

Explore the Practicality and Aesthetics of Furniture

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Abstract. The development of modern society makes people put higher requirements on furniture products, which results people in selecting furniture always taking a long time, and the use of the furniture always encounters unanticipated problems. Furniture style, aesthetics and practicality, space utilization, and so on have become the main problems people consider, so this paper mainly discusses the practicality and artistry of furniture and extends it to the future for prediction. To further explore the compatibility of furniture and the environment, this paper uses the method of literature review to study the history of the development of furniture, different styles, and design methods, and through representative case study examples, to draw the importance of furniture design and practicality in the home, and to explore the use of furniture and the development of matching aspects of the direction of the furniture, such as the furniture with internet and furniture producing with more environmentally friendly materials.

Keywords: Furniture design, style, practicality, furniture.

1. Introduction

This study looks at furniture that fits people with different requirements. This study has been highly researched in analyzing the design of furniture. The study focuses on the style and high utilization of furniture, using the literature analysis method to find and read relevant information and literature, this method has the advantage of analyzing the different aspects of furniture design in different literatures and gives a more comprehensive view, which is beneficial to the study [1]. The ultimate research objective of this study is to analyze different furniture styles and ways to enhance their utility, and to achieve this objective, research was carried out on furniture product design methods, concepts, and the history of furniture.

2. Background

In the early days of human civilization, when the concept of furniture had not yet been formed, people used various objects generated by nature to rely on the need to make life more convenient. For example, a tree trunk or rock that has been blown down by the wind can be used as a seat, a flat stone can be used as a "table" for daily work, and soft grass or animal fur can be used as a bed. Later, with the progress of the times, human beings began to make creative productions and gradually began to make more simple objects that could replace natural formations, that is, gradually evolved into today's furniture. Different types of furniture have emerged that fulfill specific functions: for sitting, lying, working, dining, storage, etc. [1].

In general, furniture architecture from the First Dynasty of Ancient Egypt is considered to be the beginning of furniture history (around 3100-2890 BC). At the same time, there is a lot of evidence that humans began to make and use furniture in the late Paleolithic and early Neolithic periods. Historically, wood was a common material used in early furniture manufacturing. However, archaeological finds have shown that some stones and animal bones were also often used [1].

2.1. The Different Styles of Furniture

The formation of style by different times and regional characteristics through the creation of ideas and performance gradually developed into a different era or region representative of the interior

design form [2]. Furniture style, local human factors, and natural conditions are also closely related. The following is a selection of more representative of the ancient home style [3].

Ancient Egyptian home style mainly from the ancient Egyptian pharaoh tomb walls and other artifacts to understand the form and construction of ancient furniture. Gilding and ivory inlay were common methods of furniture surface decoration in ancient Egypt. The surface decoration and patterns of furniture were also always based on elaborate mythological-related patterns. Ancient Egyptian carpenters used woods such as ebony, cedar, yew, acacia, olive, oak, fig, linden, and sycamore to make expensive furniture. The exterior elements of furniture were also decorated using metals, pearls, lacquer, colored glass beads, and precious stones. Ancient Egypt was familiar with bone glue, a glue used in inlay and veneering techniques. They also used dovetail joints or beveled joints on sarcophagi, chests, and dressers [1].

A feature of early medieval furniture is the extensive use of woodworking techniques, including legs, backs, chests, and joints. These elements are associated in form and style with the products of Roman artisans. In the Byzantine period, furniture was inlaid with ivory and lined with rich, soft fabrics. During the Romanesque period, the technique of manufacturing furniture deteriorated significantly and was reduced to simple carpenter's work, while for decorative purposes polychrome and colored paintings were often used. At that time, in the north of Europe, furniture was mainly made of oak, while in the south it was made of conifers [1].

The name Baroque comes from the Italian word "barocco", which means a delicately shaped shell. It was born at the end of the 16th century and is essentially a direct continuation of the Renaissance style. One of their peculiarities is the use of flat decoration, known as inlaying, on box furniture, and wood carving decoration on skeletal furniture such as chairs, armchairs, and tables [1]. When it comes to creating rich furnishing interiors, the Italian masters are unsurpassed. The main focus of the Baroque style is the luxurious gilded furniture as well as the rounded silhouette. Baroque furniture has delicate curved patterns in armchairs and chairs with carved backrests, wardrobes, and beds [3].

In 1830, the beginning of the eclectic furniture period, the German carpenter Michael Thonet (born 1796 in Boppard on the Rhine, the son of the German tanner Franz Anton Thonet) wanted to avoid the costs associated with milling wood, and he began experimenting with techniques that would allow the wood to bend. After carefully observing the behavior of wood fibers, Thonet became the world's first producer of bent wooden elements. Thonet mainly used beech wood for furniture production, as it did not require any special skills from the workers. This style is mainly reflected in some tables and chairs [1].

Nowadays, with the development of interior design gradually derived from several mainstream modern design styles, the relaxed and warm American country style; and the pursuit of layering and complexity of the classical European style; white and blue as the main colors of the Mediterranean style; as well as combining the characteristics of the island and the cultural tastes of Southeast Asia; and pay attention to the flow of space and the separation of the Japanese style; to the theme of simplicity and clarity of the modern simple style [4].

2.2. The Future Trend of Furniture Design

With the development of society, design innovation thinking continues to improve, with the rapid development of science and technology, but also gradually the following trends. The interior design returns to naturalization: with the growth of environmental protection awareness, people yearn for nature and desire to live in a natural, green, and healthy environment. And the use of new materials: with the rapid development of new building materials, and interior materials, the future of the home will become fantastic [4]. For example, The use of plastic materials and industrial materials such as carbon fiber, glass fiber, polyurethane, polyethylene, and polypropylene. Based on geometric shapes, it is also possible to make amorphous designs. In today's furniture design, as in Bauhaus design, the emphasis is on lightweight thin steel profiles and replaces today's thin section steel profiles [5].

2.3. The Practicality of Contemporary Furniture

Some consumers believe that design has become too aesthetic and commercial and that the concept of good design should be extended to the sustainable and functional functions of the product [6]. Because the difference in living space has given rise to many different types of houses, and this is also very different in design, the location of the house is different, and the sunshine and floor height are all things that designers need to consider. The furniture must have sufficient functional partitions to meet the needs of life and improve the space utilization of the house [7]. For some office furniture, modern office furniture design takes two concepts to the extreme: communication and efficiency. To work efficiently, office furniture needs to show the characteristics of high mobility, diversity, and personalization, which requires the corresponding office furniture to be further people-based and improve practicality [8].

2.3.1 Commonly methods to improve the usability of the product

The purpose of universal design can greatly improve practicality, which was first introduced in 1970. The aim is to meet as many needs as possible for each user. An example of this approach to design: is the design of furniture of different heights for children, the elderly, the disabled, and all other users, movable, height-adjustable tables, which allow people to work both standing and adapt to all different heights, prioritizing simple and comfortable use [5].

The core idea of biomimetic design is that nature has solved many of the problems are trying to solve and that animals, plants, and microbes are the perfect engineers. For example, this bionic mantis table is inspired by the body parts of the mantis: a light and elegant leg shape that supports the mantis's disproportionately long and heavy body at a unique angle. The design of the praying mantis table mimics the legs of the praying mantis, adding lightness to the structure while also having high strength characteristics to support a minimal aluminum heavy glass surface and can withstand six times its weight [9].



Fig. 1 Alvaro Uribe - Mantis table [10].

Combining two similar pieces of furniture is a great way to increase practicality and create a spacious and comfortable living space in a limited area. For example, the bed and the computer desk can be combined, with one side of the bed opened and the folding table extended, enabling individuals to enjoy snacks or staple foods while watching TV shows or movies. When needed, the table can be stowed away without affecting sleep or rest [7]. Alternatively, the bed and the sofa can be combined, allowing the sofa to convert into a bed for guests, thus providing the function of a guest room without the need for additional space when the room is limited.

3. Case Study

To better demonstrate the practicality and aesthetics of furniture, some cases of furniture are provided below for more detailed examples and explanations.

3.1. IKEA

This is a daybed that is available in both white and dark brown options and get a double bed by simply pulling the bed frame, while also having storage space.

3.1.1 Product background

Founded in rural Sweden, IKEA started as a small mail-order company and has grown to become a global home furnishing brand. Simplicity, practicality, environmental protection, and fashion have become the characteristics of IKEA home décor. Because of the low price, simplicity, and convenience of IKEA products are extremely popular all over the world. Today, IKEA has more than 100 stores, tens of thousands of employees, and more than 2,000 suppliers around the world.

Designer Carina Bengs took into account the small living space or sometimes the need for an extra bed. Then the designer's design concept is that the daybed can solve the above problems very well, a piece of furniture has two functions, in addition to the product has drawers to store items.

3.1.2 Practicality and aesthetics of the product

The product continues the classic Scandinavian style of IKEA, with clear lines and simple and elegant colors, which can bring a warmer and more comfortable feeling to the home. Good product details also give people a high-quality feeling, such as high-quality aluminum alloy handles and smooth rounded corners to enhance the texture of the product and make the product line smoother.

One piece of furniture combines four products: sofa, single bed, double bed, and cabinet. It is suitable for living rooms, single bedrooms, guest rooms, and other use scenarios. At the same time, it has three functions resting, sleeping, and storage in the living room, and only has the area of a single bed after sliding and sliding. For small houses that do not have guest rooms, the sofa in the living room can be turned into a guest room by pulling the sofa out of the living room. At the same time, the fit with the user is also very strong, the push and pull are light, the deployment is simple, and the girl can also push and pull easily, there is no requirement for the user, and it is convenient and fast to use.

3.2. The Nugget

It is a children's product that is available in a variety of colors, both as furniture and as a toy. is a game sofa made up of four foam blocks. It can be reconfigured in countless ways, so it's popular on social media.

3.2.1 Product background

When The Nugget was launched in 2014 by the eponymous company, the company didn't initially set out to make a new piece of children's furniture, but rather a good futon. The company only sells nuggets and cover sets for Nugget. However, in recent years, Nugget has been widely known on the Internet, because the high quality of its products and innovative ideas are very popular among families with children, and it has gradually become a necessity for parents. Nugget uses high-quality foams and fabrics to keep children safe when using them.

3.2.2 Aesthetics and practicality of the product

There is no clear style classification for the product as a children's toy, but its streamlined appearance and smooth lines make the product look simple. The subtlety of the size allows for a perfect fit when the different foam pieces are combined. The variety of colors also helps the product to suit different shades of the house and children's preferences and bring different experiences.

Nugget combines bricks and sofas so that the sofa can also be turned into a child's toy. The nugget is made with just four foam pieces: two supportive pillows, one soft cushion, and one secure base. Infinite combinations of rectangles and triangles allow children to discover different ways to use them, such as large sofas, small sofas, decorations, tents, houses, slides, parkour obstacles, or reading areas.

4. Discusses

The aesthetics of furniture has a great impact on human life and helps, for example, when the color of office furniture is not properly handled, not only the function of the furniture will be affected, but also easily affects people's work and rest mood, resulting in some negative, repressed emotions, or fatigue to the eyes and spirit. For employees, this can be distracting and make them less productive [11]. As another example, good furniture that can have a home-like atmosphere can make the elderly more willing to live in a nursing home and have a greater sense of belonging, such as clean chair fabrics or fireplaces [12]. The practicality of furniture is also very important so that the furniture can play the maximum function to save space, save materials, be durable, and have a wide range of applications. For example, office furniture designed based on a "comfortable office" has the characteristics of longer use time, higher frequency, and wider range. A comfortable office environment can make work more efficient and improve employee well-being [8].

The application of artificial intelligence (AI) and data is the most influential factor in the future development of furniture. Smart furniture that integrates technologies such as the Internet of Things and smart chips can better show the actual and potential needs of customers, so smart homes will become one of the focuses of furniture development in the future [8].

The environmental problems that emerged from the 90s of the 20th century cannot be ignored, and the use of materials and production processes for furniture products should also be controlled to a minimum to effectively use natural resources and avoid waste [5]. For example, for convenience and recycling, products need to have a simple design and composition of materials (e.g. wood), otherwise, recycling costs would be prohibitive. However, for long-life products, the opportunity for recycling may be lost, but the consumption of multiple purchases can also be reduced [6].

5. Conclusion

The results of this study are the influence of social media and globalization has transformed the furniture industry, leading to a more diverse range of designs and styles. This shift is a response to the changing nature of living spaces, as global population growth has led to smaller homes. This necessitates a focus on practical and functional furniture, reflecting a trend towards maximizing utility in a reduced living area. At the same time, color, environmental friendliness, and artificial intelligence interaction systems are taking over the furniture industry. According to the study, research should focus more on recyclable and green materials as well as intelligent control of furniture in the future.

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