



A REVIEW ON THE DEVELOPMENT OF OFFICE FURNITURE DURING THE ERA OF MODERNISM

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ABSTRACT

In the new order, there have been radical changes in all branches of art. Many art movements and styles have been born, but none have been as permanent as 'Modernism'. The philosophy of the modernism movement that emerged as a result of the French Revolution incorporates simplicity, forms of nature, intelligibility, accessibility and egalitarianism. In modernism, it was desired that the economic classification was completely abolished and that all people could benefit from art and its products.

With the development of technological activities, new business lines began to emerge, thus increasing the number of office spaces. The proliferation of office spaces has also developed the industry of office furniture items. In this new sector, famous artists of the modernism era made office furniture designs that were talked about too much and are still for sale today.

In this article, the features of office furniture in the modernism era are discussed first. It is followed by a discussion of the development of office furniture in the process of modernism based on the office furniture that represented a school at that time, and the movie "Play Time" directed by famous director Jaques Tatti.

Keywords: Modernism process, Modernist office furniture, Office spaces, features of office furniture

INTRODUCTION

With the beginning of the 20th century and the end of the First World War, a design group called 'De Stijl' was formed in the Netherlands. The first furniture designs created in the period of modernism came from this group. The design motto of De Stijl incorporates the elements of plainness, simplicity, and inspirations from all forms and colors of nature. These designs are in line with the philosophy of modernism but at odds with ergonomics and anthropometry.

After the war, in France, one of the first developing countries, more user-oriented and more accurate designs started to be made thanks to Le Corbusier and his friends. Thus, France is considered as the country where modernism was born. With the development of modernism, new features began to be observed in design. All activities should be for the benefit of society. Crafts must disappear completely, and the industry must prevail. Design, not decoration, must be made. Honesty should be at the forefront, and the design should be clear. (Biçer, 2006)

Modernism began to dominate the whole world over time. Modernism was the main stream of the futurism and the futurism is also a term which is widely used in many works of art utilizing different disciplines just like utopia and dystopia (Kavut, Karagozler, 2020). The artists of this

period, whose objectives were the same, brought new styles to the designs and formed the sub-movements of modernism. These are the four movements: Bauhaus, Art Deco, Pop Art and Post Modernism.

Bauhaus movement

It is the art school founded by Walter Gropius in Germany in 1919. At this art school, there are instructors from all branches of art. They aimed to produce works of art that are libertarian and appealing to all worldviews. All the works that came out of this school became the icons of that period and even today. Walter Gropius published a manifesto during that period. In the manifesto, he emphasized that real art can be achieved when artists and craftsmen act together. Thus, he revealed his point of view towards mass production. Famous designer Mis van Der Rohe, one of the instructors of Bauhaus, said a trendy sentence related to the design motto of this trend; 'Less is more.' By this, Rohe meant few materials, few connections, and simple structure.

Art Deco movement

This movement emerged in Europe after 1925. It was born as a reaction by artists who found modernism soulless and simple. By making use of technology, flamboyant designs with ornaments were made. These decorations are not as extravagant as the designs created in ancient times. The furniture forms of modernism have not been abandoned. Plain conical feet with an outward inclination in the shape of a "U" stand out. The "marketri" method was applied on the covers, and carvings from solid wood or embossed metals sometimes stood out as ornaments. Patterned surfaces were created by making use of the tree's own natural veined structure on surfaces that were left plain, and it was tried to achieve an effect that was far from imitation and suitable for the formal structure of the era (Yararel, 2013).

Pop Art movement: This movement has been the most talked about movement of modernism. The most important feature of this movement that emerged in America after World War II is the use of plastic material. Unusual, colorful, bright, sculptural designs were initially made against the elite of modernism. By the 1970s, the use of plastic materials was continued and user-oriented, ergonomic designs were adopted.

Post Modernism movement

It can be said that this movement is inspired by all art movements in history. With the increase in the media, the phenomenon of fashion and trend has developed. Thus, the wishes of the user, not the artist, determined how the design would be. In this period, conscious consumers were born and no unnecessary details were included. For example, the harm caused by plastic materials to nature was brought to the agenda for the first time in this period, so alternative products were sought. The features that we can distinguish postmodernist designs in others are the use of untested materials and the presence of never-applied forms.

There have been important developments in office spaces during the period of modernism. Developments in technology have resulted in the emergence of sub-units in office buildings. Alternatives have been developed in the construction of developing office structures. Cell office type, open office type and modular office type emerged in the era of modernism. Office furniture was shaped according to the needs of these offices.

Although office furniture is a sub-sector within the furniture sector, it is a sector with its own unique production characteristics within the general definition of furniture, and a furniture branch that is closely tied to the dynamics of the business world it addresses, and is directed by practical needs rather than fashion (Meltem Şen, 2002).

A review of the work equipment available before modernism indicates that the desk is the oldest item. In order to be able to do works such as writing and accounting works, cumbersome and individually-use secretariat desks with storage areas, the upper table of which can be closed with an accordion system cover, were used. After modernism, many features have been incorporated into the office furniture that has developed. According to Ansu Yetiz (2009), there are some rules to be considered when buying and placing office furniture. These are as follows:

- Furniture must be in accordance with the anthropometric measurements of the employees.
- Furniture should be modular. These two features prevent labor loss during operation, and also:
- Furniture accessories should be flexible and replaceable.
- Furniture colors should not be reflective of light.
- Scratch and fire resistant accessories should be selected.
- They should be designed in a way that does not endanger the safety of the employees (Edward, 1993).

1. OFFICE FURNITURE AND THEIR FEATURES IN THE ERA OF MODERNISM

The Taylorism system was used in workplaces that were designed as open offices in the early days of modernism.



Office work incorporating the Taylorism system

In this system, employees are not provided with a private workspace. They work collectively around a long table. The work desk and chairs shown in the image are made of wood material and do not have any functionality. The chair is not ergonomic for long-term work.

With the criticism of the Taylorism system by the communities, office furniture designs started to be made by considering employee rights. In these offices, desks for personal use, ergonomic desk chairs and personal storage areas are used.



An open office located in the Empire State Building

The worktable shown in the image is made of matte-colored material to prevent eye strain; its corners are oval to prevent impact; and a drawer is designed for storage. Its front and side surfaces are also covered for privacy. The chair involves a tree structure, and its ergonomics have been observed by using leather upholstery on the back, armrests and seating surfaces.

In the later days of modernism, Brolandschaft offices emerged. In these offices, the hierarchy was wanted to be eliminated, and employees at all levels started to work together on furniture with the same design.



Office work incorporating the Burolandschaft system

A review of the work tables shown in this image indicates that a wooden table is used on a steel leg. For personal storage, a drawer is preferred in the table design. The use of the shelf is seen for the first time in this period. Working chairs have a steel structure, swivel system, and wheels. In this open office, document cabinets also serve as divider panels.

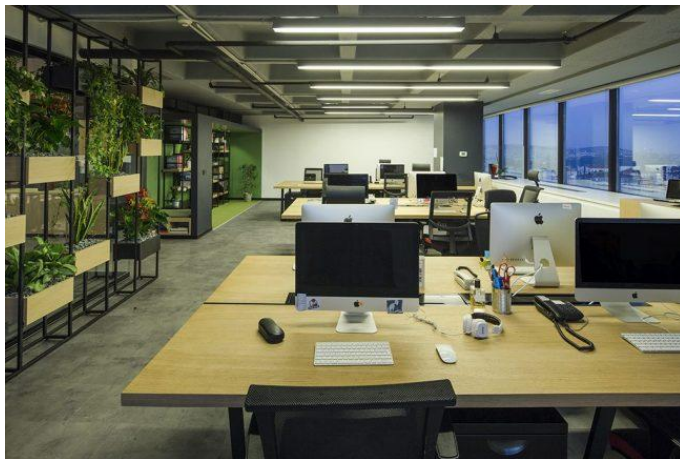
Modular offices were built by those who did not find the Burolandschaft system correct in terms of employee rights violations. In modular offices, it is desired to create a special area for the employee.



Modular office type

Personal use tables, chairs, storage areas and technological tools are allocated for the employee. For concentration, these desks are surrounded by divider panels up to a certain height. Attention has been paid to the full use of the table. Access to each corner from a single point is observed in this table designed in the form of "L". With the beginning of the use of the computer, the surfaces on the table tops started to expand. When we look at the work chairs, features such as height adjustment, 360-degree swivel system and back adjustment have developed.

At present, offices are designed that offer the employees the opportunity to work freely. In these offices, which are based on speed and activity, natural materials, simple design, functional furniture are used.



An example of an open office of present day

A review of the furniture items used in this office indicates that iron and wood materials dominate. A permeable flower bed was used as a divider instead of a wall. Thus, an aesthetic space was created for the employee, and a fiction was made by considering the employee psychology.

Looking at all these furniture designs, it can be said that office furniture has certain features. These features are discussed below under sub-headings.

1.1 Structural Features

A review of office furniture preferred in the era of modernism indicates that all parts are handled and designed separately from each other. It is tried to achieve integrity by designing separately and then combining the feet, the body and the surface. After achieving a state of ergonomics in its structure, the furniture is started to be dressed and functional features are added. And also sustainable materials came across at that time. Sustainability culturally has various definitions and roles and can be applied to many areas (Yum, 2020)

The structure of the furniture provided an aesthetic appearance without the need for decorative elements. The aesthetic order was created by means of the proportions between the parts of the whole, the contrasts in texture, form, color and brightness, and the care shown during the production process. Conformity to the human body and ease of use were not neglected, but these qualities could be realized to the extent of the economic framework they targeted (Boyla, 2012).

1.2 Component Features

With the development of modernism, there have been radical changes in the connections and components of furniture. While these features were tried to be concealed in furniture before, they were revealed in all their nakedness in the era of modernism.

The structure of furniture should be suitable for its function and the parts that make up the structure and their relations with each other should be clearly understood. The carrier system was kept strictly separate from the body. In other words, the part of the furniture that fulfills the task of sitting, lying, storing, etc. was placed on a self-standing skeleton. This feature was visually indicated by differences such as material, shape and color. (Boyla, 2012).

1.3 Effects of Development of Material Technologies on Office Furniture

Thanks to technology, every furniture item conceived can be produced instantly. With the development of the computers, modeling programs were created, thus reducing the rate of faulty production. The opportunity to work comfortably has come with the development of material technologies. Office furniture has been given adjustable features, and materials suitable for working environments have been developed. In the era of modernism, all these could be sold at low prices because they could be accessed by mass production.

1.4 Features Intended for Product-User

Office furniture represents the furniture that is designed to serve the user rather than being aesthetic. For example, while designing a table, the storage feature was considered for user convenience; while a waiting area chair was designed, a place to put the glass was considered, or care was taken not to strain the eyes for the user of the material used. Office furniture intended for the user should be comfortable, suitable for health, functional, suitable for individual use, and aesthetic, considering all of them. Furniture industry, production with certain standards becomes compulsory in order to prove itself on a global scale and to survive. As the industry develops, features sought in products steadily increase and it becomes compulsory to produce products based on those features (Ust, 2017)

2. REVIEWS

Since its birth, the modernism has been talked about positively and negatively, and has always remained on the agenda, including the present day. During this period, many designs from all branches of art were produced, with some of them being short-lived, while others remained as schools. In this section, a discussion is made of the development of office furniture in the modernism process based on furniture samples of a school character and the movie "Play Time".

2.1 Office furniture that have become a school with the modernism

Gerrit Rietveld, a member of the De Stijl group, designed the Zig-zag study chair present in the study room of the Rietveld Schröder house designed in 1920.



Zig-zag chair

This chair is formed by connecting four wooden tables with screws. It is seen in this chair design that ergonomics was not at the forefront in design at the beginning of modernism. This work chair has been designed by keeping the elements of simplicity, naturalness, easy installation and low cost in the foreground.

In 1925, Marcel Breuer designed the Wassily Chair, inspired by the bicycle. When Wassily Kandinsky, the painter of that period, liked the design very much, Breuer gifted him a copy and this furniture became famous. A structure was formed from steel profiles, and leather fabric was used to cover the seat, recline and armrests. Ergonomics is at the forefront of this chair design. This design of a school character appears as a guest chair in today's offices.



Marcel Breuer and Wassily Chair

Mies Van Der Rohe designed the Barcelona Chair in the years when the modernism designs of steel pipe were just beginning to be used. This chair was designed for the German Pavilion at the fair held in Barcelona in 1929.



Barcelona Chair

In this chair design, a mathematical aesthetic is noticed besides simplicity and ergonomics. In this chair, it is noted that the carrier system and the body are designed separately and brought together.

The designs of Le Corbusier, one of the famous names of this period, were very talked about and became a trend in that period. Steel pipes, leather fabrics and curvilinear forms dominate Le Corbusier's designs. When we look at the furniture items of the modernism era, it is noted that the 360 degree rotating system was used for the first time in the design named 'LC7'.



Le Corbusier chair designs

Charlotte Perriand from Le Corbusier's team is one of the famous female designers in the modernism era. Perriand's desk, which he named after himself, succeeded in becoming one of the most talked about furniture at that time.



Charlotte Perriand and her study desk design

Natural forms, simplicity and comfort are at the forefront in this table design. It consists of a naturally shaped wooden table, which is seated on 3 natural shaped blocks. Designed in a form close to a crescent shape, this table provides ease of access for the employee.

Charles and Ray Eames couple designed the Lounge Chair in 1956 as technology responded to all needs in modernism. This office chair design became iconic furniture of that period with its ergonomics and use of high technology. Leather upholstery is placed on 3 bent plywood so as to grasp the body of the human body. The feature that makes this design different from other designs of modernism is that it is spectacular in appearance. However, it has managed to become one of the important office furniture of modernism with its forms and material usage style.



Lounge Chair

Another classic office furniture example of the Eames couple is the office chair named PACC, designed in 1976. This chair bears the traces of the Pop Art movement. It is the first office chair that became an icon with plastic material.



PACC office chair

Steel material is used in the carrier structure and plastic material is used in the body part. Since plastic is not a suitable material in terms of ergonomics, fabric upholstery was preferred in the seating area. Technological adjustable systems are used for employee comfort.

2.2. Reviewsof Office Furniture Presented in the Movie “Play Time”

This movie about the era of modernism was shot by Jaques Tatti in Paris, France in 1967. Tati's movie can be considered one that "builds a bridge between silent and sound film, vaudeville and the modern age", where "visual sensitivities" are at the forefront, and that "has many scenes that need to be watched again due to its audiovisual intensity". With this approach, which culminated in the movie 'Play Time', a "rich viewing experience consisting of intense mise-en-scènes" is presented, which pushes the viewer to think and question actively, rather than a comedy movie that is just meant to make you laugh (Schneider, 2006: 470).

A lengthy part of this film, which is about the interesting events that happened to Mr. Hulot in the new modernist order, was shot in office space. It is noticed that furniture items produced by being inspired by the iconic designs of that period were used in such office space.

In the scene shot in the waiting room, nudity in modernism is emphasized by using glass partition walls. In this room; The seating element, which is also seen in the airport, fair and home scenes of the movie, was used as a waiting seat. Thus, attention was drawn to the anonymous designs in the period of modernism.



Waiting room scene

A review of these seating elements indicates that they look like Le Corbusier's chair named LC13. Leather fabric upholstery is placed on the steel pipe structure. It is shown that it takes the shape of his body when Mr. Hulot sits on top of it. Thus, it was aimed to reflect the fact that ergonomic materials were used in modernism.

The second space seen in the office is the meeting room where Mr. Hulot accidentally opened its door. In this room, employees can be seen sitting around a table and holding meetings. Table and chair designs are completely made of steel material, and no other material is used.



Meeting room scene

A review of the seating element indicates that the furniture consists merely of the structure. The only mobility in this chair is that the steel tubes are bent to grip the back.

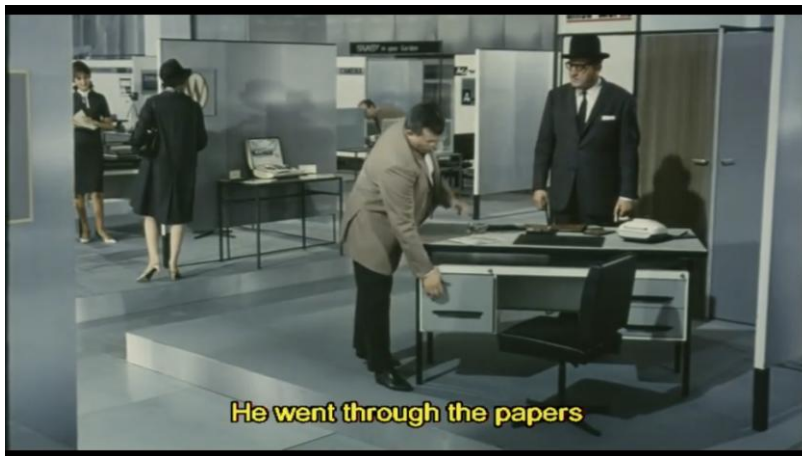
Another scene in the office space was shot in the open office space. This office is designed as a cell type. It was ridiculed that he communicated on the phone even though they could hear each other in a normal voice in these offices where they work individually.



Cell type office scene

A feature of storage space has been added to these divider panels to put documents in. Thus, the functionality in the modernism was emphasized. The fact that every furniture used in the space makes a sound is reflected to the audience in every use. In this office building, cold color tones, shiny and slippery floors, and steel furniture are used. For this reason, every place in the space is compared to each other and it is desired to show that there are deficiencies in orientation.

It is shown that the fact that Mr. Hulot thinks the fairground seated opposite the office building is the continuation of the office space is due to the similarity between the places and the lack of a venue identity.



Fairground, furniture stand

A review of office furniture available in this stand indicates that the seating element is designed as a rotating system form of the chair available in the waiting area. The work desk has a storage area and consists entirely of a steel structure. Unlike modernist desks, this furniture is designed with privacy in mind.



Fairground, bucket stand

For the design of the dustbin available at the stand, Tatti made reference to the old art movements. With this plastic Pop Art dustbin design, which was designed in the form of a column of ancient times, he wanted to draw attention to the perspective of the artists of this period on the old art movements.

3. CONCLUSIONS

The fact that the office furniture industry developed at the same time as the development process of the modernism period indicates that the artists of that period turned to modernist office furniture designs. With this movie, shot by Jacques Tatti while he was in the era of modernism; he managed to reflect the good and bad aspects of modernism. The people, who wanted to get rid of wars, economic troubles and chaos, embraced this period even though it was difficult to accept it. Although the designs were simple and flimsy, they tried to like them.

These designs, which we still review based on visuals, are used in today's office furniture, or similar ones are produced based on inspirations. The period of modernism, which has the longest influence in the history of design, owes its development to technology. For this reason, although new materials continue to be produced and new systems develop, all these designs will continue to be produced under the name of modernism.

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