

## **Disturbance between Industrial art and Industrial design concepts**

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### **Abstract:**

The art that keeps pace with the different industrial eras and that addresses the age and technology does not sit in a collection of paintings that express the themes associated with industry; Using of craft according to manufacturing as a way to innovate began from the beginning of man's existence in the earth, wherever there is a need and the human hand is found and the machine is found, man finds himself obedient to what he has of mind and tools to implement what he wants from the innovations he needs to complete his daily life. After the advent of the term industrial design, the lack of a clear definition of the term industrial art led to great confusion in design terms before and after the emergence of the Ulm School and to our present day which makes their confusion in the different fields of design practice and classification of different schools that count on industrial design.

This overlap, which through settling on its borders, makes us able to demarcate the boundaries between the term industrial design and the term industrial art by reviewing the different historical stages of industrial arts and the different eras of the machine with its diversity and modernity over time, and then by defining industrial design and standing on the beginning of its emergence as a codified term and reviewing the timeline of it and its different pioneers, including the review and beyond the term that makes us able to classify according to it.

### **Key words**

Industrial Crafts - Industrial Arts - Industrial Design– Machine aesthetics

### **First: Research Phenomenon:**

As a result of industrial development in different stages, industrial products appear that keep pace with the stage in attempts to employ this technology, and industrial art originated in polytechnic schools in the period before the Second World War (with the development of industry) in America, so the concept of industrial art appeared, which is the employment of different techniques in handmade (individual) products.

Art that keeps pace with different industrial eras and that addresses the age and technology is not included in a collection of paintings that express the themes associated with industry; the use of craft in manufacturing and innovation is something that began from the beginning of man's existence in the earth, so wherever there is a need, the human hand is found and the machine is found, man finds himself obedient to what he has of mind and tools to implement what he wants from the innovations he needs to complete his daily life.

**Second: Research Ambiguity:**

The lack of a clear definition of the term industrial art, the presence of a large confusion in design terms before and after the emergence of the Ulm School, and to our present-day makes their confusion in the different fields of design practitioners and classification of different schools that count on industrial design.

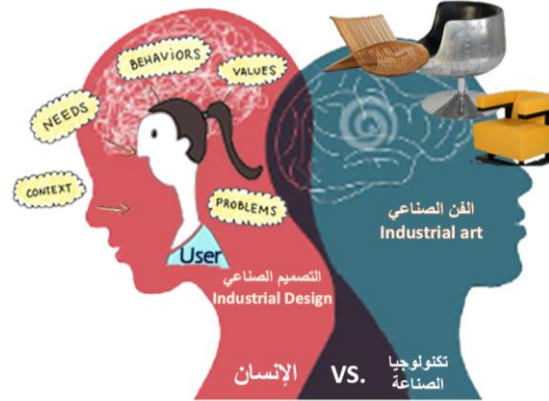


Figure 1: Research Ambiguity

**Fourth: Imposing Research:**

The research assumes that with the identification of what industrial arts are, the problem of classifying schools that teach industrial crafts and the works of pioneers of human creativity is solved according to limits through which it is possible to know the essence of industrial design and distinguish it from industrial arts.

**Sixth: Research Methodology:**

The research is based on the Inductive Approach and its research methods, including analysis, classification, criticism, comparison, and other research methods that suit the subject of research.

**Seventh: Research Plan:**

The research plan includes the following stages:

**Phase I: Survey Phase**

At this stage, information is collected on:

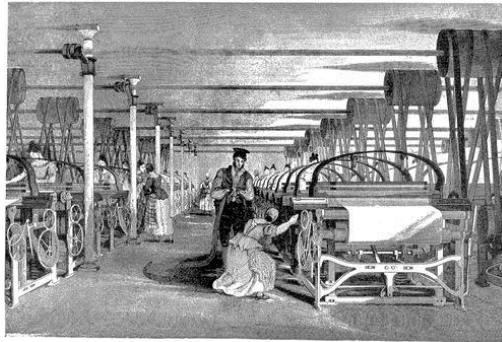
1. Industrial Crafts
2. Industrial Arts
3. Industrial Design

**Section I****Industrial Arts****Introduction:**

The term Industrial Arts came with the emergence of the Modern Movement after the collapse of the Victorian era with the French Revolution (1789-1799) - a political coup d'état and a popular revolution - that began in France in 1789 and had a great impact on the whole world, it is the first liberal revolution in history and was called that period "Modernism Age" "Where the aesthetics of the machine triumphed on the basis that it is an extension of the human hand,

and the Western world seemed to appreciate the aesthetic value of the products of the machine as new terms and principles have emerged since that time in the world of aesthetic values, the most famous of these values: «precision», «simplicity» and «economy» and the removal of other values that were prevalent in the past such as "scarcity in the material" and "exaggeration in decoration".

The era of industry and economic productivity through the Industrial Revolution came with the spread and replacement of manual labor with machines. During the eighteenth century, Western Europe witnessed a comprehensive scientific renaissance, diversifying research and experiments to include various branches of science and leading to important inventions and discoveries that were the direct cause of the industrial revolution during the nineteenth century of new chemical manufacturing processes and iron production, the increasing use of steam and water energy, the development of machine tools and the emergence of the mechanical factory system. The Industrial Revolution also led to an unprecedented rise in the rate of population growth, as well as had a profound impact on economic and social life. and political both in Europe and abroad (Figure 2).



**Figure 2: Roberts' weaving in a textile workshop in 1835.**

The principles and values of the machine became the direction of taste at the beginning of the twentieth century, and flourished between the First and Second World Wars in the twenties of that century, in which art and industry were linked and human creativity was aimed at employing industry in the service of the classes of the people, meeting their needs and consolidating democracy, or what we call "Design for All" or "Democratic Design"

Polytechnics have emerged in America, which are based on teaching crafts related to the industry such as the maintenance of machinery, metal and wood works and the development of traditional crafts by entering some automated manufacturing processes such as forming various materials with cutting, bending, and welding, as well as assembly and finishing processes, to qualify graduates to work in factories and industrial workshops.

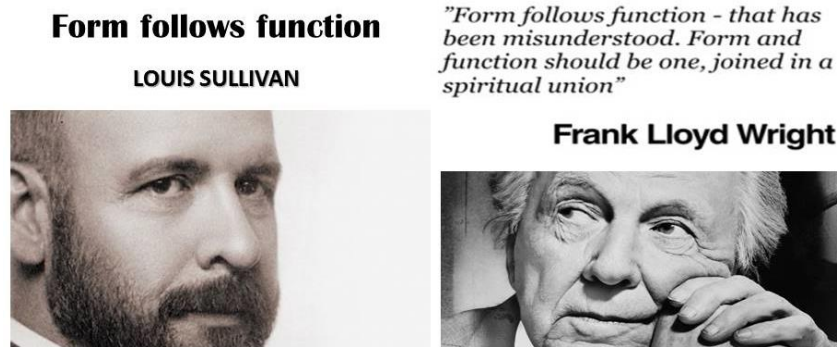
This led to the employment of these techniques, outputs, and manufactured components to the emergence of many attempts to employ these industrial outputs in the creation of handmade crafts.

### **Duality Form and Function**

The American architect Louis Henri Sullivan (September 8, 1856 – April 14, 1924) saw as the father of modernism in nature that it is not the promised paradise nurtured by a benign and omnipotent God, but rather a nature that may be seen through the mixed terms of Darwin and Emerson, materialistic its work but super and beyond the limit. Transcendental in its meaning.

Darwin taught him how to look at animals and plants as mechanical contrivances, the shapes of which are specifically adapted to perform certain physical works. Ralph Waldo Emerson explained how the harmonies between form and the necessary existence of things are in themselves a divine principle, equally applied to an animal or skyscraper.

Sullivan, therefore, coined the saying "form follows function" (meaning that it is the function that always determines the form and not the other way around). The world architect Frank Lloyd Wright has argued that Sullivan's statement has been misunderstood form and function must be one, Joined in a Spiritual Union (Fig. 3).



**Figure 3: Form and function of Sullivan and Frank Lloyd Wright**

This development in the craft and the entry of human aesthetic artistic creativity along with technical art linked to Sullivan's vision and the importance of the function from which the form originates, led to the transformation of technical education schools into schools of industrial arts and the emergence of what is called industrial art and spread throughout America between the First and Second World Wars.

No one tried to stand up to recognize that new creative activity invented by the need for it, but after a long journey and thinking about the codification of that discipline (the Bauhaus stage) in the form of the relationship between art and industry until the Higher School of für Gestaltung (HfG) Ulm was founded after World War II.

### **Vocabulary of Functionalism**

Perhaps Max Bill's "functionalism" and vocabulary of her language were the most deeply addressed at the HFG High School of Design at the first. It was also a major event in many design circles most of the time, and Louis-Henry Sullivan's adage "form follows function" served as a principle of the rationale for controlling and codifying designs.

Until the sixties came to revolve around a great controversy about the concept of industrial arts, and this was helped by the achievements made in the field of space at the end of the fifties, which had a great impact on the definition of the scientific concept of industrial design through the Ulm School, where the term design was borrowed in English from the term "Gestaltung" formation in German.

## **The second section**

### **Industrial Design**

The beginning of the emergence of industrial design is considered to be completely indefinite because the history of its emergence as a human activity is exactly the history of the scientific and philosophical codification of this branch of knowledge Discipline during the

process of its continuous progress, where it developed in a clear way from the beginning of the emergence of handicrafts until reaching its prestigious place in complex industrial production, where a special method developed in addressing design problems, in short, that process began to increase maturity and increase the importance of the role of that type Domain From the design he played as part of the ongoing contemporary process of manufacturing, and also in the role that design played in the contemporary culture.

Of course, both the teaching and practice of industrial design have influenced each other, and at the same time, their development has been closely linked to the accompanying technological development and through the changing possibilities offered by the applied quantitative production methods as well as the materials used. On the path of that development, we can mention some distinctive milestones to define the concept and definition of industrial design, which was initially associated with product design on the one hand and design for industry. Designing for Industry for Industry, on the other hand, the following figure 4 is showing a timeline of the term Industrial designer

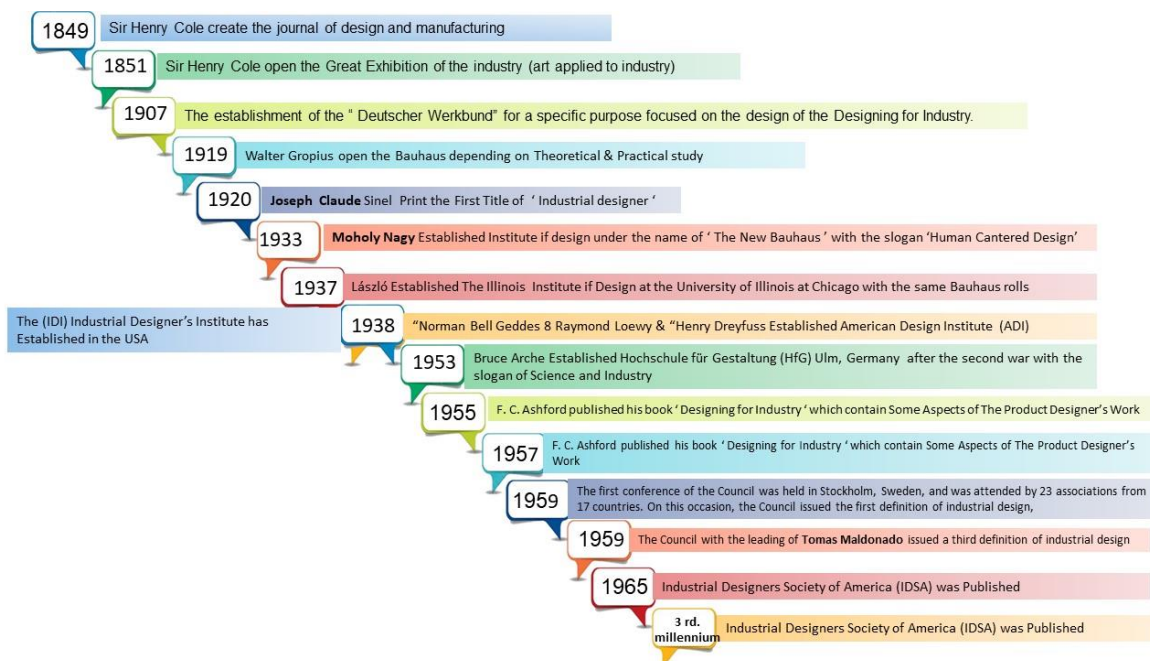


Figure 4: Timeline of Industrial Designer term

## Achievements and Recommendations

### Achievements

1. The concept of design is a new concept to which all human creations do not adhere, but determining what design is in its essence, stages, and theories makes it a science and do not confuse with other sciences and arts, does not combine the art of design with the design of the product.
2. The term art of industry is an introduction to understanding the term industrial design and classifying human creations over the ages to be put in their proper
3. There is a period dominated by industry and materials, during which the art of design prevailed because the designer at the time was the continuous practitioner of a machine, then

there were many trends and revolutions, and so came the era of rebellion against hiding beyond the product to show all industrial elements in the form of products.

4. Due to the development of human life, his needs and desires have evolved, and the industrial designer has worked to meet these needs by designing many products to suit the culture and environment of man and because of the development of technology, products have evolved in terms of design characteristics and many designs have appeared.

5. Over the years, we notice that schools and artistic and design movements have a major role in determining the features and standards of beauty of a product such as the Bauhaus in varying periods of time, and it is noted that these standards are commensurate with the pace of each era and the concept of beauty at the time. There are some schools that have taken care of the job in the product such as Ulm, while others have focused on fun and fun such as Memphis in postmodernism in the seventies of the twentieth century.

## Recommendations

1. The emergence of advanced industries and the ability of man to adapt every new technology throughout the ages makes his ability to innovate according to the technology of the times and according to his ability to use and adapt it to make the practice of creativity linked to contemporary industrial processes, so that smart materials and digital industrial processes are the sources of inspiration and the cornerstone of creativity.

2. Between the aesthetics of the machine and design as an art and a craft (the art of design and the craft of design) the term industrial design oscillates to this day so that specialists carry their own money, whether increasing or decreasing. Through reflection on the art of industry, that problem can be solved, and classification impartially helps the specialist to understand the field of industrial design and thus the ability to enrich it.

3. The need to look carefully at the history of industrial design, and the terms accompanying it in each period and to conduct comparative research and distinction of those terms to clarify the difference and thus the ability to lead science and the student to the essence of industrial design.

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