

# Research on Digital Development of Traditional Culture of Chinese Herbal Medicine\*

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**Abstract**—Chinese people have a high sense of identity for herbal medicine in the hearts. However, they mainly focus on pharmacological research. Chinese herbal medicine culture also includes the visual aesthetics and cultural aesthetics of herbal medicine. The creative development of traditional culture of Chinese herbal medicine needs to find a unique cultural entry point and focus on the areas that have not been developed. After refining the cultural core of herbal medicine, it is necessary to investigate the developed areas of herbal medicine, understand the development possibilities of unexplored areas, identify the characteristics of the audience, and determine the development style. It is required to take digital media as the carrier of expression. According to the characteristics of fast information transmission speed and wide audience of digital media, the interactive form of herbal medicine communication is developed. With the development direction and positioning of herbal culture, a gradual step-by-step development plan will be formulated. The first is to develop graphic digital artwork of herbal culture, the second is to develop the cultural and creative physical works of herbal culture, and the third is to develop digital interaction of herbal culture.

**Keywords:** *Chinese herbal medicine, culture, digitization*

## I. INTRODUCTION

China is rich in traditional cultural resources. However, with the development of the times, many traditional cultural resources have been lost because they can't keep up with the aesthetic needs of the times and lack of attention of the world. Chinese herbal culture also faces this problem. In the common sense of the world, Chinese herbal medicine mainly studies the medicinal value, formula, planting and processing technology of herb. Modern people advocate healthy nature, and people are eager to find natural medicine and health preservation methods that return to nature. Since the 1990s,

the world's medicine has gradually attached importance to preventive medicine. The attention changing from therapeutic medicine mode to preventive medicine mode is the reason why the traditional trend of health preservation is rising again. At present, the main groups of Chinese herbal medicine are those who study traditional Chinese medicine or those who have demand for traditional Chinese medicine, such as the elderly groups who pay attention to health preservation and the personnel of research institutions of traditional Chinese medicine. And other people pay little attention to it, and let alone the creative development of herbal culture resources. It can be seen that Chinese people's love for Chinese traditional cultural resources is mostly based on the surface intuitive feelings, lack of a real understanding of its deep cultural connotation.

## II. CURRENT SITUATION OF HERBAL CULTURE DEVELOPMENT

According to the investigation, herbal medicine is a kind of health preservation material for people to treat minor diseases and regulate the body. There is a common tradition of using herbal medicine in the folk. Many people who live in the countryside or villages often go to some wild places to find herbs and make herbal tea according to their own physical conditions. Some traditional vegetable markets or village fairs also have stalls selling herbs. Most of the commonly used folk herbal prescriptions are health care prescriptions for clearing away heat and detoxification, expelling wind and cold, treating cough and other minor diseases. Chinese people have a high sense of identity for herbal medicine in the hearts. However, the following problems exist in the inheritance and development of herbal culture.

First, natural herbal cognitive conditions are disappearing. With the rise of high buildings and large mansions in modern cities, there is less and less land full of wild grass. In the past, the situation of children following adults to identify herbal

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medicines in the wild places no longer exists. In some areas with rapid urbanization process, herbal knowledge lacks natural cognitive inheritance conditions. How to inherit herbal culture in the current situation of urbanization is a crucial problem.

Second, people have a narrow understanding of herbal culture. Different from the loss of some traditional culture as a whole, Chinese herbal culture is characterized by partial loss. People generally recognize herbal knowledge from the efficacy of herbal medicine. However, the scope of herbal culture is far wider than that of herbal knowledge. Herbal culture includes not only the medicinal knowledge of the efficacy, prescription, planting and process of herbs, but also the visual and cultural aesthetics of herbs. However, these areas are not understood by the world, and few people make research and development.

Third, the inheritance and promotion form of herbal culture is single. At present, the products of many herbal medicine promotion platforms are single and simple in structure. For example, there are few special packages for herbal medicine development on the market, and few cultural and creative products are related to herbal medicine. There is still a large development space in visual aesthetics and cultural heritage.

### III. CULTURAL AND VISUAL AESTHETICS OF HERBAL CULTURE

Herbal medicine culture contains the pharmacological knowledge of herbal medicine, which has been familiar to the world and has been fully developed. At the same time, it has a good heritage. At present, there is still a large development space in the field of cultural aesthetics and visual aesthetics of herbal medicine.

The cultural aesthetic field of herbal medicine refers to the cognitive historical facts and allusions of herbal medicine. Taking the legend of herbal medicine as an example, there is a legend of "seven leaves and one flower" (see the left one of "Fig. 1"). This story told that seven brothers and one sister fought against the boa in order to protect the village, and the seven brothers died. The little sister tried her best to practice martial arts, and made a clever plan. She bravely devoted herself to fighting against the boa, and finally killed the boa that was the villager's bane. She became an herbal medicine that can cure the snake poison. "Agrimonia pilosa" told the story of an old man who used this herbal medicine to cure a yellow crane in the Yellow Crane Tower, and then left on the yellow crane after it recovered (see the right one of "Fig. 1"). These legends and stories are a kind of cultural expression with the characteristics of the times and the masses. It contains the traditional Chinese virtues of eradicating evil, being brave and good, helping others and repaying kindness. In fact, the good wish of becoming immortals is the good moral of people's pursuit of health and longevity. In addition to allusions, the cultural history of herbal medicine also includes the origin of some classic prescriptions, some interesting diagnosis and treatment stories, and the spiritual

tradition of herbal technology. These cultures are worth studying and preserving.



Fig. 1. Illustration of "seven leaves and one flower" (left) and "Agrimonia pilosa" (right) designed by the team of herbal culture development.

The visual aesthetics of herbal medicine is to explore the beauty of herbal medicine from the perspective of art. The herb has its unique shape and color. After the processing of herbal medicine, it still has its artistic and aesthetic perspective, and the development of this field is currently in a blank stage. How to develop the artistic aesthetics of herbal medicine and even to discover the visual aesthetic experience of herbal medicine from the perspective of art are in great need of research and discussion. This field includes the development and artistic expression of painting, photography, cultural and creative design and other forms. It can be said that the space is very broad.

### IV. CREATIVE DEVELOPMENT STRATEGY OF HERBAL CULTURE

First of all, the creative development of herbal culture needs to refine the core cultural concepts and find the entry point of design. Carrying out cultural and creative design from the medicinal properties of herbal medicine can't highlight the new idea. Most of the herbal culture groups focus on the medicinal properties, cultivation and processing technology and other links of herb. Few people make the development from the perspective of cultural aesthetics of herbal medicine. Therefore, starting from the legend of herbal medicine, it will lead to another level of interpretation of herbal culture. It hopes to make people realize the cultural connotation behind each herbal medicine from a new perspective, such as the spirit of helping others, the courage to resist evil and the virtue of filial piety, so as to achieve the purpose of promoting traditional herbal culture.

The creative development of herbal culture also needs to locate the characteristics of the audience and determine the development style. First of all, it is required to study the characteristics of different audience groups. Considering the historical inheritance of traditional culture, this project will position the audience groups as young people groups, hoping to attract the love and attention of this group, and making herbal culture continue in the new generation. The young groups have high aesthetic taste, are greatly influenced by the Internet age, can accept the communication form of

digital media, and love novel visual forms. Therefore, the cultural and creative development combined with herbal culture finally chose the classical design style, took a fresh and elegant route, and paid more attention to promoting the heritage of herbal culture with the help of digital interactive technology.

Finally, the creative development of herbal culture follows the step-by-step development characteristics. After studying the development direction and orientation of herbal culture, a step-by-step development plan has been formulated, that is, the first stage is the development of graphic digital artwork of herbal culture, the second stage is the development of cultural and creative physical works of herbal culture, and the third stage is the development of digital interaction of herbal culture. The development features make the content of development step by step.

## V. DIGITAL DEVELOPMENT OF HERBAL CULTURE

The first stage of digital development of traditional herbal culture is to develop graphic digital art. With the guidance of the idea of refining the core cultural spirit of herbal legends, the design team sorted out the herbal legends, collected more than 50 representative herbal legends, and carried out the interpretation and refinement of the traditional Chinese virtues and cultural spirit conveyed by each story. On this basis, they made the illustration, and made the development and design of an herbal legend with original illustration design collection. The story collection focuses on the legend, with original herbal illustrations, and briefly explains the efficacy of the corresponding herbal medicine. It is a brief herbal culture story book. The unique perspective can be said to fill the gap in the field of herbal culture development.

On this basis, the digital illustration and real postcard products of herbal medicine are launched simultaneously.

The second stage is the development stage of cultural and creative products. At this stage, aiming at the problem that there is almost no brand packaging design for retail herbal medicine in the market, a series of herbal medicine packaging is developed and designed, which enriches the visual aesthetics of herbal medicine packaging. In the aspect of packaging design of herbal medicine, the characteristics of traditional herbal medicine packaging made of kraft are specially preserved, and two schemes are made: the first scheme is to keep the way of ancient herbal medicine packaging and combine it with modern visual aesthetics to make the packaging model of traditional herbal medicine packaging; the second scheme is to design the packaging model of kraft cans, considering the characteristics of storage and transportation.

On this basis, it has launched the same series of cultural and creative peripheral design, such as bag, postcard, fan, etc. The project team also studied the medicinal flowers and herbs, such as chrysanthemum, and specifically developed the chrysanthemum sachet with three-dimensional embroidery technology, which has a new combination and

exploration in technology and visual aesthetics, enriching the visual aesthetics of herbal medicine (see "Fig. 2").



Fig. 2. Achievements in the creative and cultural physical development stage of herbal medicine.

The third stage is the development of digital interaction field of herbal culture, which is also an important development field. From the characteristics of design and promotion groups, it can see that young groups have a high acceptance of digital media. Considering the rapid information dissemination and wide audience of digital media, the team developed an interactive herbal communication form.

The development is divided into two modules. The first module is the mobile UI with herbal culture theme. It is required to design herbal related items as mobile phone icons and interfaces. For example, the combination of "Saxifraga" growing in humid environment and green bristlegrass growing in relatively dry environment is designed as screen saver interface, and interactive experience development is carried out. There is a classical well on the screen saver interface. When the hand slides down the screen, the bucket handle of the well in the scene will rotate. The bucket will fall and lock the screen. Similarly, the bucket rises to unlock the screen. The form of interaction is novel and interesting (the first on the left of "Fig. 3")

The dynamic visual effect is also considered in the design of mobile phone charging screen. The morning glory of the charging interface is an herbal medicine with the functions of purgation, diuresis, detumescence and insect repellent. With the increase of electricity from 0% to 100%, Petunia will gradually grow from seedling to bloom. The design fully takes into account the characteristics of digital media carrier and the interactive needs of young people. Combined with the growth characteristics of morning glory herb, the visual effect is novel and interesting.

In the aspect of mobile phone theme icon design, different shapes of herbal medicine are selected and analyzed, and common function icons such as dialing, browser, calculator, setting, etc. are designed by means of borrowing. For example, the recorder adopts the bowl and pestle of ancient mashing medicine (third on the left of "Fig. 3"), the telephone dialing adopts the horn shape of morning glory, the browser takes the "flying" characteristics of dandelion, the folder uses the drawer shape of ancient medicine cabinet, the calculator extracts the ancient abacus shape, and the input keyboard uses the modeling characteristics of medicine cabinet of ancient pharmacies for reference. These designs retain the visual aesthetic characteristics of herbal medicine.



Fig. 3. Lock screen of mobile phone interface (first on the left), charging interface (second on the left), UI icon design (third on the left) and app interface of "recognizing herb" (right).

In the aspect of digital interactive function, the app platform of "recognizing herb" is developed. The platform shows three modules: herbal culture, herbal culture and creation, and herbal art interaction. The herbal culture module shows the early development results, including herbal illustration, herbal legend story, simple herbal efficacy introduction, herbal growth animation and physical image and other information. The herbal culture module shows the herbal cultural and creative products developed by the project, such as herbal illustration coaster, key chain postcard and other cultural and creative products, with commercial transaction function. The herbal art interaction module is used to make herb lovers to find the beauty of life with herbal culture, and the audience can upload the works of art they have found related to herbal culture, such as painting, photography, film and television works, etc. They can communicate with each other, showing people's aesthetic experience of the herb culture in the eyes. The interactive module of herbal art mainly displays the information including the creator, the title of the work, the feelings of creation and the comments of the audience, which opens up an interactive space for the aesthetic appreciation of herbal art. Through these three stages of development, the app of "recognizing herb" finally presented built a digital communication and display platform for traditional herbal culture.

## VI. CONCLUSION

It can be seen from the digital development projects of traditional Chinese herbal culture that only when people deeply tap the connotation of Chinese culture. In the collision and exchange with foreign culture, and in the integration with new technology, it is more conducive to the dissemination and promotion of traditional culture to redevelop traditional resources, endow them with more characteristics and connotations, and create aesthetic works and communication carriers that are appropriate to the times.

Only when people dig deeply into Chinese traditional culture, the essence of Chinese traditional culture can arouse people's resonance, further reflecting some deep cultural thinking. The development of traditional culture has a foothold. Compared with the rich cultural resources accumulated in five thousand years of history, the ability to develop and utilize cultural products and participate in international competition is far from enough. The operation

and final results of the digital development project of Chinese herbal culture can give some experience and inspiration for further developing China's rich traditional cultural resources.

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