) and 12% in France most often serve as the origin of these styles. For this reason, it could be said that the following styles may come from the above-mentioned countries in the future.

Scenario 7: Pandemic scenario;

The impact of the virus on public space as well as on architecture at various scales and urban and regional planning could not be ignored. Some metropolises have already converted their streets into cycle and pedestrian paths to reduce pollution and encourage more physical activity. Some leading architecture firms are focusing on the solutions for future post-COVID19 designs, with Bahadursingh (2020) and Harrouk (2020) suggesting that post-pandemic cities and buildings will look different from what we are used to. In the future, it is envisaged that antibacterial materials (such as copper) could become mainstream, regardless of cost. While gardens, balconies and terraces would increase to encourage green spaces, interiors would become more minimalist and wholesome. Floor plans would look completely different as adaptable, flexible, and lightweight designs are favored, and some ideas have already emerged. Adjustable walls, screens, and partitions would make it possible to turn a room into emergency accommodation. Sustainability has become one of the key points of all newer architectural styles. Self-sustaining urban agriculture, the planting of edible plants and the use of hydroponics, vertical green gardens (without pesticides) for ventilation and fresh air supply are on the agenda for future developments. Adhering to design principles to promote health and well-being in an ergonomic way is more important than ever in architecture. It is envisaged that automatic doors, voice-controlled elevators, cell phone-controlled hotel rooms, hands-free lights, and temperature control will be increasingly used to avoid further human contact and contribute to adaptive reuse approaches (Bahadursingh, 2020; Harrouk, 2020).

4. Conclusion and Suggestions

After the initial frenzy of art was over, people realized that everything that was created had no justification and was not appropriate at all. All these so-called styles were completely correct for their time. However, it was recognized that it was necessary to look for a new form of expression that was suitable for our modern times. It was recognized that the works of art that were created were the result of archeological studies (Wagner, 2019).

In the first centuries, classical approaches were preferred. Nowadays, it is notable that styles are taking a more eco-friendly approach by using modern, contemporary and natural infrastructures and features. It should also be noted that culture plays an important role, especially in recent decades. Some styles have been revitalized and inspired by the latter. It should be noted that the influences of each style are still present today and examples of each style can be found in different parts of the world. This is the reason why earlier architectural styles can still find their place years later when they are revived in different time periods. This could be taken as a sign that the right decisions were made when the styles, trends and techniques were created at the time the styles were created.

All the major architectural styles mentioned in this article originate from 17 different countries (Figure 1). From a global perspective, it is interesting to note that only a few prominent countries have developed important architectural styles that have been adopted in most countries. In ancient times, the designs of buildings were based entirely on human experience, and the buildings were magnificent and ornate. Even today, some of these buildings are still standing after all these years. Over time, the characteristics of the styles changed from classical styles to more modern, even futuristic and sleek styles. It has evolved from esthetics to functionality with necessities. Nowadays, a more sustainable and flexible approach is being adopted. The growing population is in direct proportion to the increase

in needs and demand. Due to increasing environmental problems, architecture has been forced to take a more sustainable approach to do its part.

There are various motivations for the emergence of styles, which are shown in Table 6. The most common motivation is 'reaction' to all major styles. This reaction is sometimes directed against another style or against a historical event that took place during the same period. The second most common motivation is 'development'. This development can either be the evolution of earlier styles or alternatives in terms of esthetics and functionality or advances in building techniques and materials. Development is followed by 'necessity' in terms of the frequency of motifs. These necessities usually relate to functional needs.

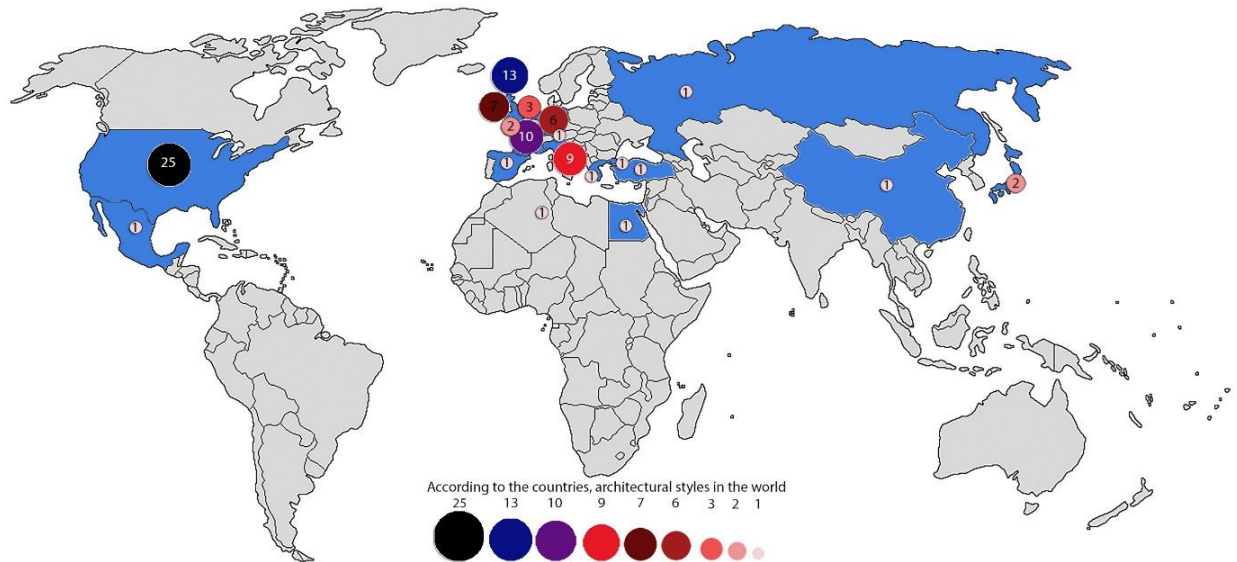


Figure 1. Depending on the country, architectural styles in the world (Original)

Table 6. Motives of architectural styles at all times (Original)

Motivation	Number of styles	Motivation	Number of styles
Development	18	Revitalization	5
Learning	5	Architectural quest	6
Necessity	13	Recycling	1
Reaction	24	Cultural curiosity	1
Religion	4	Economy	1
Preservation	5		

The characteristics of the styles are quite diverse and are shown in Table 7. Most styles are avant-garde, i.e. they brought novelty and originality to structures and adopted design ideas that were ahead of their time. The 'modern' styles are the second most common, as functionality has been emphasized over esthetics in recent years and sleek designs have become increasingly popular. 'Natural' is another important feature. The reason for this popularity could be the sustainable design approach that has been adopted over the last century. It is worth noting that features that are categorized as 'classic' and are still making an impact in different parts of the world are not as popular as one would have expected.

Table 7. Characteristics of architectural styles throughout the ages (Original)

Style feature	Number of styles	Style feature	Number of styles	Style feature	Number of styles
Monumental	1	Mixture	5	Universal	1
Classical	17	Universal	1	Pure	2
Cultural	7	Modern	27	Unique	1
Exotic	1	High-Tech	4	Novel	2
Avant-Garde	31	Traditional	1	Rich	2
Transition	1	Environmental approach	2	Climatic	1
Natural	21	Nostalgic	4	Practical	1
Historical preservation	2	Simple	29	Abstract	3
Asymmetrical	21	Dynamic	5	Flexible	1
Symmetrical	15	Formal	16	Order	1
Harmonious	1	Structuralist	15	Stylized	1
Geometric	10	Exotic	1	Unpredictable	1
Proportional	2	Rational	1	Eco-friendly	1
Chaotic	1	Irregular	1	Functional	2
Dramatic	1	Transition	1	Sustainable	2

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