

The Development Process and the Design Changes of Modern Household Objects in Britain and Japan: Modernization of Some Heat-Related Products

Omoya Shinsuke

Summary

In its modern history, Japan, while initially influenced by the West, has now formed its own highly industrialized society. Most of the modern products that appeared in Europe and America from the end of the 19th century were introduced to Japan, went through an initial stage of copying, and now can be recognized as indispensable equipment for everyday life.

British and Japanese products marketed today are very similar at first glance to each other in their design and variety. However, when the process of development of these products and the way they are used are compared carefully, some interesting differences are discovered.

In order to show various factors in the formation and development of modern mass-produced articles, three groups of examples have been chosen from household objects. These are: electric kettles in Britain and thermos bottles and electric pots in Japan, the bath, and pots & pans, each of which followed processes of evolution in very particular ways in both countries.

In the past, too much attention was paid to the obvious cultural differences while the homology of economic and social conditions tended to be ignored. This thesis does not start out with an exploration of these 'cultural differences,' but attempts to explain as a strategic method the differences of each product from the economic and social conditions in which the products developed.

Chapter 1: The Subject and the Method of the Study

This paper shall aim to examine the 'design history of objects,' incorporating examples of the development of certain household objects in Britain and Japan from the later half of the 19th century through the 20th century.

Each product follows its own inherent process of development and evolution. This study shall examine and attempt to give a rational explanation of these processes, item by item. As the evolution of many living things can be explained as the adjustment to the environment, the evolution of products can also be explained by the inter-relationship between the product itself and the environment in which it exists; i.e., the social, economic, technological, and cultural backgrounds. This evolution cannot be correctly understood until it is examined, by the actual processes of conception, production, sales, purchase, and use of the product, rather than looking at the existing design history, which tends to stress the importance of the formative ideology of individual designers.

The main subject of this study is to choose some examples, as case objects, from household products, and through these objects, take a general view of various areas of problems of the changes in modern artifacts. The case objects in this study are electric kettles, the bath, and pots & pans, all of which are related to the usage of heat in homes. In order to more clearly understand the relationships that social, economic and cultural factors have played on the process of the development, this study introduces a comparison between Britain and Japan. If there are differences in the process of development of objects in Britain and Japan, they can be explained not only by the differences in culture between the two countries, but also by the effects of different social and economic conditions on the product.

Chapter 2: Electric Kettles, Thermos Bottles and Electric Pots

Paragraph 1: Electric Kettles in Britain

This paragraph discusses the development process and the design changes of electric kettles in Britain. The development and the spread of the electric kettle in Britain were closely connected to tea drinking customs. Small electric cooking equipment enabled preparation of food on the dining table, and had the effect of producing casual ways of eating and drinking. Thus, electric kettles promoted non-ritual ways of drinking tea. In the 1950s, when automatic switch-off function was added, electric kettles started to spread, and their design started to change to make their appearance distinguishable from non-powered kettles. The advent of the Jug-type made of plastic in the 1980s was an attempt to reduce production cost and to expand the market into other countries that did not have a tradition of tea drinking. The Jug kettle abandoned the traditional imagery of English tea and became popular in the domestic market where the traditional tea-drinking custom no longer prevailed.

Paragraph 2: Thermos bottles and electric pots in Japan

The first electric pot in Japan was manufactured in the 1950s during the boom of home electrification. Alongside electric pots, manufacturers tried to introduce electric kettles, but achieved little success. The reason for this is that thermos bottles with vacuum flasks suitable for Japanese tea had already been developed and spread throughout the market.

The Japanese thermos bottle for table use underwent an evolutionary process, which went from its emergence in the early 1950s, to the flower pattern era of the late 1960s, to 'air-pots' with a pump mechanism in the 1970s, through electric thermos bottles starting in the 1980s. It could be said that the once unsuccessful electric pots in the 1950s came back into the Japanese market in the form of thermos bottles.

Electric pots and thermos bottles in Japan evolved to fulfill, mainly, the needs of the casual tea drinking custom in homes and offices, while the evolution of these objects has changed the habitual way of tea drinking in everyday life. The evolution was largely led by the interrelations of two industries: the electrical appliance industry and the thermos bottle industry. Thus, the design changes of those products are frank expressions of modern Japanese culture and its society.

Paragraph 3: Comparison between Britain and Japan (1)

Modernization of British electric kettles, and Japanese thermos bottles and electric pots

This paragraph discusses the similarities and the differences in the processes and the factors of modernization of the case objects in the two countries, through the following points of view. These are: the differences of early factors of the modernization (especially, the differences of traditional tea drinking customs), the development of small electrical appliances for cooking, changes in the mechanism and the appearance, changes in the finish and the decoration of the surface, and the changes in tea drinking customs.

Chapter 3: The Bath

Paragraph 1: The Bath in Britain

This paragraph discusses the development process and the design changes of the

bathroom in British homes from the late 19th century through to the late 20th century, and looks at the technical and social background of the development. The spread of bathrooms among working class homes derived from the government-led movement for better housing in the inter-war years, and most council homes built after the First World War had a bath with hot water. From the early 20th century into the 1960s, various means of obtaining hot water for the bath co-existed and developed: i.e., directly heated bath, back-boiler connected to the kitchen range, copper, and geyser. Social thought on hygiene also changed. Thus, the design of the bathroom represented those changes of the social and the cultural status of the bathroom.

Paragraph 2: The Bath in Japan

The bath in Japanese homes underwent processes similar to modernization in the West, and today the most typical bath consists of a purpose-built space; the supply of water heated by modern energy sources, and the bathtub made from industrialized material. The interior view of the bathroom was also 'Westernized,' but its designs are nonetheless distinctive from Western countries because of unique bathing customs. To seek the backgrounds of the formation of these designs, this paragraph looks at the changes of typical bath equipment in ordinary homes in each period.

After the Second World War, even ordinary families started to demand having a bathroom in each home, and gas supply companies, equipment manufacturers, and public housing agencies proposed several choices for modernization of the bath. The typical bath was formed utilizing some of these choices. Thus, the design changes of the bath to the present day are described as a process of product evolution led by intertwined technological, social, economic and cultural background factors.

Paragraph 3: Comparison between Britain and Japan (2)

Modernization of the Bath in Britain and Japan

This paragraph discusses the similarities and the differences in the processes and the factors of modernization of the bath in the two countries through the following points of view. These are: the differences of early factors of the modernization (especially, the differences of the habitual way of bathing), the changes of the mechanism (i.e., the development of the technology for heating water for the bath), the changes of the appearance of bathtubs, the changes of the material for bathtubs, the changes of the bathing custom, the relation to the housing reform movement, and the changes of the fabrication methods of bathrooms.

Chapter 4: Pots and Pans

Paragraph 1: Pots and Pans in Britain

The changes in material for the most typical pans were related to the structural changes of the hollow ware industry. By the middle of the 19th century, cast iron became the main material, reached its peak in the 1890s, and later was superseded by pressed steel. Similar structural change happened when aluminium became the main material for pots and pans. Stainless steel spread after the Second World War.

From the end of the 19th century through the 1930s, production of large pans decreased but the types of pans multiplied. The most typical type of saucepans from the 19th century to the 1910s was the ‘bellied’ type, deep heavy pans of cast iron. However, from the 1920s, shallow light pans of aluminium with handles of insulating material became the norm.

This change of design was accelerated by the inter-relation of some factors; i.e., the change of the heat source of cookers (from coal to gas and electricity), change in everyday cooking methods, changes in appearance of cookers, and the changes in kitchen space and design.

Although pots and pans superficially appear not to have changed very much over a long period, they actually have followed a process of change reflecting the state of the industry, the society, and the lifestyle in each period.

Paragraph 2: Pots and Pans in Japan

Japanese pots and pans have totally changed in the past one hundred years. They have been modernized and Westernized as have many other everyday artifacts, and today they show few obvious differences with the Western counterparts. On closer look, however, we do find some significant difference in their development process. This paragraph traces the process and tries to account for their design changes.

First, types of traditional pans are introduced. Then, material changes of pans in these hundred years since the beginning of modernization in the Meiji Era, and the situation during the Second World War, are briefly looked at. On changes in the industry, the case histories of two manufacturers (one of cast-iron pans, and one of aluminium pans) are compared. The general design changes from around 1900 to about 1970 and their backgrounds are explained through several design factors: i.e., the shape of the bottom, the typical size, the handles, and the thickness of the wall. The reason for the increase of pans possessed in each household in postwar years is also discussed in the last section.

The design of Japanese pans has changed and diversified in a short period, and this rapid

change resulted in chaotic situations both in the market and in the kitchen. The evolution of pots and pans in these hundred years reflects many changes both in the industry and in the habitual way of everyday cooking.

Paragraph 3: Comparison between Britain and Japan (3)

Modernization of Pots and Pans in Britain and Japan

This paragraph discusses the similarities and the differences in the process and the factors of modernization of pots and pans in the two countries, through the following points of view. They are: the differences of early factors of the modernization (mainly, the differences of traditional pan types and the heat-cooking equipment), the changes of the material for pots and pans, the changes of the appearance, the changes of the cooking method, the development of the heat-cooking equipment, and the changes of the kitchen space and design.

Chapter 5: The Process of Modernization of Heat-Related Household Objects in Britain and Japan

This chapter summarizes the argument in the case studies in the previous chapters and tries to present a general view on the modernization of heat-related household objects in modern industrialized society.

Firstly, the 'idea' of modern household objects is argued through the formation of the 'idea' in the U.S. and its American influence on Britain and Japan.

Secondly, considering the modernization of heat-related objects as they changed to new types, the causes of those changes are described from the following points of view: the introduction of new energy, the change in material, the adaptation to new habitual ways of life, and the introduction of new appearance designs and images.

Thirdly, the social framework of the modernization of homes (domestic industrialization), the relationships between home-market-industry and their differences in Britain and Japan are described briefly.

Chapter 6: An Inquiry into the Concept of the Evolution of Objects

This chapter argues the possibility of the adaptation of the concept of 'evolution' to the process of design changes of objects.

The processes of design changes of modern products, which this thesis has described, could be called 'evolutionary'. Designs have always been changing and new products have certain similarities to the predecessor. These are the bases for the concept:

evolution.

Most ideas of evolution come from biological analogies. Although living things have a series of programs written into their genes for their exact reproduction, objects by themselves do not have such a mechanism, and their reproduction is carried out by individual craftsmen, by industry or by society as whole, in a far more deterministic way. The 'program' is written in, somewhere outside the objects, in the culture.

Evolutionary theory, if used in certain appropriate ways, could be an analogy from which the history of objects or the anonymous approach to design history could benefit. However, there is no ground to argue that objects are changing towards the perfect form. This concept of progressive evolution into a single universal form was frequently sought by architects and theorists associated with modernism. Instead, in reality, objects are changing in different ways in different societies as we have seen in the case studies at length. Objects do evolve, but they do not necessarily progress.

In the Darwinian analogy, the idea of trial and error, as well as the idea of selection, is useful when we look at the design changes in mass-produced objects, which are not created by individual designers but by the collective activity of the whole society.

Cultural comparison is useful as a reminder of the preconditions for the evolution. Objects that have similar uses often take different forms in different cultures. There are differences in the course of evolution, which are the result of differences in 'environmental' factors: i.e., social, economic and cultural backgrounds.