Modernism In Architecture: Evolution And Principles

Introduction

Before we can deduce and gauge the influential nature of modernism, we must first ask the question: what is modernism? The modernism movement was a philosophy, found not just in architecture, but in almost every aspect of society during the late nineteenth twentieth century. We cannot assign specific dates to the rise and fall of modernism due to the fact that the movement did not come into existence abruptly, however it is widely assumed that it ended roughly in the 1940s. It is best described as rapid evolution of style and expression, attempting to quickly break away from the past. Many fields in western society were affected by the dominion of modernism, from literature and poetry to the fine arts and architecture; there was a strong unanimous yet implicit feeling between almost every writer, artist, architect, and creator that it was necessary to break away from the ideologies of older movements of architecture. Ultimately, modernism was not found predominantly in architecture; it was a philosophical and progressive global movement that sought to align the arts of society with the newer values and ethics of an advancing world entering the twentieth century after years of industrialization. In this essay I will examine the ideology behind the rise of modernism; evaluate the elements of the movement that made it so impactful; analyse a famous building that utilizes the aforementioned elements; and conclusively attempt to define what following movements were influenced by modernism using well-known examples of architecture, therefore proving its impact on the twentieth century.

The Background of Change and Start of the Modernist Movement

To look at how modernism influenced the future, however, we must first look at how modernism was influenced by the past. The birth of the movement was gradual yet progressive. It built upon the already existing paradigms of art and architecture from the late nineteenth century to better reflect the mindset of an advancing society. Western culture and civilization as a whole went through some significant and serious socio-economic changes during the turn of the century. Globalization and the subsequent improvement of international communications allowed for a more connected world. World superpowers were beginning to arise, and with the ensuing wealth, large scale cities began to develop across the world. The revelation of international connectivity allowed for architects (and creators in general) from around the globe to share their work, ideas, values and beliefs.

To understand the roots and philosophy behind the modernist architecture movement, we should evaluate other forms of art that went through similar influences and changes. The modernist movement had already picked up speed before WWI. “Belle epoque”, roughly translated to “beautiful epoch”, became the term used to coin the period of supposed peace and progress. For example, during the start of the twentieth century, Paris had seen a huge change in character. It had become a highly decadent city, with art-nouveau station signs scattered everywhere, and beautiful residential buildings rising high into the sky scattered with ornament. The atmosphere of Paris was a hopeful one, with a naïve optimism for the following century.

The world-changing events of WWI shifted the outlook of writers and architects alike, as seen in post-war poetry, for now the pre-war arts were seemingly inadequate to express the misery felt by so many. Literature had become grittier and more realistic, almost as a late attempt to warn of the horrors of war. Belle Epoque was now mere nostalgia, a memory of better times. The world had changed and the optimism for the new century had been diminished. The early 1920s became a time for rebuilding; a clean slate that ushered in a wave of progress in architecture.

Principles

The main principles found in architecture during the modernist era (early to mid-twentieth century) were an attempt to keep up with the aforementioned rapid socio-economic change around the globe. The ideology of a buildings form following its designated function was a proven success before WWI, but how did the other main principles come about and why does the combination of them create powerful architecture?

- Form follows Function: the idea that the aesthetic components of a building must be considered second to the buildings function. This element comprised of using geometric forms, an emphasis and strong perpendicular lines, and an expression of structure rather than hiding it.
- Modern Materials: The use, in architecture, of newer innovations in materials, technology and materials. During the early twentieth century the latest modern materials were reinforced concrete and stronger, lighter steel than previously available.
- Open Plan Interiors: describes the arrangement of the interior space within buildings- an almost complete lack of interior walls and partitions. Almost no visual or physical barriers between the functional areas in a space, i.e. kitchen and living room. Every part of the interior space was able to filled with sunlight, when combined with a feeling of spaciousness creates a mentally and emotionally uplifting space.
- Less is More: a rejection of ornament and acceptance of minimalism. The elements of modernism which defined clean facades and the use of natural and/or white colour palettes.

Form follows Function

Architects of the ensuing decades of WWI had a highly analytical approach towards design: revolving around the elements of innovation, materials, and abandonment of ornamentation. The industrial advancements of the late nineteenth/early twentieth centuries had catapulted the world into a new age. Modernism very distinctly reflects the dawn of a new era with its use of new, innovative technologies and abandonment of detailed facades. A more clean and realistic style became the perfect metaphor for breaking away from the ‘ancient’ ideologies of past movements. One of the earliest signs of modernism as we know it now was from American architect Louis Henry Sullivan. Commonly referred to as the ‘father of modernism’, he endorsed the theory that utility was just as, if not more, important than how it looked. The phrase, more famously known as “form follows function”, indicates that the shape of a building must primarily take after the intended purpose of the building. This was one of the main encompassing theories of modernism; and considerably what made it popular. At the end of the day, it is real people living real lives that use the buildings designed by architects, so it only makes sense that these buildings are designed with the inhabitants at the forefront of the architect’s mind.

One of the most clear-cut examples of this philosophy is the Wainwright Building, designed by Louis Sullivan and Dankmar Adler. Despite being built long before the height of the modernist movement, the Wainwright Building, located in St. Louis, Missouri, and built in 1891, conveys the definitive principles of form being second to function. It is often regarded as “an influential prototype of a modern office architecture”.

During the late 19th century skyscrapers were a new and exciting development in the world of architecture. With large scale cities beginning to develop in important locations across western society, tall skylines became prominent features of the developing cityscapes. A change in employment areas after the industrial revolution meant that more people were beginning work office jobs in cities, which subsequently required newer design solutions for growing companies to locate their office workers. Taller buildings with many people working inside needed to be structurally safe and provide sufficient sunlight for the workers inside – two elements that Sullivan incorporated into the Wainwright Building through the innovative steel frame and large curtain walls and windows being repeated on the façade. The Wainwright Building only pushed the ideology of the modernist movement onto later architects that the inhabitants are at the forefront of the mind of the architect.

The Wainwright Building is not only an example of the use of the building being primary to aesthetics, but it also demonstrates innovation in technology, another prevailing element of modernism. Being a tall 10 story (41m) office block, the building has a then newly developed steel frame and a facade consisting mainly of terracotta panels and brown sandstone. Its construction system is based on a steel frame that is clad in masonry; this is credited for being the first successful utilization of steel frame construction. The steel creation process had seen drastic improvements in efficiency proving it to be more reliable for building, thus allowing it to be utilized as columns and beams. Stronger frameworks could be constructed, therefore allowing for buildings to be constructed taller and stronger than former technologies would allow.

Over time, the skyline of the city dominated by church steeples and civic domes gave way to the skyline dominated by skyscrapers. Elements of modernism had begun creeping into western civilization in the form of towering skyscrapers – the main talking point of cities, which only made their elements, the elements of the modernist movement, more popular.

But what made the idea of a buildings form following function so popular? We can assume it is due to the fact that in a post-industrial revolution world, the more human accessible approach to architecture made the lives of people easier, which is why the ideology was adopted so quickly by the rapidly evolving world of the early twentieth century.

Less is more and open plan interiors

Ludwig Mies van der Rohe, one of the most influential architects of the modernist movement and a figure head of the International Style, is most famously attributed to the famous quote “Less is more”.

Post-war architecture reflected the mentality of the people. “Americans had learned to live with less, and that restraint, in combination with the post-war confidence in the future, made small, efficient housing positively stylish.” [Merkel, J. (2010, July 2). When Less Was More.]

The Seagram Building is a building which I believe best shows the use of modernist elements, but also how the3 movement seemingly developed beyond its original elements. Built in New York City in 1958, it was Van der Rohe's first major physical attempt at a skyscraper office block. The 38-story building was influential for the times for multiple reasons. Not only did it exhibit elements used prior by Louis Sullivan (form follows function and modern materials, i.e. the Wainwright Building), but it also improved on the ideology of people being at the forefront of the architects' mind. Mies set the Seagram Building back from the street edge by approximately 100ft, subsequently creating an open plaza, something not often seen in rapid growing cities of the west. This touch created a plaza at the base of the building; a public use space not before seen in the congested masses of tower blocks that filled New York's streets.

The elements of modernism in the Seagram Building can be seen to work as intended. They operate with a visual and functional symbiosis to make the function of the building an enjoyable one, which in turn makes people associate the modernist façade, the form, with the enjoyment of the function within. The aforementioned blanket term "form follows function" is still relevant in the Seagram Building, however the meaning of it had changed – it had been around half a century since the famous Louis Sullivan quote but in the words of Frank Lloyd Wright, a pupil of Sullivan's: "Form and Function are one". The function and form could co-exist in architecture; as long as the deign choices made served a use for the inhabitants, then the form did not need to be restricted. The Seagram Building showcased a highly modernist design: a minimalist façade that utilized bronze cladding and dark glass windows provided a strong continuity for the entirety of the 157m tall building.

The large dark glass windows are necessary to the design because they provide sufficient sunlight to the open plan interiors of the building. An open plan, whilst being used for office work, does not want to feel claustrophobic as that defeats the purpose of the open plan; large windows provided substantial levels of sunlight to keep the interior well-lit with natural light. Sullivan's Wainwright Building is an example of this. Whilst Sullivan designed the building with the intention of form following function, clear modernist elements can be seen as a result: the open plan was more useful for the large offices working together as opposed to confined and cramped rooms.

As opposed to an open plan, there were cellular plan layouts. Pre-twentieth century it was a more classic way of arranging space in architecture: interior walls and partitions separated the plan into rooms and enclosed spaces. An ideal use for homes, but once again the increase of office work in cities required a different approach. Cellular arrangements were historically used due to the fact that interior walls were needed to improve the structural integrity of a building. However, improvements in technology and the development of stronger steel frames mean that interior walls were not necessarily required.

The Seagram Building, despite being constructed almost 70 years later than Sullivan's Wainwright Building, proves the influential nature of the modernist principles. Form follows function, less is more, modern materials and an open plan are all exhibited working together strongly.

'Nature, too, shall live its own life. We must beware not to disrupt it with the colour of our houses and interior fittings. Yet we should attempt to bring nature, houses, and human beings together into a higher unity.' -Ludwig Mies van der Rohe - [Perez, A. 'AD Classics: The Farnsworth House / Mies van der Rohe', 2010]

The Farnsworth House is an example which I believe shows an area where modernism both succeeded and failed. The house follows the International Style, another form of the modernist architecture movement. The building had a good response to its surroundings, being raised onto pilotis to keep it safe from flooding by the adjacent Fox River. Nature is invited within via its use of an open plan and large glass walls, only two of which actually open. The house takes its name after Edith Farnsworth, who commissioned Van der Rohe to design a house on the flood plain of the Fox River, that took advantage of the site's natural beauty. The combination of raising the house onto columns and a full glass façade renders little contrast to the natural environment it is found in.

As an architectural design, the house is excellent, however I believe that a major downfall is the fact that it is not a comfortable home. Located in the centre of the house is a central core, which encloses the major services: a kitchen and two bathrooms. However, the bedrooms and living room are visually exposed to the outside. In the application of the Farnsworth House, these elements are acceptable thanks to the isolated location and cover of surrounding trees. It was designed as a weekend retreat and a place of quiet reflection, but in a more suburban environment, where privacy and personal space are more valued, the elements of modernism start to fail.

Conclusion

Definitive modernism is a rejection of ornament and acceptance of minimalism. An attempt to move on from the past and propel society into the future. The rapid socio-economic change in the late nineteenth and early twentieth century triggered an evolution in architecture, as the needs of people were becoming different. The elements of modernism can be assumed to derive from this rapid change, as well as the world changing events of WWI. The ideology of letting go of the past mainly involved the ornament of buildings, as the new mentality of the war was that they could survive with less, and less is more (but only when less is better). The philosophy of "form follows function" managed to break through, as this acted in parallel with the "less is more" philosophy of the post-WWI west. Modern materials were more commonly used in architecture thanks to advancing technologies, and the free plan was ultimately adopted as a result of Louis Sullivan's advancements as the "Father of Skyscrapers". Ultimately, the main components of modernism already existed, but were made more prominent and coexisted as a result of world changing events. The elements of modernism exist in symbiosis. The result was an architectural style that reflects what the movement and society attempted to do: rebuild and advance.