

Traditional Chinese Visual Design Elements:
Their Applicability in Contemporary Chinese Design

by

Liqi Ren

A Thesis Presented in Partial Fulfillment
of the Requirements for the Degree
Master of Science in Design

Approved July 2013 by the
Graduate Supervisory Committee:

Jacques Giard, Chair
Claudia Brown
Patrick Cheung

ARIZONA STATE UNIVERSITY

August 2013

ABSTRACT

Visual design elements – form, material and color– are the basis for the visual language. Various cultures have used visual design elements in different ways. For example, certain colors can have one meaning in one culture and a very different one in another.

Chinese traditional design has a history going back about 5,000 years and follows a philosophy that is unique. In China, traditional design has a deep connection with the past and plays a momentous role in forming the identity of the Chinese (Sun, 2010). Exploring traditional Chinese design is an effective way to inherit and transmit Chinese history and culture.

The research presented explores traditional Chinese visual design elements with a goal of incorporating them into contemporary design. It seeks to provide insight into how Chinese and non-Chinese designers and non-designers recognize common visual design elements as being associated with Chinese design. As a result, the research explores three characteristics: a) handicraft; b) naturalism; and c) design with meaning, which can be key points in understanding traditional Chinese design. Furthermore, the research explores two sets of design criteria that can guide designers to apply these representative design elements into contemporary design in order to express Chinese culture.

ACKNOWLEDGMENTS

Throughout the whole research study in the MSD program, there are several people who deserve credit and appreciation for their help in my two years of academic life. One of these is my committee chairman, Dr. Jacques Giard for guiding, teaching and inspiring the research in this thesis. I really appreciated his help, especially helping me select my committee members selecting and for his assistance in editing the thesis. Two others are Dr. Claudia Brown and Dr. Patrick Cheung, thesis committee members, who gave me numerous valuable suggestions on my research, especially on my methodology and data analysis. Moreover, I cannot be thankful enough to Dr. Janet Baker who attended my defense and gave me helpful suggestions for my study. I truly thank them for their assistance and advice.

I would also like to express my appreciation for my MSD schoolmates. They gave me great support during my most difficult time. Thanks for both Chinese and non-Chinese participants who helped me to complete my data collection of this study. They shared their thoughts, their time and their enthusiasm in my study. I really appreciate their help. Thank you very much.

TABLE OF CONTENTS

CHAPTER	Page
1 INTRODUCTION	1
1.1 Background and Justification	1
1.1.1 Design and Culture	1
1.1.2 Chinese Design and Globalization	2
1.1.3 Exploration of Traditional Chinese Design	3
1.2 Research Proposition	5
1.3 Methodology	6
1.4 Outline of the Report	7
1.5 Delimitation of Scope	8
2 LITERATURE REVIEW	10
2.1 Culture and Design	10
2.1.1 The Relationship between Culture and Design	10
2.1.1.1 Design Reflects Culture	10
2.1.1.2 Design Inspires Culture	11
2.1.2. Globalization and Local Identity	12
2.2 Traditional Chinese Design	15
2.2.1 Common Sense of Traditional Chinese Design	15
2.2.1.1 The Essence of Traditional Chinese Culture	15

CHAPTER	Page
2.2.2 Characteristics of Traditional Chinese Design.....	18
2.2.2.1 Handicraft.....	18
2.2.2.2 Symbolism.....	20
2.2.2.3 Naturalism	21
2.3 Design Elements and Their Application in Design	22
2.3.1 Visual Language and Design.....	23
2.3.2 Universality of Design Elements and Principles	25
2.3.3 Three Primary Design Elements.....	25
2.3.3.1 Form.....	27
2.3.3.2 Color.....	28
2.3.3.3 Material.....	30
3 METHODOLOGY	32
3.1 Justification for Methodology.....	32
3.1.1The Study of Cultural Artifacts	32
3.1.2 Overview of Research Methods.....	33
3.2 Research Procedures	34
3.2.1 Literature Review	34
3.2.2 Target Traditional Chinese Artifacts	35
3.2.3 Sampling Strategy.....	37

CHAPTER	Page
3.2.4 Pilot Study.....	37
3.2.5 Online Survey	37
3.2.6 Focus Group.....	38
4 DATA ANALYSIS	40
4.1 Introduction.....	40
4.2 Ethnographic Analysis.....	40
4.3 Quantitative Analysis for Online Survey.....	45
4.3.1 Selection of Artifacts and Design Elements.....	45
4.3.2 Defining Design Elements	58
4.4 Qualitative Analysis of Focus Group.....	63
4.4.1 Focus Group of Chinese Participants.....	63
4.4.2 Focus Group of Non-Chinese Participants.....	69
5 CONCLUSION.....	75
5.1 Qualitative Analysis of Focus Group.....	63
5.2 Design Criteria for Chinese	77
5.3 Design Criteria for Chinese	82
5.4 Limitation	86
5.5 Future Implication.....	87
REFERENCES.....	91

APPENDIX

A	TRADITIONAL CHINESE ARTIFACTS SELECTION	98
B	ONLINE SURVEY OF ENGLISH VERSION	105
C	ONLINE SURVEY OF CHINESE VERSION	113
D	TRANSCRIPTS OF FOCUS GROUP	121
E	CONSENT FORMS	141
F	IRB CERTIFICATE	144

LIST OF FIGURES

FIGURE	Page
2.0. Traditional Chinese dragon motif	21
2.1. Traditional Chinese abstract fish motif	22
4.0. Age group of Chinese participants.....	42
4.1. Age group of non-Chinese participants.....	43
4.2. Years have been lived in China (Chinese participants)	43
4.3. Have been to China or not (non-Chinese participants)	44
4.4. Have been enrolled or not in a design program for at least 12 months for Chinese participants.....	44
4.5. Have been enrolled or not in a design program for at least 12 months for non-Chinese participants.....	45
4.5. Have been enrolled or not in a design program for at least 12 months for non-Chinese participants.....	45
4.6. Knowledge about traditional Chinese design for Chinese participants.....	46
4.7. Knowledge about traditional Chinese design for Non-Chinese participants.....	46
4.9. Selected probability of artifacts and design elements for non-Chinese participants	48

FIGURE	Page
4.10. Top three artifacts selected by Chinese participants	49
4.11. Top three artifacts selected by non-Chinese participants.....	49
4.12. Bottom three artifacts selected by Chinese participants.....	50
4.13. Bottom three artifacts selected by non-Chinese participants	50
4.14. Bottom three artifacts selected by Chinese participants.....	52
4.15. Bottom three artifacts selected by non-Chinese participants	52
4.16. Multiple comparisons for means of selected probability of design elements (Chinese participants)	53
4.17. Test of mean differences of selected probability between design elements (non-Chinese participants).....	54
4.18. Profile plot for means of selected probability of design element (non-Chinese participants)	55
4.19. Multiple comparisons for means of selected probability of design elements (non-Chinese participants).....	56
4.20. Grouping artifacts by selected probability of form.....	57
4.21. Grouping artifacts by selected probability of material	58
4.22. Grouping artifacts by selected probability of color	59
4.23. Representative features of form of traditional Chinese design (Chinese participants).....	60

FIGURE	Page
4.24. Representative features of form of traditional Chinese design (non-Chinese participants).....	60
4.25. Representative materials of traditional Chinese design (Chinese participants).	61
4.26. Representative materials of traditional Chinese design (non-Chinese participants).	61
4.27. Representative colors for traditional Chinese design (Chinese participants).	62
4.28. Representative colors for traditional Chinese design (non-Chinese participants)..	62
4.29. Other representative features of traditional Chinese design (Chinese participants)..	63
4.30. Other representative features of traditional Chinese design (non-Chinese participants).....	64
5.1. Top three artifacts selected by Chinese participants.....	65
5.2. Bottom three artifacts selected by Chinese participants..	66
5.3. Top three artifacts selected by Non-Chinese participants.....	70
5.4. Bottom three artifacts selected by Non-Chinese participants..	73

Chapter 1

INTRODUCTION

1.1 Background and Justification

1.1.1 Design and Culture

Design has permeated society and interacted with people over time (Moalosi, Popovic & Hudson, 2010). Furthermore, design can express the social value, national spirit and the cultural essence of any particular system (Wu, 2001).

Because of different lifestyle and cultures, people have various requirements for usability of artifacts, which represent their attitude, perspective and cognition of life. Also, the visual elements incorporated in the artifacts, such as graphics, colors, form and textures represent particular cultural values (Huang & Deng, 2008). The frequency of use of these visual elements shows their popularity in a community, which can be representative of that unique culture.

Design is not only a mirror for expressing and reflecting culture, but also integrates culture and determines the development of our society. The production of artifacts as part of daily life can not only influence people's lives after but also influence their thinking and social values. Modernism is such an example. Its appearance totally changed people's aesthetics, life-style, and even cultural values by creating artifacts people use in daily life.

Design and art are part of how a culture develops. “Design is an agent of change and it is important for designers to know how they can either undermine or support the indigenous cultural systems of the society” (Popovic, 2002). Incorporating aesthetic values of a social group into design can improve the local identity of people and increase the cultural diversity of the society (Moalosi et al. 2010).

1.1.2 Chinese Design and Globalization

Since the early 1980s, the Chinese government has started to implement cultural communication policies in hopes of improving the knowledge exchange with other countries. This policy can be summarized as follows: “Going out, inviting in”. The former provides opportunities for Chinese people to study overseas, while the latter invites international experts to participate in Chinese projects (Xue, 2005). The case of a joint-venture company is a good example of this policy in action. It allows both foreign and domestic individuals to collaborate, practice and develop their skills on a specific project (Guo, 2010).

Because of the Open Door policy, China has proved its importance in the global market by sharing ideas, markets and cultures with other nations. While this act of globalization has brought prosperity to China, Chinese art and design started have experienced a dramatic decline (Gong, 2008).

“The introduction of the Western design shook Chinese designers

enormously” (Wang, 1996). Such Western ideological trends and styles have spread throughout China at an unprecedented pace, much like the impact of Modernism that emphasized standardization and uniformity. The increased cultural fusion with the West has had a direct impact on the aesthetic ideology and style of design. Examples of this fusion come from various aesthetics, from city layouts to movie posters. The unintended consequences of globalization have manifested themselves by the loss of unique Chinese heritage (Sun, 2010).

In China, traditional design is associated with peoples’ ethics and social values. It has a deep connection with the past and plays a momentous role in forming the identity of the Chinese (Sun, 2010). Traditional Chinese design reflects people’s lives, education, needs, wishes and even fears (Moalosi, Popovic & Hickling-Hudson, 2010). With globalization came design style that were standardized and homogenized and that challenged the relationship of how Chinese design represents its cultural identity.

1.1.3 Exploration of Traditional Chinese Design

Chinese and Western cultures can be very different and these differences can create nationwide cultural discussions when dealing with esthetic values. On one hand, some Chinese are in favor of integrating Western culture because this is an expected by-product of globalization; on the other, others advocate sticking with tradition (Guo, 2010). As Manzini

explained, "When society and individuals are increasingly realizing what it means to live in a limited and interconnected world, what is emerging is not a unified global society but an exasperated search for identity, both individual and collective. This search for identity also includes claiming the right to maintain different values." (Manzini, 2010).

Under the strong winds of globalization, the Chinese have still been able to defend their identity and highlight their cultural values and traditions. The Chinese have become protective of their heritage and eager to do research on its past (Shen, 2006). China's confidence and introspection started to increase during the booming economy of the early twenty-first century. The Chinese have discovered that despite making reference to Western culture, they need to keep their own unique, rich and deep culture. This has been reflected in design, as designers have stopped mimicking international styles. Instead, designers have explored deeper into traditional Chinese culture (Guo, 2010).

Developing Chinese design globally all the while retaining its own image has become a challenge. However, it can be seen as an opportunity for exploring the traditional Chinese design, which provides an emphasis on defining cultural characteristics (Gong, 2008). For designers, it is necessary to find a balance between traditional aesthetics into contemporary design and remaining true to Chinese culture (Sun, 2010).

As discussed above, culture and design are both interconnected and intertwined in traditional Chinese artifacts. In the context of contemporary design, the challenge is to find the representative visual information of traditional Chinese design that can be translated into today's design ideas (Moalosi, Popovic & Hudson, 2010).

1.2 Research Proposition

Research topic: Investigate traditional Chinese visual design elements with the goal of incorporating them in contemporary design

Finding representative visual information of traditional Chinese design can be the foundation of integrating traditional Chinese culture into contemporary design. The primary visual design elements being discussed are form, material and color. These elements have been used in traditional Chinese design in a manner that represents Chinese culture. The research is centered on gathering insight on how both Chinese and non-Chinese people recognize visual design elements that are commonly associated with traditional Chinese design.

The research aims to explore and identify the representative visual design elements of traditional Chinese design and propose an approach to their application to contemporary Chinese design in the face of globalization. Findings on the first topic will have defined features of traditional Chinese visual design elements. Once the identification complete, a determination will

be made as how these visual design elements could be applied in the future and what design principles need to be followed to express Chinese culture in design.

Conceptual Framework

The following specific conceptual framework summarizes the relationship between the concepts discussed above:

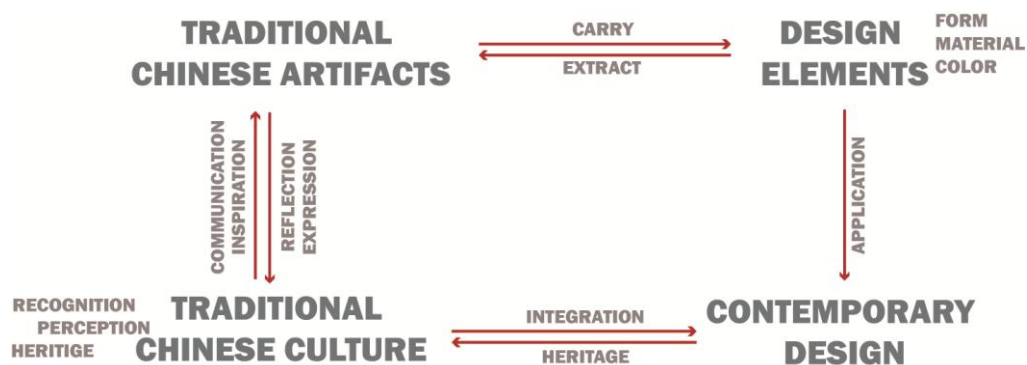


Figure 1.0. Conceptual Framework

1.3 Methodology

The methodology for this research included a literature review, data collection (online survey and focus group), and qualitative/ quantitative data analysis.

The purpose of the online survey and focus group was to define representative visual design elements of traditional Chinese design. Both Chinese and non-Chinese participants were recruited to provide unbiased insight in order to collect data from different perspectives.

The online survey had an image selection, multiple-choice questions,

and several simple short-answer questions. The results were used as a baseline for determining representative visual design elements of traditional Chinese design. Furthermore, the conclusion of the online survey facilitated the focus group discussion.

Two focus groups were conducted, one for Chinese participants and one for non-Chinese participants. The discussion centered on the artifacts selected from the online survey by participants. The main goal was to seek the reasons why these artifacts were most representative of traditional Chinese design. These groups were divided into two, one comprised of Chinese participants and the other with non-Chinese participants.

Qualitative and quantitative analyses were used to determine the findings. Among the various methods used, statistical analysis was used for the quantitative data from the online survey. Qualitative analysis was applied to analyze the data from the focus groups, which provided the various aspects of thinking and reflection of the participants.

1.4 Outline of the Report

Chapter Two builds the theoretical foundation for this thesis from the research of relevant literature around the relationship between culture and design, the essence of traditional Chinese design, and the application of three primary design elements. The methodology used to collect data is described in Chapter Three. Chapter Four synthesizes data and patterns from the online

survey and focus group. The results are presented visually in tables and charts for ease of review. Chapter Five summarizes the research findings from Chapter Four and presents a discussion regarding these findings. Chapter Five also examines implications for theory, practice and future research.

1.5 Delimitation of Scope

The research investigated the representative visual design elements of traditional Chinese design from the points of view of the Chinese and non-Chinese participants.

Traditional representative Chinese artifacts are those that were created before 1912. This marked the end of the Qing dynasty, which was the last feudal dynasty of China. The design of these artifacts was influenced by Chinese style and theory. As such, these can be seen as examples of authentic Chinese design that emerged and developed in China. Studying these artifacts helps us understand the cultural norms and values integrated into Chinese design.

To obtain an equitable view of Chinese design, the research separated the participants into a Chinese and non-Chinese group. The Chinese participants were all born in China and have lived in China for over 20 years. They have been immersed in Chinese culture and answered from a Chinese perspective. Non-Chinese participants were recruited throughout the United States. American citizens came from varied ethnic and culturally diverse

background. It was possible to obtain different opinions from people of different heritages. These data were considered as a representative sample for perspectives from non-Chinese individuals.

Chapter 2

LITERATURE REVIEW

2.1 Culture and Design

2.1.1 The Relationship between Culture and Design

2.1.1.1 Design Reflects Culture

Traditionally, the study of the links between culture and design has been regarded as a part of social anthropology. As such, culture normally include and reflect various social factors, such as religion, politics, rituals values, and language (Searle, 1995; Bourges-Waldegg & Scrivener, 1998). Therefore, culture can be defined by the shared thoughts, values and behaviors of a group of people (Choi, Lee, Kim & Jeon, 2005).

Cultural values influence the behavior of people within their respective group. These values are embodied in artifacts and reveal people's attitudes within society. In specific cultural circumstances, people's perceptions and customs can be different, which is, at times reflected in the artifacts that they use. Consequently, the evolution of artifacts can exhibit the evolution of a civilization. In a society, the artifacts produced and consumed become a cultural picture of people's lives (Moalosi, Popovic & Hickling-Hudson, 2008). Despite the many twists and turns that have occurred in the relationship between culture and design over the last century, design has always been

seen as a mirror of social change and an agent of culture improvement (Moalosi, 2010).

The evolution of artifacts does not only reflect but also determines the developments of culture and society. Culture shapes design and, in turn, is changed by it (Rose, 2004). For example, the emergence of the Internet over the last century has changed our lifestyle, interaction, and even cultural values.

Additionally, artifacts can incorporate other different design elements, such as visual graphics, colors, information and features (Huang & Deng, 2008). All of these elements exhibit cultural values, which have been integrated into artifacts that have become popular in a community because they provide the users with cultural identity.

2.1.1.2 Culture Inspires Design

Cultural values can be integrated into a design by applying representative signs and features of these same cultural values. On one hand, various cultures have a rich and varied set of materials that could provide designers with unlimited inspirations for new ideas (Gaver, 2001). On the other hand, designers need to pay attention to cultural values in order to understand their role in forming users' behaviors and attitudes. Otherwise, the design could fail if user values are not considered (Moalosi, Popovic & Hickling-Hudson, 2010).

Designers could benefit from understanding user values and behaviors in order to translate them into viable powerful visual designs, information, and design ideas. By doing so, a sense of respect for culture could be achieved (Moalosi, 2010). For a great deal of contemporary design, too much attention has been paid to the application of technology. In 2004, Kaplan shared an important reflection “Technology is not a good traveler unless it is culturally calibrated.” (Kaplan, 2004). Furthermore and as a basis for inspiration, designers must consider the aesthetic, anthropological and socio-culture factors of users. In terms of different cultural backgrounds, various users have their special needs for their lifestyle and customs. These different needs provide designers with a wide range of sizes, shapes, colors, materials and features to play with. If designers consider shared values with local empowerment to best satisfy different users, these choices and the arrangement of design elements could create successful results (Aula, 2003).

From yet another perspective, familiarity with the cultural values of target groups as well as the design elements of the cultural context of the artifact are two approaches that designers can use in order to allow the design to be more acceptable. It is important for designers to identify those design elements that reflect localized features and that make them to be signs of local identity. By then applying these signs to the design, their usability and popularity can be improved (Huang & Deng, 2008).

2.1.2 Globalization and Local Identity

Universality is part of mainstream value in our industrial era; in a post-industrial world, however, it becomes less meaningful (Krippendorff, 2006). Universality represents the loss of culture, traditions and ethnicity. In this context, locally cultural identity has become more and more important.

With design, identities never disappear completely. For example, representative features of a country of origin are often embedded in the design of the artifacts. In such cases, just a glimpse of some representative feature could confirm the cultural identity of the design for the users. However, globalization of markets and the prevalence of competition are increasing multicultural influences on national identities in an unbelievable speed (Zec, 2002). Unavoidably, globalization causes great similarity of perception and lifestyle. With greater global trade, there is an increase of uniformity in artifacts, which is accompanied by decrease in unique cultural identity. Apparently, if users are surrounded by the same products and get used to them, their lifestyle eventually becomes more similar (Zec, 2002). In the context of globalization for worldwide production and consumption, internationalization as well as intercultural and local issues can no longer be ignored (Marcus, 2002).

De Souza states that “In the field of design, many of the effects of a neo-liberal form of globalization should be strongly contested” (De Souza &

Dejean, 1999). Globalization causes homogenization of people's culture by standardizing artifacts.

Fortunately, when people realize the homogenizing under the globalization, they tend to develop a strong stance in defense of their regional culture. The increase in international contacts and exchanges alerts people the loss of customs, habits, religious values, and local values (Van, 2005).

More designers are supporting a trend that fights against globalization by taking a design approach that emphasizes the promotion of local identity while highlighting cultural values and traditions (Moalosi, Popovic & Hickling-Hudson, 2010). With the growth of global marketing, artifacts have spread across national boundaries. As a result, the same artifact can be had and be used by completely different groups of people. Designers know that they have to deal with users having various different cultural values. For example, the iPhone is used and accepted by people all around the world and from different backgrounds. But designers have to develop various applications or apps for these different groups of people. These apps reflect their cultural values despite the fact that the iPhone is a universal artifact. To not do so means that an artifact can become less popular and impracticable because the information it carries is different in different cultures (Huang & Deng, 2008).

In such cases, it is evident that design elements and features have a specific association with people's values and traditions (Daneshfar, 2011).

Many designers have come to realize that they have a responsibility to foster cultural diversity by integrating design features that are localized in a context that is more and more globalized.

Many international corporations, like Electrolux and Whirlpool, have started to designs in a way that is sensitive to the cultural diversity of their global users (Ono, 2002). For example, Whirlpool developed a new water heater that focused on the safety and environment of bathroom for Chinese users; Electrolux also created a new marketing strategy which emphasis family usability of their products when they started to explore the Chinese market. "It is posited that localization of products must be viewed as a counter-balancing force for the maintenance and durability of national cultures facing globalization as well as its potential capacity for holding, preserving and presenting cultural values to the respective product users." (Moalosi, Popovic & Hickling-Hudson, 2010). From this perspective, globalization becomes a compromise towards the standardization artifacts and services.

2.2 Traditional Chinese Design

2.2.1 Common Sense of Traditional Chinese Design

2.2.1.1 The Essence of Traditional Chinese Culture

China has experienced periods of gestation, expansion, conflict, decay and invasion; nevertheless it eventually developed into a global empire. By way of its history, much can be learned to understand the development of Chinese culture (Quigley, 1961). Over several thousand years, traditional Chinese culture has permeated all parts of the nation and has crystallized Chinese civilization. Consequently, how culture impacted design can, in part, be realized by exploring some of the core cultural issues of ancient China.

Ancient Chinese society has had varied and complex religious beliefs that have changed over time. From the Han dynasty (206BC-200AD) to the early twentieth century, there have been three main beliefs that have dominated life and thought of the Chinese people: Buddhism, Confucianism, and Daoism (Kerr, 1991).

Buddhism was a religion imported from India. Beginning with the Tang dynasty, it became the most popular religion and spread throughout the country. Buddhism has had an influence on traditional Chinese design. Mostly, the impacts can be found in temples and worship artifacts, which had not appeared frequently in daily life of the Chinese people (Bao, 2008).

Confucianism and Daoism are traditional Chinese ideas, both based on philosophical systems. Confucianism has dominated the most in people's life principles, etiquette and politics, whereas Daoism is the most influential in art, music, literature and design.

Confucianism derived from Confucius, a moral philosopher who lived between 551 and 479 BC. He devoted himself to thoughts of individual ethical and social responsibility. His philosophical concepts were based on the concepts of *ren* (仁) (humanity) and *yi* (义) (righteousness) and have evolved into a code of ethical behavior for the Chinese (Ridley, 1977). Even today, Confucianism still governs the Chinese in their daily lives, although it is not considered to be a religion.

As a system of thoughts and ideas, Daoism developed around 500 BC. The main philosophy emphasizes the greatness of the universe and the power behind it. Daoism believes in following cosmic law by harmonizing the inner spirit with nature. The only way to achieve this is to understand the 'Dao' or 'way' of the universe (Kerr, 1991).

Daoist ideology influences Chinese art, traditional design and the distinctive view of oriental art. Daoism can be thought of as possessing the quality of natural spontaneity. Laozi created Daoism and generated this definition, "the ways of men are conditioned by those of earth, the ways of earth, by those of heaven, the ways of heaven by those of Dao, and the ways of Dao by the *Ziran*". *Ziran* (自然) is a Chinese word that means nature (Chen, 1984). "Dao by the *Ziran*" reveals the essence of Dao; it shows a profound respect for nature. The concept of Daoism is founded on this philosophy and methodology. Dao is not beyond or opposite to nature in any way; to the

contrary it is conditioned by nature. Additionally, Tang Yijie said that “*Ziran*... is the natural being of the universe, the word and all things in the universe and the world” (Tang, 1983). “This reinforces the idea that everything in the world has a natural state and that one should strive to attain a state of complete spontaneity in order to become what nature intended.” (Li, 2010).

In Daoism, the translation of “element” is *Yuan* (元) and *Su* (素), which have been inherited and used until now. *Yuan* means the origin and *Su* is in term for silk without the dye. In a broader sense, *Yuan* and *Su* are characteristics of harmony (Wu, Xie, & Yang, 2008). For the ancient Chinese, elements are not only forms expressed by some symbols and patterns, but they have also been the roots of traditional design in China for several thousand years.

2.2.2 Characteristics of Traditional Chinese Design

“Tradition is something created in the past which has already been made permanent in many ways” (Wang, 2010). For about 5,000 years, traditional Chinese design has followed a unique philosophy by developing its creative concepts and visual modes. Compared to Western design theories that focus on basic forms or the scientific rules, traditional Chinese design concentrates more on the creation of philosophical images. The art and design in traditional Chinese theory aim to connect symbols and meanings through metaphors, symbolism and association (Wang & Wang, 2008)

Traditional Chinese design has unique characteristics that have been developed over several thousand years, such as handicraft, naturalism and symbolism. These characteristics given the design a kind of Chinese brand and can be considered as key points to understand traditional Chinese design.

2.2.2.1 Handicraft

The earliest craftsmen in China were found in Neolithic villages. They wove cloth and decorated their pottery with image of fish and animals, magical creatures and swirling geometric designs (Stalberg & Nesi, 1977).

In ancient China, there were two main types of craftsmen who designed and created artifacts. One type was the skilled artisan who worked for government and noblemen. The other was the talented folk craftsmen, who worked for themselves or their fellow villagers.

Many artisans worked for several years to create extravagant luxury artifacts for the kings and their noble relatives. These items included jade pendants, pottery, bronze vessels for solemn rituals, and utensils for burial. These craftsmen were extremely skilled and experienced. They worked in special factories to cast bronze, make pottery and carve jade. However, they were not just the laborers who produced the artifacts following a blueprint; they designed and executed these artifacts with expertise and precision (Stalberg & Nesi, 1977).

Because of the patronage of the rulers and noblemen, the

development of Chinese design was outstanding from the very beginning. Clearly, these craftsmen had created masterpieces, such as the finest lacquers, silks and pottery using rare and expensive materials. However, these masterpieces were the result, in part, of the wealth and resources to which these craftsmen had access. Most of the traditional Chinese design works from the palace would be difficult to copy.

The situation was different for the folk craftsmen. They created everyday artifacts for existence; furniture, utensils, ceramics, festival lanterns and clothes. These artifacts served two purposes: practical and decorative. Although folk craftsmen had limited materials, their designs were equally creative and special because of their life experience and skills (Stalberg & Nesi, 1977).

The forms, purpose, materials and techniques of the skilled artisans and folk craftsmen varied immensely. However, they did share a rich, artistic heritage of design elements and symbols, which we can extract from their work. For example, the design of dragons appeared on papercut, porcelain and even furniture regardless of whether they were created for the emperor or villagers.

2.2.2.2 Symbolism

In traditional Chinese design, a variety of artistic symbols have been inherited from previous generations. There is the dragon showed the Figure 2.0, for example. It emerged from the earliest Chinese art and crafts and has

been passed on through ages with a slightly altered form.



Figure 2.0. Traditional Chinese dragon motif

Motifs and symbols are used everywhere in Chinese design, regardless of whether these artifacts were used by emperors or villagers (Stalberg & Nesi, 1980). Anyone who is familiar with Chinese culture can usually discern the messages that the symbols and motifs carry.

Due to the omnipresent application of these symbols and motifs, they quickly became stylized. That is why so many similar patterns can be found from different traditional Chinese artifacts. Although there were some improvements, they still can be recognized as representative of traditional Chinese design. For example, in the Figure 2.1, the abstract fish that once appeared in the painted pottery have been reduced to a few geometric lines that have been repeated to form a pattern for design (Stalberg & Nesi, 1980).



Figure 2.1. Traditional Chinese abstract fish motif

China also has rich literature and historical heritage. As a result, artisans and designers could obtain a wealth of stories and symbols to use in their work. The symbolism became an important reason for the special flavor of Chinese design. Few of these motifs and symbols were used purely for decoration. They often represent deeper underlying messages or meanings (Stalberg & Nesi, 1980). Therefore, learning the history and hidden information behind these motifs and symbols can be an effective way to understand traditional Chinese design.

2.2.3.3 Naturalism

In traditional Chinese culture, the translation of “naturalism” is *ZiranZhuyi* (自然主义), which emphasizes the respect to nature and being engaged with the natural world. Under the influence of *ZiranZhuyi*, traditional

Chinese artists, craftsmen and designers used an approach that is “solitary and lonely, but in no way decadent; quiet and peaceful, but not at all dull” (Wang, 2010). The approach encouraged people to unite with nature, while finding enlightening spiritual liberation. Their design ideas were often generated from nature, both fantastical and complex. These artists did not try to present the tangible aspects of nature; instead, they explored the intangible aspects of emotional and self-expression felt within nature (Li, 2010). In this way, the artifacts they created corresponded with the physical world in an obscure but deeper way.

There are three ways in which naturalism in traditional Chinese design can be evaluated. First, the design was influenced by regional nature and geological conditions. For example, the Zisha (紫砂) teapot is famous due to the special clay “Zisha” in Yixing (宜兴), which is a small town in the southern part of China. As a unique material, the clay perfume (the special smell of the clay) and elegant appearance of Zisha allow the teapot to be recognized as a Chinese design. Second, the geological conditions and natural elements also form the social structure and cultural customs that work at a deeper level to impact the design. Lastly, the most fundamental influence on design comes from inherent traditions. If the preceding designers and artists respect nature, their descendants will prefer naturalism over other design styles (Wang, 2010).

Traditionally Chinese architecture, gardens, cities and products were

connected to nature in such a way that the deep cultural appreciation was evident. The designers understood the qualities of materials and showed mastery in using these materials. Sometimes, the artifacts made from natural materials became objects of infatuation. For example, there was a rare piece of jade known as He shi bi (和氏璧) that was owned by an emperor in the Qin dynasty (秦朝) . The emperor offered 15 cities to the state of Zhao (赵) in exchange for the jade (Yu, 2010). This story shows that Chinese culture had a high regard for natural materials.

Although the art and design style differs from one dynasty to the next, the deep-seated and emotional engagement with natural materials has never changed. Pursuing natural forms, poetic ambiances and symbols of nature are always pronounced features of traditional Chinese art and design (Lin, 2004).

2.3 Design Elements and their Application in Design

Design elements and design principles describe some fundamental ideas about the visual components that comprise the visual language of design. It is with design elements and design principles that designers create a visual statement. Different experts, many from art and design, have contributed to what constitutes a kind of catalog for the visual language and have done so by way of specific design elements and design principles. One such catalog is taken from *Designing: A Journey Through Time* (Giard, 2009). In the book,

Giard provides both studies and comprehensive explanations about the visual language, the design elements and design principles.

2.3.1 Visual Language and Design

“The true mystery of the world is the visible, not the invisible.” Oscar Wilde.

Visual language is a tool of design that refers to the use of visual elements and principles in order to communicate with people. In some ways it is analogous to the written language and has its own special vocabulary and grammar that can be called elements and principles of design. Similar to words and grammar that are found in a written article or used in the spoken language, the elements and design principles are used by designers to compose effective and understandable visual messages (Giard, 2009).

We perceive the world by “reading” the visual language that exists in our world. The visual language allows us to distinguish different things that have various visual features. Individual visual elements like line, shape, form, color and texture are combined together to create a visual message that allows us to perceive, recognize, and identify everyday things (Giard, 2009).

These design elements form the content of a design composition and exist on the surface so that they could be observed and perceived. They interact with each other by way of the design principles. The design principles are the organizational rules that function like grammar in the written and

spoken language. They combine and arrange the design elements in such a way that they create a visual message (Evens & Tomas, 2008). For example, balance, one of the design principles, has been used in distributing design elements. As an important aspect of balance, symmetry organizes design elements in balance. Like most chairs, from the top view, the left side is identical to the right side (Giard, 2009). The arrangement delivers the message of calm, steady and reliable.

In other words, the visual language is a combination of design elements that are organized using design principles in order to communicate a message to people.

2.3.2 Universality of Design Elements and Principles

Many people are fascinated by design elements and design principles when they realize their presence in nature and human-made artifacts.

Observing more closely the visual elements found in nature and in various artifacts, we find striking similarities between the two. From such observation, research and coding, there are some general visual elements and principles that are present in both humans and nature (Oei & Kegel, 2002). From the scenic views of landscapes to the close-ups of everyday objects, all of these design elements, such as form, material and color, display some constant order and elementary figures. If, for a moment, we ignore their cultural origins, they actually appear to us as basic ingredients of a universal visual language.

Basic design elements and principles can be found throughout the world. Their application is common among all cultures and for all ages. Due to different designers who come from diverse cultures and conditions, these universal visual elements are rediscovered and reshaped to various new patterns. The design elements and design principles are timeless and generally constant, but they are presented in different ways. From this perspective, the design could be seen as the recreation of existing elements by using fixed principles (Oei & Kegel, 2002).

2.3.3 Three Primary Design Elements

In this study, three design elements will be discussed. They are form, material and color. In part, these three are the foundation of organization or composition in design. Moreover, form, material and color can embody other elements in some level. The analysis of their features in traditional Chinese design will reveal the application of other elements.

The form of an artifact may be the first important aspect of the overall design. Either explicit or implied, form contains various lines such as an outline or contour (Giard, 2009). Form is the result of lines that have been integrated and designed. Moreover, form implies space that both occupies and defines artifacts. It can be considered as either positive or negative. The artifacts constitute the positive space, while the background is the negative space

(Jirousek, 1995). In this context, the analysis of form must include the space that surrounds the artifact.

As the most powerful design element related to people's emotion and cultural background, color has tremendous expressive qualities. Based on extensive studies in market research, people have the greatest emotional response to color (Jirousek, 1995). Although some responses are fairly universal, most of them are culturally biased. Various cultural traditions endow different colors with powerful meanings (Jirousek, 1995). For example, white is used in western countries as the color of a bride's dress whereas red is worn by brides in Asian countries. In the context of this study and because color relates to culture so closely, it must be one of the elements to be discussed and analyzed.

Technically speaking, material is not design element, but it is a foundational component for most everyday thing. All artifacts used in the research were composed of one or several materials. Therefore, it is impossible to discuss these artifacts without considering material. Furthermore, our world is often described as a material world; everything we see and touch is based on substances that are extracted from raw materials of one kind or another. As a human activity, design is our ability to make things out of materials not only for function and meaning, but also to create associations of abstract ideas (Ashby & Kara 2009).

Many designers make use of materials as a dominant element, especially for three-dimensional designs. For example, designers can manipulate materials by changing the surface texture to express the feeling they want people to experience. Sometimes, knowing how to apply material differently without changing its color and form can increase interest in a composition.

2.3.3.1 Form

Webster's dictionary defines form as "the shape or structure of an object".

Designers can manipulate forms in innumerable ways in order create an artifact. Even within a narrow definition, forms can provide countless possibilities. Giard provides an example here: all feet of people are similar; they all have ankles, heels, arches, and toes. But even with this anatomical constraint, shoes present various choices by changing the design of their forms. Moreover, by ways of their forms, the purpose of shoes can be identified, such as high-heels, pumps and flip-flops (Giard, 2009).

After determining the functional needs of an artifact, designers take the responsibility of creating a form that could combine the technology, marketing, human factor, price and materials. "This process is typically referred to as the 'art' or perhaps the 'compromise' of design" (Campbell, 2010).

Consumers look at visual elements in a way that is usually different from designers (Hsn, 2000). When creating forms, therefore, it is often necessary to conduct studies on the human response to forms. In the case of designers, they need to understand design principles to a greater degree and include such factors as visual metaphors, symbolisms and manipulation of elements. To do so will help them control their design in an appropriate way with a more balanced approach (Campbell, 2010).

2.3.3.2 Color

In chemistry, colors are pigments that are extracted from plants or composed from different chemical ingredients. In physics, colors are what we perceive in response to the different qualities in reflected light. When designers consider a color, it almost always refers to different properties such as hue, saturation, value, primary color, secondary color, warm, and cool (Giard, 2009).

Despite being a complicated language that relates to theory, technology and the practice of design, the use of color in design often only focuses on one aspect of its property. But color can also refer to more meaning, like symbol, culture and psychology (Evens & Thomas 2008).

Colors can intensify and embellish shape, line, texture and form in a composition. Even with other design elements set in fixed pattern, colors can create variety to distinguish one thing from another (Evens & Thomas 2008).

Also, colors have the ability to provide people with a sensation of expansion or contraction. For example, a light color expands while a dark one contracts (Giard, 2009). By appropriately applying a combination of colors, the design can be more balanced, harmonious and uniform.

Colors can also signify. The color “red” when used for traffic and signal lights means “stop” or “emergency” to most people. Color can have measureable psychological impact. White coats worn by physicians can sometimes affect patients, a phenomenon colloquially called “the white-coat syndrome” (Giard, 2009).

When selecting colors in design, designers need to consider both communication and composition. They must understand how colors are perceived, the color system, color theory, and even the psychological aspects of color. With more understanding of color, designers could have more options for the application of colors (Evens & Thomas 2008).

2.3.3.3 Material

Similar to form, materials play a dominant role in design. The development of materials science and manufacturing technologies can stimulate new forms and function in design (Arabe, 2004). Moreover, materials exert a profound influence on the form of the artifacts. They constrain design and cause designers to create forms that could be seen as structural art. As a result, forms must be compatible with the materials from which they are made

(Ashby & Kara 2009).

Materials also contribute to color, texture and even the emotional association of the artifacts (Ashby & Kara 2009). At times, materials are the texture of the artifact. Moreover, a designer must think about the natural property of the materials when applying colors onto a certain artifact. Most importantly, the intangible values of materials can elicit emotions or deeper meanings. As such, the same materials may represent various meaning under different conditions (Arabe, 2004).

When it comes to materials, people perceive them differently because they associate them with certain memories and past experiences. Materials express variously particular meanings for different people because the value and the usage of a certain material differ from culture to culture. For example, wood is a common material used to build houses in Scandinavia; in Mediterranean countries, however, wood is perceived as a luxurious and valuable material (Ljungberg & Edward, 2003).

Therefore, materials can be considered as a design element that relates to a cultural experience (Karana & Hekkert, 2010). In other words, certain materials combined with particular artifacts can bring out the expression of people's cultural values.

Chapter 3

METHODOLOGY

3.1 Justification for the Methodology

3.1.1 The Study of Cultural Artifacts

Exploring traditional Chinese visual design elements and how people perceive them are the main points of this research. A study of cultural artifacts can assist in learning people's opinions and perceptions about these visual design elements, which are present in certain artifacts.

Cultural artifact is a term developed and used in the social sciences, particularly in anthropology and sociology and refers to anything produced by humans that can reveal information about the culture of its creator and users.

The proposed study of cultural artifacts aims to explore people's perceptions of artifacts that are culturally relevant to a sociocultural group. Every social group has its own customs, behaviors, traditions, thoughts and practices in daily life. The proposed study of cultural artifacts uses specific artifacts that were created by members of a specific group and that represent the group's cultural and social values. The artifacts can be used to discover people's perceptions of the culture and explore the hidden information buried in these artifacts (Kumar, 2012). For the purpose of this study, the research is to discover the visual design elements that make certain artifacts appear to be Chinese in the eyes of both Chinese and non-Chinese participants.

The methodology for the proposed study is composed of three methods: 1) a literature review; 2) an online survey; and 3) a focus group.

3.1.2 Overview of Research Methods

The purpose of the literature review is to review the significant points of existing knowledge in order to be up to date with the current research that has already been published. As is most often the case, the literature review provides an academic basis for the research. Major resources included design and culture, traditional Chinese design, and design elements.

As a research method, the online survey is part of a non-experimental fixed design that is used for understanding people's perspectives on a particular topic (Robson, 2011). Because the purpose of the proposed study is to seek opinions of the average person, a survey – especially a web-based or online survey – becomes a credible method to collect large amounts of data in a limited time and by way of a standard design.

A focus group is a group interview on a specific topic with an open-ended discussion (Robson, 2011). The purpose of conducting a focus group in this study is as a secondary research tool in order to discuss the results emerging from the online survey and to explore some general and shared ideas on traditional Chinese design elements. Focus groups can allow more flexibility and creativity for the participants, as well as permitting them to exchange their opinions to form a representative result.

3.2 Research Procedures

3.2.1 Literature Review

Discussions on the relationship between design and culture proved to be significant in the study. Exploring traditional Chinese design built a platform on which to understand its essence, background, history and development. This was especially the case with design elements, which are fundamentals to design. Although traditional Chinese design has its own particular design elements and principles, they still generally fall under the umbrella of universal design elements.

Insufficiency in the existing research was found during the review and was described in the previous chapter. Consequently this research will in part fill the gap and explore more possibilities. The literature review constructed the foundation of the research and supports the theoretical research questions and the research design. Moreover, it provides the ground on which the final conclusions are based upon.

3.2.2 Target Traditional Chinese Artifacts

One of the aims of the study is to explore traditional Chinese visual design elements. Particular traditional artifacts need to be selected with care as objects of the study because they are vehicles for the visual design elements. Artifacts were selected from Rose Kerr's book *Chinese Art and Design*. Kerr interpreted and categorized the traditional Chinese artifacts into

six areas based on their patterns of use. For the purpose of this study, artifacts from five of the six areas identified by Kerr were selected. These are: burial, worship and ceremony, daily living, eating and drinking, and ruling. For an analysis of the design of each artifact, please see appendix A.

Burial: Around the world and throughout history, people have been fascinated by burial objects and have eagerly collected them as treasures. Chinese burial objects, during different periods, were made in a wide range of materials and styles. Most of them have fine craftsmanship (Kerr, 1991). A wealth of history information be learned from these artifacts; they also reveal the culture and features of traditional Chinese design.

Worship and ceremony: China has varied and complex religious beliefs, but there is a main idea in different religions – the continuation of life through the family line. Every generation in China inherits this cultural spirit (Kerr, 1991). As a result, worship and ceremony in China have been so important that people put a great deal of effort into them. Certain ceremonies have their own artifacts, which have been specially designed and which reflect the social values and cultural sprit. They were elaborately designed and handmade using elegant materials and special colors.

Living: Artifacts for daily use provide a picture of ancient lifestyles. Because of their usage, most of them were designed to be functional and simple (Kerr, 1991). As a result, users had more interaction with these artifacts.

These artifacts can also be inherited.

Eating and drinking: Chinese food culture is not just reflected in its variation and taste, but also can be seen in the detailed and elegant design of the artifacts for eating and drinking. Different dynasties had their particular design styles for these artifacts, which reflected the aesthetics and life styles of the people. Due to different status of people and different situation for eating and drinking, however, there were various artifacts for use within each dynasty. The diversity of the design for eating and drinking reveals how important they are for Chinese people, and offers designers and researchers a broad platform for studying traditional Chinese design.

Ruling: For centuries, the rulers of China recruited large numbers of designers and craftsmen to produce special fine artifacts that were used to enhance their prestige (Kerr, 1991). Because these artifacts exemplified the highest level of traditional Chinese design and crafts, they reflected the aesthetic pursuits of and cultural respect for the Chinese. The visual design elements used in these artifacts, like expensive materials, elegant colors and complex forms, were always seen as models to be mimicked by folk designers and artists (Kerr, 1991).

3.2.3 Sampling Strategy

Two separated surveys were used, one for Chinese participants and the other for non-Chinese participants. The survey was published on the

Internet or sent to the potential participants via email. Because the study was focused on the opinions of the average person, participation was open to anybody who chose to complete the survey.

For the focus group, two groups of participants were recruited: Chinese and non-Chinese. Each group had at least one or two designers as participants; the other participants were not designers. The composition of participants for the study was selected because the diversity can bring a richer breadth of ideas.

3.2.4 Pilot Study

A pilot study was designed to test the online survey, especially if the artifacts and questions were understandable to the participants. A test version of the online survey was sent to several people in China and in the United States. After taking the survey, participants were asked to make comments on the survey. Based on their comments, the survey was adjusted and edited to be less confusing.

3.2.5 Online Survey

The online survey had three main parts: 1) background of the participants; 2) image selection and identification of visual design elements; and 3) multiple-choice and simple short-answer questions.

Part one sought general information about the participants, including age, design experience, and their knowledge about traditional Chinese design.

Part two included the image selection and the identification of design elements. The former asked participants to review images of 20 Chinese artifacts and to select the 10 that they perceived as most representative of traditional Chinese design. For each of the 20 artifacts they were then asked to identify which visual design element seemed to be most representative of traditional Chinese design.

Part three consisted of four simple short-answer questions and one multiple-choice question that asked participants to identify the general representative visual design elements without considering the specific artifacts highlighted in part two. The open-ended questions aimed to explore the subjective opinions of participants.

The online survey was sent to students and faculty at Arizona State University and some Chinese universities as well as several Chinese companies. It was also published on certain websites including Facebook, Twitter, Renren and Weibo. Participation in the surveys was entirely voluntary.

3.2.6 Focus Group

Focus groups were conducted after the online survey. Groups of people were asked about their perception, opinions, beliefs and attitudes about the artifacts that were tested in the online survey. By way of group discussion, reasons were sought for why people did or did not perceive specific artifacts as representative of traditional Chinese design. Qualitative data from the focus

group permitted an exploration of traditional Chinese design that is beyond what was possible from the online survey.

Two groups of people were recruited: one was composed of Chinese participants; the other had non-Chinese participants. Each group had five people. The researcher guided the group in sessions lasting around 40 minutes each.

Chapter 4

DATA ANALYSIS

4.1 Introduction

Two research methods were conducted to collect data: an online survey and two focus groups. The online survey had 170 Chinese participants and 90 non-Chinese participants. The focus groups had five Chinese participants in one group and five non-Chinese participants in another.

The data analysis had three main parts: 1) ethnographic analysis; 2) quantitative analysis for the data from the online survey and 3) qualitative analysis for the data from the focus group.

The ethnographic analysis focused on the general information about participants, such as, age, design experience and knowledge about traditional Chinese design. The aim of the quantitative analysis was to identify the significant visual design elements of traditional Chinese design. Standard statistic methods and SPSS program were applied to process the numerical data. The qualitative analysis was conducted after the online survey to seek for the reasons why people did or did not perceive specific artifacts as representative of traditional Chinese design. The analysis generalized the answers and discussion of participants into several key concepts to explain their opinions.

4.2 Ethnographic Analysis

In the online survey, four questions were used to collect the general information about the participants. They were: 1) age; 2) years of living in China for Chinese participants (have been to China or not for non-Chinese participants); 3) design experience; and 4) knowledge of traditional Chinese design.

Section A: Age group:

Based on the information collected, the age of the participants were from 18 years old to 34 years old, for both Chinese and non-Chinese participants.

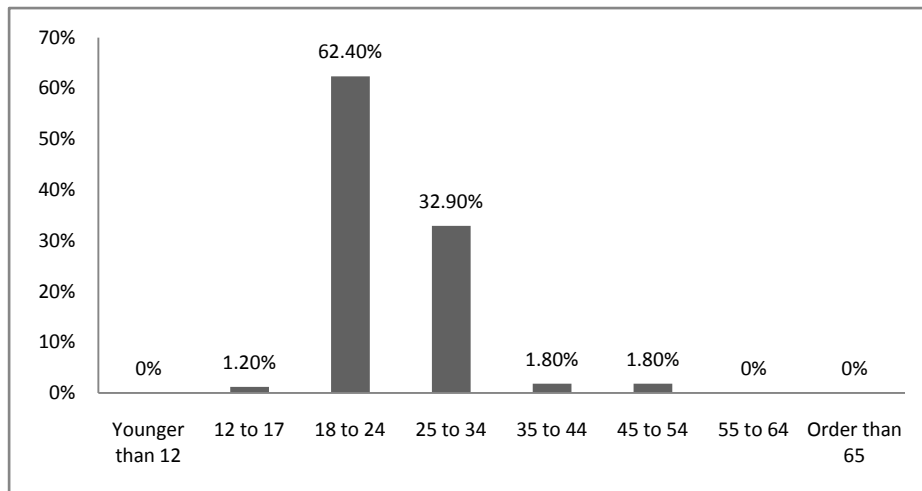


Figure 4.0. Age group of Chinese participants

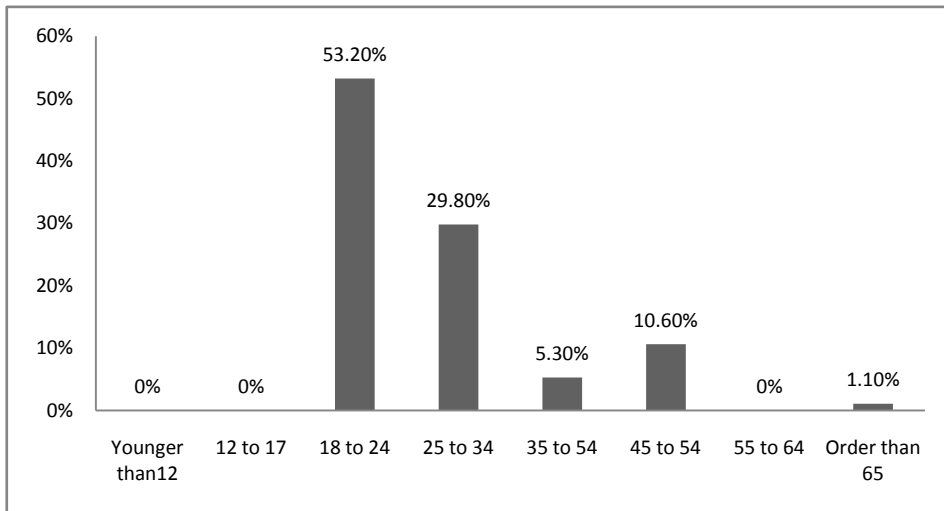


Figure 4.1. Age group of non-Chinese participants

Section B: Years of having lived in China or having been to China

before

As can be seen in Figure 4.2, over 87% Chinese participants have been lived in China over 20 years. This figure reveals that most participants are most likely familiar with Chinese life style and that they have been involved in the Chinese culture for some time.

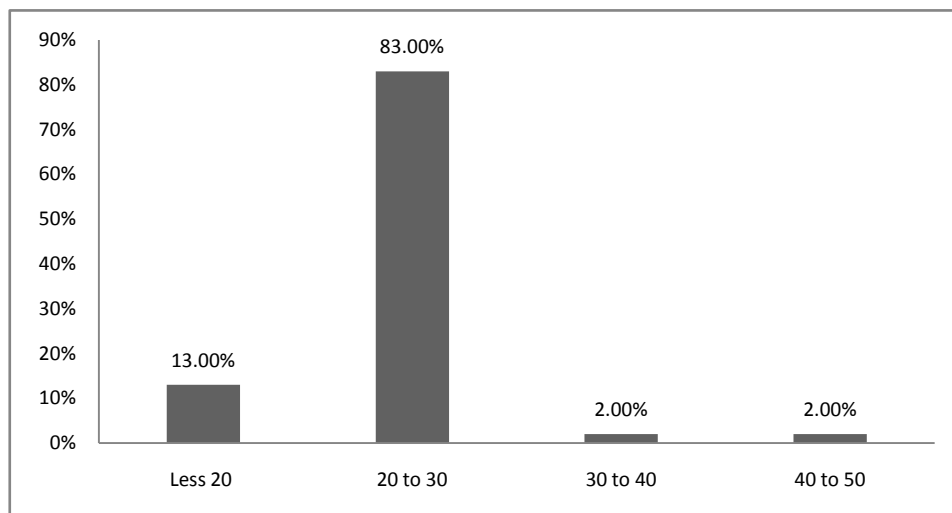


Figure 4.2. Years have been lived in China (Chinese participants)

As can be seen in Figure 4.3, most of the non-Chinese participants have not been to China before. It is therefore fair to assume that most of them were not familiar with Chinese life style and culture.

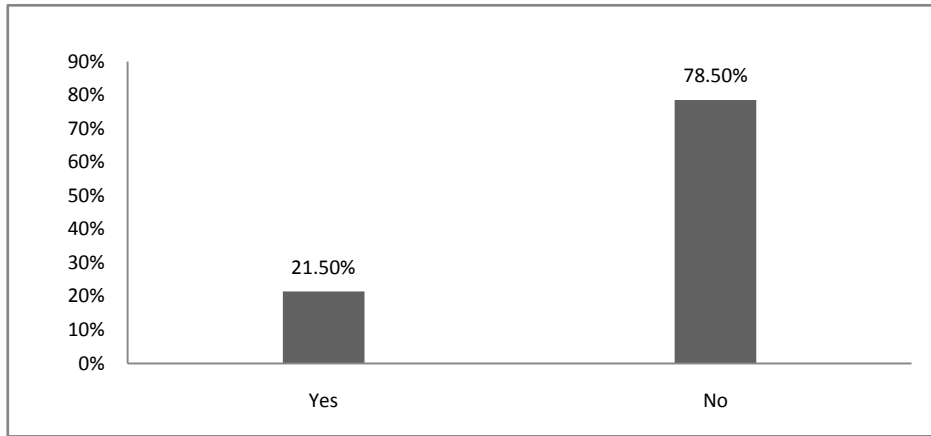


Figure 4.3. Have been to China or not (non-Chinese participants)

Section C: Have been enrolled in a design program at least 12 months

It was important to have the representation of non-designers in the study. With Chinese participants, 85.8% were non-designers; with non-Chinese, the number was 68.1%.

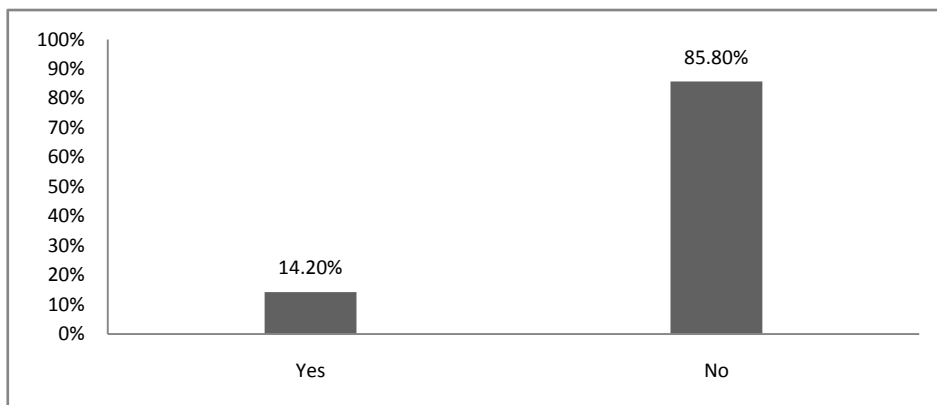


Figure 4.4. Have been enrolled or not in a design program for at least 12 months for Chinese participants

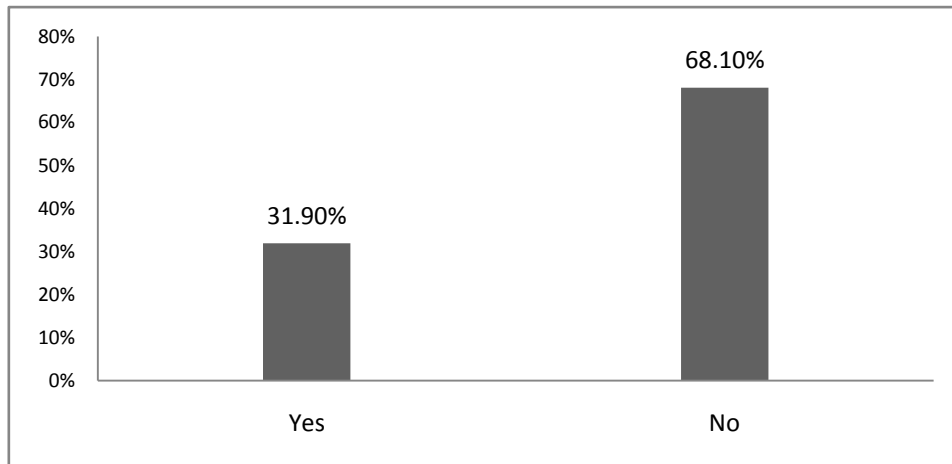


Figure 4.5. Have been enrolled or not in a design program for at least 12 months for non-Chinese participants

Section D: The knowledge about traditional Chinese design

The question was designed for participants in order to determine prior knowledge about traditional Chinese design. A five- number Likert scale was used, one representing nothing and five representing a great deal. As can be seen in Figure 4.6 and Figure 4.7, most of the participants, 96.9% Chinese and 90.4% non-Chinese, had prior knowledge about traditional Chinese design at a level of between one and three. These scores indicate the participants are not experts of traditional Chinese design and most likely represent the views of ordinary people.

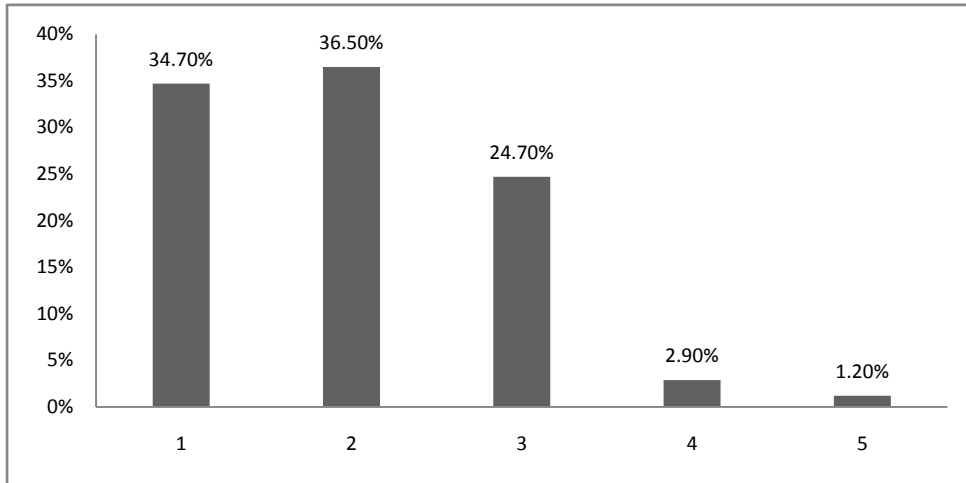


Figure 4.6. Knowledge about traditional Chinese design for Chinese participants

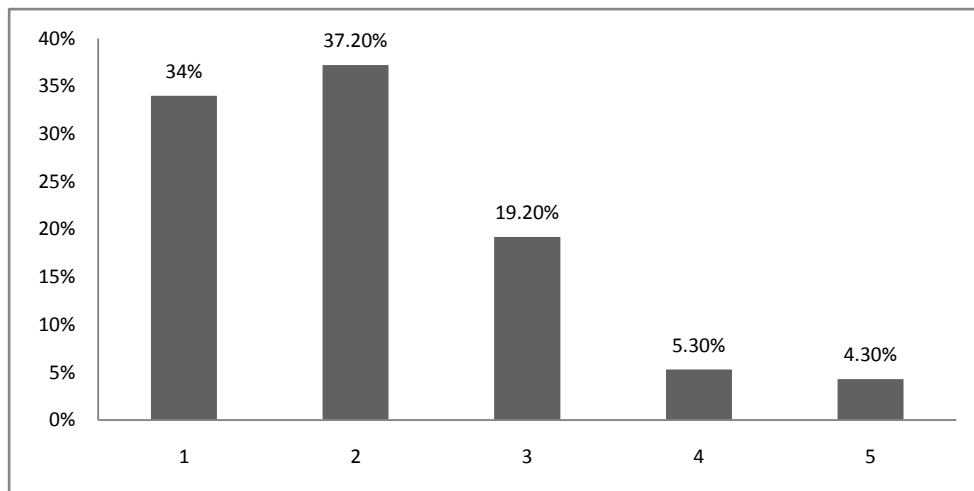


Figure 4.7. Knowledge about traditional Chinese design for non-Chinese participants

4.3 Quantitative Analysis for Online Survey

4.3.1 Selection of Artifacts and Design Elements

Section A: Selected probability for all artifacts and design elements

In the online survey, the participants were asked to select 10 out of 20 artifacts as the ones being the most representative of traditional Chinese

design. After doing so, they were asked to identify one of three visual design elements to be representative of traditional Chinese culture for each artifact. Figure 4.8 (Chinese participants) and Figure 4.9 (non-Chinese participants) show the selected probabilities that are the total number of selected as a percentage for each artifact and for each design element.

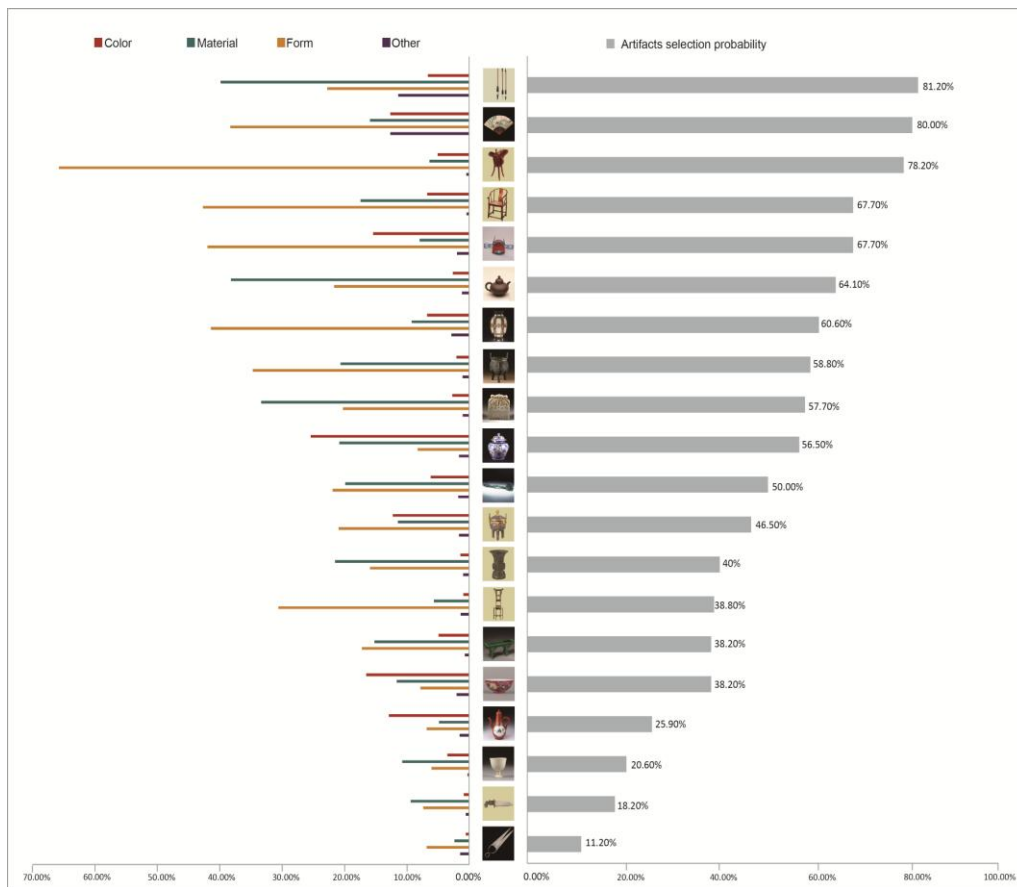


Figure 4.8. Selected probability of artifacts and design elements for Chinese participants

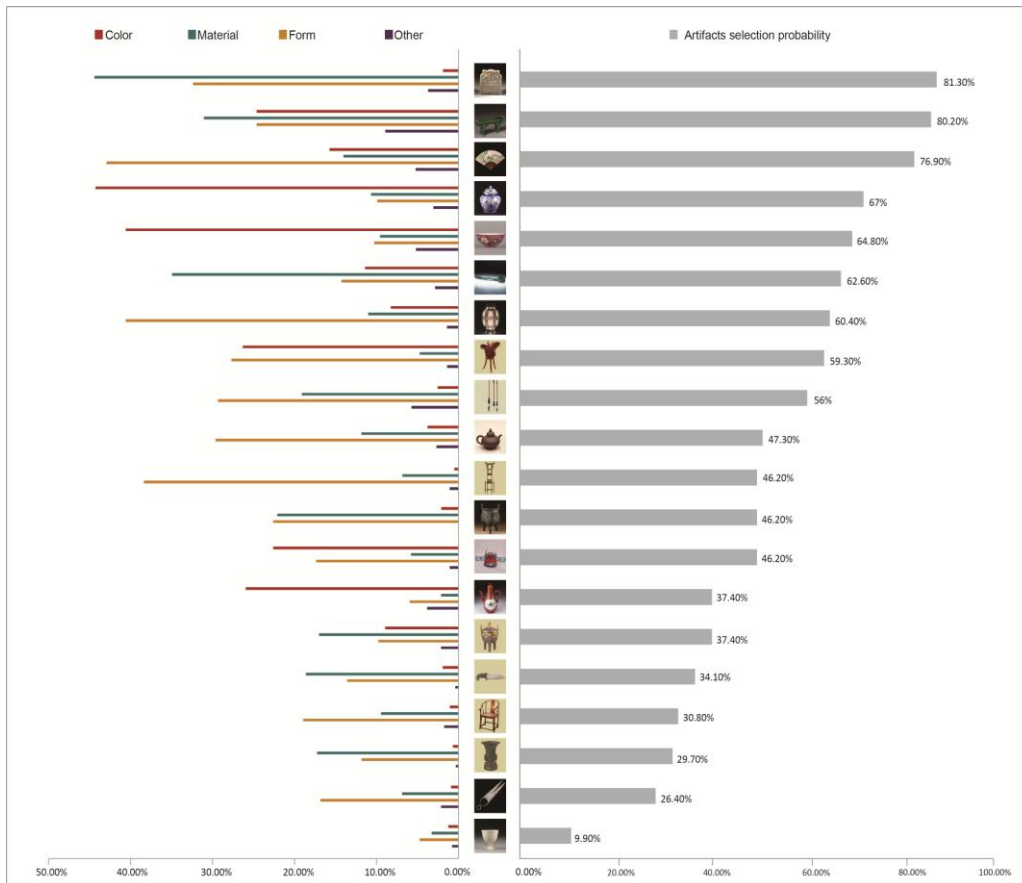


Figure 4.9. Selected probability of artifacts and design elements for non-Chinese participants

Section B: Top three and bottom three artifacts analysis

Top three selected artifacts

The artifacts that appear in Figure 4.10 and Figure 4.11 below are the three that were most representative of traditional Chinese design by Chinese and non-Chinese participants. The column titled “selected probability” shows the total number selected as a percentage.

Color, material, form and other, as contributing design elements, are also shown. The number, as percentages, provides an indication of extent to

which each design element contributed to a perception of traditional Chinese design for each of the three artifacts.

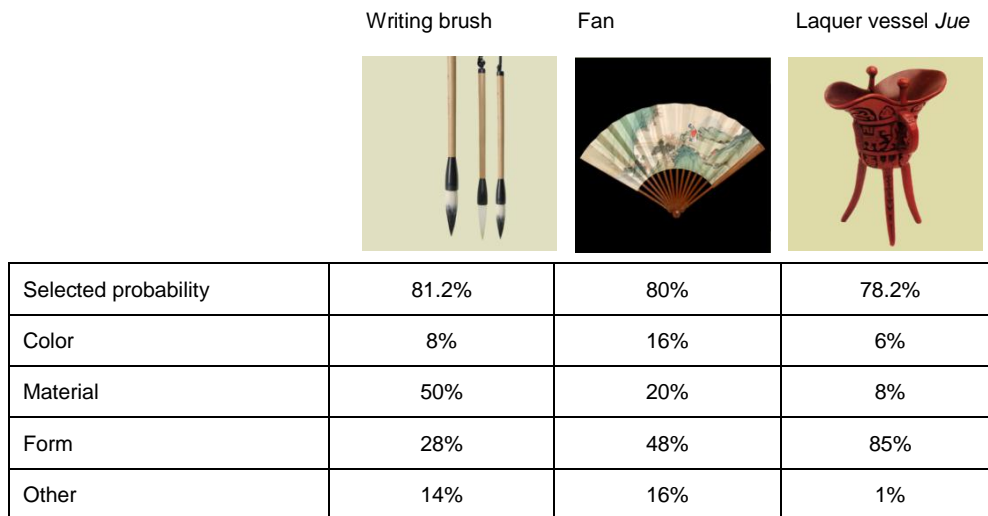


Figure 4.10. Top three artifacts selected by Chinese participants

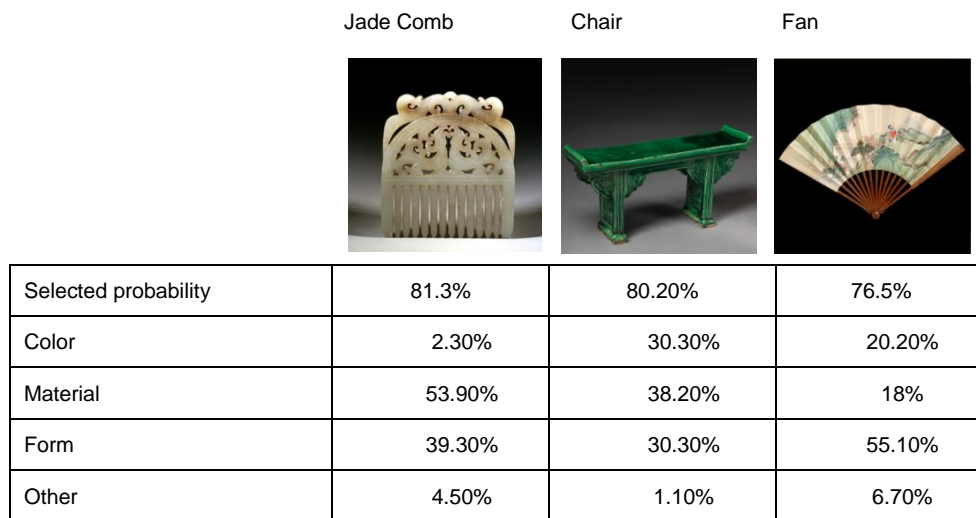


Figure 4.11. Top three artifacts selected by non-Chinese participants

Bottom three selected artifacts

The artifacts that appear in Figure 4.12 and Figure 4.13 below are the three that have been selected by Chinese and non-Chinese participants as the least representative of traditional Chinese design.

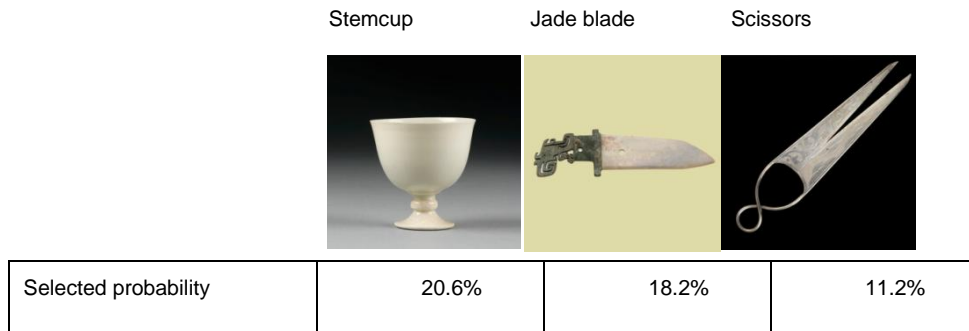


Figure 4.12. Bottom three artifacts selected by Chinese participants



Figure 4.13. Bottom three artifacts selected by non-Chinese participants

Section C: Statistic analysis for design elements

This section analyzes the contribution of the three design elements in their role in allowing the participants to perceive the artifacts as traditional Chinese design. The analyses were based on the selected probability, which showed total number selected as a percentage of design elements for each artifact.

The data were analyzed using standard statistic methods. For each artifact, the selected probability of the various design elements was multiplied by the selected probability of corresponding artifacts. The process allowed the design elements to be compared using the same standard. Furthermore, it

combined the artifacts with the design elements and considered the significant design elements that contribute to the perception of traditional Chinese design.

A one-way ANOVA model, which is a statistical method used to analyze of variance, was conducted. In the survey, the question asked participants to select one visual design element as the most representattive of traditional Chinese design for all the 20 artifacts. The one-way ANOVA aims to find out if there is a mean difference in the selected probablity in these three design elements. If there is not, it demonstrates that color, material and form share the same importance in representing traditonal Chinese design. If there is a mean difference, the multiple comparison procedure will indicate which design element has a more important effect on perception of traditional Chinese design.

SPSS is a program used to conduct statistical calculation and analysis. From Figure 4.14 to Figure 4.19 the number represents the design elements being analyzed, such as:

1: color; 2: material; 3: form; and 4: other.

Section C-1: Statistic analysis for the data from Chinese

Participants

Tests of Between-Subjects Effects

Dependent Variable: Selected Probability

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	5567.231 ^a	3	1855.744	17.044	.000	.402
Intercept	12499.000	1	12499.000	114.799	.000	.602
DesignElements	5567.231	3	1855.744	17.044	.000	.402
Error	8274.667	76	108.877			
Total	26340.898	80				
Corrected Total	13841.898	79				

Figure 4.14. Test of mean differences of selected probability between design elements (Chinese participants)

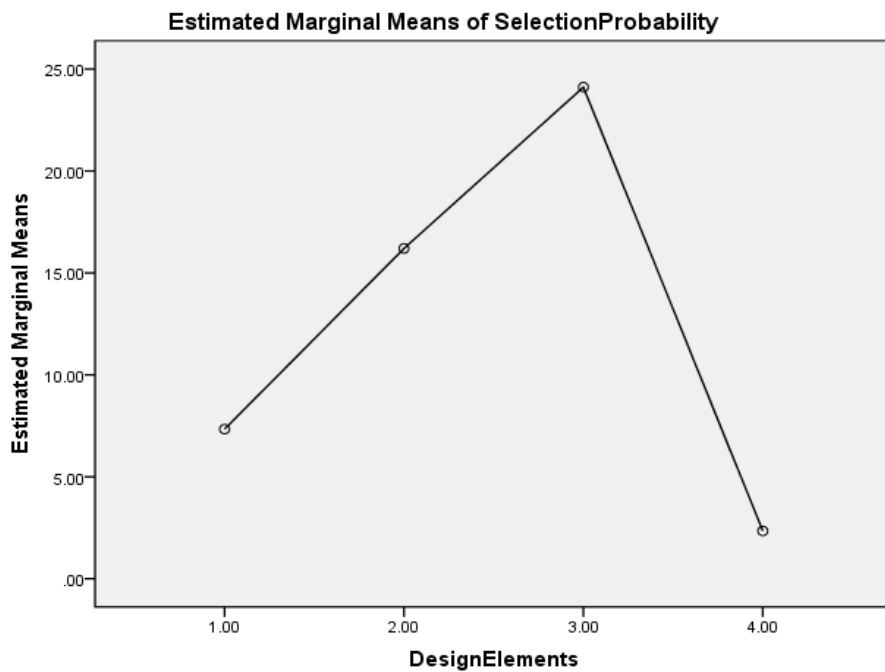


Figure 4.15. Profile plot for means of selected probability of design elements (Chinese participants)

From the result of the test between-subjects effects ($F=17.044$, $df=3,76$, $p=.000$) we can see that the one-way ANOVA is statistically significant. Furthermore, the mean square is 1855.744 and the effect size is 0.402, suggesting that approximately 40% of the variance of number of selection is due to different design elements. The means and profile plot also suggests that there was a corresponding different selected probability for different design elements.

Multiple Comparisons

Dependent Variable: SelectionProbability

Tukey HSD

I) DesignElements	(J) DesignElements	Mean Difference (I-J)	Std. Error	Sig.
1.00	2.00	-8.8640*	3.29965	.043
	3.00	-16.7765*	3.29965	.000
	4.00	4.9925	3.29965	.435
2.00	1.00	8.8640*	3.29965	.043
	3.00	-7.9125	3.29965	.086
	4.00	13.8565*	3.29965	.000
3.00	1.00	16.7765*	3.29965	.000
	2.00	7.9125	3.29965	.086
	4.00	21.7690*	3.29965	.000
4.00	1.00	-4.9925	3.29965	.435
	2.00	-13.8565*	3.29965	.000
	3.00	-21.7690*	3.29965	.000

Based on observed means.

The error term is Mean Square(Error) = 108.877.

*. The mean difference is significant at the .05 level.

Figure 4.16. Multiple comparisons for means of selected probability of design elements (Chinese participants)

Post hoc analyses were conducted to give the statistically significant omnibus ANOVA *F* test. Specifically, Tukey HSD tests were conducted on all possible pairwise contrasts. The following pairs of groups were found to be significantly different ($p < .05$): color and material, color and form, material and other, form with other.

In other words, means of material and form have no statistically difference. They have the same effects on Chinese’s perception of traditional Chinese design. But color is less important than material and form to represent traditional Chinese design.

Section C-2: Statistic analysis for the data from non-Chinese participants

Tests of Between-Subjects Effects

Dependent Variable: SelectedProbability

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	3433.376 ^a	3	1144.459	10.323	.000	.290
Intercept	12702.816	1	12702.816	114.575	.000	.601
DesignElements	3433.376	3	1144.459	10.323	.000	.290
Error	8426.029	76	110.869			
Total	24562.221	80				
Corrected Total	11859.405	79				

Figure 4.17. Test of mean differences of selected probability between design elements (non-Chinese participants)

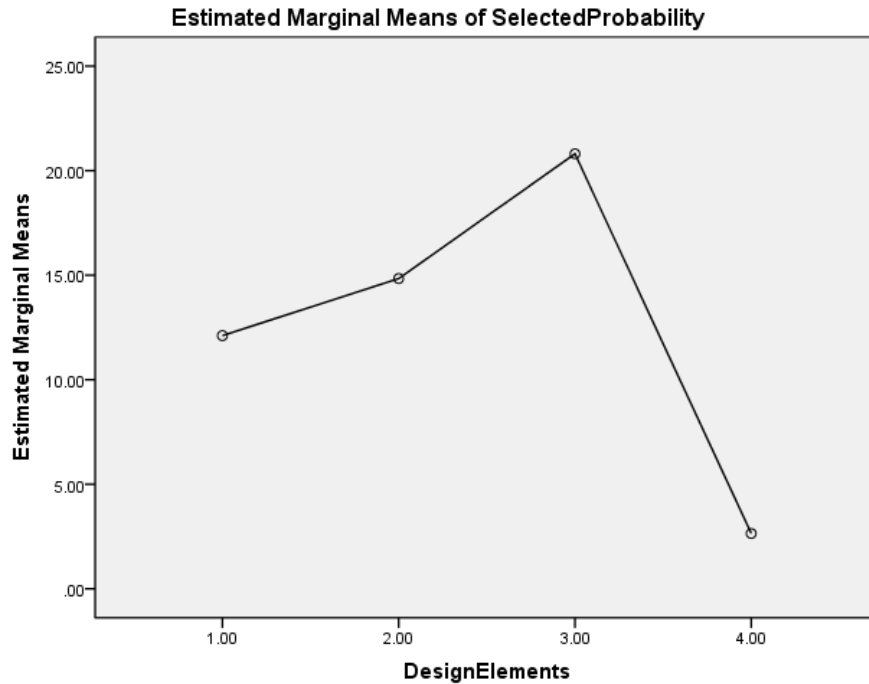


Figure 4.18. Profile plot for means of selected probability of design elements (non-Chinese participants)

Based on the test between-subjects effects ($F=17.577$, $df=3,76$, $p=.000$) we can conclude that the one-way ANOVA is statistically significant. Also the mean square is 5176.501 and the effect size is 0.410, suggesting that approximately 41% of the variance of number of selection is due to different visual design elements. The means and profile plot suggests that for different elements, there is a corresponding different selected probability.

Multiple Comparisons

Dependent Variable: SelectedProbability

TukeyHSD

(I) DesignElements	(J) DesignElements	Mean Difference (I-J)	Std. Error	Sig.
1.00	2.00	-2.7305	3.32970	.845
	3.00	-8.6965	3.32970	.052
	4.00	9.4630 [*]	3.32970	.029
2.00	1.00	2.7305	3.32970	.845
	3.00	-5.9660	3.32970	.285
	4.00	12.1935 [*]	3.32970	.003
3.00	1.00	8.6965	3.32970	.052
	2.00	5.9660	3.32970	.285
	4.00	18.1595 [*]	3.32970	.000
4.00	1.00	-9.4630 [*]	3.32970	.029
	2.00	-12.1935 [*]	3.32970	.003
	3.00	-18.1595 [*]	3.32970	.000

Figure 4.19. Multiple comparisons for means of selected probability of design elements (non-Chinese participants)

Post hoc analyses were conducted; it was concluded that the following pairs of groups were found to be significantly different ($p < .05$): material and other, form and other, color and other.

In other words, means of form, material and color have no statistically difference. They have same effects on people's perception of traditional Chinese design.

Section D: Group and analyze artifacts by form, material and color

Section D-1: Grouping artifacts by form

The artifacts shown in Figure 4.20 were grouped by selected probability of form without considering other visual design elements. The form

here for the corresponding artifacts had over 35% selected probability. For these artifacts, form can be a significant design elements and can impact perception of traditional Chinese design for both Chinese and non-Chinese participants.

Moreover and with the exception of the lacquer vessel *jue* that has over 60% selected probability by Chinese participants, other artifacts share similar features of form, such as symmetrical, static, complex and organic.












	Chinese participants	Non-Chinese participants
Over 60%	 <p>66.24%</p>	
40%-60%	 <p>43%</p>  <p>42.4%</p>  <p>41.69%</p>	 <p>42.37%</p>  <p>40.5%</p>
30%-40%	 <p>38.56%</p>  <p>34.93%</p>  <p>30.8%</p>	 <p>37.88%</p>  <p>31.95%</p>

Figure 4.20. Grouping artifacts by selected probability of form

Section D-2: Grouping artifacts by material

In Figure 4.21. the artifacts were grouped by selected probability of material without considering other visual design elements. Material can have a probability of over 30% in its representation of traditional Chinese design in these artifacts. It demonstrates that many participants perceive the artifacts as Chinese mostly because of their materials used.

Also, the materials of the artifacts in Figure 4.21 are mainly of three types: wood, ceramic and jade.







	Chinese participants	Non-Chinese participants
Over 35%	 40.11%  38.46%	 33.58%
30%-35%	 43.82%	 34.49%  30.64%

Figure 4.21. Grouping artifacts by selected probability of material

Section D-3: Grouping artifacts by color

The artifacts shown in Figure 4.22 were grouped by selected probability of color. The colors of the golden fish vessel and the bowl have a selected probability of over 35% for non-Chinese participants. Colors found in other artifacts in Figure 4.22 just have only a selected probability of between 15% and 30%. The colors that appear in Figure 4.22 have significant influence on people's perception of traditional Chinese design, even though they may be less important than form and material.

Moreover, these colors – red, blue, green and yellow – can be considered as most representative of traditional Chinese design because they appear the mostly on the artifacts in Figure 4.22.










	Chinese participants	Non-Chinese participants
Over 35%		 43.68%  40.05%
25%-35%		 25.97%  25.62%
15%-25%	 25.59%  16.62%  15.5%	 24.30%  22.31%

Figure 4.22. Grouping artifacts by selected probability of color

4.3.2 Defining Design Elements

The online survey had three questions that asked participants to define which color, which material and what features of form were representative of traditional Chinese design. Furthermore, the participants were expected to define what other elements besides form, material and color were indicative of traditional Chinese design.

These four open-ended questions allowed participants to give their own opinions about the visual design elements of traditional Chinese design. In addition, the answers offered some important hints for future exploration.

The data were translated, decoded and categorized into several key points and presented in the following figures. The numbers as percentages show how many participants have defined the elements in their answers.

Section A: Feature of form.

For the question that asked which features of form were most representative of traditional Chinese design, Chinese participants selected symmetrical, static realistic and organic, non-Chinese perspective selected complex, dynamic, symmetrical, and organic.

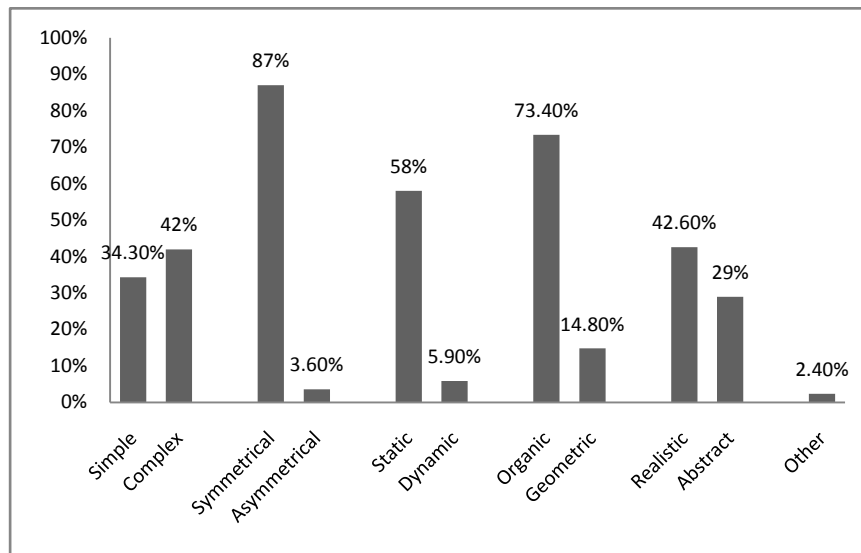


Figure 4.23. Representative features of form of traditional Chinese design

(Chinese participants)

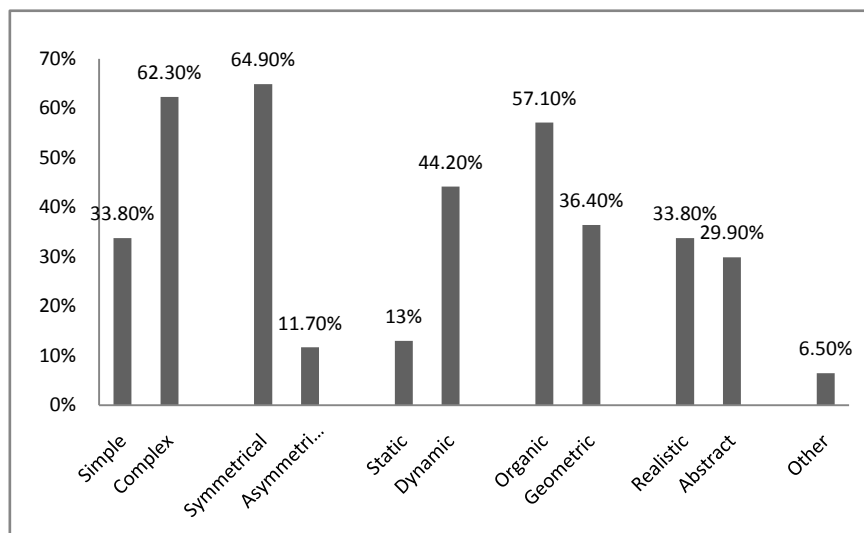


Figure 4.24. Representative features of form of traditional Chinese design

(non-Chinese participants)

Section B: Material

For the question that asked which materials were most representative of traditional Chinese design, Chinese participants identified wood, jade, bronze and ceramic and each one achieved a rating of 40%. For non-Chinese participants, however, only jade and wood achieved 40%.

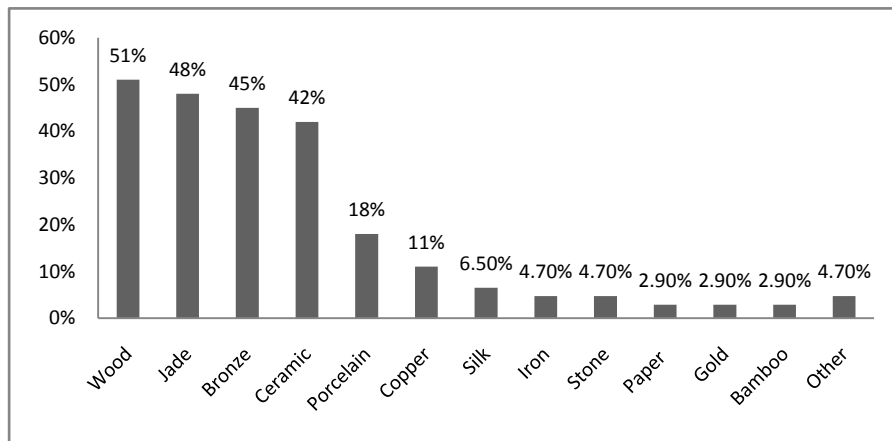


Figure 4.25. Representative materials of traditional Chinese design (Chinese participants)

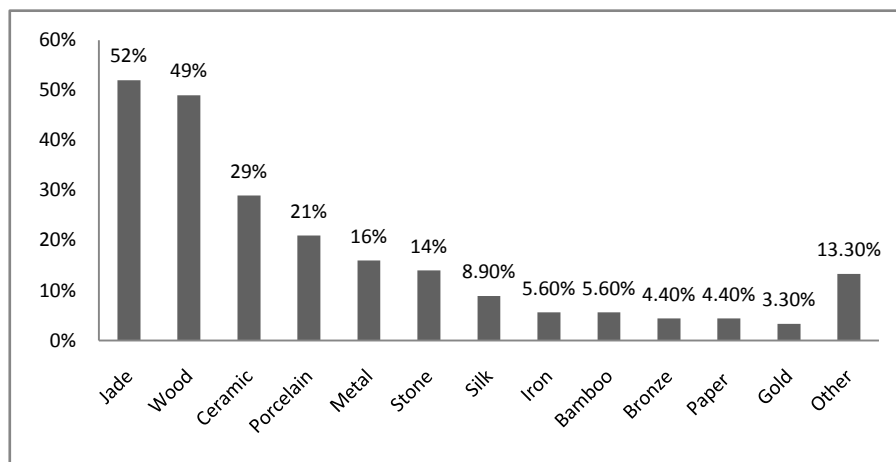


Figure 4.26. Representative materials of traditional Chinese design (non-Chinese participants)

Section C: Color

For the question of which colors were most representative of traditional Chinese design, 89% of Chinese participants identified red. This was followed by yellow, white and cyan. For non-Chinese participants, 84% participant identified red, followed by green and blue.

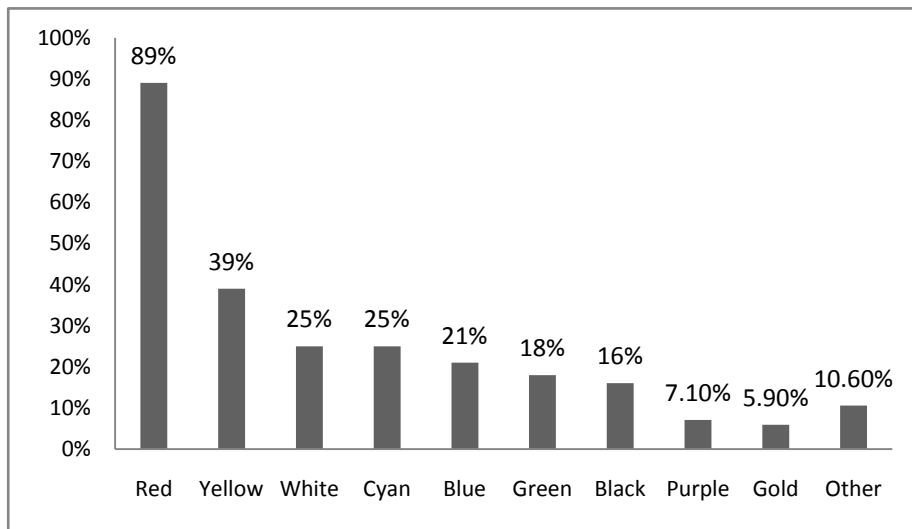


Figure 4.27. Representative colors for traditional Chinese design (Chinese participants)

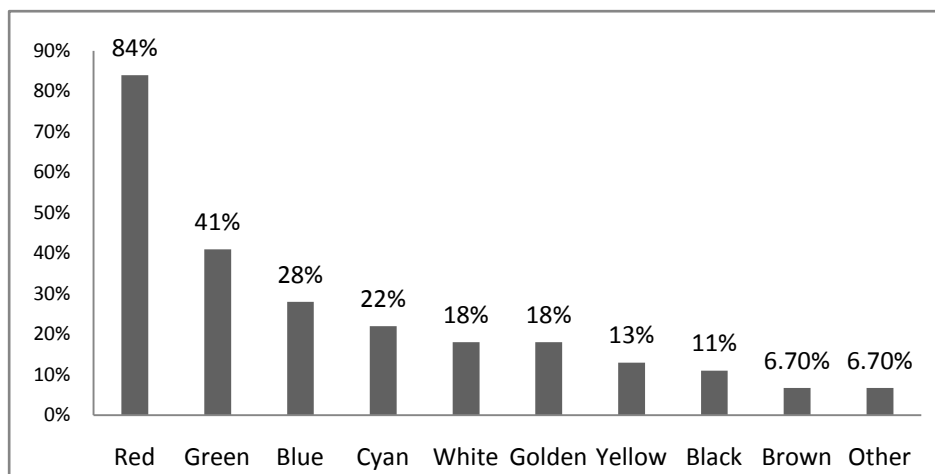


Figure 4.28. Representative colors for traditional Chinese design (non-Chinese participants)

Section D: Other elements

At the end of the online survey, an open-ended question was asked: besides form, material and color, what other features in the 20 artifacts could be representative of traditional Chinese design. The results are shown in Figures 4.29 and Figure 4.30 Chinese participants indicated graphic pattern, function and context (over 20%) followed by age, craft and characters (fewer than 6%). The option “other” included some elements mentioned fewer than 2% by Chinese participants, such as value, size, origin, people, nature, poem, etc.

Non-Chinese participants identified the graphic pattern (over 33%) as the most representative element while other elements all take near 10%. The option “other” here means some elements mentioned less than 2% by non-Chinese participants, such as lines, details, decoration, style, size, feeling, etc.

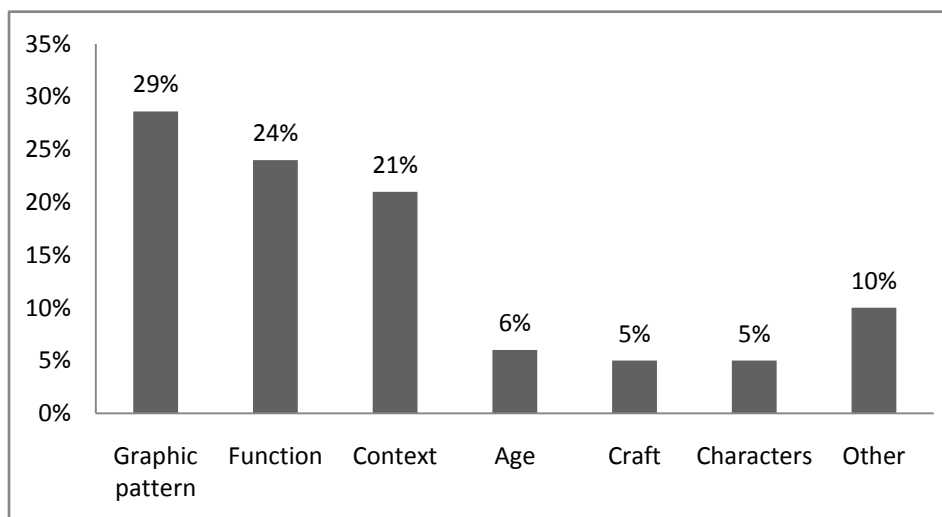


Figure 4.29. Other representative features of traditional Chinese design

(Chinese participants)

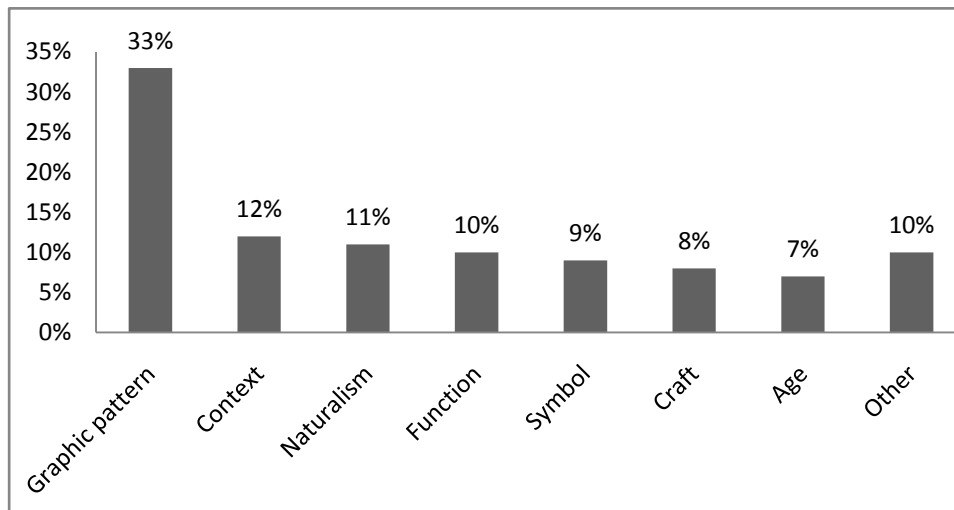


Figure 4.30. Other representative features of traditional Chinese design
(non-Chinese participants)

4.4 Qualitative Analysis of Focus Group

Two focus groups were conducted to explore the reasons why participants in the study did or did not select the artifacts as representative of traditional Chinese design. One group had five Chinese participants. The discussion lasted about one hour and focused on the top three and bottom three artifacts that had been selected by Chinese participants in the online survey. The second group had five non-Chinese participants. The discussion lasted one and also focused on the top three and bottom three artifacts selected by non-Chinese participants as the results of the online survey.

From the transcript of the discussion, the data were categorized into several key points. The researcher also provided the summary and key quotes from the participants to explain the perspectives of participants.

4.4.1 Focus Group of Chinese Participants

Question one:



Figure 5.1. Top three artifacts selected by Chinese participants

Why were the three artifacts shown above selected by Chinese participants as the most representative of traditional Chinese design?

A: Context

Some participants felt that the implied meaning of the artifacts made them to be representative of traditional Chinese design. Moreover, the three artifacts represented the life style of ancient Chinese and Chinese culture. Some participants also indicated that the artifacts easily conjures a picture of how they were used by the ancient Chinese. In addition, the artifacts reminded them of behaviors and values for which they are familiar and have been influenced by the culture since their birth.

Key quotes from participants:

“ The brushes remind me of the characters and calligraphy of China.”

“The fan was appreciated by intellectuals in China.”

“The jue (lacquer vessel wine cup) symbolise the wine culture of China. The design of the cup makes you have no choice when you are drinking. Drink more is a typical feature of Chinese wine culture.”

“The three artifacts could be a set of tools used by the ancients. We always imagine a picture of Chinese artists: they drink a lot, use the brushes to paint something on the fan.”

“The painting on the fan present a picture of beautiful mountains and waters which were descibed in the poem.”

B: Unique form

The unique form of the artifacts were perceived by Chinese participants as representative of traditonal Chinese design. The three artifacts have some special form that may applied only in traditonal Chinese design such as the ink painting of the fan, the mixed material on the brushes (wood handle and soft hair) and the three feet- form of the lacquer wine vessel *jue*. These distinctive features can be clearly recognized by Chinese people. Futhermore, similar forms of the artifacts had appeared frequently in traditional Chinese design. Chinese participants could easily associate the artifacts above with other forms with which they are familiar. For example, most of censers (a container for burning incense at religious ceremonies) have the three feet, which is similar with the lacquer wine vessel *jue*, appearing often in Chinese temples.

Key quotes from participants:

“There is something you cannot copy in traditional Chinese design, such as the form of the cup. It is a unique Chinese form.”

“The wood penholder and its texture are telling me that it is from China.”

“The wine cup would not be manufactured in modern society, especially the lacquer painted on it.”

“The painting on the fan is elegant and the foldable skeleton could show the wisdom of Chinese craft.”

C: Usability

The artifacts selected have been used by Chinese people in daily life and are found throughout the country. Most Chinese people have connection to these artifacts on a daily basis. For instance, calligraphy is a required course for most primary school students and the fan is very popular in summer time. Despite the fact that the lacquer wine vessel *jue*, has lost its value of usability, it remains part of Chinese life by way of television shows, traditional paintings and even illustrations in Chinese textbook. There, you can always find the ancients drinking with the cup.

Key quotes from participants:

“The *jue* is so popular in ancient China.”

“The brushes and the fan are daily supplies.”

“The brushes and the fan have kept the same appearance for thousands of years.”

“We don’t just inherit the form of these artifacts, but also the usability of them, we all know how to use them.”

Question two:



Figure 5.2. Bottom three artifacts selected by Chinese participants

Why were the three artifacts shown above selected by Chinese participants as being most non-representative of traditional Chinese design?

A: Lack of context

The three artifacts are so simple and plain that they do not carry enough cultural meaning. Chinese participants realized that was difficult to connect them with the history of China and the lifestyle of Chinese people. The artifacts been used by ancient Chinese for thousand years; nevertheless, they did not provide some meaningful and cultural outputs.

Key quotes from participants:

“We have very traditional ‘eighteen weapons’ in history. They are not including the dagger that has been seen as a despicable weapon by Chinese.”

“The three artifacts don’t have a historical sense; we cannot imagine any interesting story from them.”

“For the brushes, I know they are used for calligraphy, but for the knife and scissors, I don’t know what they are used for?”

B: Indistinctive form

From the perspective of visual design elements, the three artifacts have no distinctive form as traditional Chinese design. Their designs do not match the traditional Chinese aesthetics, which emphasizes complexity and organic form. The forms can be mimicked easily; therefore, they cannot be considered as representative of traditional Chinese design.

Key quotes from participants:

“Chinese porcelain is more complex and would be painted with bright color.”

“They are lacking of decoration. The form of the cup is so simple.”

“The scissors is a typical design style of *Miao* (苗族) that is a minority of China. It cannot represent traditional Chinese design.”

“Simple, plain, no distinctive feature.”

C: Lack of awareness

Lacking of awareness on the part of the participants is the main reason that the three artifacts were not perceived as representative of traditional Chinese design. In the focus group, four of five participants indicated that they had never seen the scissor and the jade blade before, even some artifacts with

the similar shape. They had not been inherited by previous generations and had lost their usability in daily life.

Key quotes from participants:

“What is that? Is it a scissor?”

“The knife is unfamiliar. Maybe it is coming from some kind of museum.”

“The artifacts that had been used by ancient Chinese are hard to be inherited, because we can find better substitutes in modern society.”

4.4.2 Focus Group of Non-Chinese Participants

Question one:

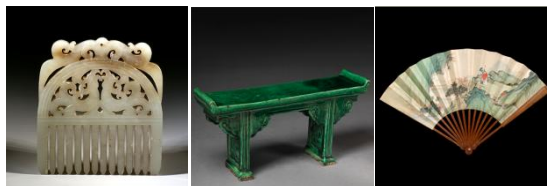


Figure 5.3. Top three artifacts selected by Non-Chinese participants

Why were artifacts shown above selected by non-Chinese participants as the three to be most representative of traditional Chinese design?

A: Familiarity

Familiarity means the participants have seen the artifacts or similar ones several times before, such as in Chinese movies, performances, museums and Chinatown. Frequent exposures make the artifacts more recognizable to non-Chinese persons, thus perceiving the artifacts as being representative of traditional Chinese design to them. During the discussion of

the focus group, some participants mentioned that they were not very familiar with traditional Chinese design. The media, such as television and movies, are the conventional ways to learn about China. As a result, the artifacts that appear more often in the media become more familiar to non-Chinese persons and gradually become symbols of traditional Chinese design.

Key quotes from participants:

“The comb and the fan, I associate them as representative of traditional Chinese design because of the music and movies.”

“I have seen the jade jewelry being worn by a lot of Chinese.”

“From some Chinese photos, I have seen women using the combs in old times.”

“I happened to see the bench in the museum.”

“Though the art pieces I have seen personally, the design of the bench I mostly associate with Chinese culture.”

B: Material

Some unique materials like jade, originated from China and have become famous around the world. They can be considered as representative of traditional Chinese design. Even though many non-Chinese persons do not know traditional Chinese design well, they are familiar with some of the materials from the oriental history and from their past experiences. For the top three artifacts selected by non-Chinese participants, two of them were made

from jade. It is therefore reasonable for them to associate the artifacts with traditional Chinese design.

Key quotes from participants:

“The bench was painted to look like jade, the typical Chinese green jade.”

“The association with green jade is all about it.”

“I thought that was white jade as soon as I saw it.”

C: Antiquity

For non-Chinese persons, antiquity is a representative feature of traditional Chinese design. Lacking knowledge of Chinese culture, most non-Chinese participants focused on the appearance of the artifacts. They associate the word “traditional” to antiquity. Furthermore, traditional Chinese design had a long history and the traditional artifacts must be old. The three artifacts they selected were associated with antiquity and could not be made in modern factories because of the material, the cut, and the curved style.

Key quotes from participants:

“It just looks old.”

“I haven’t seen this being manufactured today; it looks like something made by craftsmen.”

“There is some association between tradition and old, this comb and that bench look so old.”

Question two:



Figure 5.4. Bottom three artifacts selected by Non-Chinese participants

Why were the three artifacts shown above selected by non-Chinese participants as being the most non-representative of traditional Chinese design?

A: Generality

Generally speaking, traditional Chinese design is considered unique and special; it is not plain and universal. The three artifacts selected as least representative of traditional Chinese design have forms, materials and colors that could be replicated easily by most factories. Based on the discussion with non-Chinese participants, the scissors and the white cup are too simple; they have no features to show their cultural background. Therefore, the lack of visual distinction in the artifacts do not give people a sense of traditional Chinese design.

Key quotes from participants:

“I am saying that is a kind of universal design.”

“There are so many replica of that cup, you can just go to a store and buy it.”

“I have seen the cup in the street festival near my home.”

“It is just so plain and just white. I made one when I was taking a ceramic class.”

B: Similarity

One reason the three artifacts were not selected is the similarity of ancient artifacts from other countries. At one level, it cannot be denied that similarity exists between different ancient cultures. This could certainly be the case for non-Chinese persons who are not familiar with traditional Chinese design and who could be easily confused with similar designs from other ancient cultures such as Korea and Japan. Also, some design styles were popular in ancient times across the world, such as the bio-facial design that had existed in Greece, India and China. Therefore, the vessel with the bio-facial design cannot be perceived as uniquely Chinese. In the end, the similarity of the three artifacts to some artifacts from other countries reduces the possibility of being recognized as Chinese.

Key quotes from participants:

“The white cup looks like Holland pottery.”

“It is so similar with the shapes you can find in ancient Greece that most westerners are more familiar with.”

“The wine vessel may come from other culture, like African culture.”

“I don't associate silver with China; it is more likely European design.”

C: Non-familiarity

With reference to the top three artifacts selected, familiarity was an important reason for their ranking. In contrast, the three artifacts least representative of Chinese design are not as familiar; there has not been the same level of exposure to a non-Chinese population, even in the popular media. As a case in point, few of the participants knew exactly what the scissors and vessels were. This level of non-familiarity makes the artifacts difficult to be recognized as traditional Chinese design.

Key quotes from participants:

“What’s that used for (the scissors).”

“It looks like big and heavy stuff (the wine vessel).”

“For non-Chinese people without learning something of art history, it is not familiar to them.”

“I haven’t seen the design patterns before; I don’t know where it comes from.”

Chapter 5

CONCLUSION

5.1 Characteristics of Traditional Chinese Design

Traditional Chinese design has its own visually distinct characteristics. Several were identified through the responses of Chinese and non-Chinese participants. These characteristics are key points in order to understand traditional Chinese design.

Naturalism

Naturalism is one of the most representative features of traditional Chinese design, which was reflected in several ways from the findings of the study. Both Chinese and non-Chinese participants indicated that the most representative features of form for traditional Chinese design were organic and realistic, which can label the artifacts as in the category of naturalism. Furthermore, wood, jade and ceramic, which are all natural materials, were selected by the participants as being representative of traditional Chinese design. Additionally, Chinese are also known to have a deep appreciation for natural organic form and material, understand their qualities and have substantial skills in using them (Yu, 2004). Therefore, it appears that traditional Chinese design and naturalism are connected by way of certain visual design elements.

Design with meaning

There exists a deep and complex connection between Chinese culture and traditional Chinese design. Chinese participants in the study considered the context of the artifact as the condition that mostly influenced their selections and answers. Non-Chinese participants pointed out that “most of us don’t understand the Chinese ‘drama’ ”, which reveals that they understood the traditional Chinese design more from external visual clues instead of internal meanings. Clearly, the design elements found in traditional Chinese design relate to many aspects of society, history and culture of China.

Handicraft

Handcrafting is another important feature of traditional Chinese design. In terms of the artifacts that were selected by participants in the study, they were easily recognized as traditional Chinese design because of the visually characteristics of craft, such as the jade comb and the lacquer wine vessel *jue*. If the form was too simple and plain and the material was modern and universal, the artifacts were not considered as representative of traditional Chinese design because they could be manufactured easily. For example, a participant in the focus group indicated “it (the white porcelain cup) is so common and can be made easily; I may buy it just in the store downstairs”. Over centuries, Chinese craftsmen have developed special techniques and skills for different materials and have created thousands of wonderful works as

a result (Bao, 2008). These designs and works of art are now known to the world.

After analyzing and abstracting the data from the study, two sets of design criteria were generated for integrating traditional Chinese design elements to contemporary design. The reason for two separate sets of criteria was the differences between Chinese and non-Chinese in perception of traditional Chinese design. Both sets include visual design elements such as form, material and color, as well as related features such as context, usability and familiarity.

5.2 Design Criteria for the Chinese

The design criteria were generated from the opinions of Chinese participants in the research. It could be used to integrate traditional Chinese design elements into contemporary design in order to express Chinese culture to Chinese people.

1. Form: symmetrical, organic, static and realistic
2. Material: wood, jade, bronze and ceramic
3. Motifs
4. Context
5. Usability

Form:

Chinese culture devotes particular attention to symmetry, which is evident in Chinese architecture, gardens, cities, arts and production. Even poetry includes parallelism and balance (Yu, 2010). Chinese participants identified symmetrical form as the most representative of traditional Chinese design. Therefore, symmetrical forms should be one of the significant design components when the goal is either to express traditional Chinese design to Chinese viewers or to integrate Chinese culture into an artifact.

Static forms are associated with value, structure, space and emotions. Chinese culture emphasizes the spirit as “solitary and lonely, but in no way decadent, quiet and peaceful, but not at all dull”, which implies a quiet freedom from worldly complexity (Li, 2010). Cultural value has been deeply rooted in traditional Chinese art and design. Therefore, the form needs to present a sense of quiet, placid and peaceful to be perceived as traditional Chinese design by the Chinese.

Organic and realistic form reflects the features of naturalism and handicraft of traditional Chinese design. Organic means outlines that are curvilinear and irregular, like branches of a tree. The form is abstracted from nature but still keeps lines of flow and basic shapes. Realistic implies that the form or the shape can be identified in terms of normal daily visual experience (Jirousek, 1995). It suggests something organic and realistic, which can be

applied together to represent traditional Chinese design. The fan can be a good example and was selected by Chinese and non-Chinese participants as the most representative artifact of traditional Chinese design. Sandalwood has symmetrical and organic three-dimensional form and the paper sticking on it has a realistic landscape painting as two-dimensional form.

Moreover, for Chinese people, a unique form can work individually to represent traditional Chinese design. Chinese participants indicated that if the form of an artifact is unique and cannot be duplicated by others, it becomes a symbol of traditional Chinese design, like the three-footed wine vessel *jue*. As a result, a unique form in traditional Chinese design can be found and applied to contemporary design in order to express Chinese culture, even if the form is not symmetrical, static or organic and realistic.

Material:

Chinese participants selected wood, jade, bronze and ceramic as the materials most representative of traditional Chinese design. However, the data demonstrated that form and material had an equivalent impact on the perceptions of Chinese people about traditional Chinese design. Therefore, in applying these findings to express traditional Chinese culture on contemporary design, it would be advisable to combine form and material together.

As a material, wood is a particular case and needs to be understood in context. In China, different woods have different uses and function; they even

reveal different status. Therefore, wood needs to be selected based on its suitability in the context of the project. The study showed that Chinese participants considered more expensive and high-quality wood to be representative of traditional Chinese design. However, the study needs to be extended in the future to learn which specific wood can be more readily perceived as Chinese.

The study also revealed that color was less important than form or material as an element to represent traditional Chinese design. It appears that an artifact was perceived as being Chinese when it kept the original color of the material.

Motifs

Motifs are another visual design element that assisted Chinese participants to perceive something as being a traditional Chinese design. Motifs carry messages whose meanings are quickly obvious to people having some knowledge of Chinese culture. Many decorative elements become stylized symbols that are inherited as a special feature of traditional Chinese art and design (Stalberg & Nesi, 1980). Therefore, the application of the symbolic motifs in the design could improve the recognition of Chinese design. However, it should be understood that these motifs are seldom used for decoration only; there is almost always some underlying theme or message to the motif. Consequently, exploring and understanding the implied meanings of

these motifs could be significant and effective in integrating them into a design in order to present Chinese culture.

Context:

Context refers to the meaning and hidden story that is implied by the artifacts. Chinese people expect that a traditional Chinese design should have enough contexts that they can learn something about Chinese history and culture from the artifacts. In order to integrate traditional Chinese culture into contemporary design, the design has to meet ancient aesthetic precepts of “implication of meaning” and “association of imagery” (Pan, 1999). The designer has to explore the culture of the traditional artifacts. One conclusion that can be made from the study is that a style that is simple and plain but without enough context cannot be perceived as representative of traditional Chinese design.

Usability:

Traditional Chinese design has to reveal enough rational usability to be perceived and recognized, especially for Chinese people who are familiar with the culture and who have been involved in it since birth. Based on this fact, the usability is an effective way to represent traditional Chinese design. Moreover, usability does not only mean the artifact is usable by people in daily life. If an artifact is regularly seen being used by Chinese ancients and identified as a traditional Chinese design, this familiarity can provide people

with the needed information to identify it as traditional Chinese design. As a result, the feature of usability in traditional Chinese design needs to be explored further and applied in various ways in contemporary design.

5.3 Design Criteria for the Non-Chinese

The design criteria were generated from the opinions of non-Chinese participants in the research. They could be used to integrate traditional Chinese design into contemporary design in order to present Chinese culture to non-Chinese people.

1. Form: symmetrical, organic and complex
2. Material: Jade, wood, ceramic and porcelain
3. Color: Red, green
4. Familiarity
5. Antiquity

Form

Similar to Chinese participants, non-Chinese participants were of the opinion that forms that were symmetrical and organic were representative of traditional Chinese design. Therefore, applying these features of form could improve the perception of Chinese design both for Chinese and non-Chinese people.

In contrast to Chinese participants, non-Chinese participants identified complexity form as one of most representative features of form in order to

express traditional Chinese design. Complexity implies that the form has a number of intricate parts and comprehends many variations, either in the outline or in the decoration (Jirousek, 1995). The identification of complex form reveals that non-Chinese people concentrate more on the visual outputs of the artifacts because they are less involved with Chinese culture. Furthermore, complexity also can be associated with organic forms which are mostly created with curvilinear outline and complex details. The findings of the research suggest that avoiding simple and geometrical form as well as creating the complex and organic forms could assist non-Chinese people in recognizing Chinese design.

Material

Both Chinese and non-Chinese people participants indicated that wood, jade and ceramic represented traditional Chinese design.

For the non-Chinese participants, jade was the material most representative of traditional Chinese design. As a material known to the world, jade, in its various forms, represent the highest ideals of Chinese culture, is deeply rooted in people's mind as a symbol of China, and its presence, in the form of artifacts, has spread to many nations over a long period of time (Kerr, 1991). Even the color green can be considered as a representative color of traditional Chinese design because people associate it with jade. Therefore, many people are automatically reminded of China when an artifact is made of

jade. For this reason, it is reasonable to use jade in the contemporary design in order to represent Chinese culture.

There is no doubt that the three materials – jade, wood and ceramic– should be explored and researched further by designers and researchers as a means to discover appropriate ways to apply them to represent Chinese design, whether to Chinese or non-Chinese people

Color

As a color, Chinese red has been considered as a feature representative of traditional Chinese design (Wang, 2009). A color can be associated with a country when it relates deeply to the culture and its history. Red symbolizes the personality of Chinese people, such as passionate, brave and friendly (Wang, 2009). The color red has been used almost everywhere in China and is recognized as an obvious characteristics of Chinese design. When applying Chinese red to contemporary design, the challenge becomes “take the color, extend its meaning and express its spirit” (Wang, 2009). It also requires that there be an understanding of the symbolism of the color as well as the means to integrate other visual elements in the design.

As mentioned previously, green, as a color, is also considered to represent traditional Chinese design but only by non-Chinese people because of its association with jade. The color green typically refers to the jade green. The application of green can probably occur in one of two ways: 1) using the

jade as material and keeping the original color; or 2) painting the artifact a jade-green color. Both ways could provide an opportunity for non-Chinese people to perceive traditional Chinese design by color.

Familiarity

Familiarity exists when non-Chinese people have been exposed regularly to Chinese artifacts in various ways. Over time, certain materials, forms, colors, motifs and other visual elements have made strong mental impressions and have become known as Chinese at a glance.

For example, many non-Chinese persons will associate the shape of dragon on an artifact as something connected with China. Consequently, the use of such visual elements already known by non-Chinese persons will most likely reinforce the identity of the artifact as being Chinese.

Worldwide advertisement of traditional Chinese design could also improve its exposure. Therefore, some visual elements could be successfully disseminated and thereby become known to more and more non-Chinese persons. Moreover, contemporary designers could incorporate these popular visual design elements, which could achieve a higher recognition of Chinese design.

Antiquity

Antiquity means old, which is associated with “traditional design” by non-Chinese persons. The artifacts that were old and ancient looking were

easily perceived as traditional Chinese design. On the contrary, universal and modern artifacts were hardly ever considered as representative of traditional Chinese design. The writing brush is an example. Most non-Chinese participants in the focus group indicated that it did not look like traditional Chinese design because of “it is not old”. Their opinions revealed that there needs to be an emphasis on history if the goal is to show traditional Chinese design to non-Chinese persons. It is also important to note that the look of antiquity involved the use of several visual elements, like traditional forms, colors and natural materials. Therefore, it could be a challenge to apply these traditional elements as a combination in contemporary design to express the feature of antiquity in order to express Chinese history and culture.

5.4 Limitations

Time limitation

This study focused on only three visual elements: form, material and color. It was limited to the three because of time limitation and sample strategy. Moreover, the purpose of the study was to seek the opinions of average person rather than just designers. Therefore, it would have been difficult to find an effective way to explain clearly all six design elements if the participants did not already have some design knowledge and experience. If time allows in the future, there may be a way to effectively present all six design elements to participants.

The time limitation also did not allow for a large group of participants in the focus group. More qualitative data needs to be collected in order to achieve a better understanding of traditional Chinese design. The study was conducted with only two focus groups, which may not be enough to get valid results. At least five focus groups or more need to be considered to get significant data.

Technology limitation

In order to get sufficient responses and extensive data, an online survey was used to recruit participants, but the time was limited for the research. Moreover, the technology was shown to have less flexibility to reduce variables. Working with participants from two different cultures also presented challenges, which can create control problems when using long-distance website based survey. Lastly, in the artifacts selection process, the sequence of the images may have influenced choices that participants made. Unfortunately, the survey tool did not provide the possibility of randomly changing the sequence.

5.5 Future implication

An effective way of integrating culture into design is to explore the visual elements that have been used in the traditional artifacts and to apply them to the new design. Due to the cultural diversity, Chinese and non-Chinese people have different opinions of about the representative qualities of visual elements. Therefore the study provides two sets of criteria

(which are explained in 5.2 and 5.3) for presenting traditional Chinese design to them. Each one has several visual elements, which were derived from the research. The two sets of criteria aim to provide a guideline for designers to express Chinese culture in their design. For example, if designers want a non-Chinese audience to perceive Chinese culture in his design, they can follow the “design criteria for non-Chinese” and apply the elements in the criteria to his design.

Given the limitations of the study, the two sets of criteria described in previous two sections are not complete. But as a foundation, it could be explored more extensively. Some suggestions for the future study are provided below.

First, the visual design elements in the study focused only on form, color and material, but there are others also important for design including line, shape and space. Following the current research methods, it is suggested that research be undertaken to find out the particular features and application of these elements in traditional Chinese design.

Second, from the discussion of the participants in focus groups, some important non-visual design elements, such as context, usability, familiarity and antiquity, were identified as representative of traditional Chinese design.

These elements can be seen the unexpected results of the study. Without considering visual elements, there are other design elements

impacting on the perception of traditional Chinese design of people. These non-visual elements allow to analysis traditional Chinese design in other perspectives. Therefore, the future research may need to go beyond from the visual elements in order to seek other design elements and their application in traditional Chinese design.

Third, while the criteria provide basic information about the representative visual element of traditional Chinese design, they will not be significant tools or guideline for designers until the methods of application for each element are explored further. For example, the study demonstrated that both Chinese and non-Chinese participants perceived symmetrical forms as traditional Chinese design. However, designers need to know what is a particular Chinese symmetrical form, how to apply it in contemporary design and how to combine it with other design elements. The potential possibilities for individual elements are each worthy of additional research and discussion.

The study concentrated on traditional Chinese design and attempted to find the representative visual elements based on the different perspectives of Chinese and non-Chinese participants. The research resulted in a kind of guide for designers and researchers as a way to explore traditional Chinese culture and to apply the findings into their designs. The research methodology proved to be efficient and valid. In future studies, the methodology could be used in other studies that seek to understand the critical elements of some

particular artifacts in particular cultures. Also, future researchers may wish to expand the research to other areas that related to visually identification, such as psychology and ethnography.

In the end, traditional Chinese design has developed over thousands of years. In many ways, it expresses Chinese culture and its social values. Exploring the visual design elements of traditional Chinese artifacts is merely a first step in an attempt to understand Chinese design better. The goal of studies such as this one is to discover ways to integrate the culture of the past into our contemporary design to retain the wealth of the past and improve the cultural diversity in an age of globalization. The journey will be a long one and will require the endeavor of generations, but the cultural heritage will be worth the efforts.

REFERENCES

Ahmad, A. (2008). In a Ahmad (Chair). *Islam and the Chinese Traditional Culture*. Chinese University of Hong Kong Islamic studies in China, Hong Kong, China.

Anderson, D. (1961). *Elements of Design*. (1st ed.). New York: Holt, Rinehart and Winston.

Anonymous. (2008). China rising. *Chinese Graphics*, 23(10), n/a.

Bao, Y. (2008). *A Handbook of Chinese Art, Crafts, and Culture*. (1st ed.). New York: Edwin Mellen Press.

Beutler, B. (2006). China's Design Influence is on the rise. *Electronic Business*, 32(12), 11-18.

Chinese Designs & Symbols. (2nd ed.).(1982). New York: Art Resources for Teachers & Students, Inc.

Campbell, W. (2010). *Form and Visual Cues*. (Master's thesis, Rochester Institute of Technology).

Chau, P., Cole, M., Massey, A., Montoya-Weiss, M., & O'Keefe, R. (2002). Cultural Differences in the Online Behavior of Consumers. *Communications of the ACM*, 45(10), 138-143.

Chen, A. (2011). *Discovery, Inheritance and Innovation Incorporating Traditional Chinese Family Values with Residential Design*. (Master's thesis, Carleton University, Ottawa, Canada).

Chen, F. (2011). Traditional Architectural Forms in Market Oriented Chinese Cities: Place for localities or symbol of culture?. *Habitat International*, 35, 410-418.

Chen, R. (2011). *The Dao of Graphic Design — a Study of Interrelationship between the Daodejing in Chinese Daoism and Graphic Design*. (Master's thesis, Rochester Institute of Technology).

Cheung, H. (2011). *Representing Sight and Sound in Design Media: A Cyclical Time-based Model*. (Doctoral dissertation, Arizona State University).

- Chi-Cheng, P., Tushar, H., & Rajit, G. (1998). Evaluation of Virtual Reality Interface for Product Shape Designs. *IIE Transactions*, 30(7), 629-643.
- Clarke, D. (2011). *Chinese Art and Its Encounter with the World*. (1st ed.). Hong Kong: Hong Kong University Press.
- Clunas, C. (1988). *Chinese Furniture*. (1st ed.). New York: Bamboo Publishing.
- Clunas, C. (2009). *Art in China*. (2nd ed.). USA: Oxford University Press.
- Clunas, C., Kerr, R., & Wilson, V. (1911). *Chinese Art and Design: Art Objects in Ritual and Daily Life*. (1st ed.). New York: overlook hardcover.
- Cohen, D. (2006). *A Visual Language: Elements of Design*. (1st ed.). London: Herbert Press.
- Crouch, C. (2010). *Contemporary Chinese Visual Culture: Tradition, Modernity, and Globalization*. (1st ed.). Amherst, N.Y.: Cambria Press.
- Currey, E. (2003). *A School for the Chinese Martial Arts*. (Master's thesis, University of Maryland, College Park).
- Daneshfar, E. (2011). Ethical and Traditional Concerns in Contemporary Japanese Design. *Asian Culture and History*, 3(1), 115-127.
- Demirkan, H., & Afacan, Y. (2012). Assessing Creativity in Design Education: Analysis of Creativity Factors in the First-year Design Studio. *Design Studies*, 33, 262-278.
- Deng, X. (2009). *Consumer Response to Visual Aspects of Packaging and Product Design*. (Doctoral dissertation, University of Pennsylvania).
- Evans, J., & Mathur, A. (2005). The Value of Online Surveys. *Internet Research*, 15(2), 195-219.
- Evans, P. (2008). *Exploring the Elements of Design*. (2nd ed.). Clifton Park, NY: Thomson/Delmar Learning.
- Fan, F. (2006). *A Cross-Cultural Design Pattern: Chinese Modern Design*. (Master's thesis, West Virginia University).

Fan, X. (2011). *Industrial Design: Contrasting the United States and Chinese Methods*. (Master's thesis, University of Cincinnati).

Folkes, V., & Matta, S. (2004). The Effect of Package Shape on Consumers' Judgments of Product Volume: Attention as a Mental Contaminant. *Chicago Journals*, 31(2), 390-401.

Fung, J. (2000, Apr 28). Nuosu: a Chinese Minority that's not really Chinese. *Northwest Asian Weekly*, p. b3.

Giard, J. (2009). *Designing: a Journey through Time*. (1st ed.). Phoenix, AZ: The Dorset Group.

Giard, J. (2005). *Design FAQs*. (1st ed.). Phoenix, AZ: The Dorset Group.

Gong, J. (2008). Chinese Traditional Folk Pattern and Modern Graphic Design. *Asian Social Science*, 4(2), 65-70.

Goulart, K. (2003, Oct 18). The Fengshui Way; Ancient Chinese Art Influences Design at Tara Show House. *The Patriot Ledger*, p. 43.

Gramazio, F., Kohler, M., & Oesterle, S. (2010). *Encoding Material*. (1st ed., Vol. 80, pp. 108-115). New York: John Wiley & Sons, Ltd.

Grillo, P. (1960). *Form, Function, and Design*. (1st ed.). New York: Dover Publications.

Halkier, B. (2013). Yves-Chantal Gagnon, the Case Study as Research Method: A Practical Handbook and Gary Thomas, How to do Your Case Study. *Qualitative Research*, 13(1), 107-110.

Handler, S. (2001). *Austere Luminosity of Chinese Classical Furniture*. (1st ed.). Berkeley, CA: University of California Press.

Hannah, G. (2002). *Elements of Design: Rowena Reed Kostellow and the Structure of Visual Relationships*. (1st ed.). New York: Princeton Architectural Press.

Himelfarb, E. (2011, April 9). Chinese Design Marches Forward. *The Globe and Mail (Canada)*, p. L13.

- Hoffman, M. (1976, Dec 5). Decorating with a Chinese Influence. *The Washington Post*, p. 138.
- Hu, P. (2000). *Visible Traces: Rare Books and Special Collections from the National Library of China*. (1st ed.). New York: Queens Borough Public Library.
- Hu, X. (2007). The Influence of Zen Culture on Chinese Art Design. *Canadian Social Science*, 3(2), 92-97.
- Huang, K., & Deng, Y. (2008). Social Interaction Design in Cultural Context: A Case Study of a Traditional Social Activity. *International Journal of Design*, 2(2), 81-96.
- Jn, V. (2011). *Diversity in Design: Perspectives from the Non-western World*. (2nd ed.). New York: Fairchild Books.
- Johansson, F. (2004). *The Medici Effect: Breakthrough Insights at the Intersection of Ideas, Concepts, and Cultures*. (1st ed.). Boston: Harvard Business School Press.
- Karana, E., & Hekkert, P. (2010). User-material-product Interrelationships in Attributing Meanings. *International Journal of Design*, 4(3), 43-52.
- Kerr, A., & Niblett, L. (1989). *Immortal Images: The Jade Collection of Margaret and Trammell Crow*. (1st ed.). New York: Crow Family Interests.
- Kerr, R. (1991). *Chinese Art and Design*. United States: Victoria & Albert Museum.
- Knight, T. (1993). Color Grammars: The Representation of Form and Color in Designs. *Leonardo*, 26(2), 177-124.
- Lai, H., Lin, Y., Yeh, C., & Wei, C. (2006). User-oriented Design for the Optimal Combination on Product Design. *Production Economics*, 100, 253-267.
- Li, Y. (2006). *An Exploration of Designed Water in Traditional and Contemporary Chinese Landscape Architecture*. (Master's thesis, University of Guelph, Guelph, Canada).
- Lidwell, W. & Manacsa, G. (2009). *Deconstructing Product Design: Exploring the Form, Function, Usability, Sustainability, and Commercial Success of 100 Amazing Products*. (1st ed.). Beverly, MA: Rockport Pub.

Lin, F., Koc, B., & Lin, L. (2009). Material Selection in Product Design Subject to Environmental Taxation and Environmentally Conscious Consumer Buying Behavior. *Sustainable Design*, 1(2), 145-162.

Liu, Y. (2009). Philosophies Underlying the Western and Chinese Traditional Cultures. *Asian Culture and History*, 1(2), 158-163.

Lu, J. (2007). *The Art of Traditional Architectural Ornaments in Northern China*. (Doctoral dissertation, Indiana University).

Luchs, M. (2008). *The Unity of Form and Function: Making Sense of Product Design from a Consumer's Point of View*. (Doctoral dissertation, The University of Texas at Austin).

Markus, H., & Kitayama, S. (1991). Culture and the Self: Implications for Cognition, Emotion, and Motivation. *Psychological Review*, 98(2), 224-253.

Martin, D. (2012). The Cooperative Use of Material Resources and Contextual Features in Graphic Design Work. *Design Studies*, 33(6), 589-610.

Menges, A. (2012). Material Resourcefulness: Activating Material Information in Computational Design. *Architectural Design*, 82(2), 34-43.

Meyer, C. (2001, NOV 1). A Case in Case Study Methodology. *Field Methods*, 13(4), 329-352.

Minick, S. (1996). *Arts and Crafts of China: Chung-kuo Kung Imeishu*. (1st ed.). London: Thames and Hudson.

Moalosi, R., Popovic, V., & Hickling-Hudson, A. (2010). Culture-orientated Product Design. *International Journal of Technology and Design Education*, 20(2), 175-190.

Nisbett, R., Peng, K., Choi, I., & Norenzayan, A. (2001). Culture and Systems of Thought: Holistic Versus Analytic Cognition. *Psychological Review*, 108(2), 291-310.

Pearson, R. (1951). Texture, the Neglected Element in Design. *Design*, 52(6), 12-16.

- Prown, J. (1982). Mind in Matter: An Introduction to Material Culture Theory and Method. *Chicago Journals*, 17(1), 1-19.
- Ragin, C. & Becker, H. (1992). *What is a Case? Exploring the Foundations of Social Inquiry*. (1st ed., Vol. 1). London: Cambridge University Press.
- Ridley, M. (1977). *Style Motif and Design in Chinese Art*. (2nd ed.). Poole [Eng.]: Blandford Press.
- Robertson, A., & Men, D. (2011). Future “Designing” and the Chinese Notions of “li”. 40(7), 1137-1148.
- Rompay, L., Thomas, J., Pruyn, H., Tieke, P., & Ad, T. (2009). Symbolic Meaning Integration in Design and Its Influence on Product and Brand Evaluation. *International journal of design*, 3(2), 19-26.
- Schuster, C. (1951, Nov). An Ancient Chinese Mirror Design Reflected in Modern Melanesian art. *The Far Eastern Quarterly*, 11(1), 51-67.
- Shen, S., Woolley, M. & Prior, S. (2005, November 14). Towards Culture-centered Design. *Interacting with Computers*, 18(4), 820–852.
- Sigur, H. (2008). *The Influence of Japanese Art on Design*. (1st ed.). Salt Lake City: Gibbs Smith.
- Singh, J. (2009, June 5). Unique Design for Chinese Mosque. *New Straits Times*, p. 25. (Singh, 2009)
- Siu, K. (2004). Red packet: A Traditional Object in the Modern World. *The Journal of Popular Culture*, 35(3), 103-125.
- Stalberg, R., & Nesi, R. (1980). *China's Crafts: The Story of How They're Made and What They Mean*. (1st ed.). New York: Eurasia Press San Francisco.
- Steele, V., & Major, J. (1999). *China Chic: East Meets West*. (1st ed.). New Haven, Conn.: Yale University Press.
- Steinhardt, N. (1984). *Chinese Traditional Architecture*. (1st ed.). New York: China Institute in America, China House Gallery.

- Tamaribuchi, L. (1989, Dec 2). Chinese Symbolism Seen in Decorative Art. *Los Angeles Times*, p. BB.
- Tan, H. (2009). *Chinese Visual Poetry*. (Doctoral dissertation, Indiana University).
- Treasures of the Forbidden City: Three centuries of Chinese imperial art. (1st ed.). (1984). Orlando: Florida Walt Disney Productions.
- Wang, W. & Wang, F. (2008, September). An Application and Study of Chinese Traditional Culture in Modern Art. *Asian Social Science*, 4(9), 96-100.
- Winkler, D. (2008). Visual Culture and Visual Communications in the Context of Globalization. *Visible Language*, 43(1), 4-43.
- Wong, W. (1993). *Principles of Form and Design*. (1st ed.). New York: Van Nostrand Reinhold.
- Woodward, L. (2007). *Understanding Material Culture*. (pp. 17-35). London: Sage Publications Ltd.
- Wu, X., Xie, J., & Mao, Y. (2008). The Application of Chinese Elements in the Product Design. *Asian Social Science*, 4(8), 109-111.
- Yang, B., & Volkman, N. (2010). From Traditional to Contemporary: Revelations in Chinese Garden and Public Space Design. *Urban Design International*, (15), 208-220.
- Yoshioka, T. (2006). *Tokujinyoshioka Design*. (1st ed.). London; New York: Phaidon.
- Young, P. (2008). Integrating Culture in the Design of ICTS. *British Journal of Educational Technology*, 39(1), 6-17.
- Yu, Z. (2011, March). An Analysis of the Significant Form in Modern Design. *Asian Social Science*, 7(3), 220-225.
- Yung, C. (2011). *A Chinese Critical Pragmatism*. (Master's thesis, Carleton University, Ottawa, Canada).
- Zhang, C., & Shi, L. (2012). Spirituality in Traditional Chinese Medicine. *Pastoral Psychology*, 61, 959-974.

Zhang, Y. (2009). *Conceptual Embroidery for Fashion in a Chinese Context*. (Doctoral dissertation, The Hong Kong Polytechnic University, Hong Kong, China).

APPENDIX A

A SELECTION OF TRADITIONAL CHINESE ARTIFACTS

Traditional Chinese Artifacts

'Tradition is something created in the past which has already been made permanent in many ways' (Wang, 2010).

Traditional Chinese culture experienced their periods of gestation, expansion, age of conflict, decay, invasion and developing into global empire, though which we learn, understand and categorized them (Carroll Quigley, 1961). What's more, over a long period influence, traditional culture could permeate all the cells of the nation by impacting everything.

Chinese traditional design has been developed about 5000 years following its unique philosophy, it forms its creative concepts psychologies, visual modes and molding rules. Comparing the western design theories that focus on the basic forms or the scientific rules for visual modes, Chinese traditional design concentrate more on the creation of philosophical images. The art and design in Chinese traditional theory seek for connecting symbols and meanings through metaphor, symbolism and association ((Wei Wang, Futing Wang, 2008)



Scissors

Date
675-750 (made)
Tang dynasty
Dimensions:
Length: 18.5 cm
Function:
Tool for cutting

Design elements:
Color: Silver
Texture: Silver
Form: consisting of two blades, joined by a twisted wire, each blade is chased on one side with a design of foliate scrolls, and on the other with a pattern of clouds



Porcelain Lantern

Date
1725-1750 (made)
Qing dynasty
Dimensions:
Height: 33.5 cm
Function: Lighting

Design element:
Color: Red, pink, green, blue, yellow
Texture: Porcelain, glaze enamels
Form: Six-sided lantern made of panels with different lattice patterns and painted in 'famille rose' enamels. The surface is also decorated with medallions painted in polychrome colors



Armchair


Date:
ca. 1550-1650 (made)
Ming dynasty
Dimensions:
Height: 97 cm,
Height: 50.5 cm of seat,
Length: 59 cm of seat
Function:


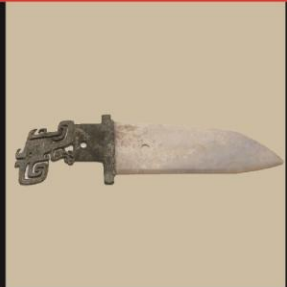


Furniture for sitting
Design elements:
Color: Natural color of wood
Texture: Huaili wood
Form: A combination of lines, the back and the arms of the chair are made as one part. The chair has four legs, and one flat wooden seat. It is constructed entirely of mortise-and-tenon joints and without the use of nails.



Living

The traditional-style Chinese house of the upper classes was built round a courtyard and constructed of cantilevered timber beams supported by columns. It was the home of the joint family unit, several generations and their servants living there. There were regional variations in house construction and differences dependent on each family's financial position (Kerr, 1991).

		<p>Wine pot and lid</p> <p>Date: 1662-1722 Qing dynasty</p> <p>Dimensions:</p> <p>Function: Wine pot</p> <p>Design element: Color: Red, white, green, blue Texture: Porcelain, overglaze enamels Form: Pear-shaped body with curved spout and handle; dome-shaped lid surmounted by a cone-shaped knob. Two fruit-shaped reserves on either side of the body, containing Daoist legendary scenes, painted in overglaze enamels in the famille verte palette.</p>
<p>Stemcup</p> <p>Date: 618-700 (made) Tang dynasty</p> <p>Dimensions: Height: 7.6 cm, Diameter: 7.5 cm</p> <p>Function: Wine cup</p> <p>Design element: Color: white Texture: Porcelain with clear glaze Form: Inverted bell shape and short stem, characterized by a thin body and bluish glaze, the slightly flared sides and knopped stem are derived from similarly shaped vessels in silver.</p>		
		<p>Teapot</p> <p>Date: 1625-1655 (made)</p> <p>Dimensions: Height: 8.3 cm</p> <p>Function: Store tea</p> <p>Design elements: Color: Red brown Texture: Stoneware Form: Small pear-shaped teapot with a ball of the lid and has a half-cycle handle.</p>
	<p>Wine-jar</p> <p>Date: 1522-1566</p> <p>Dimension:</p> <p>Function: Store water and alcohol</p> <p>Design element: Color: Blue, white, gold Texture: Porcelain Form: Porcelain jar with lid decorated with watery plants in underglaze cobalt blue and fishes in overglaze iron red.</p>	
<p>Eating and drinking</p> <p>The Chinese enthusiasm for food can be seen in the specially prepared and presented edibles at celebrations and religious festivals, in the careful combining of certain foods thought to promote good health and long life, and in the abundant restaurants and 'take-aways' serving Chinese dishes in and outside China.</p> <p>The Chinese divide their foodstuffs into two broad categories, 'fan' and 'cai'. The first consists of grains and starch foods. Rice, millet and wheat are examples of 'fan'. 'cai' are vegetables and meat. Each group has its own utensils for cooking and serving, and a balanced meal must contain both 'fan' and 'cai'. Dairy products and raw foods are not traditionally part of the Chinese diet although preserved food is widely used to prolong seasonal choices and also to protect against food shortage(Kerr,1991)</p>		

	<p>Model of a table</p> <p>Date: 1500-1700 (made)</p> <p>Ming dynasty</p> <p>Dimensions: Height: 11 cm, Length: 24.4 cm, Depth: 6.6 cm</p> <p>Function: Furniture, burial staff</p> <p>Design elements: Color: Green Texture: Earthenware, green glaze Form: Model of a rectangular table with raised ends and cloud head spandrels on either side of the two legs.</p>	
		<p>Jade blade 'ge'</p> <p>Date: 1250 BC-1050 BC (made)</p> <p>Shang dynasty</p> <p>Dimensions: Length: 33.4 cm</p> <p>Function: As a symbol of status, buried with its owner</p> <p>Design elements: Color: Natural color of jade and bronze Texture: Jade, Bronze Form: The fragile jade mounted on a bronze handle of the shape dragon with a long curled snout and beneath it is a foot with claws.</p>
	<p>Jade comb</p> <p>Date: 1644-1911</p> <p>Qing dynasty</p> <p>Dimension: Width: 7cm, Height: 8cm, Depth: 0.3cm</p> <p>Function: As a symbol of status, buried with its owner</p> <p>Design elements: Color: Natural color of jade Texture: Jade Form: Wide teeth, half-moon shape handle with cloud spandrel, face to face phoenix.</p>	
	<p>Bronze Vessel, "Li"</p> <p>Date: 1400 BC-1200 BC (made)</p> <p>Shang dynasty</p> <p>Dimensions: Height: 26 cm</p> <p>Function: Ceremony, buried in the graves with its owener</p> <p>Design elements: Color: Natural bronze Texture: Bronze Form: Three-lobed body, everted rim and two vertical loop handles, standing on three partially hollowed legs. The surface decorated with spiral shapes and pairs of protruding eyes separated by vertical raised flanges.</p>	
<p style="text-align: center;">Burial</p> <p>Throughout history and across the world, grave goods have fascinated people and have been avidly collected as treasures. They were made in a wide range of materials and styles, and were often of the finest craftsmanship. They also provide a wealth of information on both material and spiritual cultures, and Chinese grave goods are no exception(Kerr,1991)</p>		



Wine vessel, "Zun"

Date:
13th century BC
Dimensions:
Height: 27.3 cm
Function:
Ritual container for holding wines

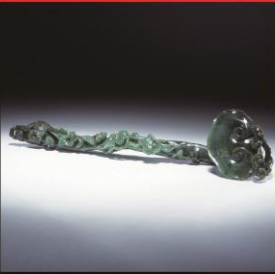
Design element:
Color: Natural color of bronze
Texture: Bronze
Form: Cylindrical body with trumpet-shaped mouth, the animal faces as decoration on the body with four narrow flanges.



Incense burner

Date:
1736-1795 (made)
Dimensions:
Height: 26.4 cm
Function:
Incense burner for worship

Design elements:
Color: Green, gold, purple, yellow blue
Texture: Enamel, metal
Form: Standing on three legs and having a round body with elaborate decoration, the cover has a hydrangea shaped handle and golden round small plates imposed on the body.







Ruyi sceptre

Date:
Circa 1790
Dimension:
Function:
Ceremonial scepter, was a token of good fortune

Design elements:
Color: Green
Texture: Nephrite jade
Form: Long term with flowers and petals, with bulbous end, floral scrolls and coils.

Worship and ceremony

Chinese religious beliefs are varied and complex and have changed much over time, but at their heart is an idea of continuation of life through the family line. The living venerate those who have already died, back through the generations. This belief sometimes characterized in English by the over-simple term of 'ancestor worship', and has been a feature of Chinese society from at least as early as the Bronze Age. While other faiths developed in later times, the veneration of ancestors continued to be observed by all sections of society (Kerr, 1991)

<p>Cup, juze</p> <p>Date: 1750-1800 (made)</p> <p>Dimensions: Height: 17.6 cm</p> <p>Function: Wine cup</p> <p>Design elements: Color: Red Texture: Carved lacquer Form: This cup imitates the shape of an ancient bronze vessel known as juze, carved with archaistic motifs on a square diaper ground.</p>		
	<p>Fan</p> <p>Date: 1721-1725 (made)</p> <p>Qing dynasty</p> <p>Materials: Colours on paper, zitan wood guards Carving.</p> <p>Painting (image making). Calligraphy</p> <p>Dimensions: Length: 31.7 cm</p> <p>Design elements: Color: Yellow, light blue, light green, red, color of wood Texture: Paper, Zitan wood Form: Folding fan, colors on paper, zitan wood guards; painted with landscape and figures in color on one side, calligraphy on the other.</p>	
		<p>Washstand</p> <p>Date: 1550-1620</p> <p>Qing dynasty</p> <p>Dimensions: Height: 183.5 cm, Width: 58 cm across bowl stand, Diameter: 50 cm, Width: 65.5 cm across cresting.</p> <p>Function: Daily washing</p> <p>Design elements: Color: Natural color of wood Texture: Hua li wood Form: Six circular-section legs arranged as the points of a hexagon, the main frame is decorated with two phoenix head finials. Carved open work spandrels of natural form are attached on either side of the main frame and a four piece carved open work frame on the inside to create a square border, between the two horizontal stretchers, the uppermost of which forms the towel rail. The front four legs terminate in carvings of lotus buds.</p>
	<p>Bowl in Yongzheng period</p> <p>Date: 1723-1735 (made)</p> <p>Qing dynasty</p> <p>Dimensions: Diameter: 9 cm</p> <p>Function: Bowl used by emperor Yongzheng</p> <p>Design elements: Color: Red, green, yellow, pink, blue Texture: Ceramic Form: Normal shape with luxury decoration of flowers, leaves of different colors.</p>	
<p>Ruling</p> <p>From the earliest times, the rulers of China have been able to call on makers in a large number of crafts to produce particularly fine objects which added to their prestige.</p> <p>By the Ming(1368-1644) and Qing(1644-1911) dynasties a variety of workshops existed in the immediate vicinity of 'Forbidden City', the huge imperial palace set in the very centre of Peking, to supply luxury items for court use and for the emperors to give as marks of their favour.</p> <p>The Qing emperors, like all their imperial predecessors, were themselves the chief celebrants of rituals to worship the cosmic powers of Heaven, Earth, the Sun and the Moon(Kerr,1991)</p>		

APPENDIX B

ONLINE SURVEY OF ENGLISH VERSION

Discover visual design elements of Chinese traditional artifacts

New Page

Discover visual design elements of Chinese traditional artifacts

Dear, Participant,

I am a graduate student under the direction of Professor Jacques Giard in The Design School at Arizona State University. I am conducting a research study to investigate perceptions of traditional Chinese design elements. I am inviting you to take this online survey, which involves recognizing and categorizing various artifacts, and labeling their specific design elements.

The survey, which will take you 10-15 minutes, is made up of, an image-selection section, multiple-choice questions, and some simple short-answer questions. Please take your time to finish all the questions.

Your participation in this study is voluntary. If you choose not to participate or to withdraw from the study at any time, there will be no penalty. Your responses to the survey will be analyzed in my conclusion, which will be used in my MSD thesis but not used for commercial purposes. Your identity will not be revealed in the research study.

If you have any questions concerning the research study, please contact me at lren7@asu.edu or by phone 4089217357 or the investigator JACQUES.GIARD@asu.edu. If you have any questions about your rights as a subject/participant in this research, or if you feel you have been placed at risk, you can contact the Chair of the Human Subjects Institutional Review Board, through the ASU Office of Research Integrity and Assurance, at (480) 965-6788.

Sincerely,
Liqi Ren

Next

0%

Discover visual design elements of Chinese traditional artifacts

New Page

1. What is your age?

- Under 12 years old
- 12-17 years old
- 18-24 years old
- 25-34 years old
- 35-44 years old
- 45-54 years old
- 55-64 years old
- 65 years or older

2. Have you ever been to China ?

- Yes
- No

3. Have you been enrolled in a design program for at least 24 months?

- Yes
- No

4. On a scale of 1 to 5, where 1 is nothing and 5 is a great deal, how much do you know about visual elements in traditional Chinese design?

- 1
- 2
- 3
- 4
- 5

Discover visual design elements of Chinese traditional artifacts

New Page

Twenty (20) artifacts will be shown on the next page. Begin by selecting 10 artifacts that for you are the most representative of traditional Chinese design. To select the artifact, click on it.

Back

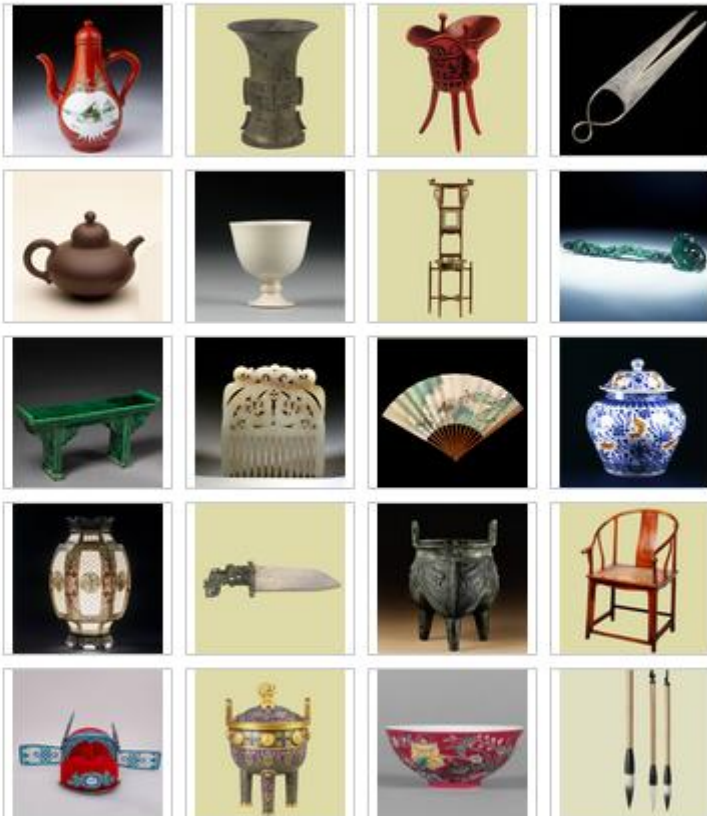
Next

29%

Discover visual design elements of Chinese traditional artifacts

New Page

Artifacts *



Back

Next

43%

Discover visual design elements of Chinese traditional artifacts

New Page

The same twenty artifacts will be shown on the next page. Among the four choices presented, please select the visual element which is most representative of traditional Chinese design for each artifact. Do this for all 20 artifacts.

Back Next

57%

Discover visual design elements of Chinese traditional artifacts

Page One

Twenty artifacts



Visual design elements

NO.1 *

- Color
- Material
- Form
- Other



NO.2 *

- Color
- Material
- Form
- Other



NO.3 *

- Color
- Material
- Form
- Other



NO.4 *

- Color
- Material
- Form
- Other



NO.5 *

- Color
- Material
- Form
- Other



NO. 8 +

- Color
- Material
- Form
- Other



NO. 7 +

- Color
- Material
- Form
- Other



NO. 8 +

- Color
- Material
- Form
- Other



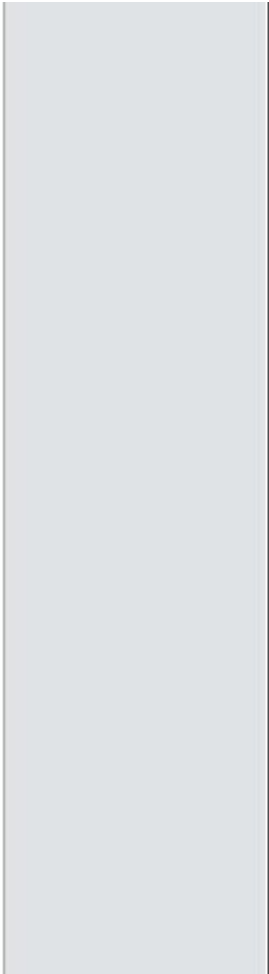
NO. 8 +

- Color
- Material
- Form
- Other



NO. 10 +

- Color
- Material
- Form
- Other



NO.11 *

- Color
- Material
- Form
- Other



NO.12 *

- Color
- Material
- Form
- Other



NO.13 *

- Color
- Material
- Form
- Other



NO.14 *

- Color
- Material
- Form
- Other



NO.16 *

- Color
- Material
- Form
- Other



NO.18 +

- Color
- Material
- Form
- Other



NO.17 +

- Color
- Material
- Form
- Other



NO.18 +

- Color
- Texture
- Form
- Other



NO.19 +

- Color
- Material
- Form
- Other



NO.20 +

- Color
- Material
- Form
- Other

Back

Next

71%

New Page

6. In your opinion, what features of form are most representative of traditional Chinese design? (Select no more than five)

- Simple
- Complex
- Symmetrical
- Asymmetrical
- Static
- Dynamic
- Organic
- Geometric
- Realistic
- Abstract
- Other

8. In your opinion, what colors are most representative of traditional Chinese design? (List no more than three)

- 1
- 2
- 3

7. In your opinion, what materials are most representative traditional Chinese design? (List no more than three)

- 1
- 2
- 3

8. Besides color, material and form, what other features in the 20 artifacts remind you of Chinese culture? (List no more than three)

- 1
- 2
- 3

9. In your opinion, what other artifacts are representative of traditional Chinese design? Exclude the 20 artifacts previously showed. (List no more than three)

- 1
- 2
- 3

Back

Submit

APPENDIX C

ONLINE SURVEY OF CHINESE VERSION

New Page

探索中国传统设计元素

亲爱的参与者，

我是亚利桑那州立大学的在读研究生，这个在线调查问卷是我研究的一部分，目的在于探索中国传统的设计元素。回答这个问卷将会牵涉到您对中国设计的了解程度。它将会占用您10到15分钟时间，其中包括一些选择题，图片认知题，以及简单的问答题。请忽略时间，认真回答。
您的参与是自愿行为，如果这些问题让您感到不适，您可以随时放弃。调查的结果将会用于本人的论文创作，不会用于任何商业用途。您的个人信息不会在问卷中提及，也不会以任何方式泄露。
如果您有任何疑问，可以发邮件到本人邮箱，随时联系。renliqi225@gmail.com

谢谢您的参与。

任丽琦

Next

0%

New Page

1. 您的年龄是？

- 12岁以下
- 12到17岁
- 18到24岁
- 25到34岁
- 35到44岁
- 45到54岁
- 55到64岁
- 65岁以上

2. 您在中国生活过多久？（以年为单位）

3. 您以前学习过设计吗？（最少12个月）

- Yes
- No

4. 您对中国视觉设计元素有多了解？以1到5为单位。1代表一无所知，5代表非常了解。请圈出你的选择。

- 1
- 2
- 3
- 4
- 5

New Page

您将在下一页看到20个产品，请选择出10个最能代表中国传统设计的产品。
点击图片做出选择。

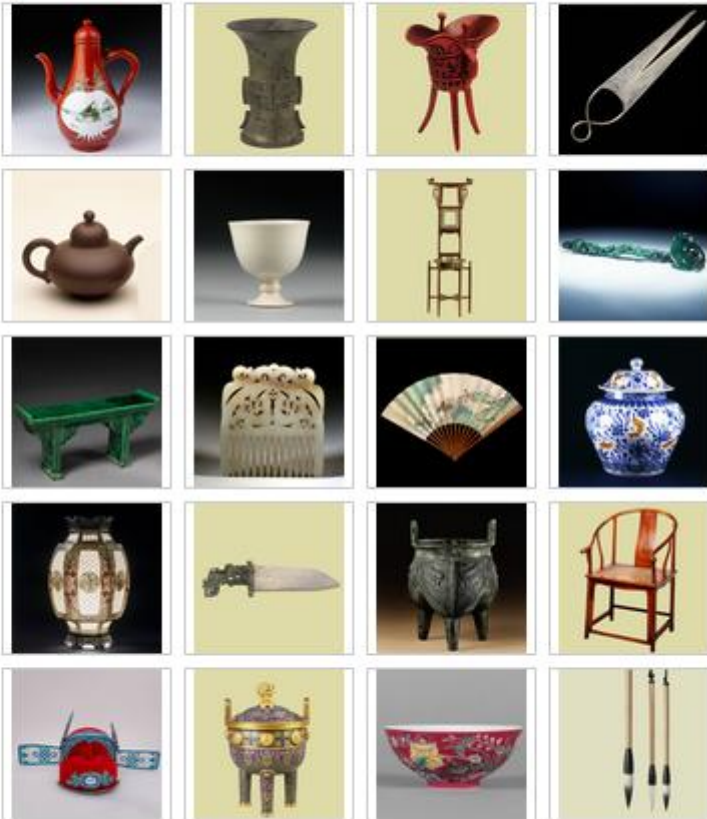
Back

Next

29%

New Page

产品



Back

Next

43%

New Page

20个同样的产品将会出现在下一页，每张图片的右边有3个设计元素作为选项。对于每个产品，请选出三个基本设计元素中最能体现中国传统设计的元素。仅限一个选择。点击按钮做出选择。

Back

Next

57%

Page One

产品



设计元素

1*

- 颜色
- 材质
- 形状
- 寓意

2*

- 颜色
- 材质
- 形状
- 寓意

3*

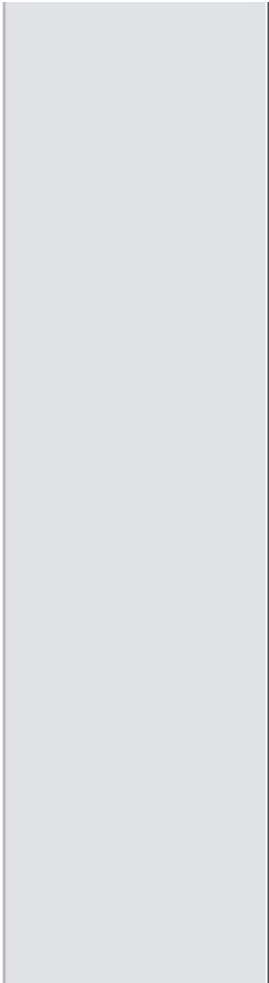
- 颜色
- 材质
- 形状
- 寓意

4*

- 颜色
- 材质
- 形状
- 寓意

5*

- 颜色
- 材质
- 形状
- 寓意



6 *

- 选项 A
- 选项 B
- 选项 C
- 选项 D



7 *

- 选项 A
- 选项 B
- 选项 C
- 选项 D



8 *

- 选项 A
- 选项 B
- 选项 C
- 选项 D



9 *

- 选项 A
- 选项 B
- 选项 C
- 选项 D



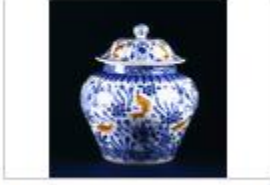
10 *

- 选项 A
- 选项 B
- 选项 C
- 选项 D



11 *

- 扇面
- 折扇
- 团扇
- 葵扇



12 *

- 磁器
- 瓷器
- 陶器
- 玉器



13 *

- 磁器
- 瓷器
- 陶器
- 玉器








14 *

- 磁器
- 瓷器
- 陶器
- 玉器



15 *

- 磁器
- 瓷器
- 陶器
- 玉器

	<p>16 *</p> <p> <input type="radio"/> 圈椅 <input type="radio"/> 官帽椅 <input type="radio"/> 交椅 <input type="radio"/> 靠背椅 </p>
	<p>17 *</p> <p> <input type="radio"/> 朝冠 <input type="radio"/> 朝服 <input type="radio"/> 朝靴 <input type="radio"/> 朝鞋 </p>
	<p>18 *</p> <p> <input type="radio"/> 朝冠 <input type="radio"/> 朝服 <input type="radio"/> 朝靴 <input type="radio"/> 朝鞋 </p>
	<p>19 *</p> <p> <input type="radio"/> 朝冠 <input type="radio"/> 朝服 <input type="radio"/> 朝靴 <input type="radio"/> 朝鞋 </p>
	<p>20 *</p> <p> <input type="radio"/> 朝冠 <input type="radio"/> 朝服 <input type="radio"/> 朝靴 <input type="radio"/> 朝鞋 </p>

Back Next

6. 基于生对中国传统设计元素的认知，那些形状最能代表中国传统设计？（最多选择5项）

- 简单的
- 复杂的
- 对称的
- 不对称的
- 稳定的
- 运动的
- 自然的
- 几何的
- 写意的
- 抽象的
- 其它

8. 基于生对中国传统设计元素的认知，哪些颜色最能代表中国传统设计？（最多列出三个）

- 1
- 2
- 3

7. 基于生对中国传统设计元素的认知，哪些材质最能代表中国传统设计？（最多列出三个）

- 1
- 2
- 3

8. 除了颜色、材质、形状，在以上20个产品中，其它的那些特征能让生联想到中国文化？（最多列出三个）

- 1
- 2
- 3

8. 除了以上展示的20个产品，生认为还有什么东西最能代表中国传统设计？（最多列出三个）

- 1
- 2
- 3

Back Submit

88%

APPENDIX D

TRANSCRIPTS OF FOCUS GROUP

NON-CHINESE PARTICIPANTS

R: Why were the three artifacts selected by non-Chinese participants as the most representative of traditional Chinese design?

S: Do you want us speculate why other people pick them or why I associate them to traditional Chinese design?

R: Why other people consider them to be representative of traditional Chinese design? However, it's not just guessing, you may provide opinions based on your experience.

E: I think one reason that why Non-Chinese people picked the fan because people who don't have a lot exposure to Chinese culture in everyday way, — —may see a few artifacts in their whole life time-they know for sure the Chinese example might be fan because they might see it in performances, Chinese culture center, other their stores, China town in San Francisco or the other place in the country. Maybe from other Chinese people somewhere out of the store, such as Chinese tourists who worn something may be like the fan or jade. I would think anything about the jade, people might also associate. I have seen some Chinese jewelry made of jade. I think the bench might be more traditional. The comb is surprising to me.

R: Susan just asked me if the question was based on your experience, but maybe you didn't choose the artifact, did you?

S: I might have, but I don't remember. But also, Jade, I associate it strongly with Chinese culture. The comb and the fan, I associate them as representation of Chinese women of music or movies.

J: I thought that was white jade as soon as I saw it. But I am familiar with jade, so (it is easy for me to recognize the material) and I thought that was pottery (bench). I wasn't sure about the material.

R: That is wood.

S: It is not jade, or pottery?

J: But it was painted to look like jade. It looks like typical green jade.

RA: The comb and bench, they both have designs. There are some similar art pieces I have seen personally. These designs mostly associate with oriental culture, whether being Chinese, Thailand or anything like that. But that just coming from the backyard in the art, I am not automatically assuming that.

R: What about the fan?

RA: The fan to me, not so much (as representative of traditional Chinese design). Overall, it definitely has some Chinese feeling. But at the same time, there are so many replica, you can just go downstairs to a store and buy it. It's really hard to think that's Chinese, because it's hard to determine unless it is really in front of you and you are able to touch it to see this is really old or this is a model more often we find here.

J: Are you saying that is a kind of universal design at this point?

RA: Yes, very much. I actually have one.

T: I have seen the fan a lot in the movie and I have seen this design (bench). I haven't seen the comb before. I have seen this shape before (bench), I can distinct these two (bench and fan) but for that (comb) I cannot. For lots of cuts design of jade, I know it. But I thought that was porcelain so, I didn't associate it. For movie standpoint, I have seen these two a lot (bench and fan).

S: I would add two more things building on the opinion of Ra. On the comb, the cut outs are not specific. I don't know what creatures they are.

RA: They look like almost lions or dragons.

S: I have seen something that had cut outs, but not specific something like this. Then the drawings on the fan remind me of Guilin that has mountains and rivers. These mountains look like some paintings I have seen.

E: Also this one (bench), there is some association between tradition and old. This comb looks old, too. I haven't seen them being manufactured today. It looks like handmade (comb). Also from the images I have seen of women using combs from old time, I associate it was tradition. I think that's why it has the top choice.

R: What about the color of the bench? It is green, but most people associate red as Chinese color.

J: The green is more span's dynasties, the association with green (to traditional Chinese design) is jade. It stretches back thousands of years, but

the red is more modern. Maybe after Qing or post Qing kind of color's game.

One thing I want to say about the comb is the carving style of it. It looks very interesting. The curving is almost in around, not just on the bar. That is very different from the central Asian and Africa style curving. They tend to be carving on the surface. This comb is all of way though shows the certain patience of carvers. The type of the comb is incredibly exact shows the certain institutional memory had cut like that.

J: One thing I surprised is that the triple bar vessels is not one of your top three.

R: I have that in Chinese participants' choice. These two things have selected by Chinese participants as most representative of traditional Chinese design, I want you think about why non-Chinese people don't think they are traditional Chinese design.

RA: I am surprised the brush hasn't more consideration. Because I automatically associate that is Chinese, just because of the calligraphy and paintings. But for that one (lacquer wine vessel *jue*), unless you know it, most of Americans would not associate that to Chinese culture. It is harder for them. Almost you need actually look really closely to the design and you know what you are looking for.

S: Or you happen to see it in the museum.

RA: You would not know where it comes from.

S: I have no idea, this is unfamiliar to me. I haven't seen anything like that shape.

R: Even in the movie or performance?

T: What's that use for?

R: Drinking

J: But there is some censer burner, food dishes, and lanterns that have similar shape with the vessel. The design on it is called bio-facial design. You can see it on bones, chests and carves. If you look at forward, it looks like one animal, but when you look at on the side, there is a same animal. From art history points, it is very traditional. It oriented from China. If for non-Chinese people without learning something of art history, it is not familiar to them because it lacks of exposure. When we see Chinese religious, what we see is Buddhism. It doesn't include other elements of Chinese variance spiritualism and in the case of the jue, not many people understand the Chinese dramas.

E: This one (brush), there not may non-Chinese people choose it, again, because the association between traditional and age. This brush looks not from 200 years ago or 500 years ago rather than recently manufactures. The brush works in a traditional way, but it has new looking. It may be just made last year. For the people who are unfamiliar about Chinese culture, they might have said that this is not as traditional as the hair comb or the fan. This looks like a modern tool. Even though it is a very special art form, but this is not old

for me. But if I think deeply, this isn't old, but the tradition is old. So I will drop the artifact, because we are looking at the artifacts.

J: I wonder were those brushes being bias on who took the survey. Your participants are artists or designers?

R: No, 70 % are non-designers.

T: The brush seems modern, you can go anywhere and buy it, unless it was from the back of the day and it was made in last century. I did models all the time and I have my painting brushes like this. I have never seen that cup before, so I cannot relate to (traditional Chinese design).

R: If you take a guess, where it comes from?

T: Japan, China, any foreign country. Depends on what options I have.

S: My sister-in-law, she works with Chinese art. She was surprised there is not calligraphy among her choice. Calligraphy may be more associated with Chinese culture, but not the brush, I don't know what calligraphy brushes look like.

E: Another thing for the non-Chinese people would not pick this (lacquer wine vessel *jue*) because the elements in this design. For example this shape (spiral), if you are not familiar with traditional Chinese design, you may associate them to ancient Greece. If you have educated with the differences, you would not have any problem. You may see this as some spiral square but

not part of creatures. It (spiral) is the shape you can find in ancient Greece that most westerners are more familiar with.

J: It looks like Holland red and black Greek pottery. From the photography memories, it looks like the black background and red pottery.

S: I came up with Greece, because how I think about the abstract shapes.

RA: I have done calligraphy before. So I know it (comes from China)

R: These are bottom three that selected by non-Chinese people. Why they don't think they can be representative of traditional Chinese design?

J: White porcelain cup is lack of decoration.

RA: Also it is a reasonable stuff you can find in Europe, it looks universal.

J: But that is spread out from China, the porcelain.

RA: But if you didn't know that (you would not associate it with Chinese culture).

S: I think the quality of the photography have impact on their choice, because I am not sure about the material. It (the white porcelain cup) looks like porcelain, but it may be ceramic? It is kind of thick. And I have seen it in the street festival in the United States. The scissors are totally unfamiliar to me.

E: If you never see it before, you try to pick one that you know that is traditional Chinese design. You are not picking one you have not seen before.

R: If you have not seen it before, why don't you think that is Chinese design.

E: You don't know what it is.

S: If I am totally unfamiliar with it, I can associate it (the scissor) with anyplace and it looks like silver to me and I don't associate silver with China.

E: The white cup is so modern, if you don't really know Chinese traditional Culture.

T: If you have knowledge of art history, you will know that is solid Chinese traditional design.

J: The more I look at the scissor, the more Chinese the look to me. In America, we have old style like shears that is large version of this, for garden work. But the decoration on the scissor, the plant sculpts and the cloud, are very distinct Chinese decorative wise.

RA: The wine vessel may come from other culture, like African Culture. When you see the pictures on it deeply, it may looks like Chinese. But at the same time, it also has very mild felt to it. If they weren't paying much attention to it, they may think it is form Mexico. I will automatically associate they are old, but I don't know where they come from.

E: It is hard to make out the design on this (wine vessel), because it is the same color. Unless you really know the shape, the material, you could associate it with China. There is nothing telling you enough about it.

J: I believe the material is Bronze.

E: I can't see enough, because it (wine vessel) is blended with the background. They look like stylized characters almost, but I don't know if they are. I don't

know what the patterns represent. I don't know if it is traditional or new age artist work. But it does look old.

T: I don't know lot of Chinese pattern. On the scissor, the clouds and plants do look Chinese, but, the cup is just so plain and just white. I have made one when I was taking a ceramic class. When it came out, I don't know where it is from.

R: The jade blade was selected by Chinese participants as non-representative of traditional Chinese design. Why do you think non-Chinese participants had selected it as representative one?

J: I know that is a burial knife, I know it comes from Daoist rituals. If you dropped it 800 years ago in the central of America in any village, nobody would back the eyes of that.

E: Because the pattern was so similar?

S: Because of the jade?

J: Yeah. America has jade products.

E: Maybe non-Chinese people associate it with martial arts of traditional China because it also looks old.

J: But there were just only 20% of Chinese people selected it. It has sort of martial use because it used to scare people, but it also has religious use. Since it was burial using, your Chinese participants may not be familiar with it.

E: Is this the similar pattern on that wine vessel, same face?

J: They are all bio-facial design.

S: This shape is identical (jade blade). I cannot image the non-Chinese pick the blade being as the representative. Because it is unfamiliar for me, I am pretty sure I picked the cup (white porcelain cup) from the Tang dynasty. I know the long blade from the movie. But I have not seen this before.

J: That not looks like actual martial arts.

E: It just looks very old.

T: Old is Chinese? Is that a dragon? The dragon will be associated with Chinese culture. It cannot be made in the modern. I guess it may be mixed with other old culture.

RA: The pattern, I would not associate it to Chinese. I have not seen it before, I never guess it was Chinese.

E: The other thing is thrown to me when I saw this thing on the survey is the circle, because I did wonder if it is something used to heal something to metal, like metal to metal. Why would the blade look like this? It is complex.

J: It is interesting having two materials.

R: Any other comments for these artifacts we discussed?

J: Some of them should have multiple views. And the brushes should have some background such as calligraphy.

E: What is the definition of tradition? Is that the artifacts itself? Or how it used? Because of this (brush) is very traditional use, but the device could be six

months old. What do you mean by traditional? Maybe Chinese people define the tradition as usage. But non-Chinese people focus on the artifacts themselves.

J: So it is necessary to show the usage of these artifacts.

CHINESE PARTICIPANTS

R: Why were the three artifacts shown above selected by Chinese participants as the most representative of traditional Chinese design?

H: The brush could be associated to the calligraphy. It reminds me the calligraphy and paintings.

J: The material (brush) is special for Chinese design. The wood handle and its texture are telling you it's from China. The hair of the brush is unique for Chinese design. People from other countries would not use this kind of hair for writing brush.

H: The jue has been selected by so many people because of the Chinese wine culture.

G: The material of the jue is so special. For wine cup, maybe only Chinese use lacquer to make wine cup. The form of the jue is also unique and it may have some implied meaning in it. The three feet here symbolized something from very traditional period.

H: And the form of the jue was popular in ancient China such as Ding (a big container with three feet) and censer for ritual. In ancient China, almost all the wine cups have this form. The fan makes me a little confused.

W: The fan may be appreciated by intellectuals and it is known that Chinese people respect for wisdom. So the fan gives them a feeling of Chinese culture.

J: Now, we still use the fan a lot. In summer, almost everyone has a fan for cooling. And it is easy to find them home. I think it can be selected by so many people because it is a daily supply.

H: This fan is not a common one for Chinese design. The painting on it is elegant and the skeleton looks making from expensive wood. It looks like a fan just for decoration.

G: The painting on the fan implies some traditional Chinese culture, the ink painting of the mountains and the water may come from some Chinese poetry. The painting reminds me some poem in ancient China, like pastoral. Also the wine cup, reminds me one traditional words: "No wine, no feast"

H: There are so many replicas of these artifacts. You can find the fan and the brush from Japan or Korea. But there is something you cannot copy, like the implying meaning of the painting on the fan, like the form of the wine cup (lacquer wine vessel).

G: We learned and read lots of ancient Chinese prose when we were young.

These three artifacts(fan, lacquer wine vessel, brush) almost appeared at the same time. They represent the lifestyle of ancient Chinese people.

Poets got together for drinking and started to write a poem on their fans. These three artifacts could be seen as a set of tools that were used by intellectual of ancient Chinese.

H: The fan could be associated with the painting and calligraphy.

W: The lacquer wine vessel is just so unique. It looks so special and you cannot find a replica from other country.

H: The brush and the fan, we are still using them in daily life. But the *jue* lost its value for using. I have never seen people using it for drinking, most of them only for decoration and for collection. It looks hard to use. But from the painted wood (lacquer wine vessel), you can tell the material development of traditional Chinese design. The *jue* was made from bronze before Qing. Then, people started to use wood which was easier and more convenient for carving. Also, I can picture life style of ancient people, like how they were drinking use the cup. Also the design of the cup make you have no choice when you are drinking, you have to swallow all of the wine in the cup, which implies the wine culture of China. Drink more.

J: People choose the brush and the fan not only because of form, material and color, but also the implied meaning, stories and images people seen or listened before.

G: The brush and the fan were very popular in China because they have been seen as representative of traditional Chinese culture.

R: The bench and the comb had been selected by non-Chinese participants as most representative of traditional Chinese design. But Chinese participants did not have the same perspectives. So why did not Chinese participants think they are representative of traditional Chinese design.

H: The first impression of these two things is that they must be very expensive. They are probably kept by some museums and people cannot see them in daily life. Moreover, the material and the form are so unique. The texture of the bench is so strange and you cannot tell the real material of it. It looks like glazed tile or porcelain.

G: These two artifacts have long history. Most of Chinese people have not seen them.

H: Chinese people in Modern time have not seen them also.

J: Even for collection, the bench is so hard to get.

G: They are so valuable.

H: That's why non-Chinese people selected them, because they are in the international museums or auctions. Maybe they have seen them before in these kinds of places.

J: Comparing the three artifacts before, the bench and the comb are not so Chinese because we are not familiar with them,

H: Even the wood comb we can see in daily life, the rich decoration like this is rare.

H: The bench is hard to use. We would not have this kind of bench in home. It is so big, not functional and too expensive.

J: In China, the furniture, most of them keep the original color of woods. They would not be painted in green.

W: What we have seen in our life, most of furniture are red or black or wood color. The lacquer like doesn't meet Chinese aesthetics.

J: If it was made of jade, probably it would be less strange for us.

H: The comb doesn't have any meaning in it. You cannot connect it to the Chinese culture. Not like the brush, you could imagine the calligraphy from it. Even decorated it with complex form and expensive material, it is just a brush that reminds you hair.

J: The form of the comb actually could tell you something about the lifestyle of the ancient people. It is different with the comb now. It represented different life style.

G: The form of the comb has been changed a lot from the ancient time till now. But the brush and the fan almost have kept the same appearance, so they may be more representative of traditional Chinese design. They have been inherited for thousands of years. The unchangeable thing could be the best representative of culture.

R: Why these three artifacts were selected by Chinese as bottom three to be representative of traditional Chinese design?

G: Color. None of them is red. They are so simple and plain. The white cup looks like designed by European.

J: The knife is used for war or martial supply. It reverses with Chinese culture that respects for harmony and peace.

H: The blade has modern form. It looks like a dagger that is created by westerns. But the decoration of the blade is kind of Chinese.

G: In china, we have very traditional “eighteen weapons” that does not include the dagger. The dagger, for Chinese people, cannot be regarded as a real weapon. And it has been seen a despicable weapon. Also the decoration is too simple.

H: The scissor is the design style of Miao, which is a minority of China. It cannot represent China. It is made from silver which is a popular material used by Miao people.

G: Simple, plain, no distinct features.

W: They don't have symbolization and there is no meaning under it.

J: You cannot tell the history from them.

H: The form is so modern. And the design is clean so that they don't have the historical sense.

G: The scissor is not familiar to us, but older generations may have seen this before and use it often. We already forget what it is.

W: Also, the scissor was still manufactured in 1990s.

H: The silver is not a popular material in ancient China.

G: For the ceramic, Chinese ceramic is more complex and have some bright colors on it. They may have more rich decorations. Also the form is more elegant than the white cup.

H: These three artifacts don't have the royal feeling on it. The traditional Chinese design emphasis more on luxury. The rulers who supported the designers wanted to show their power on their artifacts.

J: Lack of meaning.

H: Traditional Chinese design is more complex, elegant and luxury.

W: For collection, still a lot of people appreciate the appearance of the traditional artifacts.

H: What we have seen usually are imperial artifacts. They are easy for inheriting.

W: The artifacts from citizens are all plain and simple. And they are hard to be inherited.

H: Some porcelain made for the rulers are rear and expensive. And they probably put lots of efforts to protect it.

J: Compared to other things, they are less representative. If I have better choice, I would select other things instead of these things.

W: They don't have enough decorations.

R: These two artifacts had been selected by non-Chinese participants as most non-representative of traditional Chinese design, but Chinese participants considered them to be representative. Why?

G: I have seen the wine vessel in Taiwan museum. It has some Chinese characters on it, which easy to tell it is Chinese. It is more representative than others because of the characters.

J: It looks old.

H: It looks a part of some weapon in recently dynasty. If it is a wine vessel, it is for ritual.

W: It looks complex, especially compared to others.

J: I don't think it is representative.

G: The key is that it has some kind of decorations on it. You can see the lines and grains on it including the shape on it. It looks like a face. You can have some imagination from it. Other three things are looking like tools. The animal

face here is telling you some stories. Not just a tool, but related to some deep culture.

W: The artifacts for daily use have fewer things to concentrate. The wine vessel may be made for rulers for ceremony not for common use. It represents high classical people.

G: The characters could be recognized as Chinese. They are telling the history.

W: The wine vessel would not be manufactured in modern society. Less functionality is a feature of traditional Chinese design.

G: The wine vessel could be representative is because of the characters.

H: The wine vessel is a heavy artifact. It looks big and the shape is clear.

Big one could have more features and content in it. So it may be more representative because of the content in it.

G: The material—bronze is more representative.

G: The culture of Han has not been inherited a lot, the wine vessel is hard to be perceived as Chinese, because in the history of China, Han culture is lost.

Minority governed the China for such a long time. And the culture has been influenced a lot by them.

G: the ancient currency could represent Chinese design more.

Comments

G: Furniture is more representative and easy to inherit. They also include lots of Chinese elements.

H: The lines, grains and shapes could be showed to non-Chinese participants.

G: The color could be a choice. Show people different colors to select which ones are more representative. The green may be associated to the jade by non-Chinese people.

W:H: G: Red is the first one, and the second maybe yellow.

J: White is associated to white jade. So it is easy related to Chinese design.

APPENDIX E
CONSENT FORMS

Discover design elements of Chinese traditional artifacts

Date

Dear, Participant,

I am a graduate student under the direction of Professor Jacques Giard in The Design School at Arizona State University.

I am conducting a research study to identify traditional Chinese design elements. I am inviting your participation, which will involve your knowledge in recognizing and categorizing some products and labeling the design elements which influenced your decisions. Also, I will ask some questions after the survey, and all the questions are related to the choice you made in the survey. Your participation in this study is voluntary. If you choose not to participate or to withdraw from the study at any time, there will be no penalty. Your responses to the survey will be analyzed in my conclusion, which will be used in my MSD thesis but not used for commercial purpose. Your identity will not be revealed in the research study. Although the activity will be photographed, your face will not appear. And the interview will be audio recorded. Furthermore, the photographs and the audio will be erased upon completion of the study. Your responses will be anonymous. The results of this study may be used in reports, presentations, or publications but your name will not be known/used. If applicable, results will only be shared in the aggregate form.

If you have any questions concerning the research study, please contact me at: iren7@asu.edu or by phone 4089217357 or the investigator JACQUES.GIARD@asu.edu. If you have any questions about your rights as a subject/participant in this research, or if you feel you have been placed at risk, you can contact the Chair of the Human Subjects Institutional Review Board, through the ASU Office of Research Integrity and Assurance, at (480) 965-6788.

Also, I need your email address for further information. If you admit to attend this survey, Please write down your email.

Sincerely,

LiqiRen

APPENDIX F
IRB CERTIFICATE



Office of Research Integrity and Assistance

To: Jacques Giard
DS

From: Meri Rosta, Chair
Soc Res IRB

Date: 10/29/2012

Committee Action: Exemption Granted

IRB Action Date: 10/29/2012

IRB Protocol #: 1210008593

Study Title: Discover Visual Design Elements of Chinese Traditional Crafts

The above-referenced protocol is considered exempt after review by the Institutional Review Board pursuant to Federal regulations, 45 CFR Part 46.101(b)(2).

This part of the federal regulations requires that the information be recorded by investigators in such a manner that subjects cannot be identified, directly or through identifiers linked to the subjects. It is necessary that the information obtained not be such that if disclosed outside the research, it could reasonably place the subjects at risk of criminal or civil liability, or be damaging to the subjects' financial standing, employability, or reputation.

You should retain a copy of this letter for your records.