International Journal of Advanced Research and Review

www.ijarr.in

# THE EFFECTS OF THE CONCEPT OF MINIMALISM ON TODAY'S ARCHITECTURE, EXPECTATIONS AFTER COVID-19 PANDEMIC

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## ABSTRACT

As a word, 'minimalism' originates from 'minimal, that transcribes as 'minimum' in French. Lexically, the word, 'minimum' is defined as 'the least or smallest amount or quantity possible, attainable or required.' The same word transcribes as 'the lowest digit to which a variable quantity may get reduced' in mathematics. (Turkish Linguistic Society).

In architecture and other disciplines of design, the minimalist movement has grown relatively different than the branches of art. Unlike art, architecture offers no absolute rights. When it comes to design, the functional meaning ascribed to the object is immense. Independent from semantic and functional yields of minimalism in quite a number of fields, function has always been compelling around the minimalist movement for designers.

Minimalist movement differs from other architectural movements in that it manifests itself from time to time at different periods and within other movements before it has grown into a movement and even after it. For this reason, as far as minimalist movement is concerned, it would be apt to look at the period before and after minimalist movement emerged as a branch of modernism. In this paper, postmodern minimalism will have been scrutinized as a movement.

**Key Words:** Minimalism, Architectural Venue, Design, Movement

## INTRODUCTION

### 1.1. Aim of the Study

The aim of this research is, by evaluating today's consumption society and examining minimalism, to eveal the reasons why minimalism is now preferred as a lifestyle rather than a trend.

We aim to show how the minimalist approach can change our living spaces for designers and consumers and to show the importance of this approach for consumers.

As an actuality of the subject expectations in architecture after Covid-19 pandemic is discussed as well.

### 1.2. Scope of the Study

In this study, how the people in the big cities with increasing population can increase their living standards and quality through minimalism and how minimalism was handled by architecture and interior architecture designers after economic and social crises was examined.

### 1.3. Method of the Study

Information gathering and analysis method was used throughout the study. Domestic and foreign literature review, review of theses and articles written, examination of written sources on art and architecture were made and databases on the internet were used.

In line with the obtained data, it has been tried to describe visually and in writing with the appropriat examples elected by considering why minimalizmin architecture and interior architecture emerged today and with what criteria they are designed.

### 2.1. Minimalism as a Concept

Conceptually, the word minimalism does not come up with a definition or description, so one can only take a look at as to how certain designers and philosophers have handled and evaluated it. According to Hegel, minimalism offers a sense of beauty that is plain but not necessarily meek as it is subtly interesting. According to Descartes, it is a common error to take complicated things for beauty. Here is how Kant expresses minimalism: Minimalism is a beauty that addresses and is appealing to reason, to absolute reason, to be precise. It is only pleasant to absolute reason. In addition to these names, Ludwig Mie van der Rohe, who made significant contributions to minimalism, describes it as follows: Minimalism is not lack of things, poverty or deprivation. On the very contrary, it is an intentional choice, it is to go for what is challenging, and to do more with less.

Minimalism as a concept, has derived from an article called ‘Minimalist’ penned by the British philosopher Richard Wollheim (1923-2013), who observed artists around him made effortlessly beautiful works of art.

An art critic, Barbara Rose, employed the word ‘minimum’ when referring to formation of a new art in her article ‘ABC Art’ published in ‘Art in America’ magazine in 1965. Since then, it is recognized that the word minimum has breathed life to minimalism as a concept.
Minimalism materialized in visual arts and music in New York State of the States in the late 60s. Minimalism as in art, is also known as minimal art, ABC art, minimalist art.

Minimalism concept was born and developed at times of modernism. As we get under the skin of it, we can argue that the initial steps were taken by the artist Kazimir Malevich’s works in the 1900s as well as the simple and subtle designs by the architect Mies van der Rohe of the time.

Minimal philosophy reveals itself at many different times both in art and design. It sometimes appears as a stance-against and sometimes as a requirement. even though minimal influences extend to different periods, it materializes in the 1960s as an art movement. After minimalist movement, a number of movements developed, yielding several works. This never suggests that that’s it for minimalism. Today, we still encounter minimalist designs and arts. Apart from art and design, there are some individuals amongst today’s consumer society who successfully adopts minimalist thinking, and builds their life on and around it, leading societal awareness.

Truly, minimalism is a movement that would not come to an end or become obsolete. Minimalist thinking is a concept that will always subsist in belief and lifestyle. In brief, it will, also in the future as it did in the past, survive and reappear in art, design, manufacturing technology, technological advancements and amongst individuals and communities. As a striking example, we do need minimalism simply because of scarcity and steadily declining sources and economic crisis around the globe.

**2.2. Minimalism in Architecture**

On taking a look at art and architecture from a functional perspective, it can be said that art contains no function but it entails an absolute dependence in architecture, and makes up its constituent. Making use of the least possible materials, minimalist art has secured a place in architecture in the purest, economic and simplest way and with functional designs as possible.

Under the influence of modernism, minimalism has found a place in art and literature in a context of literature in the 1960s. For its simplicity, subtle structure, formal structure and philosophy, it managed to make its presence felt not only in a limited time window when it got involved in literature but also in many other periods and times. Consequently, it would not be awkward to refer to existence of minimalist perspective throughout the history of architecture.

On looking at it from a philosophical perspective, minimalism has sometimes adapted itself to the pace of time in terms of art, architecture and many other disciplines, and sometimes materialized strongly or with a subtle iteration. In design and engineering, mankind has always mimicked the nature. Be it a design of a helicopter or a structure. Nothing is redundant or extra in nature. Just to give an example, structure of foam that is composed of combination of molecules on a minimum level has inspired quite a number of structures in a similar form for its surface tension and spherical form.

As a result of modern advancements, minimalist movement that has spread to architecture formed after rigid- hard structure of geometrical forms in the light of conceptual purism and formal restrictions. Back in the 1920, minimalism emerged as a sequel to modern movements, and in the 1960s it was recognized as a movement of art and design until the 1980s when it came up again. Minimalism subsists in several architectural structures from the past and still picks interest from designers today. Surprisingly, the depth and dimensional philosophy of minimalism prevails in our times when consumption is at its best.

As in painting and sculpture, minimalism appears in a form of abstraction in architecture, too. From this point of view, architecture goes hand in hand with art. There is a fine balance in this relationship though. Painting and sculpture embrace an understanding that goes from realism to abstraction. But looking at it in an architectural context, one notices that designers tart from abstraction and arrive at the reality. A structure designed by the architect is never independent from the abstraction in his/her drawings. For this reason, the architectural output gets its share from the abstract idea, which is the starting point at time of designing. The fact that base units are selected in design, a proportional formulation is created, and all of them are made rely on simplification followed by a mathematical order reveals relationship of the architecture with abstraction.

Economic collapse after world wars, severe casualties and immense losses on the face of human history made it much easier for the minimalist approach to be embraced. Modern architecture has converted instrumentally economic structure of the nature to a minimalist philosophy; stressed the idea of making an abstract mathematical space out of a minimal

thing, and highlighted and preserved naturalness of materials, emphasizing perfection of details. In light of these ideas, several architectures, particularly with the influence of Mies van der Rohe, adopted minimalist design concept.

### 2.3 Modernism and Postmodernism in Architecture

New inventions were discovered in 18th and 19th centuries in Europe, new discoveries and inventions enhanced productions and steam-powered machinery came into life, which, all in all, paved the ground for mechanization industry. Undoubtedly, this marks one of the most remarkable breakthroughs on the history of mankind. Way of life, socio-economic structures and cultural patterns changed in the postindustrial revolution. In light of these changes, new quests and pursuits occurred and innovations were unearthed. Needless to say, art and design took its share and went through radical changes in such an environment of major alterations.

Culturally speaking, modernism was born, with the influence of new discoveries in 19th century, from the idea that conventional art, literature, social life and daily life was no longer applicable. Art, politics, design, trade, social life, economic regime, educational systems, amongst others, went through changes and modernization in a period that is marked by modernism.

In parallel with modernization, innovations sought after in many disciplines were also sought after in architecture. The new order of things introduced and brought up new requirements that needed satisfying. In line with the advancing industry during modernization, people tended to migrate to big cities. Cities became more popular and crowded than before. New and quite large settlements materialized in most areas and they grew ona gradual basis. With the effect of population increase, big cities needed to grow and develop in response to influx of people, and public spheres such as railroad terminals and exhibition premises failed to suffice, which was a problem to be solved. Hence, architects needed to create bigger public spheres. Thanks to advancing technological means, designers had more options in design, construction and materials-wise. Even though it posed a certain trouble to design bigger public spheres than the ones we used to have, structural iron technology enabled opportunities for making light railway switches from forged iron bars as industry advanced during modernization. The very first example for this technological advancement in architectural context, is the Crystal Palace exhibition premises that was built in 1851 in London. It has a translucent design formed by the roof and gable walls of the Palais de Machines building intended for large-scale machinery that would be exhibited at the Exposition Universally in Paris in 1889. Its visible and large-scale clearance emphasizes overall size of the building. Opportunities in making such effects possible were owed to developing glass and steel industry of the time. Many structures built in the same period offered many structural opportunities thanks to industrial developments, and made things convenient for designers. This, needless to say, highlights that machinery and mechanization had its effects on architecture.

E'cole des Beaux-Arts (translated to English as 'The School of Fine Arts') made no small contributions to the architectureal features and forms of the time. Principles of architectural design set forth by Julien Guadet in 1901 describes that the very first criterion when designing a structure was to comprehend the intended function and to respond to it. According to him, a fine design should be doable and construction-friendly, free from complex and costly items, and authenticity was always to be observed and employed as an architectural language. The three foregoing criteria, which are a well-designed and clear structural expression complemented with a functional composition, are derived from Vitruvius, and were adopted, recognized and implemented by American architects that studied at E'cole des Beaux-Arts.

Henry Hobson Richardson, an architect, who studies at E'cole des Beaux-Arts, designed the Marshall Field and Company Building in Chicago in 1885-1887. His design clearly reflects the principles and tenets of designing represented by the school Richardson studied at. The building, being the only business premises in the city, was built with overlapping stone arcades on the exterior walls, hence expressing the sense of singularity with mass integrity. Designed with a creative and strict approach, the building has no place for history-driven adornment or decoration. What's more, the visual tissue was given a form merely with the natural and vulgar pattern of the stones used on the structure itself.
(Figure1).


**Figure1: Marshall Field building, Henry Hobson Richarson, Chicago, 1885-1887**.

Radical changes emerged thanks to innovative construction techniques in office building business at the time when Richardson designed the Marshall Field building. Forged iron used for construction business during the preindustrial period went through major steps thanks to advancing technologies, and increase in extraction and processing of steel as metal. As steel was used in architecture, it acquired a common ground in structures, and premises with a metal frame were designed. Steel was also used as framing in architectural structures, as a result, total weight of multi-storey office premises reduced, thick load-bearing walls were eliminated. This served architects a great convenience both in terms of design and construction. Using steel in architecture had its own breakthrough in building skyscrapers.

The Shingle style, an American architectural style, which eschewed the highly ornamental patterns versus the over-decorated Victorian style became popular from 1874 to 1910. Architects who relied on the Shingle style, came up with plain and simple designs characterized with chiseled lines and forms. That kind of architectural language was also adopted and applied to the interiors in which free, undivided and open spaces were highlighted. Interior of such designs is clearly and overwhelmingly characterized by flows from one room to another. The Newcomb House in New Jersey designed by McKim, White, and Mead in 1880 is good example to look at in this sense. The abstract flooring pattern designed for the floor, flowing extension of the skirting below the ceiling towards next rooms, and open layout of the rooms -avoiding a divided plan- all point out to a minimalist approach.

As for the Shingle architectural style, Henry Hobson Richardson is an important architect. The Stoughton House designed by him was used not for a simple and natural-looking decoration, but for lining purposes only. Since it had a flowing layout, it did not get interrupted on the surface, hence highlighted a flowing effect in an expressive way. (Figure:2).

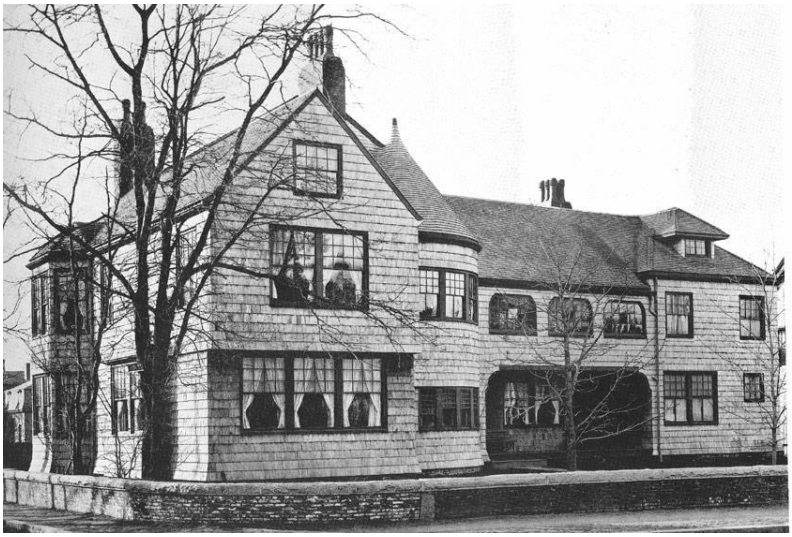

**Figure2: M.F.Stoughton House, Henry Hobson Richardson, Cambridge, 1882. 58**

In an unfortunate fire in Chicago in 1885, significant structures inclusive of the one designed by Richardson, were gone for good. After the fire, the structures were re-built in the city, and durable materials were used this time. More importantly, a group of architects, known as Chicago School, shook off the previous way of constructions with a desire to take the lead in architecture. One of the most important works credited to this group was the Monadnock Building constructed in 1889-91. This is a very good example for a minimalist building both in terms of design and materials used. The structure was 16-floor high, with walls totally made with bricks. Rectangular windows had a rhythmic harmony and order of their own. Also, the structure has no engraving, ornament or decoration.

In 1904, Frank Lloyd Wright designed a very big building in New York, which marks a radical thrust-forward in modernism. Known as the Larkin Building, the structure emerged as a concept of office premises (Figure:3). Design of the Larkin Building was handled in a totally abstract manner, and converted to a simple and geometrical form as it is. On taking a look at the interior architecture, it is clearly seen that spaces inside the structure have been designed in line with the intended function and use. Structural design is characterized by a simple and plain approach in face design and interior architecture. This is why it is recognized as a minimalist approach.

**Figure3: Larkin Building, Frank Lloyd Wright, New York, 1904.**

In 1892, Louis Sullivan wrote as follows in an article titled 'Ornament in Architecture': 'Only if we went after all those decorative aspirations for a while and focused on, in good faith, elegantly formed and solemnly attractive buildings that would make all the good.' These remarks and approaches recognized by the architects of the time, using resources wisely and cautiously, taking decoration as redundant luxury paved the ground for the imminent minimalist approach.

Walter Gropius was another architect who favored simplicity in the first half of 20th century. He is the one who founded the German institution in Germany in 1919. On the Bauhaus manifest, which designates the fundamental principles of design with a teaching point of view, 'The ultimate purpose of any visual art is to attain a holistic structure.' 'The New Architecture and the Bauhaus', a book penned by Gropius in 1935, clearly suggests a functional, simple and free-from-ornaments designs; 'We have enough historical styles at our disposal, and we have spent enough time on remaking the historical styles. We have learned already to seek an abstract expression of today's lifestyle through clearly lucid forms when moving in a direction to the orders of a structural mindset, one of the volatile whims of architectural caprice.' There is one other equally significant characteristics of the institution founded by Gropius as it is a teaching institution that has crossroads and junction points where architecture, art, industrial design, graphic design and interior architecture meet. It is clearly seen from the Bauhaus building in Dessau that Gropius reflected all his assets of opinions and design thinking on it. Airplane propellers that were manufactured in Dessau district were abstracted and reflected on the land settlement and layout of the structure in an architectural context (Figure:4). This is clearly seen from a top view of the structure.

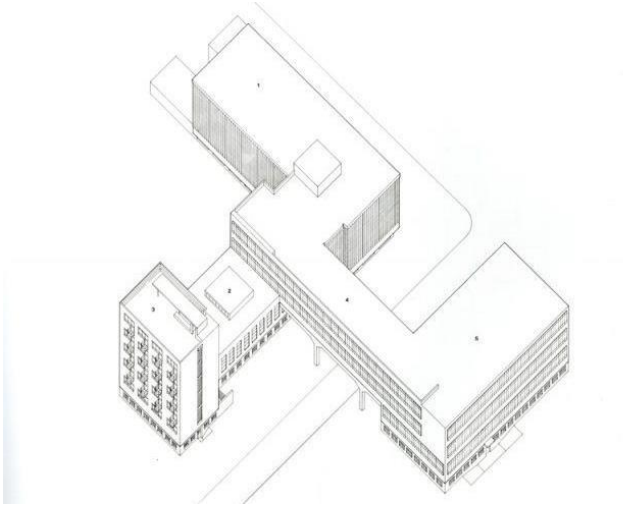

**Figure4: Bauhaus building perspective, Walter Gropius, Germany, 1925-1926**.

Visible parts of the building are the workshop area of the institute as shown in Figure: 5. When perusing that part of the building, it is clearly seen that the architect employed a weight-free and translucent approach. It is vital that the facade is shaped properly to let the sunlight in through the workshop. Purely geometrical approach to design in combination with plain and modest facade of the materials as used horizontally and vertically points out to a minimalist approach as a whole.


**Figure5: Bauhaus building, Walter Gropius, Germany, 1925-1926.**

The architecture intended to make use of structural and technological innovations in his design in that the structure purports to be an architectural, art and general design complex for students. Just to give an example, innovations of using materials such as glass, reinforced concrete and bricks catch the eye on the pedestal roof and tiled roof that allow threading on it. Gropius used services from students whom were studying at the institute at the time of construction. The architect accomplished an understanding of total work upon participation from students.

Adolf Loss, one of the pioneering architects of modernism who was under influence of Louis Sullivan's article, released his manifest 'Ornament and Crime' in 1908. Loss remarks as follows: 'It's easy to underestimate great damages caused by rein vocation of ornament on the improvement of aesthetic sensitivity because nobody can hinder human beings from evolution, not even the states. This could only be slowed down. We can hold. Nevertheless, labor force, money and materials wasted in vain is a crime committed against the natural economy indeed. Sadly, time cannot undo it.' These remarks by Los suggest that ornament is a crime, which architecture, as a discipline, should break free from this burden. Functional and minimalist approach adopted by Loos is clearly seen at the Steiner House, his most famous architectural example (Figure: 6). Coming up with a simple and free-from ornaments style, the structure sets a mark in modernism.

**Figure 6: Steiner House, Adolf Loos, Austria, 1910.**

In 1917, De Stijl (Neo-plasticism) with contributions from and pioneered by Theo Van Desburg emerged in the Netherlands. The De Stijl movement endeavors to break off all stereotyped ties with the past, and to continue on and on with no influence.

Another pioneering figure of the movement is the famous painter Piet Mondrian. The Dutch painter believed and defended that beauty could be attained via abstraction of form and materials in art. His opinion and approach that he adopted in his works changed the aesthetic perception of his time. The pure geometrical perception and minimalist approach to the art of painting influenced architecture as well. Mondrian played a significant part in the birth and growth of the Stijl movement, who also believed that it was an approach that needed to guide and direct architects of the time. Mondrian says as follows: 'An architect should only endeavor to concretize what is expressed in abstraction on the canvas in neo-plasticism. It is the architects and engineers that will secure harmony with the environment in the future. Art of painting should do something when architecture lags behind unless a brand-new architecture materializes as a whole, it should be wise enough to describe totally equivalent proportions, or in other words, it should make an abstract plastic art. For this reason, it is, for the moment, the only thing that can be the savior in abstract painting. 'In his words, Mondrian clearly defined the existing and ideal relationship between art and architecture. In all honesty, he made sense of minimalist movement with his remarks and works.

The Barcelona Pavilion, designed by the young architect Ludwig Mies van der Rohe on account of Germany, with a 'Less is more' discourse in minimalist movement reveals all the constituent elements of the movement. In his design, Rohe applied a minimalist approach of architecture to the interior architecture, creating uninterruptedly spacious spaces. The architect's minimalist style was reflected to the lodging designs designed at that time. (Figure:7).

**Figure 7: The German Pavilion, Ludwig Mies van der Rohe, Barcelona, 1929.**

Naturalness and use of material is an impressive design for simplicity of construction. Choice of materials and finishing, in addition to simplicity of design and many other technical particulars, are utterly meticulous. Rohe qualifies architecture as a nonverbal art. This particular structure designed by Rohe and is maintained in Barcelona is listed amongst designs that symbolize modern architecture. In purism, which is a modern artistic style and movement founded by Le Corbusier, one of the famous architects of his time, avoids decoration and ornaments and is characterized by simplicity. Having adopted austerity in architecture, and keen forms of geometry in design, Le Corbusier recognizes that economy is also an important element of modernism. Economy prevails widely in modernism. More

precisely, factories, industrial structures and mass production facilities of the time accepted a minimal approach to overcome financial challenges. Also influencing architecture, this particular approach has become a matter that is and has been handled with care by quite a number of architects.

From a financial perspective, Le Corbusier remained loyal to the idea of making as minimal as required so that his designs attain the fundamental functions as intended. Under the influence of economy and purism, he designed Villa Savoye, and Maison Citrohan, with which he was credited as the pioneering figure of minimalism. Initially applied to public structures, this approach had a wide range of use in domestic architecture thanks to Le Corbusier and his peers.

**Figure8: Villa Savoye, Le Corbusier, Paris, 1929.**

As a widely-acclaimed architect in 20th century, Le Corbusier, for his design of Villa Savoye, was appreciated very much. His work is still recognized as one of the most important modern structures in the world. Designed as a modern suburban house in France, it is one of the best examples that reveals Le Corbusier's understanding of modern architecture.

It is important that the structure was designed at an elevated level as if having broken off contact with the ground, and a void volume was created beneath thanks to columns. With these columns, the first floor was carried over to one upper elevation, and this principle of constructions is known as pilotis. (Figure8).

Le Corbusier intended to arouse an effect as if his design was floating in the air, and accomplished this with pilotis technique by painting the service area in green at the entrance floor. Caught up in nature, the service floor and white colored structure reveals it as if challenging the gravity as a whole.

Dominated by strictly geometrical forms, the design attains a modern air with vertical accentuation of the columns and the effect aroused by window aperture vertically. The design in itself, and neat and meticulous use of materials masterfully combined with the simplicity of facade and open layout of internal volume is a tribute to minimalism. However, minimal effects diminished gradually as years went by since different movements and approaches of modernism materialized. Especially upon development of expressionism, different styles and approaches were born in art and architecture.

The minimalist approach, that were reborn after 1980, found a common ground on store designs that were co-dressed by fashion designers and architects of the time as a popular practice in important cities as New York and London. Several well-known brands went after idiosyncratic, easily perceivable design that fit and overlapped with their core values in an aesthetic way. Dense use of white color, less furniture, less products exhibited under white light, a simply language that claims the space, highlighted modesty and store space that avoids ornaments were the common features for venues. Boutiques that reflected a minimal approach turned out to be beautifully designed venues as if a museum of art.

This approach of the 80s found a practical area of use in residential designs, and the influence of modernism re-appeared. It is observed that there were certain restrictions at the time, furniture with fundamentally geometrical forms were designed and came into use again, white color prevailed and minimal effects recovered. Ideal simplicity and modest perspectives of Rohe, Philip Johnson were re-invoked by architects, namely, Tadao Ando, Claudio Silvestrin, Micheal Gabellini, John Pawson and recovered influence in design works.

Recovery of minimalist approach was reformed in architecture in a context of space and spatial relationship. As architects avoided redundancy of accessories and ornaments in design, they tended to use only minimum color, tissue, form and style. Designers' aspiring to attain the minimal with a simple and modest approach was seen as an achievement in design. In that sense, minimalist designs developed on a rationalist axis. As a young traveler who threaded in USA and Europe, and had an opportunity of perusing the works by remarkable architects such as Mies, Le Corbusier, Frank Llyod Wright, and Louis Kahn, were truly impressed by what he saw, and this gave him a chance for self-improvement. As a result, Tadao Ando became and is acclaimed as a minimalist architect who is a pioneering figure today.

Ando was admitted for his minimalist approach in his designs in 1980-90, and he was also recognized as the most important representative of conventional Japanese architecture.

Even though minimalism was originally born in USA and spread to Europe subsequently, it perfectly overlaps with the philosophy and lifestyle of the oriental cultures. Adopting the oriental approach to things, which is mystical, serene, peaceful, economic in character and recognizes less is more way of thinking, and cherishes a lifestyle that cuts off ties with dynamism and pace, Ando employed modern designs in his own rendition, and his designs were so powerful that he marked his name in minimalist.

The Church of the Light in Osaka/Japan was designed by Tadao Ando in 1999. Striking as it is, the structure and the architectural language employed in making the structure is still cherished today. It is a crucial structure in that it harmonizes belief and minimal design. Even though architecture is blessed by new materials such as exposed concrete and all in parallel to the advancement intechnology, the architect made particularly good efforts in using the available materials wisely for a less-is-more effect, and the output was clearly yielding (Figures 9 and 10).

Importance of light is undeniable in minimalism. Ando masterfully exposed this in a form of an extruded cross on the wall as a testament to minimalist architecture.

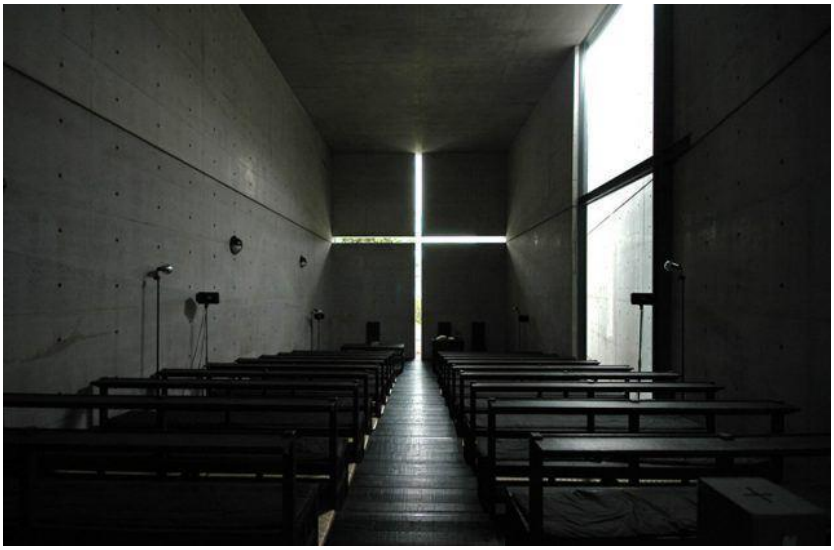

**Figure9: Church of the Light, Tadao Ando, Japan, 1999.**

Ando sets up belief and architecture in a dramatic way. In doing so, it made wise use of existential dichotomies and binaries as a rigid body and void, light and dark, intense and serene. Having employed a simply modest architectural language free from ornaments, Ando conveyed architectural materials and their expressionist effects to the interior space.

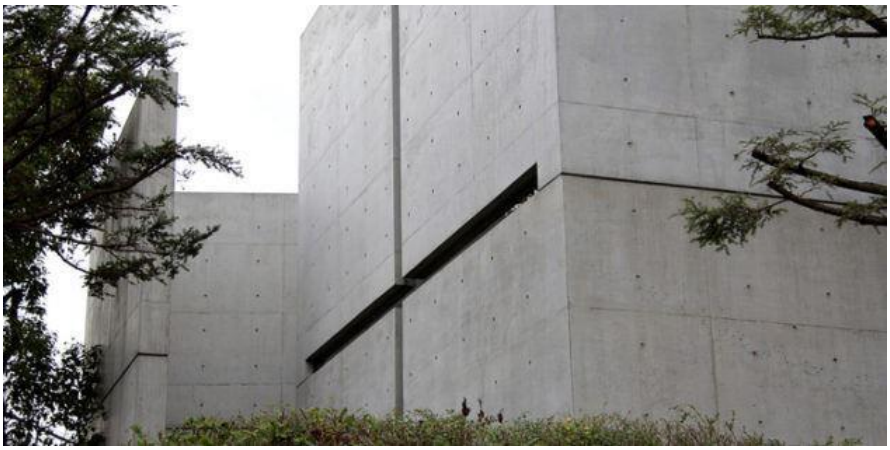

**Figure 10: Church of the Light, Tadao Ando, Japan, 1999.**

For cost-efficiency, Ando used wood of the structural framework for floor covering. Apart from avoiding ornaments, he minimized.

Tadao Ando used concrete for a minimalist aesthetic effect in space, and formalized it in line with a play of light spatially only to counterbalance the cold strict structure of materials in the interiors. From a perceptive point of view, Ando succeeded in converting the material to non-material, dark to light and light to space, which, in turn, minimally speaking, paved the ground for utterly and uniquely different aesthetics.

### 3.1. Historical Background and Dramatic Change Developments after Endemic and Pandemic Diseases

A Pandemic İs An epidemic of an infectious disease that has spread across a large region, for instance multiple continents or worldwide, affecting a substantial number of people.

Infectious disease has already transformed our places through architecture, design, and urban planning. Previously, many trends in architecture and urbanism that we see today were derived from similar measures taken before to ensure the health, hygiene, and comfort of urban residents. Our built environment has always exhibited the capacity to evolve after the crisis

During pandemics, the form has always followed the fear of infection, just as much as the function. From interiors to city planning, our built environment is shaped by diseases. Previously, to minimize the risk of infectious diseases, people redesigned interior design, architecture, cities, and infrastructure. Considering historical events of the last two centuries, the architecture and urban story includes several developments.

In the 14th century, the bubonic plague motivated the fundamental urban improvements of the Renaissance. Cities cleared overcrowded living quarters, expanded their margins, developed early quarantine facilities, and opened large public spaces. In the 20th century, infectious disease was one of the drivers of urban renewal. Modernist architects saw design as a cure to the sickness of overcrowded cities, where tuberculosis, typhoid, polio, and Spanish flu breakouts encouraged urban planning, slum clearance, tenement reform, and waste management.

During the industrial era, cholera and typhoid influenced the sanitary reform movement. These epidemics contributed to developing water and sewage systems to fight the pathogens, eventually leading to a sanitary innovation and required the streets to be straighter, smoother, and wider to install underground pipe systems. Furthermore, the third plague pandemic in 1855 changed the design of everything from drainpipes to door thresholds and building foundations.

The impact of pandemics on cities is well documented following the recent 4 pandemics that affected major cities across Africa, Asia, Europe and Arabia in the last 20 years. From the SARS (2002), MERS 2014, H1N1 (2009), Ebola (2014) and Zika (2016), cities have had to grapple with issues related to security, economic downturn and unprecedented public health crises, political stress and tensions and numerous social problems.

The wipe-clean esthetic of modernism can be partially attributed to tuberculosis. The modern architectural designs were inspired by an era of purity of form, strict geometries, modern materials, and a rejection of ornamentation. Modernist architects designed these curative environments as cleansed (physically and symbolically) from disease and pollution.

Beyond their esthetic appeal, these features embodied modernist preoccupations with the healing effects of light, air, and nature. These buildings included large windows, balconies, flat surfaces that would not collect dust, and white paint, emphasizing the appearance of cleanliness. Against this background, the current health crisis should develop our built environment to increase the security layers that help to prevent the spread of infections and diseases.

### 3.2. COVID-19 Pandemic and Expectations forFuture Architecture

The COVID-19 pandemic, also known as the coronavirus pandemic, is an ongoing global pandemic of coronavirus disease 2019 (COVID-19), caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). The outbreak was first identified in December 2019 in Wuhan, China. The World Health Organization declared the outbreak a Public Health Emergency of International Concern on 30 January 2020 and a pandemic on 11 March. As of

31july 2020, 17 million cases of COVID-19 have been reported in more than 188 countries and territories, resulting in more than 650.00 deaths, The virus is spread primarily via nose and mouth secretions including small droplets produced by coughing, sneezing, and talking. The droplets usually do not travel through air over long distances. However, those standing in close proximity may inhale these droplets and become infected. People may also become infected by touching a contaminated surface and then touching their face.[11][12] The transmission may also occur through smaller droplets that are able to stay suspended in the air for longer periods of time in enclosed spaces.

The pandemic has caused global social and economic disruption, including the largest global recession since the Great Depression. Up to 100 million people have fallen into extreme poverty and global famines are affecting 265 million people. It has led to the postponement or cancellation of sporting, religious, political, and cultural events, and decreased emissions of pollutants and greenhouse gases. Schools, universities, and colleges have been closed either on a nationwide or local basis in 161 countries, affecting approximately 98.6 percent of the world's student population.

When the World Health Organization (WHO) declared the fast spreading COVID-19 as a pandemic, citizens around the globe hastened to go home. This global pandemic significantly influenced our personal and professional lives and has a direct bearing upon the very foundations of urban planning and architecture theory and practice. Consequently, the pandemic has led to questions of how architects and planners could present and install antivirus-related ideas or update the existing spaces, as well as at what stage can the pandemic affect our physical and built environment.

The coronavirus is quickly spreading and causes significant damage, mimicking the spread of computer viruses within a network. In the digital world, it is common practice to design and incorporate solutions that can help overcome virus attacks; for every new generation, a new security layer is added to ensure the ever-mutating computer viruses do not harm the digital structure. Could policymakers, planners, and architects inspired by the digital world learn from its cyber security to make our built environment more resistant to the virus? Could we design and build our cities to stop the virus from spreading? If so, could we install an antivirus-built environment ready to help in the protection from coronavirus or other pandemics?

There is no end in sight to the COVID-19 pandemic, but it has helped us predict what post-pandemic architecture and urbanism might look like. Although we are not going to overhaul how we have been building architecture and cities before, based on the current circumstances and emergency measures, we should review our design strategies and planning theories. We could more effectively use healthy design and planning strategies to face pandemics and create a less pullulated, more sustainable architecture, and urbanism in general.

## CONCLUSION

At the present time, fast-pacing technology, ever increasing population, cumulative urbanization and fast lifestyle that we lead block the way of minimal effects. Designs are no longer cost effective; in fact, they are prohibitively high and extravagantly luxurious.

Minimal effects are hardly existent in some points of time and powerfully highlighted in others. Today, less is more is adopted by architects and several design offices merely on the basis of quality of materials and interior living space. This has nothing to do with minimalism and minimalist approach. What is more, this kind of approach at the hands of those who

produce architecture at low prices as possible only to obtain high yields out of it leads to many perils including without limitation dysfunctional interior space and unplanned urbanization.

The process of modernization and the things promised by it have been poorly handled at the hand of capitalist producers in a consumer society. This is so dark as an approach that even the well-meaning less is more approach has been poorly manipulated to suggest more work to be donein little time, or more output in return for small wages.

Fast way of life is a negative consequence of technological advancement, and it makes things vulnerable to go easily unnoticed. Some designers and architectural firms are aware of this and design wisely considering the global sources as they act eco-friendly and energy-efficiently. Also, functionality is prominent. Even though these approaches follow a relatively small progress in comparison to fast pace of consumption trends, minimalist approach revived mostly in USA and Europe today. Minimalist approach is a requirement onwards indeed. This necessity can be explained as follows; it is now a fact all of us are familiar with that the planet earth has a life span, resources are limited, financial sources are wasted not to mention global warming, financial crisis and turmoil. We can solve these negativities with a minimalism-driven thinking and design.

From an interior architecture perspective, we own a bigger house but it is not as functional as it used to be this is mainly because designs are not really functional and the house is filled with furniture more than enough. Maybe life has never been as objective as it is today.

Nowadays, most interior designers rely on accessories and ornaments than functionality. What is worse, it is mistaken for functionality. To put it differently, it is simply a misconception that using a set of different colors, patterns and tissues in combination and maybe in harmony is mistaken for design. On the very contrary, the real merits of a design work should be functional interior spaces, wise use of material and finishing, modest details as in a minimalist style, and importance attributed to details for an economic design output.

**DISCUSSION**

Gladly, people have a revelation on minimalism. Authors write books, people release and post on different media channels thanks to technological advancements. Some bodies and institutions release publications and hold conferences on using resources responsibly and creating eco-friendly and green designs. Minimalism has become a societal reality for a quality and meaningful life, proper and livable living spaces, wise and well-balanced use of resources.

The fact that eco-friendly and renewable power technologies are used more and more for architectural structures encourage us with efficiency on the long run instead of consumption. A greater portion of responsibility is to be shouldered by designers in order to make this happen. With self-awareness, designers have to overcome assertiveness they are imposed on. Truly, they are obliged to do more with less equipment. Even a whole of the existing educational systems are consumption-driven because the educational system serves to raise a labor force to satisfy the requirements of the post-industrial period. Neither revised nor improved up until today,the educational system is over for a long time now and it needs renovating. We have to act consciously, take examples of minimalism, contemplate and revise many things from a minimalist approach.

The global pandemic has highlighted the limitations of how we manage our built environment regarding how we should design, build, and run our built environment; however, it has given us a chance to learn. Nevertheless, certain questions remain such as will we regard these unique lessons? If so, we should think more specifically about the benefits of this forced experimentation and implement further developments to select which could be used or planned as long-term reforms from a transformative viewpoint. The pandemic increased the requirement for architects to think more out of the box, trying to reshape our physical spaces, and reset the existing build environment or develop more ideas to face future virus attacks. However, it is too early to judge how responses to COVID-19 will affect design and urbanism theories.

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