

# Research on the Construction of Design Evaluation Dimensions of Modeling Intangible Cultural Heritage Derivatives

Hesen Li<sup>1</sup> Yirui Hu<sup>2</sup> Yurong Wu<sup>3</sup> Ziyang Li<sup>4</sup>

<sup>1,2,3,4</sup> College of Industrial Design, Hubei Institute of Fine Arts, Wuhan, Hubei 430205, China

<sup>1</sup> Corresponding author.

## ABSTRACT

At present, the design of intangible cultural heritage derivatives is uneven, and there are still problems such as pattern piling, rough design expression and blurred design perspective. Therefore, this paper studies the evaluation dimensions of modeling intangible cultural heritage derivative design, establishes a basic dimensional evaluation model of modeling intangible cultural heritage derivative design, combines derivative design and evaluation, and promotes the improvement of derivative design level. Through the combination of the existing literature analysis and the cybernetics design theory, this paper analyzes the elements of derivative design, forms the basic idea of evaluation dimensions with human, object, environment, technique and vein, and sorts out the relationship of each dimension and transforms it into a framework model, which to some extent can promote the research of derivative design and provide more design ideas for derivative design, so as to accurately and truly transform the essential content of intangible cultural heritage into the effective strength of derivative design.

**Keywords:** Modeling intangible cultural heritage, Derivative design, Evaluation dimension.

## 1. INTRODUCTION

According to the UNESCO Convention for the Safeguarding of the Intangible Cultural Heritage, "intangible cultural heritage" refers to the social practices, conceptual expressions, manifestations, knowledge, skills, and associated tools, objects, handicrafts, and cultural places that are considered by communities and sometimes by individuals to be part of their cultural heritage. In his "Introduction to Modeling Intangible Cultural Heritage", Zhang Xin states that "intangible cultural heritage" is a concept introduced in comparison with "tangible cultural heritage", which is a living heritage that aims to supplement and perfect the intangible form of cultural heritage produced by the omission phenomenon, with more emphasis on inheritance, especially on the inheritance of skills, technologies and knowledge, highlighting the human factor, human creativity and the dominant role of human. [1]

Although they are not identical, they express the same key point, that is, a group or a person uses unique skills and tools to develop a form of

expression that fits the context to present local culture and knowledge. The purpose of the design derivatives is also to make intangible cultural heritage more accessible to more people, so that it can continue to show its characteristics and develop new features of the time in its unique way in the current environment. Therefore, the similar key points of the definition of intangible cultural heritage are also the basic requirements for the design of intangible cultural heritage derivatives.

## 2. PROBLEM DESCRIPTION

In the literature theoretical research, the number of research papers on the topic of "intangible cultural heritage derivative design" on CNKI from 2018 to 2022 is about 38, while only 5 are on the topic of "modeling intangible cultural heritage derivative design". The number of papers on the theme of "evaluation of cultural and creative product design" is about 9, and there are only 4 articles related to the design of modeling intangible cultural heritage derivatives in this topic, but most of them are museums or heritage scenes, which do

not belong to the research scope of modeling intangible cultural heritage to which this topic refers. Besides, most of the design evaluation system studies are based on the demand subject, with fewer evaluation dimensions and a single evaluation method. For example, Cheng Chaogong analyzed the demand of cultural products based on the demand subject from the perspective of marketing, but his focus was on demander consumption and demand behavior. Chen Junzhi et al. applied the KANO model to analyze the demand factors [2] of consumers' cultural attributes of cultural and creative products; however, they only analyzed from the perspective of people and didn't constitute an evaluation system. But they did provide a more detailed evaluation research content from the human dimension.

In 1979, Mr. Morihiko Hiramatsu initiated the "One Village One Product" movement, which was based on the psychology of local people, mobilizing the development initiative to form products through knowledge, ideas and technology for the purpose of promotion. In the 1980s, South Korea launched a large-scale movement to revitalize national culture, and classes were held all over the country to learn traditional national cultural heritage. [3] And these were the important basis for students' entering a higher school and assessment. [4] Italy combined intangible cultural heritage with the tertiary industry, putting economic benefits on a par with cultural promotion. [5] Puppet production has "revitalized" the tertiary industry in several major cities, including Palermo. The UK has enacted legislative documents in Scotland and Wales, such as the Scotch Whisky Regulations 2009 and the Scottish Plaid Registration Act 2008, which address the crafts and languages that are characteristic of the nation, and has established corresponding databases to use modern means to build an environmental space for the cognition of intangible cultural heritage. [6] In these countries, intangible cultural heritage has been extensively promoted into daily cultural activities through various forms, creating a model of public participation and forming a human-centered, rich and diverse "object" form derived from intangible cultural heritage and its technology as the medium, and intangible cultural heritage social environment as the space to sustain the inheritance of intangible cultural heritage.

To sum up, foreign countries have combined with other industries on the basis of legislative protection to form an environmental space for intangible cultural heritage, enhance experience

feeling, stimulate interest, and achieve the purpose of promotion. In essence, they have the five dimensions of human, object, environment, technique and vein, which can better achieve the purpose of promotion.

### 3. CONSTRUCTION OF EVALUATION DIMENSIONS

According to design cybernetics, the "thing" is the first in time and the first in logic. The "thing" is the basis for "object" to integrate internal factors under the restriction of external factors. [7] Only when the two influence each other and coordinate can things show the trend of development. Therefore, design also requires the study of the factors that govern the formation of the product according to the goal to design the desired product.

In terms of final form, cultural and creative derivatives encompass two parts: the cultural and creative content and the product carrier, with the former being the special thing that distinguishes cultural and creative derivatives from ordinary products. [8] Similarly, the modeling intangible cultural heritage derivatives are different from other products because of the unique stories and historical deposits of intangible cultural heritage, which connect with the vein of modeling intangible cultural heritage.

The product carrier includes the shape of the derivatives and exists in two-dimensional, three-dimensional, solid and virtual form, etc. Mr. Liu Guanzhong also said, "The essence of design is to plan things". The "thing" is the intermediary point of the relationship between people and objects. [9] The "intermediary point" is the medium. In this case, "thing" as a mediator is equal to "thing" to communicate between people and objects, and wheelchair users make the appearance of wheelchair ramps in public places, and wheelchair ramps also facilitate tourism travelers. People and objects influence each other, so the design needs to consider not only people but also objects.

For different people or the same person in different environment, at different time, under different conditions, even for the same purpose, the tools, methods, behavioral processes, and behavioral states needed are different, and the tools, products, and even shapes, materials, and structures needed are certainly different. [9] It is clear from the previous section that people are the main factor of design. However, in terms of the requirements for setting up stairs in public places, the design

requirements for the four kinds of people who travel, who travel on rainy days, who travel during peak work hours, and who travel with luggage are different, producing changes in environment, time, and conditions. Here, the design purpose focuses on responding to changes, and the tools and methods needed to form derivatives change according to people, time, and environment. The former can be summarized as the result and the latter can be summarized as the cause, with the result changing with the cause. Generally, the "cause" is constant or limited, and this constant or limited can also be understood as the environment.

The existence of the "environment" sets the tone for the design of derivatives. As Mr. Liu said, "So once the 'thing' is clear, the 'object' will emerge from the water; all that remains is to choose the principle, material, process, technology, form, color, and so on. This is only a means to achieve the 'goal' that is limited by external factors." [9]

Finally, the method and the specific object are chosen, and the external conditions of people end

and means to achieve it are crucial. [9] After the cause, one has to look for principles, processes and techniques according to the limits of the cause, and at the same time they become the cause of the results of form, color, etc., layer by layer, excavating the results to judge the next layer of results.

According to the above theoretical analysis, "Figure 1" is formed. People feel the world through five senses and form their own perception of the world. Similarly, the design of modeling intangible cultural heritage derivatives also needs a bridge to connect, and to integrate the vein of successive generations of modeling intangible cultural heritage into the derivatives under the basic conditions based on the usage population and usage environment, and then use the existing production process to form a batch production. It is necessary to think about the product formation from five dimensions: target group, existence form of derivatives, usage environment, technology application and inheritance vein.

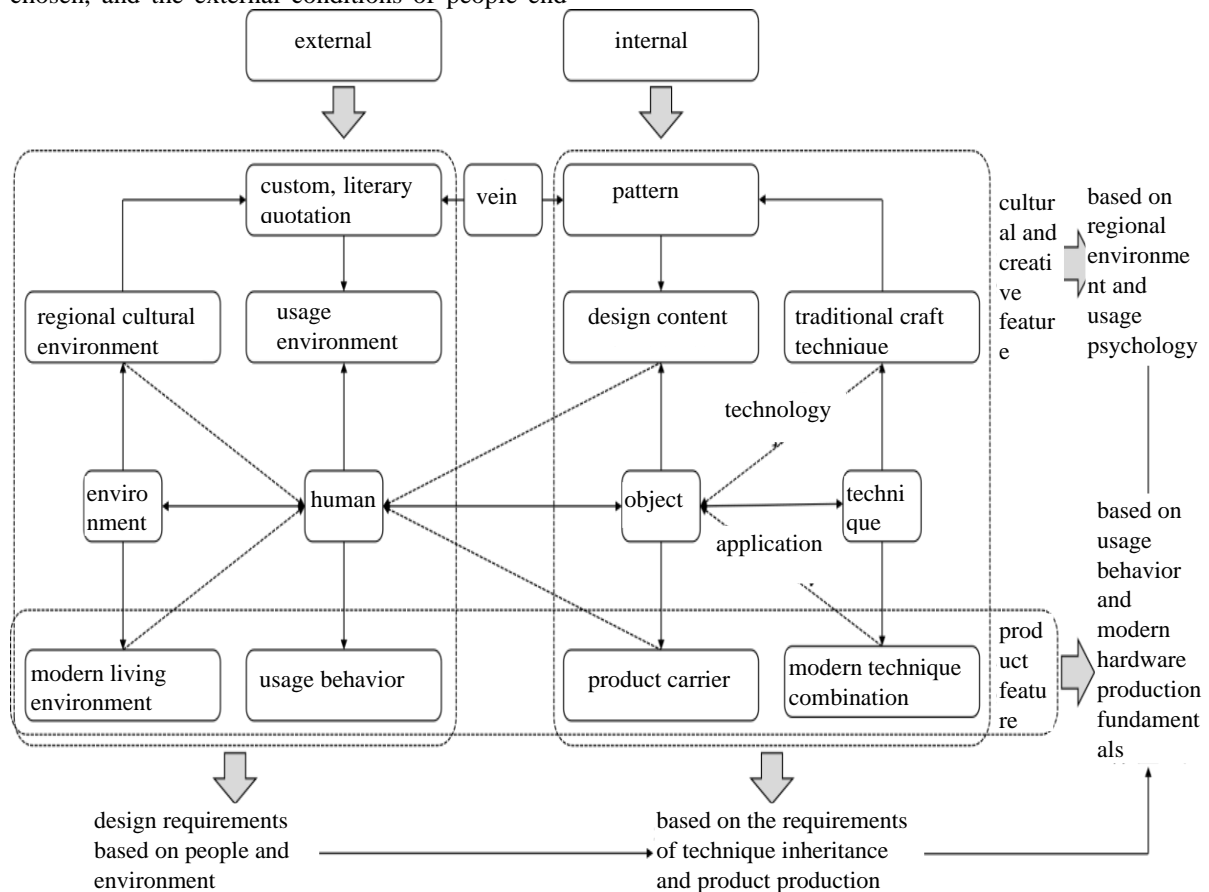


Figure 1 Framework of evaluation dimensions.

#### 4. CONCLUSION

A reasonable and clear design evaluation system can, to a certain extent, promote the improvement and development of the design quality of intangible cultural heritage derivatives. In this paper, the authors have analyzed the basic dimensions of the design of modeling intangible cultural heritage derivatives based on cybernetics, and formed the five basic evaluation dimensions of human, object, environment, technique and vein to provide certain design ideas. However, the shortcoming of this study is that the five evaluation dimensions are relatively basic, and more design practice and research data are needed to analyze the evaluation dimensions and evaluation indicators. Therefore, the authors will continue to study the evaluation dimensions of modeling intangible cultural heritage in depth in the future to make up for the shortcoming.

The inheritance of intangible cultural heritage is not a passing fad, but a sustainable career. To do a good job of living inheritance and to let the intangible cultural heritage better enter the public's vision from the role of derivatives to stimulate public interest, it is necessary to continue to study in depth to form a more rigorous evaluation system and promote the improvement of the design quality of derivatives.

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