The Rational Combination of Symbols in Graphic Design of Information

XIN WANG and CONGMEI ZHAO

ABSTRACT

In this paper, the information design elements - information design symbols as the starting point and the full text of the central content, attention to information graphical design. This paper analyzes and discusses the formation and rational selection of symbols in information graphic design from the aspects of rationality of symbol function and form, rational selection and use of symbol type. It is hoped that through the research of symbolic characteristics in information graphic design, the law of symbol formation and symbol propagation can be obtained, which can promote the intuitive and effective communication of information and the profound and effective display of design culture.

KEYWORDS

Information design, graphical, symbol, reasonable allocation.

INTRODUCTION

With the advent of the information explosion era, people are faced with the "information overload" plight; integration and planning design of information are urgently needed. Therefore, the information design has attracted increasing attentions by all walks of life. Information design can be conveyed in various ways, of which the information graphic design is the most popular. Information graphic is a trend that visualizes information, data, and even a viewpoint, and information that is graphically expressed can be more efficiently and clearly conveyed, the time that people receive information and accuracy are shortened. From the microscopic perspective, in the construction of graphic design of information, the generation and selection of symbol, the construction of the symbolic system become the decisive factor of the success of the information design work, and it is the problem that designers most attach great importance to. Designers should follow the requirements of specific practice and symbolic characteristics; complete the reasonable allocation of symbols from the combinations of symbols, semantic communication, and application effect perspective.
THE RELATIONSHIP BETWEEN INFORMATION DESIGN AND SYMBOLS

From the perspective of design art discipline, information design is to analyze and organize data and information in reasonable way, make data and information spread in a proper way, and complex and difficult data is easy to understand; information design can state information content with pictures, materials, technology or media and other forms, and make the data clear. Among them, the visual graphic is the most important expression form of information design.

"Humans are symbol animals" said by E Cassirer. Human development is inseparable from the symbol, and it is medium that human understand things and instrument that realize information storage, memory, while it is an expressive means with ideographic function as well. Information design uses image, language, text, color, and point, line, surface, space and other visual elements constitute the design symbol system, and then form information graphic design with different styles. It can be seen that the visual graphics system in the information design is a special symbol system, which is the main carrier of the information design, the graphic design of the information itself is composed of symbols and appear in the form of symbols, and the symbol is used as an expression medium as well. Therefore, the information design is a specific symbol phenomenon.

THE RATIONAL COMBINATION AND APPLICATION OF SYMBOLS IN INFORMATION GRAPHIC DESIGN

The expression ways of information design are various, by contrast, abstract information are carried out graphic design to convey feeling, which is more easily accepted by people. In the visualization process information, how to integrate information, how to rationally accurately select and construct the graphic symbol system in accordance with the needs, characteristics and audience of the information and other objective factors, thus effectively conveying the information becomes the key of the problem. From the perspective of information theory, the graphics in design works only carry rich information content, optimize the arrangement structure, and ensure the effective communication of information in order to maximize the function of visual communication. Here the graphics should be understood as a broad graphics, including text, icons, images, charts and other visual design forms, it can be seen as a complete symbol system. The generation of the design symbol and choice of rationality should be considered from two aspects: first, the basic design elements of the design work - namely, the graphics, text, color symbols with independent meaning should be appropriate to expressed information; secondly, according to differences of information needs, choose the corresponding symbol type, symbol semantic level, symbolic pragmatic norms, so ensure the generated and selected symbol system, it can reasonably and accurately express all the requirements of information.

Rational allocations of symbol function and form

The rational combination and application of graphics, text, color symbols will affect the final convey results of information. The combination and application of information graphic symbols should attach importance to the form expression and
function embodiment of the symbol system during the design. The pursuit of form beauty is the instinctive reaction of people. The form of symbol system is unique and novel, which can stimulate people's instinct consciousness, and it is conducive to the spread of information. The expression of form beauty can be achieved by formation principles and aesthetic law. The proportion of the characters in the information design cannot be ignored, which mainly play a role in explaining and prompting information, and sometimes it even becomes the only symbol of information design works. The characters mainly appear in the form of font design, when choosing font symbols, should comprehensively consider based on the purpose of information - namely, consider the use environment of the font, the audience needs, many factors that interfere symbol function, ensure the readability and cognition of font symbols. For example, the fonts in the expressway signs should consider the transmission function of the font symbol under the condition of various complex weathers, and also take into account human physiological structure and response, choose the best characters combination. In addition, we should pay attention to the use of color symbols, because of own attributes of color; characteristics have an important influence for human emotions and cognition. For example, for the spread of information on food, when designing, it should consider the choice of yellow, orange and other color symbols, because it can stimulate people's taste buds, evoke people's appetite; the information expression on high-tech products should more consider blue, because it can give people calmness, precision, scientific and technological sense; promotional information of women's product should consider the choice of pink, peach blossom and other symbols, they give a gentle, elegant feeling. Of course, the design object is very rich, and should select specific color symbols in accordance with specific circumstances.

**Reasonable selection and use of symbol types**

From the perspective of the symbol type, according to different information needs, reasonably choose symbols combination with different types to represent and transmit information content. The founder general semiotics theory Pierce divides the symbols into the image, image, and symbol from the related level involving symbol.

**SELECTION AND USE OF IMAGE SYMBOLS**

The image symbol represents its object by realism or imitation of object, which must be similar to some characteristics of the object. That is to say, represent the object in similarity; the real image symbol is a characteristic of the characterized object itself. Image symbols as a representative symbol type, which has a certain number of visual conversion rules, but also allows people to re-understand some of the things in reality. First of all, the most prominent feature of the image symbol is similar to things or similarly reproduces. This formal reproduction is most easily be caught and identified by the human eyes, thus achieving the purpose of spreading information. Secondly, the reasonable positioning, reasonable distribution and organization order of image symbol can vividly and intuitively express deeper level intention of information. For example, the current shortage of water resources in the earth, the consumption is becoming more and more serious; in order to make the public realize the importance of water resources and save water, facing this complex, abstract topics involving a wide range, an American designer' information design
work-water footprint, he selected representational image symbol to build work symbol system. The concise summary and the symbol that most embodies the characteristics of things are used to connect the water with seemingly unrelated things, and display the information of the water in a simple and clear way and compare it horizontally. The works properly select and use image symbol system, and have very strong communication and transmission, intuitively let us know about the importance of saving water, express the theme with strong persuasion and reflexivity.

SELECTION AND APPLICATION OF INDEX SYMBOL

When the information has a simple index intent, or need to express a rule and state, the index symbol can be used when selecting the image symbol. Pierce thought that "index symbol can be understood as the relationship between a symbol and characterized object, and this object relationship is not simulated, it's indicative, there are causes and effects or temporal and spatial association between the index symbols and object involved.” The index symbol is more concise compared to image symbols; the meaning it stands for is more abstract, with strong directivity and intuition. Public symbols in public places are used to convey information through the index symbol, such as subway guidance signs, maps and so on. The essence of them is a kind of information interaction between people and guidance signs. Of course, there are many types and use in public symbols, its keys that represent and convey information and the use environment, the audience are different, from the perspective of symbol pragmatics, and should be reasonably generate and select different types and forms of symbol spread information. Taking Public symbols for example, common sense symbols are often used in the guidance system, public identity, UI design and some chart designs, these symbols are formed after people reach a consensus. It can directly express the symbol content, so applied range is wide, the composition forms are many, the public recognition is high, for example, the "upward" common sense symbol is "↑", the "bees" common sense symbols are yellow and black stripes and so on. Symbols with uniform style are often used in guidance systems, corporate image recognition systems where such symbolic structures are parallel or progressive relation. There are many symbols in the same field, each symbol has its own independent significance, but the style is uniform in form, with series. The systematic symbols with the guidance and reasoning characteristics are mainly used in the systematic symbols with the established rules. The most common systematic structure is the design of traffic signs.

SELECTION AND USE OF SYMBOLS

Symbols are the combination of function and meaning. The communication of information is essentially the communication of symbol semantics; each symbol has its own meaning. When the represented information contents are abstract or symbolic, it may consider expressing by symbol. The relationship between symbols and object involved is conventional; there is no internal, inevitable link between the two. Max Benzer said "the symbol is a sign that its object is not similar or directly related, so it can be completely free to characterize the object." The object and its acquired meaning that symbols refer to is an associative collection that people experience in their long-term lives. For example, because of long life experience and feelings, people do social agreements for pigeons, give it the meaning of peace, and make it to be a symbol of peace. From the biological point of view, pigeons are the same to ordinary birds, there
are no part characteristics with peace of the messenger, but humans are more willing to put the spirit of peace fix on it; after convention of social customs, its meaning has universal sense of identity, other birds or animals symbol peace, which is also not a bad idea. Thus it can be seen that the signifier-signified relationship of the symbol is free and arbitrary, represented meaning of symbol only relates to the interpreter. The meanings of symbol are related to the background of the interpreter, social and life experience, cultural heritage and cognitive factors. The symbol with more abstract or stronger national culture is difficult to identify and understand. For example, Europeans often wind snail in the cup on behalf of medicine, easterner with different cultural background are very difficult to understand its meaning. Therefore, when using symbolic signs, should fully consider whether the target group understand and recognize the meaning of such symbols, only the symbolic significance of the symbolic signs designer and the target group select have the common cognition and understanding, so achieve effective spread effect. And the information design work which is commonly used in the world, it had better use consensus symbol that are similar or closer to the object.

CONCLUSION

When the information are changed into graphics, the choice of symbol is no single and dogmatic, it should be based on information requirements, makes concrete analysis of concrete conditions, comprehensive selection, reasonable allocation, and achieve unity of synchronicity and diachronic of symbol. These three types of symbols the relationship which cannot be interchanged, they coexist and gradually deepen, from the image symbol to the index symbol and to the symbol, with the deepening of extent, and the information contents are richer. Function and connotation of three types of symbolic characterized comprehensive design theme can be often seen in the information design works. From the change of information to the graphical symbol, from the perspective of symbolic semantics, according to the requirements of information expression, select the symbolic semantics with different expression levels to characterize the meaning of information; from the perspective of symbolic pragmatics, pay attention to the effect of chosen symbols in the application, it mainly relates to the technical requirements of the symbol, human adaptation consideration is the most important. In summary, only comprehensively considering information requirements and symbolic characteristics can complete the rational combination of symbol conversion in the real meaning, and smoothly realize the design goals.

REFERENCES