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ADVANCED METHODS IN FURNITURE DESIGN

Historical aspects of the origin and the development of furniture and industrial design

My academic dissertation **ADVANCED METHODS IN FURNITURE DESIGN** is about analysing the work of a designer and an architect in process of manufacture development of furniture and industrial design. The main goal is to explain the influence of technical and social development on the changes and understanding the design around us, and also to explain the influence of design on the need of development in sphere of engineering and science. The taste of a consumer is influenced by works of visual artists, sculptors, designers and architects. The designers give the product the final form. It is the form that lures the customer. But the artists, designers and architects are also those who are affected by technical development. This makes a circle of mutual relationship and any part of it cannot be omitted.

People showed their sense of art as early as the **ancient times**. At the beginning they drew on cave walls, then they started to make various things of daily use. First it was products of their own need. As the barter trade grew the need to recognise products was growing, as well. The product which is cheap and attractive at the first sight, is sold more easily than the other product. This is an everlasting rule.

People realised that participation of a designer in furniture manufacture was necessary in the 19th century. But the term 'INDUSTRIAL DESIGN' was defined only at the beginning of the 20th century. But everyone uses the internationally accepted term 'DESIGN' /Petránsky, 1994, s.11/. Thanks to **The First Industrial Revolution** the 19th century has an important place in the history of /Industrial/ Design. It started at the end of the 18th century in the developed countries of Europe. Its beginning is defined by discovery of the Watt's steam engine in 1765. /Syróvý, 1974, s. 339/. Since that time, everything what was related to man went

through enormous changes: human thinking, the way of earning and spending money, transportation, trade and man's values changed. People started to move to bigger cities, the way of life had undergone a complete transformation. These changes did influence the understanding of furniture design and utility art.

The 19th century brought a lot of important and brand new scientific, technical and industrial inventions. It was an epochal century in this respect. But this state had also its great disadvantage. It became a period of strong fight to gain a good place on the market. Owners of the factories preferred quantity to quality. Thanks to the steam engine it was not necessary to employ too many people, but it was not even important to employ experts. The process of manufacture was getting faster and faster with less and less workers. It was not important to make products of attractive form, but fast manufacture of cheap and functional goods became important. At that time the technical drawers delivered their design concepts into factories. They copied the historical forms, set them into different time and environment and different social conditions. From the designer's point of view this fact is considered as big disadvantage of that period. It took some time until producers realised that they really needed a direct participation of artistic designers at the creation of the product. The first efforts to renew arts and craft labour have appeared in Great Britain at the end of the 19th century. Several groups creating and working in furniture design joined together and based **The Arts & Crafts Exhibition Society**. Its representatives tried to deprive the furniture of the excessive decoration.

Michael Thonet should not be omitted when writing about the 19th century furniture. He became one of the most famous pioneers of progress, who tried to 'span these seemingly insuperable gaps' between the fast technical

advancement and the need for designer's presence in manufacture process. He is known as the father of the worldwide chair No '14'. He made the chair of great form that could be used in any interior. But the chair was also easy to manufacture and pack. He managed to put 36 peaces of this chair into one box of size 1m³. /Bott Gernhard, 1989/ This fact demonstrates that packing and transportation aspects of goods started to become of great importance for the producers. Michael Thonet and his successors totally changed the principles of the furniture design the world over.

Michael Thonet began his experiments with what became known as 'bentwood' furniture in 1830. /www.thonetassociates.com/ Later Thonet and his sons started the mass production of bentwood furniture with unprecedented standards of quality. The name Thonet quickly became synonymous with a high standard of exquisite craftsmanship, and Thonet's company grew into the most famous and imitated furniture company of that time. Thonet innovated the furniture industry with distinctive design and superior workmanship. The Thonet family had perfected the assembly - line production, becoming a major manufacturer of bentwood furniture. No other company has had, or will continue to have, such a remarkable impact on the way we see the furniture around us as Thonet. Thonet was the first one who understood the necessity of designer's work. He was the first who invited the best known designers, as Marcel Breuer, Le Corbusier, Ludwig Mies van der Rohe...to work for him. And it was worthwhile.

Analysing the historical issues of using advanced methods in utility art and necessity of designer's participation I need to mention two German art and crafts groups '**Der Deutsche Werkbund**' and '**Bauhaus**'. Representatives of both of them were trying to find the right way for furniture and product design. They taught their students that a designer was able to determine the right form for any product after perfect mastering of a craft. And so the form went hand in hand with technology. Many great architects and designers worked in the spirit of the Bauhaus school. I can mention again Le Corbusier, Mies van der Rohe and other like Wassily

Kandinsky, Teo van Doesburg, Mart Stam, etc.

The furniture and other objects of daily use have been made for long time. But the importance of good looking pieces of furniture went on and on. An aspiration for better 'tomorrow' changed the life after The World War I. People suddenly wanted to be surrounded by beautiful things. And so 'product design' was born right at this time. Manufactured products could be sold only if they were attractive at first sight. And so the form has become as important as the function.

The period after The World War II meant the next great turn in science, technology and industry. These changes are known as **Science and Technical Revolution** or **The Second Industrial Revolution**. It started in that period and it still continues up till now. The quick development in science and technology was reflected in the product and furniture design. Artists began to experiment with new materials, forms and shapes. Effort of minimalism, miniaturization, design of cheap furniture, using plastics, inspirations from the universe and military design were the characteristics of the war-destroyed Europe.

Plastics started to be applied on a large scale. Experiment became the most important way of designing. Materials with short durability as paper and cardboard, also stainless steel tube appeared in the 1970s. Furniture became dismountable, multifunctional, variable. Strict rational forms, which are characteristic for technical development, were taking shape besides traditionalism, naturalism, hippy-tendencies and also High - Tech style, which used industrial materials as metal, glass and plastics.

Computing technologies have affected all technical, manufacturing and scientific spheres in the period of 90thies. The computer has become a criteria of the country progress. It has become the inseparable part of human life.

Within the last five years, the Internet has had a remarkable impact on the design process and has triggered according to Lunar Design, "the move from mass production to mass customisation". The

freedom and accessibility of such communication technologies have also led to an ever-increasing transfer of design ideas and the 'cross-pollination' of disciplines. This tendency towards integration is a result, of the increasing miniaturisation of technology, which will undoubtedly continue to the foreseeable future. /Fiell, 2001/

Simplification has clearly become a key objective in design. Designers will probably head to miniaturisation and simplification of structural forms. It is possible that it will be necessary to make products that can be easily understood and used in an intuitive way. Psychological aspects of design are also extensively given the prominence as never before. There is a general consensus that products need to go beyond considerations of form and function if they are to become "objects of desire" in an increasingly competitive marketplace. / Fiell, 2001/ Emotionalism is considered not only as a powerful and essential way of facilitating better and more meaningful connections between products and their users, but as an effective means of differentiating their solutions from those of their competitors. / Fiell, 2001/

So there are many possible ways and tendencies of next heading in the sphere of design. We would not like to predict only one way right now.

It appears in general, that designers have an exceptional influence on the expectations and buying habits of costumers. So it is a great moral and social imperative and simultaneously a great challenge for them. Every designer has his own and different approach to creating new products and planning of interiors. However, everyone needs to look for new sustainable and humanistic solutions. All designers and architects have in common the constant search for furniture that will enhance the quality of life. By using the advanced materials and technologies while striving to provide simplified design solutions with an easier emotional connection for the consumer, designers should be able to create the products that will be needed in the future.

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