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# Advantage of Backwardness: The Effect of Industrialisation on European Modern Design Movement

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## Abstract

To answer specific questions of modern design history, historical analysis is needed, alongside chronicles and narrative, to promote deeper understanding. This paper, with the assistance of advantage of backwardness theory and the method characterised by historical sociology, focuses on the social origin of European modern design against the background of the industrial revolution. It aims to understand the link between technological change and the rise of modern design in Europe. The study starts with an explanation of the progress of industrialisation within those countries that were closely related to European modern design movement, and then investigates how this process diversely impacted the emergence of modern design in Europe through a comparative analysis on the interactive connection between industrialisation (as a case of technological change in modern times) and European modern design movement (as a cultural and social consequence of the change). This study particularly clarifies why the subsequent industrial countries, instead of the early industrial countries, had dramatically obtained the advantage to fully develop the modern design movement in Europe. It concludes that, in terms of technological change, advantage of backwardness played an important part in the origin of European modern design.

**Keywords:** European modern design, social origin, historical sociology, comparative study, advantage of backwardness

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## Introduction

The study of modern design history lays the foundation of theoretical system of modern design. As one of the sources of modern design, European modern design movement and its history have attracted attention from the academic world for many decades. Based on the previous investigations into this field, this article attempts to explore the historical process of European modern design movement over the period from the nineteenth century to the early twentieth century. The rise of modern design (a cultural and social phenomenon caused by technological change in modern times) has dramatically impacted aesthetic appeal as well as the social significance of architectures, products, and visual communications. Therefore, this article conducts a comparative analysis on the social origin of European modern design, using advantage of backwardness theory by Thorstein Veblen (2003) and Alexander Gerschenkron (1962). They successfully applied it to elucidate the development of national economy in European modern history. Interestingly, the countries that lagged behind the forerunners obtained the advantage. This article specifically aims to understand the link between technological change and the rise of modern design in Europe.

Although many art history researchers had already given continuous attention to modern design before this time, the 1930s can be considered as the starting point of academic research on modern design history. Nikolaus Pevsner, a British historian, wrote the earliest work on modern design history in 1936. His book, *Pioneers of Modern Design: from William Morris to Walter Gropius*, declared the real beginning of modern design history study.

Since the 1940s, based on Pevsner's classical study of the "narrative chronicle", some researchers have provided new studies on this issue. The remarkable works include *Mechanization Takes Command: A Contribution to Anonymous History* by Siegfried Gideon and *Theory and Design in the First Machine Age* by Reyner Banham. Against "heroic approach" of Pevsner, Gideon presented "anonymous history". As a result, the focus moved from the "historic force of heroes" to a much broader view on the impact of "impersonal industrial technology". Banham directed his academic insight towards design activities which had not been classically included into modernism's main trends, such as the Italian Futurism in the 1910s.

From the 1970s up to the 1990s, Penny Sparke, Adrian Forty, and Jonathan Woodham stepped into the same field. Their wide-ranging works included *A Century of Design: Design Pioneers of the 20th Century*, by Sparke; *Objects of Desire: Design and Society since 1750*, by Forty; and *Twentieth-Century Design*, by Woodham. Along with other upcoming researchers, they had a more comprehensive theoretical view. This allowed them examine modern design history and discuss it through diversified methods. Subsequently, this change strengthened the trend which indicated a

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significant shifting from "narration of modern design under chronicle" to "analysis and interpretation on modern design from sociological and cultural views" (Banham, 1980; Sparke, 2019; Woodham, 1997; Forty, 1992). This new trend had an impact that continued into the twenty-first century.

As an investigation into European modern design history that was deeply involved in technological change, this article follows this main trend. The goal of the study is to discover the effect of the industrial revolution on the rise of modern design in Europe. It tries to clarify how the ideologists and designers in the early industrial countries won the dominant position of the industrial revolution but missed a chance to make modern design come into being. Also, it identifies how the ideologists and designers in the countries that lagged behind the forerunners have taken advantage of backwardness and led to the emergence of modernism.

## Methods

By means of comparative study, this article aims to discover the effect of the industrial revolution on the rise of modern design in Europe, and to clarity why the subsequent industrial countries dramatically obtained the advantage to fully develop the modern design movement in Europe, instead of the early industrial countries. Historical sociology is employed and the object is concerned with the historical process of European modern design movement, namely, from the Arts and Crafts Movement to Bauhaus.

Although historical sociology appeared as a sub-field of sociology in the 1960s, a few classical sociologists or historians, e.g., Alexis de Tocqueville, Max Weber, and Marc Bloch, had already made their contribution. Thereafter, it became a specified research method from a diachronic standpoint to inspect social phenomena and conduct comparative study (Delanty & Esin, 2003; Skocpol, 2012). Historical sociology has the advantage of interpretation on the causality of social change in the long term, and the evidences can hardly be obtained by standardised approaches, e.g., conditioned experiments, interviews, or questionnaires. In this investigation, historical sociology is applied to illustrate the diversified action of technological change on the rise of modern design in Europe, taking full advantage of this method to investigate the long-run cultural and social phenomenon.

On account of invalidity of standardised experiments, interviews, or questionnaires for data collection, this study, like many other studies of historical sociology, depends on the contribution of historical evidences. However, its meaning is evaluated in terms of understanding rather than objective statistics (Collingwood, 1994; Tullock, 1965). This study mainly collects these kinds of evidences from the narratives of design history and architecture history, which provide historical facts for further analysis. Such

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evidences belong to the past but prove valuable for sociological explanation. This study also makes subjective understanding a preferred approach in the investigation, since the meaning of social action cannot be understood only by outside observation, but by introspection, e.g., empathy (Weber, 1978, 2017). Their sociological significance can be learned in this way. Nevertheless, some sociologically valued hints were missing. This study, therefore, places emphasis on the understanding of the participants of European modern design movement in respect to their subjective aspects, e.g., attitude and judgement.

The main structure of the article is arranged in accordance with the methodological explanation earlier mentioned. First, the course of industrialisation in Europe is briefly clarified and the question "why modern design finally emerged in the subsequent industrial countries" will be defined. Then, following the interpretations under the subheading "hesitation in the early industrial countries" and "breakthrough in the subsequent industrial countries", a comparative analysis is carried out to understand the effect of the industrial revolution on the rise of modern design in Europe. Subsequently, conclusions are drawn. This framework is based on two assumptions. First, the historical knowledge of modern design is acquired not only from chronicles and narratives but also from historical analysis. Second, an investigation into modern design history should not lose sight of the effects of ideology, attitude, and mentality on the historical process.

## Results

### *The Course of Industrialisation in Europe*

Since the nineteenth century, industrialisation has not only been a deciding factor in Europe's modernisation, but also an important reason for the birth of European modern design. This consideration leads to an attempt to examine the course of industrialisation in Europe. Also, the timeline of industrialisation in European countries that were related to the historical process of European modern design movement need to be inspected.

A few European countries first completed industrialisation and are known as "the early industrial countries". Accordingly, the countries which afterwards experienced industrialisation became "the subsequent industrial countries". Although it is difficult to make a definite division between the early and the subsequent, a brief task has already been accomplished. In Europe, three countries, namely England, Belgium, and France, were leading the way (Cameron & Neal, 2002). The industrial revolution emerged in England for the first time. Belgium and France are the two continental countries which carried out the earliest work of industrialisation in the manufacture system (Belgium is the first one), and they followed closely after England at the beginning of the nineteenth century. Nonetheless, Germany, the Netherlands, Austria, Italy, and Russia are classified into another group,

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since industrialisation was triggered much later in these countries. Compared with the others in the group, Germany had the advantage of efficiency. However, this country still showed the quality of retardation in the beginning when compared again with the early industrial countries, e.g., England or France.[1]

### *Why Modern Design Finally Emerged in the Subsequent Industrial Countries*

Based on the literature review, the different attitudes of the ideologists and designers towards industrialisation against the background of modernisation are disclosed. Their reactions did follow a trend that shifted from refusal to acceptance. The Arts and Crafts Movement in England and Art Nouveau in France and Belgium both strongly resisted the effect of industrialisation on the design activities. Vienna Secession in Austria indicated an ambiguous opinion on modern industry, which is regarded as a compromised colour. For instance, the architecture designed by Josef Hoffmann showed the simplified style although bore the localised decoration (Pevsner, 2005), and Otto Wagner delivered his kindness to modern technology and manufacturing methods in *Moderne Architektur* (Kruft, 2013). Accordingly, all the designers and artists from the organisations or the movements such as Deutscher Werkbund, Italian Futurism, De Stijl, and Russian Constructivism had an affirmative attitude to industrialisation, despite their diversified presentations. It is however questionable that the design movements in the early industrial countries expressed rejection and hostility regarding industrialisation, but the movements in the subsequent industrial countries (or the countries that lagged behind the forerunners) accepted it. Particularly, one could suppose that the ideologists and designers in the early industrial countries should have had the advantage, whereas the ideologists and designers in the subsequent industrial countries obtained the advantage. In order to respond to this, the potential causal links will be examined through the theory of advantage of backwardness, which has been introduced to interpret the restraints and consequences of economic progress of European countries in modern times (Veblen, 2003; Gerschenkron, 1962).

### *Hesitation in the Early Industrial Countries*

Although the early industrial countries had won the dominant position in terms of economic development and industrialisation, it does not hint the same situation for the birth of modern design in Europe. In retrospect, the definitive effect of industrialisation on modern design has been demonstrably discovered in terms of visual form and social values. The ideologists or designers in the early industrial countries, however, could not stay in a position with this sort of retrospection. Despite the tremendous social impact on both

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good and dark sides, industrialisation was a brand new phenomenon at the time. As civil citizens of the early industrial countries, the ideologists or designers were not confident of embracing modern technology and inevitably made an unconformable judgement on the relationship between industrialisation and design. This kind of opinion was noticeable in the Arts and Crafts Movement and in Art Nouveau. John Ruskin, for instance, had depreciated industrial products in *The Seven Lamps of Architecture* (Ruskin, 2012). William Morris did not only regard industrial manufacture system as evil (Pevsner, 1985) but also felt disgust for industrial metropolis. He looked upon London as a city with unqualified buildings and a mass of swindlers and slaves (Pevsner, 1985). Similarly, the designers of Art Nouveau insisted on seeking natural forms of decoration (Pevsner, 2005). They made it even more romantic, believed in handicrafts, and rejected industrialisation at the same level (Pevsner, 1985). The negative attitude was also caused by another factor. The designers (or artists), as well as the public intellectuals, who sensitively perceived the catastrophic aspects of industrialisation, were included in the movements of the early industrial countries. As regards visibility, the negative influences in their mind were far more conspicuous than the benefits, which emerged much later. Consequently, disgust became prominent among the dissidents (e.g., Ruskin or Morris) of a fast-capitalised society, alongside the industrialisation trend of design (Riseboro, 1982; Frampton, 2020; Raizman, 2010).

Nevertheless, the negative attitude to industrialisation was not the only voice that was heard in the early industrial countries. As Sparke and Forty have described, the British government managed to improve design by the education reform, the exhibitions, as well as other supports at the time (Sparke, 2019; Forty, 1992). A few European designers even perceived the importance of modern technology to the future of design. They looked forward to technological change. In England, William Richard Lethaby thought that decoration should be abolished in architecture and in machine, and James Nasmyth and John Dando Sedding accepted the updated technology and manufacture system (Kruft, 2013). In France and Belgium, Tony Carnier and Van de Velde also expressed a good opinion on the industrial society. Stimulated by the progress of industrialisation in the continent, Carnier conceived *Industrial City* and Velde opined highly of Art Nouveau but agreed on the value of modern machine (Pevsner, 2005). However, the positive attitude did not become a main trend. Although some design works, e.g., *Crystal Palace* and *Industrial City*, were realised or visualised by the pioneers in England, France, and Belgium, the design movements there adopted a resistant posture on industrialisation. In brief, the tendency had been dominated by the conservative movements instead of supports from the government or a small number of pioneers in the early industrial countries.

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***Breakthrough in the Subsequent Industrial Countries***

When the focus moved to the subsequent industrial countries, the design movements had a far more positive attitude towards the same trend in this area. Exactly as putting the interpretation on the ideologists and designers in the early industrial countries, the ideology from the historical personages, who did alter the course of European modern design history, should be taken into consideration again, and their practice left a trace by which their ideological characteristics and effects can be learned.

In Austria, Adolf Loos was more radical than Wagner. He rejected any decoration and applauded the crucial function of modern technology as to architecture design (Frampton, 2007). His standpoint laid an ideological groundwork of the mechanical age, which was connected to the emergence of "international style" (Banham, 1980). In Italy, as narrated frequently in modern design history, the futurists, whose compliments mostly referred to the industrial manufacture system and public life in metropolis (Frampton 2007), already expressed unreserved and exaggerated praise for the potential aesthetic appeal of industrialisation.

Reviewing the attitudes of the design movements in Germany, the Netherlands, and Russia towards industrialisation and modern machine, this judgement is reconfirmed. Strictly speaking, modernism in the field of design emerged in these three countries. Namely, typical ideology and visual pattern of modern design have been developed in Germany, the Netherlands, and Russia. According to the records of the narratives, the breakthrough is of great significance from the perspective of comparison. Although there was full of diversities in terms of social backgrounds and visual presentation, e.g., functionalism and rationalism of Germany, formal aesthetics of the Netherlands, or political colour of Russia, they all agreed with the industrialisation trend of design, which led to the historic practice of modernism.

Along with their practice, the modernists explicitly claimed modern ideas. The artists of De Stijl voiced the value of machine regarding aesthetics, social culture, and even human spirit. Van Doesburg praised machinery as an incarnation of mankind and J.J.P. Oud acknowledged the aesthetic of mechanisation (Banham, 1980). The modern movement in Germany gave its strong backing as well. Deutscher Werkbund was founded in 1907 in order to promote industrial production in Germany and make a firm combination of German industry and design (Kruft, 2013). Herman Muthesius was confident of reaching this target (Kruft, 2013). Peter Behrens and Walter Gropius steadily followed his steps. No other than Deutscher Werkbund had taken the most farsighted view towards industrialisation, which determined the final direction and destination of the educational ideas and practice in Bauhaus. In the East, Russian designers' enthusiasm was no less than that of Italian

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futurists after the October Revolution. Alexey Gan expressed that art should be rooted in the factory in order to redefine the role of an artist (to abandon individualism and to absorb the aesthetic from the manufactured products) (Kruft, 2013). Moisey Yakovlevich Ginzburg viewed architecture as a simulation of machine and a new voice of machine aesthetics (Kruft, 2013). He also articulated that architecture is only an issue of function and its key role relies on rational plan, application of modern technology, assembling of prefabricated standard component, and industrialisation of construction procedure (Riseboro, 1982). Consequently, a positive ideological system of the relationship between industrialisation and design emerged and has been consolidated. This became a foundation for the later development of modern design in Europe (after the Second World War in particular). The far-sighted activists and even the radicals confirmed the achievements of the design movements in the subsequent industrial countries.

**Discussion**

Recalling the ideas of Ruskin and Morris in England or of Art Nouveau designers in France and Belgium, who all stood for natural forms and handicrafts, any reader could have been amazed by the contrary positions regarding the subjective feeling and attitude towards industrialisation. Only this contrast, however, suggests a determinant from an advantage of backwardness view. In terms of social value or effect of industrialisation, the ideologists and designers in the subsequent industrial countries made a better judgement than those in the early industrial countries. They had learned a lesson from their forerunners. This is the superiority of lagging behind, which is provided by the historical process. The ideologists and designers in the subsequent industrial countries recognised that industrialisation plays a major role in modernisation of design. Although with unexpected dissatisfaction, embracing modern technology became a symbol of modernisation. However, the ideologists and designers in the early industrial countries still had a strong illusion and lived in hope that designs could develop better without industrialisation. On the contrary, the ideologists and designers in the subsequent industrial countries had a dramatically changed idea. They considered how modern technology and machine could help design become better. In addition, the impact of the second industrial revolution should also be taken into consideration. The above-mentioned difference was enlarged through this new revolution, after which modern design in Germany and the United States (as the followers of the first industrial revolution but the leaders of the second industrial revolution) rapidly developed. It is in no sense a coincidence, given that the idea of standardisation or typology expressed by Muthesius resonated with interchangeability, assembly line, and scientific management emerging in America. Accordingly, while the movements in the

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early industrial countries bitterly experienced the harm of modern industry to the social traditions (the Arts and Crafts Movement) and devaluation of aesthetic (Art Nouveau) although with the approach of the second industrial revolution, the movements in the subsequent industrial countries paid more attention to the kind of improvement industrialisation could make for the uncertain future of design. Such an awareness began in the age of Wagner and Loos (also of the pioneers in England, France, and in Belgium, yet their endeavours did not make the early industrial countries an origin of modernism), and continued through the period of Deutscher Werkbund, Italian Futurism, and De Stijl of the Netherlands. This led to the accomplishment by a convergence between Russian Constructivism and German Bauhaus. In the Arts and Crafts Movement and Art Nouveau, the positive attitude was by no means a main trend. However. in Italy, the Netherlands, Russia, and Germany in particular, accepting industrialisation was indeed becoming a consensus.

## Conclusion

According to the analysis, the question mentioned earlier has been answered based on the course of industrialisation in Europe. For the acceptance of the industrial revolution, the different stages of European modern design movement showed the diversified performance and made a final step towards success. Although the early industrial countries had won the dominant position in terms of economic development and industrialisation, the ideologists and designers in this area could not essentially combine their design activities with industrialisation. It was discovered that industrialisation, accompanied by the corresponding aesthetic appeal and social significance in the field of design, became an approved idea of modernism in the subsequent industrial countries. This clarifies that the industrial revolution did not have modern design emerge in the early industrial countries. Nevertheless, it led to the emergence in the subsequent industrial countries (as the countries that lagged behind the forerunners in the process). As regards advantage of backwardness, force was exerted not only on economic progress in Europe but also on European modern design movement. On the other hand, the described mechanism does not suggest any meaning of determinism, since it played a part largely (not absolutely) through the historical personages, whose attitudes and judgement determined the tendency of European modern design at the time. This mechanism can only explain the unique process of European modern design movement and it will most probably be another picture against a changed civilisation background, for instance, in East Asia.

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**Notes**

Regarding the issue of the early industrial countries and the subsequent industrial countries, see: *A Concise Economic History of the World: from Paleolithic Times to the Present*, chapter 9 and chapter 10, where Germany is included in the early industrial countries but also characterised by retardation.

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