USE OF DESIGN IN TRADITIONAL CRAFTWORK INDUSTRY

The design development project to traditional craftwork in Iwate Prefecture as a case

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Abstract: Designing can have a significant effect on regional traditional craftwork industry by using its meaning and function properly. In the past, although the project of new products development has been implemented toward most of traditional craftwork, market cultivation of those products has not being made any progress and traditional craft industry is heading for decline. The reason why existing new products development could not innovate the traditional craftwork Industry was that the usage of design had been limited to modeling work. In this report, an example that utilized design to the new product development is introduced. In the example, design was placed a product plan and a molding plan with development and an act to practice for the rational correspondence to the times. And it is considered that the design is a strong means to revolutionize a state of traditional craftworks in the future.

Keywords: Traditional Craft, Usage of Design, Design as the Dominant Conception

1. Introduction

The author examined the role for design in regional traditional craftwork industry and the direction of current situation and its practical use in the report titled, “Use and Expansion of Design for regional traditional craftwork industry” [1] in 2004. As the result, the following matters were concluded.

1) A design for a traditional craftwork is an act to develop, and to practice product and molding plan to correspond reasonably to the times, according to the traditional technology and technique that an area and local industry cultivated.

2) About a practice of a design, Nature of the craftsman who had new knowledge based on traditional technology and an experience of technique that an area and local industry succeeded to is necessary as well as ability about molding of product shape about practice of a design.

Although the production of traditional craftwork is seemingly considered to be fertile with creativity, when we study its origin and details it becomes clear that the creativity had been just brought out within the framework of styling by the tradition. That means that traditional craftwork industry do not have element to innovate the products as a whole dynamically. However, it was indicated that if the concept of design is possible to be functioned as the dominant conception in production, dynamic innovation could be brought to traditional craftworks.

Afterwards, traditional craftwork industry across the nation has made downfall continuously [2], and need the strong support for its survival. After that, the author is applying the result from relevant study to other cases, and continues to verify its effect. And then through these projects, certain results were accomplished by the design. In this report, the author would like to examine the cases which proper use of the design could help succeed in making products, and to clarify substantive effect of design.

Furthermore, the author would like to examine essential and fundamental innovation which traditional craftwork industry needs, by introducing the projects performed to usher the concept of the design, and also the concrete con-
tent of development placing the concept of the design to a high position as a practical manner.

2. Use of Design for Regional Traditional Craftwork Industry in Iwate Prefecture

In Iwate Prefecture, many new products development projects are performed to promote regional traditional craftwork industry. After the year 1978 when I started to work for Iwate Industrial Research Institute, many development projects have been implemented based on development of product design mainly around traditional craftworks.

But there are very few cases that these products development was successful and those products to be produced and sold continuously after finishing these projects. There are some cases not purposing for the development of production and selling, but most of them are projects aiming at market cultivation, and in that meaning successful examples are few. This is because both manufacturing companies to give orders and person in charge of designing (stated “designer” herein after) to receive orders have been misidentifying the meaning and function of design for traditional craftworks.

Since most of these products development projects have been implemented using unified manners, if we organize the common element, it would be as follows.

2.1. Outline of the System

1) Most of them are supporting business implemented as local industrial development policy of the government. [3]
2) As for the scale of the projects, project cost is from three or four million yen to ten million yen, and grant rate is from half to full amount of total project cost. [4]
3) The project body is a group or an association organized from multiple companies of same type of business.
4) The project term is normally a single-year. [5]

2.2. Outline of the Projects

1) They are established aiming at promoting regional Industries by development of new products.
2) They request to designer the development mainly focusing on molding work.
3) The project contents are to examine the direction, to develop the design, to make prototype, to make trial sale or receive reports from well-knowlable people, to make necessary public information mediums for trial sale, to hold an exhibition, and so on.

2.3. The Main Product Development that has been Undertaken so Far

Large-scale production districts such as being designated as “traditional craftworks” by the national government have implemented many projects of product development. Nanbu ironware, lacquer ware and Iwayado Tansu (a drawer) mentioned below are the examples. Since these projects require about from one third to half of self-pay of total cost and also need high business work ability for the sake of large scale of project management like application and report of the project, it has been a tendency to be limited to production districts of large scale.

Many of small groups or voluntary groups do not have these elements, so that application itself has been difficult. But among them, there is a case that was implemented by cooperation of autonomy in Iwate. And also following small woodwork is the case that was implemented for regional development of northern coastal area of Iwate. [6]

1) Nanbu ironware: tea pot, candle holder, tableware like pot warmer
2) Hidehira-nuri, Joboji lacquer wares: furniture, interior accessory, tableware
3) Iwayado Tansu: drawer, storage cabinet
4) Small woodworks: trinket box, interior accessory

3. The Reason why Development Products were not Successful in Market Deployment

For this kind of projects in general, several types of new product lines should be proposed. And after gaining appraisal from experts, they will be released at an exhibition. The exhibition after getting appraisal from experts is positioned as part of market cultivation in most of the case. But there are few cases that the product come to mass-produced and sale after release of trial products. As stated previously, it’s true that there are development examples that projects were not aiming at market cultivation. In these cases, whether developed products will have appeal power in the market or not, it is considered as aiming at pursuing the direction of production districts by creation of advanced case examples. But there are few cases to conduct new product development entrusting to designer not aiming at market cultivation, and manufacturing companies of production districts are generally hoping for creating products that can expand the market.

Though it can be guessed the factor why the projects couldn’t meet these expectations from above mentioned project summery, the author examined the essential factors to be following three items.

3.1. Factor Caused by Structural Defect of the Project

3.1.1. Insufficient Implementation Term

For series of operations that is necessary to develop new
products, implementation term of a year period is too short to spare time for necessary research before development implementation and to follow the sales promotion activities.

And also it makes difficult to assure time to make a try and error process for development itself. As a result, they have to embody the idea as it is, and cannot spare enough time to examine and correspond. [7]

3.1.2. Insufficient Project Contents

Project contents were divided into four categories, which are to hold a conference with expert members, to entrust development to designers, to make prototype of development products and to make necessary public information for evaluation and announcement of prototype. And so, it was difficult to examine the point prior to development, and to implement the project outside the categories like market cultivation work after development within project budget.

3.1.3. Design Development Hung in the Air

All items of design development were entrusted to designer, and in most of the cases, and the cooperation with manufacturers was not assumed then. When the idea of manufactures regarding new products was once transmitted to designer, idea sketch and models were made, and the committee examined them to make prototypes.

Above all three elements indicate that existing new product development projects took design as simple work (modeling work). It means that project itself didn’t predict to innovate the dominant conception of development of traditional craftwork. As might be expected, since the product development had been considered within these frameworks, both requesting party and requested party recognized design as a work just to make a shaping model. This recognition led to bring about product development to follow the base of existing traditional product form. And though the shape has been changing, various meanings involved in traditional product have been carried on without changing. Followings are the examples that simply show these facts.

3.2. Examples that Meaning Involved were not

Renovated even though the Shape was Changed

All of these examples [Figure 1-3] are above mentioned development products at new product development projects. On the surface, though it seemingly has transformed from its modern molding against existing traditional products, all the items of material, technique, shape and assumed usage were nothing changed from existing products. The assumed market and customer segment were little changed as before, and did not come out from the framework of variation of existing traditional products. After all, though it can appeal to customers who acknowledge the value of tradition, it becomes a major factor to influence the success of the product. These examples cannot deny the possibility for not being acceptable from customers who have no interest in tradition, and should take a big risk. To create a variety of traditional products is sometimes necessary by requirement from the market, but these development works are considered to be possible in manufacturing industries involved in daily production. Next, followings are the examples that developed aiming at innovation of the meaning involved though the shape may seemingly be same as existing products at a glance.

Figure 1: Examples of Casting Iron Ware

Figure 2: Examples of Furniture

Figure 3: Examples of Lacquer Ware

4. Success Example that Developed Innovation of Meaning Contained by Products for Purpose

The ironware introduced below is a development exam-
ple implemented by Iwate Industrial Research Institute in 2001, which was developed aiming at improvement of usability and safety. [8][Figure 4] In case of this ironware, the innovation of the meaning involved was to enhance the value as a tool to boil water in daily life. The material should be cast iron since it is the production district of Nanbu Ironware, but this necessity was first principle and all for existing products. In this development, though the first principle of using cast iron remained unchanged, the fact that cast iron is the best material in use of cooking device is second major reason. And all the factors of the shape (shape of body, shape and position of a spout, shape and structure of a handle and so on) were designed on condition of use of electromagnetic cooking device.

![Figure 4: New Developed Iron Kettle](image)

Next lacquer's example is a development implemented by Iwate Industrial Research Institute in 2003 [Figure 5].

![Figure 5: New Developed Soup Bowl](image)

Its side shape doesn't differ from a soup bowl of traditional craftwork. But this soup bowl is capable to hold as figure 6 shows. The comprehensive design is a result of taking it as tableware to pour hot liquid in it and then hold it and set it to mouth to eat. It means that it was designed to be able to hold easily for the first principle. It is a consid-

![Figure 6: Explanation of Holding](image)

eration not to knock it down nor slip from hands when holding the bowl. Furthermore, if we considered that we should hold the bowl filled with hot liquid by hand, it is indispensable to use wood not to let the heat travel through hands, and use of lacquer was most appropriate for surface treatment of the wooden bowl.

In this development, it spent time in grasping the actual condition of each existing product being used in current life and the impression of users toward the products.

The molding works, as design was to design the shape considering how to solve the problem when users had complaints, or how to make realize the requests they have.

5. For Future Development

As it is clear from the above examples, the state of products changes drastically depending on the first principle considering the meaning of the tool required to the product. Under the circumstances that development term is short and design is requested based on molding, to avoid the failure, it becomes important to use existing value of existing products, which is general value for market and users. After all, in the case of traditional craftwork, these values are the shapes following the tradition and the fine detail works of craftsmanship. Since new developed products are keeping the traditional framework, they are not so different from the exiting product line. But considering the current situation of traditional craftwork industry to be continuously declining products that are not different from existing products are difficult to be the power to make big innovation for the declining industry. In the above-mentioned development of ironware, it was consider primarily to be used in the current life environment. And the improvement of existing products and the imparted function that existing products don't have, were examined. These concerns should be applied other than the intended products. Because, by applying various improvements point applied to each product and function newly forged to many products, the direction of production
district itself will be changed.

As for the grasp of problems in use, the making of those improvement plan, the process of an application to a product of improvement plan, they were carried out in a general idea of a design for a traditional craftwork described first. Next, they are introduced development of an iron kettle as an example.

5.1. Decision on Development Products and to Grasp the Problem

First of all, the product to be developed was decided roughly by hearing the request of producers, and the designing team exchanged idea and impression toward existing products in use. They confirmed the possible points at issue by conducting experimentation of actual use, based on the image of ironware diffused in general and opinion of users. Also at the same time, they worked to clarify the cause of these problems through experiment. The viewpoint at this examination was focused on two items, one is possibility of occurrence of accident, and the other is usability. Next, they picked out the elements to make easy to use furthermore by same experiment with the points that have not been put in question so far by use experiment.

The extracted matter was brought together by the scene of operation like the following chart. [Figure 7]

5.2. To Devise a Specific Improvement Idea

The designing team examined the method to solve these problems from the viewpoint of use of structure, shape and other parts, and devised an idea.

In the specific development, though only a part of idea should be adopted, [9].

5.3. Molding Work and Trial Production

The designing team performed the molding work to devise the shape of the actual product incorporating these ideas. This work was performed inviting Mr. Heikki Orvola [10], a designer of Finnish tableware and kitchenware, and getting advice on molding from him.

The final plan as devised above-and specification were decided making, discussing with engineer of Nanbu ironware, who is an actual manufacturer, using idea sketch, drawing and model. Though ten items of ironware were to produce experimentally at first, one manufacturer of Nanbu ironware made a trial production of ironware of each item, and then these were decided to be produced.

5.4. Market Cultivation, Grasp of Reaction and Improvement of Products

Mass production of ironware and market cultivation was implemented in 2002 utilizing in various opportunities.

These new products were displayed two times at the announcement exhibition held in Tokyo ward in the first year [11], and after the subsequent year they were also displayed at exhibition and applied for public offering exhibition [12]. They were also sold at every exhibition, and staff of the institute always attended the exhibition to collect comments from customers. At the same time, they collect comments from people in charge of sales floor in order to make improvement for the next production to reflect these comments. Since the minimum lot of ironware is five, it is easy to make improvement of detailed design.

Though the ironware developed this time has achieved a steady sale, it showed an effect to broaden the choices of customers, not as a product driving the ironware of existing traditional shape.

6. Conclusions and Consideration

In this report, it was stated that it is important to apply design to whole development as a dominant conception, in order to innovate traditional craftwork drastically. In case of traditional craftwork, even though using design within the frame of tradition, it doesn’t lead to innovation synthesizing production district, manufacturer and product.

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![Diagram](image-url)
In tradition craftwork, there are two major values.

One is an abstract and irrational value like culture, history, skill and regional characteristics, which involved in the words tradition and craftwork. The other is a concrete and rational value as a tool in life. As for handling of the traditional craftwork so far, rational value, utility achieved by artisan skill cultivated spending much time has been introduced in various opportunities.

But that rationality was stated within the abstract framework of traditional craftwork consistently, was the second value stated next to culture. For this reason, almost all traditional craftworks could not gain indispensable position in life of Japanese people. If traditional craftwork is indispensable tool for our life, the opinion, "traditional craftwork is expensive" and "care is difficult", will not be disincentive for purchasing. To consider responses by stop-gap measure toward these two negative opinions against traditional craftwork doesn't lead to essential solution.

The most important thing is to aim to be an existence inevitable in our life using varied excellent elements, like material characteristic, processing technology and flexibility in production that traditional craftwork has as a factor of concrete and rational value. To that end, it is important to make the use of design as more rational shape, and its method and effect is as indicated before.

Finally, though the meaning involved in tradition and craftwork themselves project a value to see from the present to the past, by combining conception of design, it becomes a point of view to see from the present to the future. And in order to get back traditional craftwork in our life once again, the harmony of element to see the past and to head to the future is important.

Note
2. As for domestic traditional craft goods industry, the amount of production, the number of offices, and the number of engaging people keep being decreased, and declining to even 1/2 after peaking in 1983 for until present. About an ideal method of the policy for a traditional craftwork industry in 21st century, A basic problem examination committee, Council for traditional craftwork industry, 2001
3. Mostly, these supplementary business of which theme is product development superintended by the Ministry of Economy, Trade and Industry and Small and Medium Enterprise Agency.
4. The industry and the government often bear 1/2 supplementary rates, or the industry, the government, and the municipality bear 1/3. But there was a case that the government bears 100% in the past.
5. Because the period of a supplementary business in single fiscal year is short, the project of the development system cannot put out the result. So recently there began the new type supplementary business, which have three fiscal years.
9. The application method to the product of the improvement idea was told to the manufacturers in the handbooks. And the content of the handbook can be downloaded from the homepage of Iwate Industrial Research Institute, Manufacturing of the goods that anyone can use easily No.1-No.3, Iwate Industrial Research Institute, 2001, 2002, and 2003. (http://www.pref.iwate.jp/~kiri/index.html)
10. Mr. Heikki Orvola is a designer of the ARABIA Co. that is the pottery manufacturer of the maximum scale in Northern Europe established in Helsinki in 1873. And it is eminent worldwide in the design of tableware and the kitchen articles.
11. The Universal Design Square at Matsuya department store Ginza branch, and Nihonbashi Maruzen department store, etc, 2002.
12. '2004 Japan craft design exhibition sponsored by Corporation Japan Craft Design Association, 2005