

Research of Chinese Auspicious Elements in Tableware Design -Illustration with Chinese Auspicious Fish-

Yue-Xin Huang

Graduate School of Design
Dongseo University, Busan, 617-716, Korea

BumKyu Kang

Graduate School of Design
Dongseo University, Busan, 617-716, Korea

ABSTRACT

Chinese auspicious element is a kind of art which is used to express yearning of a happy life. It is one of the great treasures of China, with not only emotional value of the people but also an aesthetic value. Chinese auspicious element derives from the aspiration of luck, enthusiasm of life and conciseness of eliminating malicious. It is of great cultural connotation and widely used in interior design, graphic design, fashion design and such. There are many research papers on application methodology of auspicious elements; however, there are very limited research papers on three-dimension product, let alone application in tableware. This paper focuses on illustration of Chinese representative auspicious element "auspicious fish" in tableware design. The research of its application of auspicious element's styling characteristics is of important significance in auspicious element spread and tableware design. This dissertation aims to provide referential design methodology and experience for later researches on related topic.

Key words: *Auspicious Elements, Methods of Application, Tableware Design, The Auspicious Elements of Fish.*

1. INTRODUCTION PRINCIPAL ARGUMENT

1.1 The background and Objective of the research

Chinese auspicious element is a kind of art style which is used to express yearning the happy life. It has not only the people's emotional value but also a certain aesthetic value, which is the great treasure of China. Chinese auspicious element is a result of psychological love of life and eliminating malicious consciousness, which has a profound cultural connotation.

With the development of society and the improvement of living standards, we do not only need advanced technology and fashionable design in our life. We pursuit a higher quality of design, which reflects cultural connotation in the same time. Under such background, the creative design, based on the auspicious element, with the demand of modern people, is accepted by more and more people in the modern fashion field, which is also loved by western countries in not only interior design, but also graphic design and fashion design. There are many leading research papers of application methods about auspicious element. However the thesis on the application of auspicious element is rare because of product in three-

dimensional design. There is almost no study of application methods on tableware products.

Now China tableware market tends to go for two directions: one is the direct emulate Western-style tableware design, and 60% of tableware is full of western forms and patterns in the market, the other is a total imitation of ancient Chinese tableware style pattern. Now China tableware cannot fully met the needs of the consumers. Through the research on the auspicious element used in tableware design method, we choose the representative Chinese auspicious fish as a case to carry on the design elements. It is very significant to study the characteristics of modeling in tableware design, the application of the auspicious element and the spread of tableware design. Under such background, finding out the auspicious elements on the innovation method of tableware design to meet the demands of national consumers, is necessary to future status of Chinese diet lifestyle. And this is also meaningful to the status of tableware design in the world.

1.2 The content and method of research

First of all, we can master the methods of auspicious element used in other design field by researching and reading related research papers, books and Internet. Using traditional Chinese patterns in both eastern life and western life at the same time, we can carry on the three-dimensional design with the success stories, case analysis and examples, and then sum

* Corresponding author, Email: idesign@gdsu.dongseo.ac.kr
Manuscript received Apr. 30, 2013; revised Oct. 01, 2013;
accepted Oct. 10, 2013

up China's auspicious element of three-dimensional design method and principle and etc. Secondly, taking auspicious element fish as case study to master the patterns of the fish dishes with characteristics of Chinese plastic tableware, we will sort according to the time. Finally, I choose two plans from hundreds of drawings to conduct the 3D production design in-depth. The final impression drawing provides referential experience design method and guidance for auspicious element application in tableware design afterwards.

2. APPLICATION OF CHINESE AUSPICIOUS ELEMENT IN THE DESIGN

2.1 Application in the fashion design

Chinese auspicious element is firstly used in fashion design, which was applied on the robes in ancient China. In modern fashion design, we have attained much experience and many methods on the application of Chinese auspicious elements, which displays in following two aspects.

2.1.1 Methods of distortion: Chinese auspicious element is a product of history. It is comparably detailed and repeated, so it is not suitable for the aesthetic requirements of concise or modern decoration in modern fashion design. As a result, it is necessary to redesign the element in a succinct way. In particular, we can use some methods to realize the goal, for example, induction, abstraction and exaggeration. The induction method means that it retains its morphological characteristics, and omits complicated shape, structure and patterns of auspicious elements. So it can make the form peaceful, concise and simple. Abstraction, a way using geometric deformation, makes the image of auspicious element deformed. Usually, straight and curve lines make images a square or circular. Exaggeration, according to the auspicious element content and form, can strengthen the theme and increase the decorative effect [8]. All the three specific methods can be analyzed as followings:



Fig. 1. Fashion design in the deformation method

This sportswear is designed with "lion", which is a traditional Chinese element, and it has carried on the form deformation and exaggeration. The design of the suit illustrates auspicious meaning and modern fashion sense.



Fig. 2. Fashion design in the abstraction method

It's a design based on traditional Chinese elements "bat pattern", carrying on the bold abstract deformation of woman's fashion design.

And the use of the abstract generalization in geometry makes the image square and circular. Abstract deformation gives the suit a new pattern of life, and we can feel it more concise and fashionable.



Fig. 3. Fashion design in the exaggeration method

The design, in the method of exaggeration, is based on Chinese calligraphy. Fonts were arranged in different densities. It makes calligraphy into point, line and surface, which has broken the traditional restrictions, and gives people completely different feeling.

2.1.2 Methods of decomposition and composition: Methods of decomposition and composition rebuild the images and the elements in color, shape and technique, making different effects. We divide the original elements and pick up some of them. According to the design intents and practical requirements, we follow the modern fashion design requirements - aesthetic and concise, and redesign elements by methods of decomposition and composition. After that, it will give people complete feelings about modern fashion. By this way, you can use the methods of decomposition and composition with the same materials.

Case analysis is as below:



Fig. 4. Method of decomposition and composition with the same material in fashion design

Design of this evening dress uses the same materials. "Moiré" and "water" patterns are the Chinese traditional auspicious elements. They are reformed into a new pattern. Design of the geometric way will be more fashionable in such method.



Fig. 5. Different materials are broken up and then reformed

The suit used Chinese traditional auspicious elements "water" and "Lotus", which were scattered and combined into a new one. Mix of different materials and patterns shows a special effect, such as the water pattern in fur and lotus pattern in the other texture materials.

2.2 Application in graphic design

Traditional auspicious elements, are widely used in modern design, imply propitiousness and totem adoration. It is inevitable that traditional auspicious patterns would be recreated and refined under the influence of graphic design and modern logo design. Traditional auspicious patterns cannot be simply copied or replaced in modern design, but match points between traditional auspicious patterns and modern logo design can. It means creation and application in spirit and shape of traditional auspicious patterns. Based on the original elements of traditional auspicious patterns, and combined with aesthetic requirements and consideration of modern people, the new design ideas are brought from original patterns and shapes by induction, abstraction and exaggeration [9].

As the following examples:



Fig. 6. The logo of China Unicom and the auspicious pattern of Eight Treasures

The logo of China Unicom is a very successful case. Main body of the logo is designed based on the traditional Chinese auspicious element "Eight Treasures". The whole logo consists of Chinese characters and English translation of China Unicom. Panchang, in the shape of the intestines, symbolizes infinite. The words "intestine" and "long" have the same pronunciation in Chinese. China Unicom redesigns the "Eight Treasures" in modern way to make the logo easy to identify and matches modern people's aesthetic sense of taste.



Fig. 7. Moon exploration and the dragon pattern

The logo of Chinese Lunar Exploration Project is another successful case in a perfect combination of the meaning and the dragon figure, another traditional Chinese auspicious element. The main body of CLEP logo is a Chinese character "月" (moon) composed by a dragon shape and two paw prints. The dragon of the logo appears in the way of Chinese brush writing which makes the logo abstracted, simple and more active. Similar to the shape of moon the bending dragon, not only shows the orient feature, but also strongly express the wish from Chinese moon exploration.

2.3 Study on the examples in product design



Although Chinese auspicious element has been widely used in fashion and graphic design, there are still some problems in the application. First of all, auspicious element is only printed on the surface of the product, without any shape change. Secondly, there are not enough research and study on Chinese auspicious element in product design, which could not be the basic theory or reference to designers. In spite of these, there have been many successful cases for us to study.

Nowadays, the 21st century is an era of information, network and digitalization. The worldwide value and local value of the products are compatible in this time. People more

and more prefer the products with personalization, diversity and brand culture. So the application of Chinese auspicious elements is more and more important in the modern industry design. By studying the traditional elements, we can find out the most local feature, which is widely applied in our design. But in the days of diversification, design focused only the graphic seems not good enough. In the field of industrial design and architecture, three-dimensional design of traditional elements will come to be applied soon. From traditional graphic design to three-dimensional design, more vivid visual language will attract more and more consumers no matter in China or in other western countries.



Below studies are the successful examples in three-dimensional design with Chinese traditional auspicious element.

Table 1. The public chair of the “Return” pattern

chinese traditional pattern	
example	
the name of example	the public chair of the "Return" pattern
designer	Hohai university industrial design
the meaning of pattern	Its shape is like the Chinese word “回”, so it is called Word Return pattern. Word Return pattern is a symbol of fortune and noble from generation to generation with no end, just like the shape of a closed loop. Word Return pattern often appears on the ancient pottery and bronze ware, such as the carpets, pottery, furniture, architecture and decoration in Qing dynasty.
the feature of modeling	From two- dimensional word to three-dimensional product, the public chair design is quite simple. This very creative idea makes people feel local, simple and modern.



The public chair design adopts the traditional Chinese word “回”, which means return. Its shape is like the Chinese word “回”, so it is called Word Return pattern. Word Return pattern is a symbol of fortune and noble from generation to generation with no end, just like the shape of a closed loop. Word Return pattern often appears on the ancient pottery and bronze ware, such as the carpets, pottery, furniture, architecture and decoration in Qing dynasty. From two- dimensional word to three-dimensional product, the public chair design is quite simple. This very creative idea makes people feel local, simple and modern.

Table 2. Qing’s family series

chinese traditional pattern	
example	
the name of example	“Qing.s family” Series
designer	Stefano Giovannoni
the meaning of pattern	Status and identity,high cultural level.
the feature of modeling	They designed the "Qing dynasty family" series of tableware, learned Chinese patterns of Qing dynasty portrait, refactored graphic elements, changed multiplicity into simplicity, kept the original pattern shape characteristic, such as the hat shape of Qing dynasty officer and the color of suit and so on.



Alessi Company is famous as a Italian Design factory. They designed the "Qing dynasty family" series of tableware, learned Chinese patterns of Qing dynasty portrait, refactored graphic elements, changed multiplicity into simplicity, kept the original pattern shape characteristic, such as the hat shape of Qing dynasty officer and the color of suit and so on. Alessi’s clever idea makes design of "Qing dynasty family" series of tableware traditional, adorable and popular in the market.

Table 3. Sofa of yin and yang fish

chinese traditional pattern	
example	
the name of example	Sofe of Yin and Yang fish
designer	LKK company
the meaning of pattern	Yin and Yang fish represents the balance of the universe,the beauty of harmony
the feature of modeling	The Yin and Yang fish sofa picked Chinese traditional patterns of Yin and Yang fish as the element for design, combined graphic of Yin and Yang fish and western streamline. This is also a step from a two-dimensional graphic to a "three-dimensional" product with the image connotation, the streamline and modern style and the save for space.

In 2007, LKK Chinese team participated in Red Dot Award in German, and the "Yin and Yang fish" sofa presented by LKK, won the best of the best. The Yin and Yang fish sofa picked Chinese traditional patterns of Yin and Yang fish as the element for design, combined graphic of Yin and Yang fish and western streamline. This is also a step from a two-dimensional graphic to a "three-dimensional" product with the image connotation, the streamline and modern style and the save for space. The success of the "Yin and Yang fish" sofa design, proves to be a mix of tradition and modern, surprise the award judges all around the world, which also supports the idea that the patterns of the Chinese traditional elements are promising in the product design.

Table 4. The bed of the “Return” pattern



chinese traditional pattern	
example	
the name of example	the bed of the "Return (回) "pattern
designer	American designer San Francisco
the meaning of pattern	The design adopts the traditional Chinese word “回”, which means return. Its shape is like the Chinese word “回”, so it is called Word Return pattern. Word Return pattern is a symbol of fortune and noble from generation to generation with no end, just like the shape of a closed loop.
the feature of modeling	Its elements contained Chinese word “回”. The three-dimensional design was based on two-dimensional graphic, but the color of the product was black, very typical in the west.

This bed was designed by a western designer, in traditional Chinese “Return” pattern. Its elements contained Chinese word “回”. The three-dimensional design was based

on two-dimensional graphic, but the color of the product was black, very typical in the west.



Black color does not appear in the history of Chinese auspicious elements, because only bright colors such as red can be the symbol of luck. Combination of Chinese auspicious elements and traditional western color fits lifestyle of both west and east. It is another example of three-dimensional design according to traditional Chinese “Return” pattern.

Table 5. Nokia 7260

chinese traditional pattern				
example				
	<table border="1"> <tr> <td>the name of example</td> <td>Nokia 7260</td> </tr> <tr> <td>designer</td> <td>Tanja Fisher</td> </tr> </table>	the name of example	Nokia 7260	designer
the name of example	Nokia 7260			
designer	Tanja Fisher			
the meaning of pattern	The design adopts the traditional Chinese word “囍”, which means return. Its shape is like the Chinese word “回”, so it is called Word Return pattern. Word Return pattern is a symbol of fortune and noble from generation to generation with no end, just like the shape of a closed loop.			
the feature of modeling	Word Return pattern appeared on the mobile phone keyboard and left side of the screen. The two-dimensional graphic was applied in three-dimensional design. Chinese red was applied for major color of the product, and silvery white applied as minor color. There's another color composition from Nokia 7260 - black as major, and red as minor. This product design gave the auspicious elements a new life.			

Nokia 7260 mobile phone used the traditional Chinese color. Word Return pattern appeared on the mobile phone keyboard and left side of the screen. The two-dimensional graphic was applied in three-dimensional design. Chinese red was applied for major color of the product, and silvery white applied as minor color. There's another color composition from Nokia 7260 – black as major, and red as minor. This product design gave the auspicious elements a new life. In mobile phone market in 2004, this product was the best-seller.

Table 6. “Chinese knot” pattern

chinese traditional pattern				
example				
	<table border="1"> <tr> <td>the name of example</td> <td>“Chinese knot” pattern</td> </tr> <tr> <td>designer</td> <td>Hohai university industrial design</td> </tr> </table>	the name of example	“Chinese knot” pattern	designer
the name of example	“Chinese knot” pattern			
designer	Hohai university industrial design			
the meaning of pattern	The cane design was based on a traditional Chinese element - Chinese knot. Chinese knot pattern derive from Paleolithic period when people tied ropes to record things. It later evolved into a traditional Chinese auspicious pattern, as symbol of junction, solidarity and marriage.			
the feature of modeling	Focusing on the patterns of the traditional image, the designer reconstructed the images of Chinese knot patterns, boldly and creatively. The designer put the center of the knot as the cushion and armrest of the cane chair, and the rest of the knot as the back and legs of the chair.			

The cane design was based on a traditional Chinese element - Chinese knot. Chinese knot pattern derive from Paleolithic period when people tied ropes to record things. It

later evolved into a traditional Chinese auspicious pattern, as symbol of junction, solidarity and marriage. The cane chair design used the Chinese knot patterns for three-dimensional design, but completely broke the patterns of the traditional concept. Focusing on the patterns of the traditional image, the designer reconstructed the images of Chinese knot patterns, boldly and creatively. The designer put the center of the knot as the cushion and armrest of the cane chair, and the rest of the knot as the back and legs of the chair. This was another good example with creative transformation from pattern graphic to tree-dimensional design.

2.4 Application method in product design of auspicious elements

Compared to the successful cases from logo design and fashion design, we can also get conclusion in the area of product design, such as transformation from pattern graphic to three-dimensional design, combination of tradition and modern. We can reconstruct patterns by formation or deformation, order or disorder, completeness or incompleteness, composition or decomposition.

2.4.1 From multiplicity into simplicity: Retain the good meaning of elements; abandon the complicated part of the auspicious elements; inherit patterns of the classic style and connotation. Auspicious elements contain the original idea and wisdom of designers. If we could carry on the essence part and carefully redesign with the modern concept and simple graphic, it will be a promising design method.

2.4.2 Combination of Eastern and Western: Combination of Eastern and Western history and culture innovate way of product design. Combination of the Chinese auspicious element and the Western color and shape forms unique design style. Such innovation requires designers to be concise and reasonable about combination.

2.4.3 Traditional colors: The colors extracted from Chinese auspicious elements give color to a new meaning. Chinese traditional colors are gorgeous bright, and many designers don't use them in product design due to too strong contrast and conflict. However, applied properly, the auspicious element color will achieve good effect of performance. Therefore, a bold attempt to apply the traditional color in products may result unexpected harvest.

2.4.4 New image expression: Pay attention to image performance, show originality. In addition to the auspicious element of the form designer, color and structure are used by accident. The creator of the heart of the auspicious elements of self-interpretation, extraction of auspicious elements of imagery, sublimation, regardless of design form, breaks the tradition, pay attention to image performance and innovation, but it still can show the traditional flavor. This design is the auspicious elements of the highest realm of three-dimensional transformation.

2.5 Using the principle of Chinese auspicious elements

The use of Chinese auspicious elements is to achieve good results and to grasp the principles and innovation. We must pay attention to the rationality, artistic, creativity, and other three principles according to principle of auspicious elements of the three-dimensional design. These are three principles and three different states of the product innovation design.

- 1) The rationality, according to the features of the product features, is design requirements and the characteristics of the symbols which is supposed to correctly choose suitable auspicious element.
- 2) Art highlights the artistic aesthetic feeling of product design, referenced with the pursuit of auspicious element and modern design in the aspects such as shape, color, material of harmony and contrast, by means of three-dimensional technique of specific auspicious element [7].
- 3) Creativity, designers can break the use of stereotypes, give the auspicious elements of new forms and boldly use new materials and new technology, etc. Meanwhile this creates new effect.

3. CHINESE AUSPICIOUS ELEMENTS OF THE FISH SHAPE FEATURES

3.1 Modeling the background and significance of Chinese traditional fish patterns

Chinese auspicious elements leave us a rich spirit and wealth of culture, reviews the history of Chinese traditional fish pattern with its unique cultural connotation and artistic charm and deduces the various styles and forms. Decorative language, as a symbol of traditional fish pattern, is subjective emotion from people, awareness of natural image and morphological meaning sublimation.

Worshipping fish patterns originated in ancient Banpo times. People made the pot fish pottery and pattern. Associated with worship of fish patterns and economic life at that time, Banpo people lived predominantly a settled life on agricultural production in the valley, engaged in gathering, hunting and fishing. The fish pattern is the picture of their lives [5]. Later in the period of Shang dynasty, it is a symbol of fertility worshipped by man because there's quite a lot of fish at that time. According to pronunciation of these two words, "fish" and "yu" are homophonic, so fish is metaphor in Chinese traditional culture, and means rich enough. The fish patterns therefore became popular. Carp, especially in the tang dynasty, had double meaning, since the Tang Dynasty's Emperor Li, Carp Li Tongyin. Fish is a family name of the emperor, the royals carp Peja, leaded with carp and folk worshiped more fish patterns.








In China folk ancestors worshiped in the standards for fish. It is a kind of totem worship to the fish. Today in some continues, people believe that fish can bring one million head, so as to inspire the confidence of the people to pursue a better life, to meet the psychological needs for a better life yearning It encouraged people to overcome difficulties. Now in China, the People's Bank of China also issued several consecutive medals which have fish pattern in the gold and silver coins. The places where companies, restaurants and housewarming located in HK

used to put a tank koi fish as symbol of fortune. Fish is the meaning of the Chinese people passed down from generation to generation.

China has many harmonics expression in auspicious phrases. Fish grain is larger. About the ancient games, fish homophone means the pursuit of affluence and the desire for victory. It is auspicious to imply nature which was welcomed by people. Carp, "carp" and "the", "fish" and "yu" and "jade" homophonic [1].

Below is the specific analysis about the meanings of the fish.

Table 7. The meaning of fish 1[6]

fish patterns	formative background	meaning of Chinese traditional fish patterns
	More than happy	"Fish" and "surplus" are homonymic in Chinese, a symbol of great luck, the life is very rich.
	Treasures fill the home	Gold and jade fill the hall -- abundant wealth or many children in the family. It stands for the treasure prosperity, wealth, and describes rich in knowledge.
	Every year have enough things to spend.	A fish is also a symbol of surplus in Chinese culture, another measure of a good year and a good life.
	More than wealth	means "rich and have a surplus
	cyprinoid jump over dragon door	Ancient legends the carp jump over the huge canyon that is the narrowest place, and then it will change to a dragon. It means the man makes good winning and achieves the dreams.
	like a fish in water like a duck to water	Original means a favorable king-subject relationship, but now it means that your friends or husband and wife feelings harmony, and you feel content for your work environment.
	"Lotus" and "in succession" are homonymic in Chinese, never shut down.	A fish is also a symbol of surplus in Chinese culture, another measure of a good year and a good life.

In the west, people's worship the fish, but fish patterns are different between east and west. Westerners believe that everything in the world all have their own destiny and a method of self-protection, so westerners worship an animal through studying the characteristics of animal life, motion, shape and traits.

In western studies, fish live in water and water power is endless. Fish can live freely under this powerful, which illustrates the fish has potentially strong survival ability. The water sometimes is in peace and sometimes waves, but fish can adapt to their environment, which proved that the fish has a strong ability to adapt to the environment. Fish can swim freely in the water, which is also a symbol of independence and freedom. So in the west, people regarded surplus the fish as independent, potentially strong, adapted to the environment. They believe that fish can teach a person's ability to adapt to

living in environment, and can bring people endless potential power so that we can protect ourselves and lead to be free. So westerners tend to be in their own home or leave the fish pattern on the body.

Table 8. The meaning of fish 2

Comparison	Reason	Implied meaning
Eastern fish pattern	1. Fish is related to the economic life. Early man made a living by fishing. 2. About life. Fish belongs to the fertility of animals	affluence regeneration, peaceful coexistence More than wealth, longevity, good luck
Western fish pattern	1. Fish live in water, with potentially strong survival ability 2. Fish can swim freely.	Ability to adapt to the environment; Boundless potential ability; freedom

3.2. Traditional fish pattern representative products in China

According to the Chinese tableware market research, for China's TaoBao online shopping of water-wave cutlery purchase amount of investigation, we find out the following set of examples in Chinese traditional fish patterns used in tableware design.



Fig. 8. The tableware of Jingdezhen

Jingdezhen ceramic tableware, porcelain is exquisite, white downy, pervious to light is strong, with traditional themes in, the application of auspicious fish patterns in Jingdezhen tableware, according to the survey 18% (according to China's Taobao online shopping data), mostly white porcelain for the bottom color, monochrome [10]. Due to the complexity of the tableware of Jingdezhen process, fine workmanship, so that the fish pattern tableware in 688 Yuan - 1599 Yuan.



Fig. 9. The tableware of enamel porcelain

This set of Three-dimensional fish tableware breaks the traditional complication. The fish patterns painted directly on the tableware are vivid. The goodness of fish meaning is very beautifully described in tableware market price 999 Yuan [12].

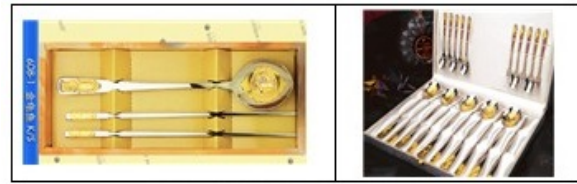


Fig. 10. The tableware of Yafei

Yafei is a famous brand of Korean tableware. They pay more attention on the kingly design, and their material uses more gold and silver. The pattern was selected according to auspicious graphic and texture pattern, for most consumers purchase them as the executive's gift. There is a set of fish patterns of the spoon and chopsticks. The price is expensive, but the design is really interesting.



Fig. 11. A series of Blue Fish from Japan

The colorful ceramic tableware in Japan, the traditional fish patterns, with the modern way of composition and color make people feel good and willing to have them. 3 pieces are 120 Yuan sold in Chinese market.



Fig. 12. A high-quality ceramics from Italy

This "year for" ocean series, strong combination of colors, patterns and application of the fish, make consumers feel themselves in the ocean. Pointed handle and spout, imitated shape of Marine fish make them unique products. The price is in 2000-4000 Yuan.



Fig. 13. Yamazaki "Fish style" of tableware

This set of tableware includes 2 spoons, 1 knife and 2 forks. Stainless steel material, meticulous and realistic shape, a

beautiful waist line and lovely fins, cute eye and mouth in proper location, all these have no implication of the stereo modeling of fish dishes. The market price is \$39.99per set [11].






According to the market investigation, in the tableware market in Korea and Japan, the traditional fish patterns are widely used in tableware design, and loved by different consumer groups. But most of the fish dishes are graphic expression, which means the fish patterns is drawn directly on the tableware. In China there are very few of the fish pattern three-dimensional tableware design, in western countries there are some successful design three-dimensional the fish dishes.





4. THE RESEARCH OF CHINESE TABLEWARE

4.1 The development process of Chinese tableware

History of tableware and diet culture is inseparable. Different ages, different productivities and different ways of eating make tableware very different. About ten thousand years ago, human didn't know how to make fire, so there were no cookers. They just have the food get into the mouth directly in that era. Human and other animals almost have no significant difference, so tableware didn't exist. Human diet cultures really sprout and tableware emerged after human were able to use fire and artificial fire. Then the raw food has entered into the phase of cooked food [3]. Primitive agriculture, animal husbandry and the emergence of pottery industries marked that the Chinese diet culture really start, and that the eating utensils were in production and application. In different social background, with the production technology progress, tableware has developed. Let us look at the history of tableware in China:

Table 9. History of tableware in China[4]

Times	The Feature of Tableware	Material & Technics	Social Background
Neolithic Age 	Tableware mainly has the bowl, the alms bowl, the plate and the cup. The common shapes are dagger and spoon.	Material is mud and sand, Red clay, also, Unearthed bone meal spoon, Neolithic age late, there was color pottery, grey pottery, black pottery and eggshell pottery, etc.	Began to manufacture and use system of the stone, invention of the pottery, appear the primitive agriculture, raise livestock industry and handicraft industry.
Xia, Shang and Zhou Dynasties Period 	Tableware along on the species before the generation, appeared angle, Jue, freely, spoon.	In addition to clay production materials, but also increase the copper, jade, bone, ivory, and wood products.	Slavery society, the agriculture is a major economic pillar, bronze manufacturing hair very much up to.
Spring and Autumn, the Warring States Period 	The bucket, knife, cutting, sign, such as different kinds of food tableware. Tableware in modeling changes, such as a spoon from the initial pointed lobes the tongue of the spoons to handle wide end spoons, evolution is narrow handle the flapper spoons.	Production materials in addition to the bone, horn, wood, copper, Jade, bronze is widely generic application.	Private business began to rise productivity began to development in people, arts and crafts products between wide circulation.
Qin & Han Dynasty Period 	On modeling, the chicken spoon, flat shape, pot of new shape, such as pattern	Production materials have the pottery, wood, bronze and jade, also the food the bamboo. The Han dynasty tableware, celadon gradually popularity.	Economic development and water conservancy gradually, culture and art Developed, ceramic industry art continues to advance.
Wei Jin, Northern and Southern Dynasties Period 	And started to large bowl small matching sets of products. Style at that time aesthetic trend, the influence of by a stout dignified to thin turn all the way.	The biggest change in the material as China began to gradually replace foreign pottery, gold, silver and glass material such as meal enter the high society	Ethnic minority region moved south north culture started to merge, production technology to improve. Hand industrial development, many varieties, the yield increased.

Times	The Feature of Tableware	Material & Technics	Social Background
Sui Tang and five Dynasties Period 	Varieties include: tableware bowls, plate, plate, basin, wash, bowl, cup, and wine bottles, cups, lamp, wine pot, wine, wine glasses, instruments etc.	Because the main copper material used to make money, tableware made by brass to the limit, so the general commodity multi-purpose ceramic replacement, thus promoting the porcelain made in fly leaping development and success fire under the glaze color, flower porcelain, famous tang three-color.	Rapid economic development, the hand industrial, manufacturing, and agriculture, people are all its height, industry the life rich, thereby the wind of rise of the tea, the tea lights, the saucer, soup, etc
Song and Ming Dynasties Period 	The period of the cutlery note: the kiln scratching wine cup, Yongle blue and white hand, Chenghua cup color characters, modeling is rich.	More popular ceramic in this period, porcelain tableware, the most famous Jingdezhen ceramic	Stable economic development, tea continue to flourish, tea sets, this is completely separated from the wine.
Qing Dynasties Period 	In continuation of the Ming dynasty With the characteristics of the model, color. at the end of the Qing dynasty and into the western diet countries, tableware also along with the shape of the change.	In ceramic technology the development, but brilliant is not as good as before.	In the Qing dynasty Manzu noble rushed to buy the porcelain the west, the "China craze" round a climax.
Industrial Revolution Period 	There were bowls, spoons, cover box, footed dishes and wine cup, footed bowl, basin, bottle, statue, vase with, slag hopper, such as the modeling of tableware and ornamentation as good as before	Porcelain glaze, number quantity, as well as the production workers art, etc., are not with the power peak compared with period.	The opium war in 1840 since, China's economy beginning, political chaos, handicraft industry, agriculture manufacturing is gradually decline of the process.

4.2 The classification of tableware

Due to the Chinese diet culture, many kinds of Chinese food such as soup bowl and rice bowl are both the deep tableware, container. However the plate is not the same way. Therefore, different types or different dishes must be carefully classified. The party use different tableware according to the different dishes. The most common dishes are plates, bowls, chopsticks, spoons, cups and pots, etc [2].

4.2.1 plate: serving dishes, light and common in the household or restaurant with no soup, can show food with good looking, and give a person appetite.

4.2.2 disc: instruments of serving items, circular, bigger and deeper than plate. It's convenient to pick up. Heat dissipation is better. According to use, can be divided into: plate family with more commonly used is candy dish, fruit bowl, etc.; Services for kitchen utensils and appliances with plates, especially the boiled fish and hotpot are need to use the metal and ceramic plates, etc.

4.2.3 bowl: is a daily diet household utensil. The origin bowl is not research. However, it can be traced back to Neolithic argillaceous earthen bowl. Its shape and today's are little different, named as small mouth bottom and bowl, wide and narrow bowl bottom, have a bowl under the foot, mouth height are generally along the diameter of the half, mostly rounded, rarely square. General purpose is food.

4.2.4 chopsticks: China is the birthplace of chopsticks, eating with chopsticks has a long history. Invention of chopsticks is

associated with food. Han nationality began very early farming way of life, the main crop is adaptable millet (panicum). Millet class food has two characteristics. One is the small particles, the order is rough skin is not easy to be removed, the emergence of chopsticks provide convenient for use.

4.2.5 spoon: is usually metal, plastic or wooden. Oval or round for small objects liquid or fine stuff.

4.2.6 cups: daily utensils. Since its main function is used to wine or tea, the basic shape is mostly straight mouth or exposure mouth along the diameter. Cup height is almost equal.

4.2.7 pot: a kind of ceramic or metal have the mouth, usually used for tea, wine and other liquids. Pot time is longer, and the style is very diverse, roughly circular, square, circular, octagonal, arc, etc.

4.3 Chinese dietetic culture is be related with the tableware

In ancient China, the Yangtze River, Yellow River and Pearl River with the wide plains of the three rivers, the good climate, loose and fertile soil, gave birth to the farming, fishing and hunting. Two kinds of cultural formed. Farming was easier than fishing and hunting to obtain stable source of food. Wheat and barley grain of epidermal structured closely, if they are not crushed, the taste is very poor. But millet and rice don't need to be crushed, thus this determines the grain food of the Chinese tradition. Planting, breeding and auxiliary laid the diet of the Chinese agriculture form from then on. This also determines the main types of Chinese dishes: plate, plate, bowl and chopsticks to give priority to. In sui and tang dynasties, the Chinese culture and the state is strong, the integration of all ethnic groups on the diet culture further communication, varieties of dishes, genre, establish different diet, so by eating one of a set of tableware form evolution at the table and food for people, so some size larger plate, plate, etc., serving dishes, soup, etc.

The Chinese diet culture, decided to the size of the Chinese type tableware and cutlery, can be divided into little, small, small bowl, album, plate, bowl, chopsticks, chopsticks, spoon, cup, pot size, etc.

5. DESIGN DEVELOPMENT

Combine the traditional Chinese auspicious element with tableware design method research. Using "fish pattern" as a case, then we can design and develop it. Through the previous research, most auspicious elements are used directly plane patterns of imitation in tableware design. From the perspective of product, we design scheme of 3D point of development.



Fig. 14. the draft of design plan 1

The idea of the cup comes from Chinese traditional fish pattern. Fish body is curvaceous, and its shape characteristics are applied in the stem of the cup and the cup tray. Meanwhile, the tableware used traditional Chinese color such as black, bright blue and yellow. These gorgeous colors make white porcelain tableware have more vitality.



Fig. 15. 3d of design plan 1

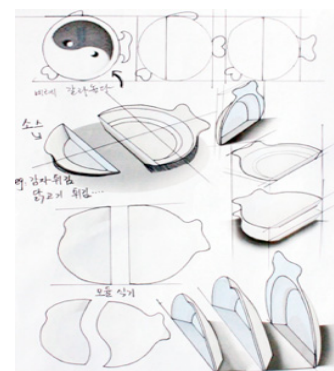


Fig. 16. the draft of design plan 2

The Yin and Yang fish design used the traditional Chinese characteristics. The tableware abstracts western culture to carry on the design. A plate is divided into two parts to separate the sauce and rice in the western diet. And at the same time with Chinese meaning, fish is a symbol of harmony as Yin and Yang, the significance of the harmonious beauty. Combination of western life style and the Chinese traditional fish pattern in three-dimensional design makes the product adorable.



Fig. 17. 3d of design plan 2

6. THE CONCLUSIONS AND PROPOSAL

First, the traditional Chinese elements are about "meaning and form" concept. By deconstruction, integration, and its application, tableware will be designed. The fish pattern means love, freedom, happiness, fortune, wealth and prosperity. The combination of fish patterns and the application of modern three-dimensional design in tableware is practical.

Second, through advanced studies referenced with a lot of related research on Chinese auspicious elements, we found out that most of applications in traditional elements are focusing on texture and color. However, research and analysis on transformation of traditional Chinese patterns and distortion of three-dimensional are quite less. Chinese auspicious elements with the three-dimensional original performance in tableware design will be promising national characteristics.

Third, consumers in China have their own unique preference in tableware for. For instance, they are fond of tableware with good meaning; they like white streamlined tableware; they like the tableware combination of Chinese traditional food culture and modern design; they give attention on the texture and appearance of tableware. Given the design features mentioned above, we can develop products that meet the consumer psychology.

Fourth, in my proposal above, from plane pattern graphic to three-dimensional, the design provided new connotation and performance. Through the dinnerware market situation analysis, and related theory, we put the design proposal further with subsequent patterns in tableware design. Three-dimensional expression provides a research basis and the research have been conducted in such depth due to temporary situation.

As a result, the application of Chinese auspicious patterns in tableware design method research is extremely important. The purposes of this article are to apply the characteristics of Chinese auspicious elements and to explore the tableware modeling methods with Chinese auspicious elements. Combination of the consumers' preferences and the characteristics on application in tableware design, not only meets the aesthetic and cultural demands of Chinese consumers, but also improves the status of Chinese tableware designs in the world, which then provides design method and referential experience for using auspicious element in tableware.

REFERENCE

- [1] Zai-Tang Cao, *Fish as a symbol of fortune and happiness*, Wuzhou Dissemination Publishing Company, 2009.
- [2] Zhao Chen, *The culture of Chinese food*, ShangHai Antique Book Publishing Company, 2009.
- [3] Pei-Fen Chen, *A study on the bronze ware of Xia, Shang, and Zhou dynasties*, Shanghai Antique Books Publishing Company, 2004.
- [4] Da-Shu Qin, *The arts of stone and fire : Ceramics of Ancient China*, Sichuan Education Publishing Company, 1996.
- [5] Yin Wei, *The culture of Chinese fish*, Culture Publishing Company, 2009.
- [6] Shi-Yan Cui, *Auspicious patterns; memory; modern signs; Chinese traditional culture*, a master's thesis, Northeast Normal University, 2009.
- [7] Dian-Shen Jiang, *Reinstitution of Traditional Graphics in Modern Plane Design*, a master's thesis, Northeast Normal University, 2007.
- [8] Yu-Cheng Lu, *The Concept of Being Auspicious in Traditional Veins Decoration and the Modern Design*, a master's thesis, Suzhou Vocational University, 2004.
- [9] Yan-Zu Li, *Visual Communication Design*, a master's thesis, Publishing Company of Beijing University of Technology, 1992 .
- [10] Xiao-Yu Qi, *The Application Study of Chinese Traditional Auspicious Culture in Chinaware Tea Set Design*, a master's thesis, Tianjin University of Technology, 2011.
- [11] <http://www.ixiqi.com/archives/17472>
- [12] http://designer.ju51.com/200911/clgz.27644_2.shtml



Huang, Yue-Xin

She received her B.S. degree in Design from Tianjin Academy of Fine Arts, China in 2008, and her M.S. degree in Industrial Design from Dongseo University, Korea in 2012. Currently, She enrolled in the PhD program in Department of Design at Dongseo University. Her main research interests include industrial design, design management and design strategy.



Kang, Bum-kyu

He received the B.S., M.S in Industrial Design from Kon-Kuk University, Korea in 1993, 1996 respectively and also received M.A. in DeMontford University in England. He also got a Ph.D. in Design Management from Buruel University, England in 2002. Since then, he works in Design Department of Dongseo University as a professor. He is not only a president in DIDIC (Digital Image Design Innovation Center), but also a director in BK21 team which is sponsored by Korea government. His main research interests in the industrial design, design management and design value, etc.,