Applied Research on “Fallibility” Chinese Character Aesthetics in Package Design

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Abstract. Chinese character is a symbol with the function of information communication, its design thought and method are of widespread significance to package design. The thesis has introduced the “Fallibility” ideas into Chinese character design to analyze the relation between “Fallibility” of Chinese characters and the identification of Chinese characters, and how to shape “Fallibility” features. Visual communication needs to break people’s common visual habits to manifest most abundant and profound content in simplified and symbolized form, besides, by extracting highly precise graphic language and easily understandable arrangement order, it can deliver expected connotation. The thesis studies how to use “Fallibility” idea for reference to form directive design method, so as to make Chinese character more flexible and exploit more free space for theoretical research and practice of package design.

1. Introduction

“Fallibility” in Chinese character recognition makes people broadly recognize Chinese characters. As a symbol to bear information, characters are required to be accurate, standard and clear in information communication, but in visual design art, character design shall realize maximally visual differentiation on the basis of being recognized. Modern Chinese character art design strives for design method with open visual appeal, as shown in figure 1.

![Figure 1. Chinese character design research relation](image)

2. Current status of research

2.1. Current status of domestic research
During the long-term evolution, Chinese characters manifest configurative features like one character in several typefaces and one character in several fonts. On the one hand, Chinese character font presents its diversity and increases visual variation in application, so as to offer various font basis for further art creation. On the other hand, configurative features of different typefaces also reflect predecessors’ open and inclusive attitude toward recognition and application. It’s believed that Chinese character “Fallibility” can play to the fullest. In Chinese character information structure, by maintaining key and stable part as the feature and adopting the rest parts for transformation, characters won’t lose its ideographical meaning no matter how diversely font transforms in application. Therefore, both functionality and artistry can be possessed. Regionally divided, there are mainland China and HongKong, Macao and Taiwan.

2.2. Current status of foreign research

In foreign countries, character design research initiated early, attracting great emphasis and owning diversified methods. In spite of China- the birthplace of Chinese character, countries and districts which have been impacted by Chinese character are from Southeast Asian neighboring China. In history, districts which had set Chinese character as communication language and cultural carrier are mainly Japan, North Korea, Vietnam and so on. From the aspect of visual communication design, as for foreign designers, Chinese character is a kind of graphic language. In other words, for the discrepancy in cultural background and cognitive concept, they directly design and apply Chinese character to produce distinctive visual effect.

2.2.1. Korean character design. Early in 1985, Ahn Sang-soo systematically researched phonetic Korean character from 600 years ago, found the beauty of Korean character and created a Korean typeface named with his family name Hangul. Subsequently, he designed typefaces lee, myrrh and mano, and then provided abundant and practical resources for brand creativity in Korean graphic design, as shown in figure 2.

![Figure 2. Poster design Ahn Sang-soo (Korea)](image)

2.2.2. Japanese character design. Japan may probably be the country which has adopted the most Chinese characters. Chinese character design in Japan is mainly precise and forms its own series of aesthetic concepts. Shiraki Akira, a Japanese design, has skillfully applied Chinese characters as graphs into graphic design. When designing, he has also introduced “Fallibility” principle into typeface. For design requirements, some parts of character have been exaggerated, the conclusive graphic characters can not only be readable and recognizable, but also be more beautiful in form, as shown in figure 3.

![Figure 3. Character design Flower, Shiraki Akira (Japan)](image)
3. Origin of “Fallibility” philosophical idea

K·R·Popper, a famous western philosopher of science, proposed scientific knowledge rule in his Conjectures and Refutations published in 1962: a given problem situation - tentative theory - error elimination - more and more interesting problems, as shown in figure 4.

![Figure 4. Scientific knowledge rule in “Fallibility” Philosophy](image)

Popper’s “Fallibility” idea is of important theoretical value and practical significance, and of vital guiding significance to scientific development. “Fallibility” principle highlights subjective initiative in scientific research process, stresses on connotation, finds out a key point for scientific development, and proposes to hold a scientific attitude of positively learning from error.

3.1. Take a new look at Chinese character design from the aspect of Chinese character font “Fallibility”

“Fallibility” philosophical principle offers a brand new perspective for recognition. It has not only re-positioned “false” opinion and value from ideas, but also provided more beneficial reference to methods. As a scientific discovery, trial-and-error method is rational to a certain extent, in addition, it reflects actual status of scientific research and development, and then leads to methods of discovery and trial. In conclusion, this thinking mode is indeed worthy of reference and study.

3.2. Chinese character development and evolution in the view of “Fallibility”

Diversification of Chinese character font makes it more flexible in design and abundant in visual variation. Different typefaces have different constitutive features, which can present predecessors’ inclusiveness and openness toward Chinese character font cognition and application. Chinese character font “Fallibility” can be appropriately played in this thinking mode. In the process of Chinese character development, important parts of Chinese character structure are maintained as features, and other parts are applied to be varied, even being richly varied, the original meaning of Chinese character can still be kept, so the vitality of character can be fully presented from both function and art.

3.3. Relation between “Fallibility” and the developmental evolution of various calligraphies

The evolution from inscriptions on bones or tortoise shells of the Shang Dynasty to inscriptions on ancient bronze objects, small seal style, an ancient style of calligraphy current in the Han Dynasty and regular script is actually the process of Chinese character steps to simplification and abstraction. For instance, after being evolved, an ancient style of calligraphy current in the Han Dynasty has completely separated from graphic feature, broken away from illiberality of Chinese character font combination, besides, Chinese character has transformed from graph to character, from visualization to abstraction. Chinese character font can be divided into parts, and part can be disassembled into strokes. Basic strokes have become the most perfect fundamental elements in character font spatial combination, based on various arrangements and combinations, they can constitute more than 200 parts and then form Chinese characters with different structural relations. Aesthetic elements of Chinese characters lay the foundation for calligraphy. Calligraphy’s aesthetic image, theory and artistic spirit are inseparable from false or true, yin or yang and symmetrical arrangement and aesthetic pursuit of Chinese character modeling. The developmental evolution of Chinese character makes archaeologists and litterateurs agree that inscriptions on bones or tortoise shells of the Shang Dynasty is the earliest and most systematic Chinese calligraphy. Restricted by writing instruments at that time,
most characters were carved by knife, strokes were simple, neat, slim, averagely distributed, mostly squared and folded, and unvarnished, so subsequent writing brush and knife used for seal cutting have been imposed with a far-reaching impact.

4. Chinese character “Fallibility” idea in package design
In modern Chinese package design, graphic character design adopts basic strokes for design through methods like addition, variation, subtraction, connection and so on, highlights symbolic meaning and commodity feature and attribute of Chinese character, emphasizes on form and decoration, conforms to Chinese character form, corresponds to basic character strokes, extends character imagination and pictograph, so as to make characters easily known, readable, abundant in connotation, and possess various techniques. Although character structure has been arranged, processed, changed and recreated, it’s obvious that recognition of Chinese character can not be decreased in package design, for connotative font “Fallibility” and Gestalt effect mutually affect each other. As shown in figure 5.

![Figure 5. Zhuyeqing Tea Logo by Chen Youjian](image1)

If Chinese character elements are separated and recombined into packaged design, the same visual feeling will be generated. In package design of Seiko watch, the designer has directly presented product feature in package, as this type of watch is exquisitely designed, four Chinese character Dong, Nan, Xi, Bei (representing directions like East, South, West and North) are organically combined with numbers like 3, 6, 9, 12 (representing time scale) on plate, it has broken people’s existing visual habits and thinking mode, and then bestowed watches with abundant imagination and connotation. As shown in figure 6.

![Figure 6. Packaging design of Seiko watch](image2)

As Chinese character strokes are well-arranged and varied in both static and dynamic statuses, character layout will be skillfully changed to better conform to the topic, and satisfy with consumers’ psychological demands, so a relaxed, humorous and casual visual manifestation will bring about considerate care and understanding to people. In terms of real package design, a kind of typeface won’t be directly applied. When designing package for Chinese cultural products, historical brands and local specialty, a certain kind of calligraphy will be directly applied, however, while creating and innovating calligraphy in modern product packaged design, it will generally integrate times feature and product feature for variation, so as to form an enjoyment for consumers to easily recognize and accept, and innovative fonts that conform to product selling. As shown in figure 7.
In cognitive psychology, illusory effect means that as two or more simulations rapidly present, their feature or parts will be mistakenly recombined. As shown in figure 8, the package design of Food is the Paramount Necessity of the People (民以食为天) dinnerware adopts illusory effect of Chinese character recognition, by dismantling and recombining “民” (people) and “食” (food), a brand new deconstructed Chinese character is presented. “民” can be seen in “食”, and the concept of Food is the Paramount Necessity of the People (民以食为天) is integrated into package design to present diversified psychological imagination and visual enjoyment.

In semiotics, entropy is used to present information capacity contained in unit symbol, its unit is bit. Chinese scholars have concluded in data investigation that entropy of a Chinese character is 9.65 bit, far more than those of Latin letter and Slavonic letter in Indo-European language. Character information capacity has provided more expression methods to designers, endowed Characters more brand information, and burdened greater brand mission, as shown in table 1.

| Language  | French | English | Japanese | Chinese |
|-----------|--------|---------|----------|---------|
| bit       | 3.96   | 4.03    | 4.81     | 9.65    |

Character, part and stroke are highly flexible, and can offer an abundance of possibilities in design. In designing label, logo, poster, book, package and electronic media, as for Chinese characters to be applied, both part and entirety, periphery and connotation can be varied according to actual requirements, recognizable parts can be maintained, and the rest parts can be varied.

5. Conclusion
Cultural in modern package design, design with Chinese character as elements can deliver the most direct and accurate information. Through exploring Chinese character structural form, character design can better combine form, information communication and graphic creation, merge character font “Fallibility” with artistic associations, so as to make information communication more accurate, rapid, appropriate and unique, endow character with incomparable flexibility in design, and expand a diversified space for character’s formal creative design. At present, there have appeared some new calligraphy systems which can’t be strictly classified into any category, for they are not written according to a certain type, actually, they are created by combining with design environment, principle or written by computer programs or generated by comprehensively applying several methods. A great amount of information delivered by Chinese characters can offer designers more design methods, so
Chinese character definitely deserves to be the best element in Chinese package design. The existence of Chinese character recognition “Fallibility” makes character “Vague” in recognition. By means like deformation, recombination of two different graphs, reversion, simulation, decomposition and reconstruction, addition, graph combination and artistic conception, design with Chinese characters as elements is processed in an artistic way. Chinese character font “Fallibility” is well manifested in character design.

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