

# Inspiration from the Structure of Calligraphy in Modern Format Design

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**Abstract**—Calligraphy is a Chinese traditional culture with broad and profound content. By studying combinational relationship and rules of each part of Chinese characters, we found that a lot of theories are similar with those of modern format design. Therefore, the author tries to find the theoretic rules from calligraphy to guide modern format design and create some format arrangements according to the combinational rule of Chinese characters, so that we can see that the combinational rules of Chinese characters could guide the modern format design.

**Keywords**—structure; format design; inspiration

## I. INTRODUCTION

As one of excellent Chinese cultures, calligraphy contains rich art principles and aesthetic thoughts, which has a profound impact in all walks of life in China. For example, small inscribed boards, couplets, pavilions and terraces are all included calligraphy. Painting art and architectural art are also derived from the beauty of harmony and form of Chinese calligraphy, which could be said “the highest level of art”. Viewing from plane layout of Chinese character structure, it is exactly the same with our modern graphic design. Especially, there are close relationships with format design. Our character rules and the format design of ancient books are very distinctive. But in modern times format design we use is introduced from foreign country. We forget the complete set of calligraphy system our ancestors left. The paper has analyzed the structural rules of Chinese character and its influence and inspiration on Chinese-style format design from similarities and differences of the structural principles of Chinese character and the design principle of modern format.

The structure of character is also called formation, frame, arrangement, layout, distribution or form. They all refer to the structure of character which is the key of calligraphy[1]. In ancient times, there were many calligraphic researchers and works, such as Zhi Guo’s Praise with Heart, Ou Yangxun’s Thirty-six Methods, Chen Yizeng’s Hanlin Knack, Li Chun’s Eighty-four Methods for Character Structure, Wang Yingdian’s Buzibingyuan and Sanmei of Calligraphy, Huang Ziyuan’s Ninety-two Methods for Character Frame, Bao Shichen’s Nine-chamber Method and Liu Xizai’s Huozhonggong. These works have summarized the structural

rules of characters which are valuable basis for later generations to study calligraphy as well as great wealth of Chinese culture. The structural method of forefathers includes two aspects: character shape and pattern. The shape is static but the pattern is dynamic. The structure of calligraphy masterly combines the shape and pattern. In the layout of Chinese character shape, the most important is the contrast relation, for it could produce vivid sense of beauty. From the view of position relationship, there are four aspects: primary and secondary, partial and positive, vertical and horizontal, toward and backward. There are all dual artistic dialectics. They reflect the opposition and uniform relationship of Yin and Yang in ancient Chinese philosophical thought. The shape determines the pattern of structure. Different characters are given with different stroke order. It is the most unique aesthetic characteristic that calligraphy is different with other visual arts. Strokes and rules all follow the sequence: from top to bottom (“字”), from left to right (“可”), from horizontal to vertical (“十”), from left falling to right falling (“木”), from middle to sides (“小”), not more than three turns (“凸”, “乃”). Gather points and create characters; gather characters and form lines; gather lines and form passages. The pattern is different but uniform and harmonious.

As an important part in modern design, format design is an expression form that makes necessary arrangement and form vivid, clear and concise combination easy for reading, with clear priorities, to convey unique individuality and artistic characteristics in a limited format space. It is similar with the structure of Chinese character. The paper has analyzed the relationship between the structural layout of Chinese character and the modern format design

## II. THE STRUCTURAL LAYOUT OF CHINESE CHARACTERS AND ITS SIMILARITIES AND DIFFERENCE WITH THE GRID DESIGN

According to the formative properties of Chinese character structure of Wang Ning, Chinese characters are formed by certain models. Its basic parts show some layouts. The following are 12 common layouts “Fig. 1”.

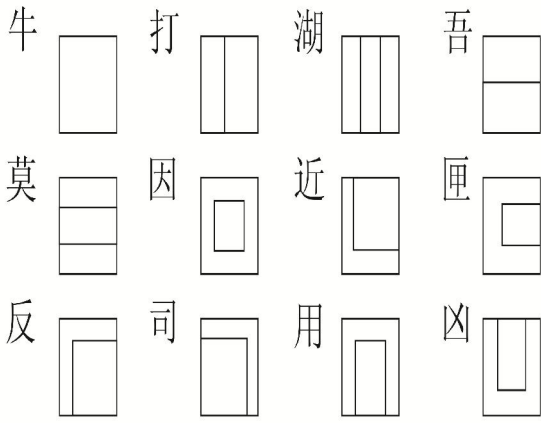


Fig. 1. Layout Pattern of Chinese Character Structure

Some layout patterns are multi-layer and applied repeatedly in a multi-part character, presenting a complicated layout pattern, as shown in the following “Fig. 2”.

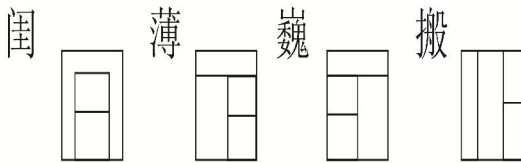


Fig. 2. Layout Pattern of Complicated Chinese Character Structure

The above 12 layout patterns are simple, while these simple layout patterns could be applied together, forming complicated layout patterns. It is different in approach but equally satisfactory in result with the grid system in modern format design. Grid refers to a special system with a series of equivalent spaces or symmetric spaces. In this way, the continuous order or reference area is established for arranging the scale and position of various elements (shape, words and color), so as to establish universal relationship among all elements. Grid units are composed of vertical lines and horizontal lines. Grid is defined by the numbers of vertical units and horizontal units. A grid with two columns and three lines is called 6 grid or 2×3 grid. Once grid is established, the words or width and length of pictures could be adjusted at will or could occupy many grid units[3]. The simple grids with two columns or three columns are usually used in format with text as main editing object. Use complicated with three or more columns for format with illustration and picture as main editing objects. The more complicated the grid is, the more flexible and difficult your design will be. Simple grids could be applied repeatedly for complicated purpose.

In the layout patterns of Chinese character structure, the layout pattern of single-part character is similar with the full-column layout in format design.

The layout pattern of Chinese character in left-right structure is similar with two columns in format design. The difference is that the widths of columns can be equal or different. If use four columns, arrange some explanatory words in first column and merge the rest three columns into one. It looks like the pattern of two columns, but the two columns are of different width. If using three columns, merge two columns of three column and form a two-column pattern. In the structure of Chinese characters, there are also three types. The symmetric bilateral characters with same width are “囍”, “林”, “双” and so on. The dissymmetric bilateral characters are “献” and “都” (wide left and narrow right); “汉” and “接” (narrow left and wide right). This is very similar with column division in modern format design. Chinese characters pursue the beauty of asymmetry and the dynamic beauty and the whole beauty in changes in a harmonious way. According to the left-right structure of bilateral characters, there are primary and secondary. Even Chinese characters with same scale on two sides also pursue some changes. Take “林” as an example. The “木” on the left side is smaller than that on the right side. It follows the principle of “modesty” in Ou Yangxun’s Thirty-six Methods for Character Layout. For bilateral characters, the components of Chinese characters shall be modest and arranged properly and not affect others. Therefore, the changes of left side and right side of bilateral characters could guide the change of two columns in format design. It is unnecessary to divide into two same columns. There can be some changes and the format would be flexible. Of course, it should be determined by the content and theme of design format. Some themes may not be suitable for too many changes, and some may changes a little more “Fig. 3”.

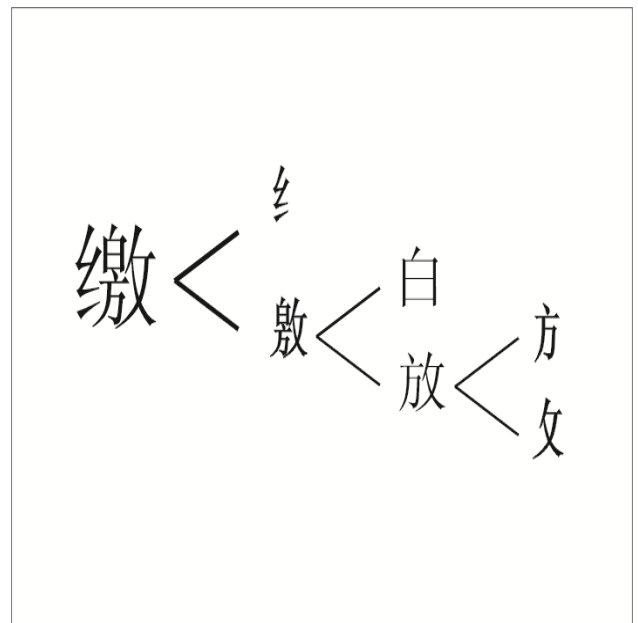


Fig. 3. Combinational hierarchy of “缴”

The layout pattern of Chinese characters in the left-middle-right structure, such as “撤”, “缴”, “微”, “狱”, “御”, “班”, “斑”, “瓣”, “辨”, “辩”, “辮”, “粥”, “衡”, “街”, “街” and “激”, is just like three-column format in modern design. Three columns can be arranged independently, or two of them can be merged into one. Chinese characters in left-middle-right structure could be divided into two types. For example, in “Fig. 3”, we can see that “缴” is a character in left-middle-right structure. This character is composed of radical element and phonetic element. The radical element occupies a smaller space and the phonetic element occupies a larger space. The secondary components of “白” and “放” are interwoven together. They are not in symmetrical structure. The tertiary components of “方” and “反” are not of same size. “方” is a little smaller than “反”. From the hierarchy and combinational methods of Chinese characters, we could get the arrangement changes for three-column format. For example, in “Fig 4”, the up-down structure and up-middle-down structure in layout pattern of Chinese character are just like the horizontal lines (two or three horizontal lines) in modern format design. The layout of Chinese character is particular about changes. In the up-down structure, the upper element can be larger than the lower element, such as “吾”; or, the upper element can be smaller than the lower element, such as “昌” and “岳”. In writing, the former character’s upper part is wider than the lower part and the later character’s upper part is a little narrower than the lower part, so that the characters look beautiful. We could use these principles to guide modern format design. For example, if use the up-down structure to arrange image-text, the area occupied by the picture in the upside could be smaller than that of text in the downside. It is like the up-down structure of “花” and “芬”; the upside is smaller than the downside. Or the area of text can be larger than that of picture. If put picture under text, the area of picture can be larger than that of text. All in all, the area of picture shall be different with that of text. It conforms to the principle of beauty and comparison and the relationship of primary and secondary. For example, in “Fig. 5” the laws of modern format design could be found in the rules of structure of Chinese characters.

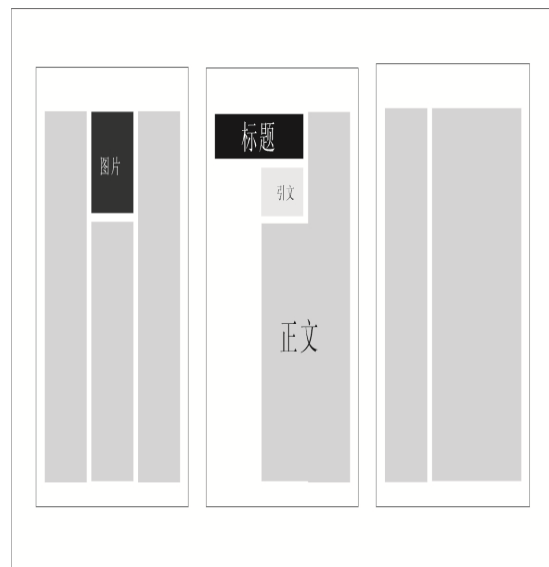


Fig. 4. Format arrangement according to the hierarchy of Chinese character

There are also a lot of Chinese characters in semi-enclosed structure and full-enclosed structure. We could try to design some modern format according the layout of semi-enclosed structure to arrange the article of Discussion on Religious Art in the following figure with at most two pictures. The left upper side is Chinese character. The left lower side is structure. The right side is the format arrangement designed according to the structure of the Chinese character. We could design different arrangement schemes according to the structure of different Chinese characters for same content. Some of them focus on picture, so the area of picture should be large, such as the structures of “近”, “司” and “反”. Other formats are the other way around. The area of pictures is smaller than that of text. Therefore, we could get inspiration form the structures of Chinese characters in processing the relationship of picture and text. Pictures could be set in different position in the format. We could apply it flexibly in reference of the structure of Chinese characters, rather than mechanically. We could apply the dividing relationship, scale relationship of area and position relationship flexibly into the modern format design in order to design unique format.

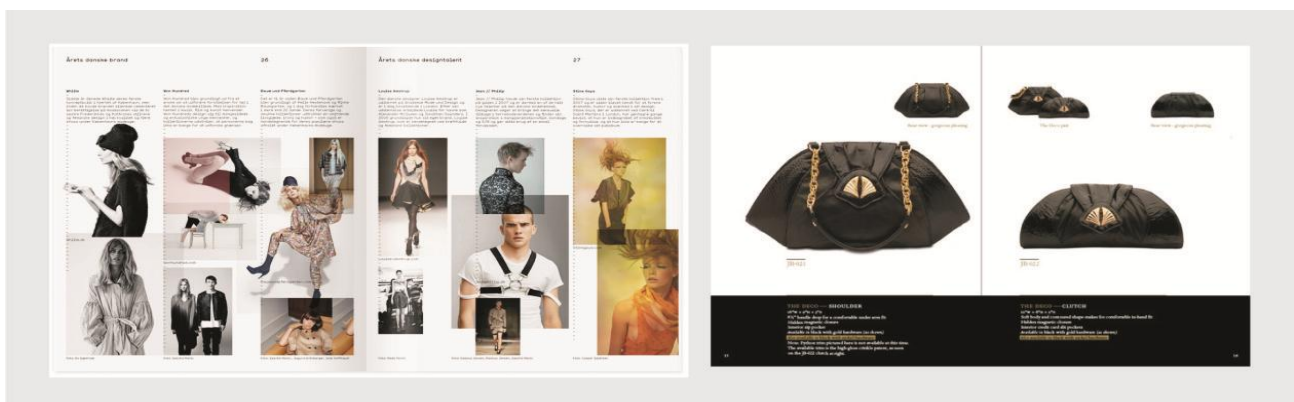


Fig. 5. Modern Format Design

### III. THE STRUCTURAL LAYOUT OF CHINESE CHARACTERS AND ITS SIMILARITIES AND DIFFERENCES WITH THE IMAGE-TEXT PARTITION IN FORMAT DESIGN

The layout relationships of picture and text in modern format design could be summarized into the following types:

1. Up-down division. It divides the format into two parts, the upper part and the lower part. One part is for pictures and the other is for text. This division format is similar with the up-down structure of Chinese character. The upper part shall be a little larger or smaller than the lower part. Even for the character with same size of parts, we may write the upper part smaller than the lower part, so that it may look steady. It also makes changes in structure, such as “吕” and “昌”. In format design, we seldom divide two identical spaces to arrange picture and text. Either the picture or the text could occupy large area. We could combine them according to the theme. In this point, the rules of the structure of Chinese character are consistent with the laws of format design.

2. Left-right division. It divides the format into the right part and the left part. According to visual habit, put picture in the left side. Put small pictures and text in the right side. If the light and shade of image and text form a strongly contrast, it could produce a lofty and solemn sense. And the area of picture shall be larger than that of small pictures and text if the pictures are main elements. It is also workable if we put picture on the right side and the text and small pictures on the left side. The format is similar with the left-right structure of Chinese character, which has been clearly said in previous passages.

3. Repeat arrangement. Arrange text and related pictures repeatedly in a format. The repetition of same content may stress and highlight the theme. It could be arranged repeatedly in size, direction, grid unit, uniform color, uniform format and same header. In a word, it is very common in continuous pages of a publication. In combination of Chinese characters, there is a special combinational pattern. There are overlap characters, such as “林”, “从”, “品”, “鑫”, “森” and “淼”, with two or three same words overlaying together. Laozi said “Dao bears primordial qi; primordial qi bears Yin qi and Yang qi; Yin qi and Yang qi bears man and the universe; man in the universe makes things in the world. The world is composed of negative Yin qi and positive Yang qi. The Chong qi could balance them”. It reveals the reproducing law of all things and the structural law of all things. The combinational pattern of Chinese character comes from the result of nature. Therefore, the law of repetition is inspired by nature, for they are similar in this point.

4. Keynote-centered arrangement. The centered format is usually in an attractive shape. The sight of people may tend to the center part. If put key pictures or headline in the center, it may serve the function of emphasis. It is similar with the structure of Chinese characters with centered main stroke and other strokes surrounding it. For example, the vertical stroke of “丰” is the main stroke. Just like Zhu Hegeng said: “set the main stroke of a word, then the structure will be tidy. The

layout, pattern, structure, operation, side flow and support are all follow the main stroke”.

5. Symmetrical and balanced arrangement. Elements are arranged symmetrically or balancedly in the format. The symmetry and balance are the rules of all things. Making character is no exception. No matter single-part character or multi-part character are all designed with symmetrical and balanced pattern. For example, in single-part characters, the structures of “半” and “十” are symmetrical; the structures of “也” and “与” are balanced. The structure of “晶” is symmetrical. Most of combinational characters are in balanced structure, such as “跳” and “提”. All characters, whether there are balanced or completely symmetrical, have a symcenter to keep structure of character balanced. Therefore, we practice calligraphy in intersected figure traditionally. The center of each word is around the geometric center, which is determined by the specific character. Ancient people also use the nine-chamber method which divides square Chinese character into nine identical parts. The centered grid is called centered chamber; the top three grids are called three upper chambers; the bottom three grids are called three lower chambers. The left one is called the left chamber and the right one is called the right chamber. The center of every character may be distributed in the centered chamber.

6. In the frame-typed arrangement, we may either put text or picture in the center. If put text in the center, we may put picture around; if put picture in the center, we may put text around. This arrangement is similar with the full-enclosed structure of Chinese character. The full-enclosed structure of Chinese characters, like “回”, “因”, “圈”, “国”, “园” and “图”, has same effect with the frame-typed arrangement in modern format design. The difference is that in format design the text and picture of framed arrangement have no fixed position. The text could be arranged in the center or around the center. But the outside frame is same with outer frame of Chinese character in full-enclosed structure and the inside strokes are different, as shown in “Fig. 6”.

### IV. CONCLUSION

The structure of Chinese character is completely in a plane form. Its combinational rules certainly comply with the laws of nature. The theory of modern format design is also involved in the relationship of arrangement and combination of elements in two-dimension space. Through above analysis, we know that there are a lot of similarities between them. Of course, we only elaborate the structural rules of Chinese character from the aspect of combination in order to guide modern format design. Calligraphy also includes many other aspects, such as art of composition, method of the use of ink and water, technique of writing and so on. The author hopes that more rules and principles could be concluded from calligraphy in order to apply them in our modern design and give our format design with “Chinese style”

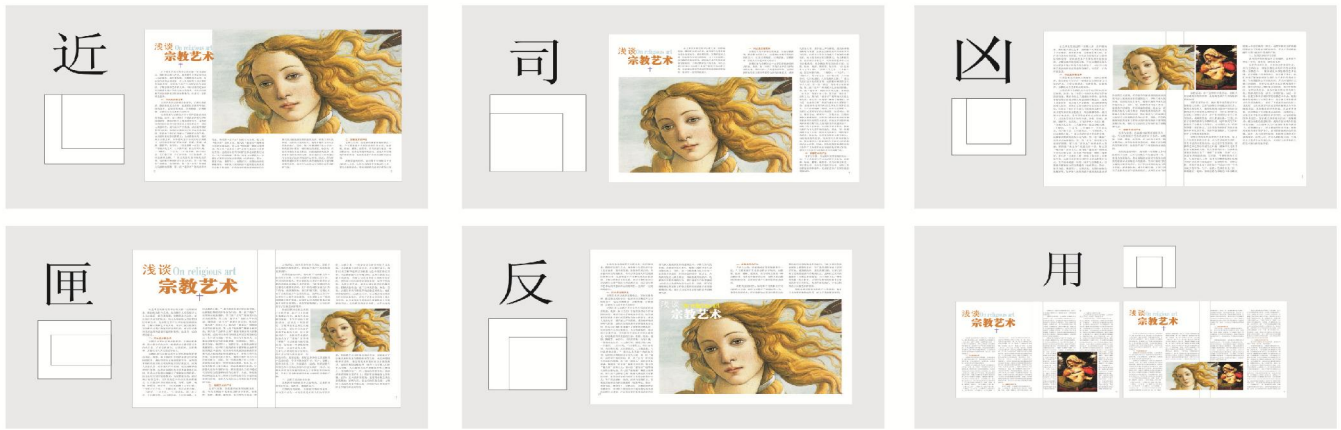


Fig. 6. Frame-typed Arrangement

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