

Compositional Stochastic Model Checking Probabilistic Automata via Assume-Guarantee Reasoning

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ABSTRACT

With analysis on two highly discussed Chinese style culture and creative products (Nike Air Foamposite One Tianjing and Jade Hare & Laurel washi tapes from the Palace Museum), this paper attempts to explore whether they indicate different Chinese and western philosophy and aesthetics, discussing about the preference of traditional Chinese art. It will be divided into four parts, each of which analyzes the two respectively, following the comparison section. Preliminary results suggest that with different philosophy and language context system between China and western countries, the two products have different understanding about Chinese style. The author also argues that designers ought to study more on Chinese culture rather than elements, including history and color preference, in order not to awkwardly violate cultural taboo. Further researches on more Chinese style culture and creative products of the Palace Museum and Nike or products in the same category are suggested.

Keywords: Cultural and creative products, Chinese style, Nike, the Palace Museum

1. INTRODUCTION

Cultural and creative industries which have generated significant economic benefits have become a favorite topic for research. Recently, the increasing interest in Chinese culture has heightened the need for Chinese style cultural and creative products. The industries in China and western countries, including clothing industries, advertising industries, and film industries, have seen the commercial opportunity of traditional Chinese culture, and begin to meet the market demand. Researchers also have done many researches on it.

John Howkins defined creative industries as those which produce intellectual property through brain work in any field from the arts and sciences to infrastructure and social policy (John, 2005).^[1] In China, a body of studies also have been conducted. ^[2]As mentioned by Zhang (2013), the concept of cultural and creative industries was first mentioned in 2006, described as an industry that takes cultural contents as the core values and realizes intellectual property rights, while ^[3]Zhang & Wang (2009) believes that it is an industry with large scale production and market potential, which originates from cultural innovation, and produces high value-added products through high-tech processing. Although the definitions are different, they all emphasize the characteristics of culture and creativity. Among the products that enjoy a strong cultural support is Li Ziqi's short videos which have gone virus on Youtube. This has bred a numerous researches on Chinese style culture and creative products. ^[4]Gao (2019) argues that Li Ziqi's image of being independent and capable is in line with the value demands of women today, and the quaint Chinese style builds a paradise for anxious young people. Her traditional clothing, cuisine and tools

creates a brand of individuality (Huang, 2019).^[5] At the same time, Chinese style products from the Palace Museum have also drawn people's attention. ^[6]As Wu & Li (2018) has observed, in terms of marketing strategy, to break its stereotype image of solemnness, the Palace Museum makes full use of new media, talking in a humorous tone on Weibo, Taobao, and WeChat. In regard to the productions, they were analyzed from three aspects, including culture, aesthetics, and commerciality, acknowledging that they carry a rich historical culture (Ge et al. 2018).^[7]

Nowadays, many overseas companies also involve in the manufacture of Chinese style cultural and creative products. However, most of the researches did not adopt a comparative perspective on products between the Palace Museum and foreign enterprises. In this paper, built on the scholars' existing foundation, the author reports the findings of a comparative analysis on two highly discussed products (Nike Air Foamposite One Tianjing and Jade Hare & Laurel washi tapes from the Palace Museum), which are in four aspects. It intends to figure out whether the two reflect different philosophy and aesthetics, discussing the features of Chinese style. The researcher hopes that it will provide reference and inspiration for the subsequent research on Chinese style cultural and creative products.

2. WAYS OF EXPRESSION

2.1. Western Philosophy

Western philosophy believes the separation of man from things. ^[8]Xu (2004) stated that western art demonstrates

man's control of things, and the temptation of things to man, which shows a parallel relationship between man and nature. Different from the simple style of Chinese art, it tends to present an exuberant and unrestrained feeling. For instance, Hamlet leaves people with the impression of great despair. Although Hamlet eventually avenges his father's death, he is killed in the end. It expresses the disharmony that separates mankind from fate. Thus when facing Chinese art works, people appreciate elegance with a peaceful mind, while when facing Western art works, people often feel a certain strong emotional expression.

2.1.1. The sneaker



Figure 1. Nike Air Foamposite One Tianjing.

The sneaker is inspired by the picture called "For more than years", one of the most popular Yangliuqing New Year's picture, which means having a surplus of food in the successive years. Nike adds five Chinese elements on the sneaker. The lotus flower and the lotus child have auspicious meaning of having children. "Fish" and "surplus" are homonymic in Chinese, which inherently means "a prosperous year", and the fish-scale pattern is also a common pattern on traditional Chinese costumes and jewelry.

Obviously, the designer intends to satisfy Chinese people's desire for wealth and fortune. Thus the designer grabbed many Chinese elements and squashed them into a tiny little picture at one time. Laden with excessive fancy Chinese elements in one picture, the design presents people with too much emotions, which/goes against the doctrine of the mean. Hence, it becomes ponderous and lifeless instead of graceful and restrained.

2.2. The Definition of the Doctrine of the Mean

The doctrine of the mean, also called the golden mean, is the ethical principle and highest moral standard in Confucianism. It claims that one must not go too far in what one does or expresses, but one must not fail to express it either. It also means integrating one opinion with another opposing opinion, so that the two become one. (Chen et al., 2017).^[9]

It has a great impact on Chinese aesthetics. Though every dynasty held different aesthetic interest, yet they abode by the principle of graceful and restrained, appreciating simplicity and elegance. Under unrestrained and intense desire, the doctrine of the mean permeates the literature and art, presenting the unique beauty of Chinese art.

People highlighted pleasure without lust and sorrow without hurt in a elegant way, like the beauty in the unity of man and nature, subject and object, sense and sensibility, and masculine and feminine (Xu, 2004).^[10]

2.2.1. The Washi Tapes



Figure 2. Jade Hare & Laurel Washi Tapes.

The designer only uses two major elements, the Jade Rabbit and Laurel, which both have propitious meaning in China. Without enormous information, the style is obviously simple. Even though the designer has strong emotions, he expresses himself in a restrained way, pursuing the unity of emotion and rationality, and rigid and soft in the beauty of elegant moderation and harmony. The most common way to demonstrate it is by leaving white space.



Figure 3. Fishing alone on the Cold River.

For instance in the ink wash painting "Fishing Alone on the Cold River" by Ma Yuan from the Southern Song Dynasty, only a boat and a fisherman were showed. Almost no a drop of water is performed, yet people may see water and fog by their imagination. The elements presented are object and the rest of the space is subject, of which the unity is of high aesthetic value in China, since people believe that nothing here is better than something there. In the washi tapes, by leaving white space between the Jade Rabbit and Laurel, the whole picture is more coordinated. People will be guided to focus on the main elements, leaving a vast space for the them to imagine. It is their freedom to fill the rest of the space by associating it with folklore or something else. The white space makes the whole picture concise and lean, and people will not feel a stirring emotion, yet a grace and simpleness.

2.3. Comparison

Different philosophies in China and the West have had different impacts on people. Upon western philosophy, things and man are separated. People can see in western poets or novels that the characters are able to master things, but things can also stimulate and seduce them. Hence, western art always shows passion, as in the case of this sneaker, the creator uses at least five Chinese elements to express his intention very directly. However, Chinese philosophy, on the other hand, with pursue of the the unity of man and nature, emphasizes the symbiosis between man and his destiny in works of art or literature, favoring simpleness. The washi tapes have fewer elements than the sneaker, and it leaves white space between the elements to make it look elegant.

3. CULTURAL CONNOTATION

3.1. *The Sneaker*

An important feature of cultural and creative products is that they provide consumers with aesthetic enrichment by infusing culture into the goods. The Chinese elements Nike displays come from the popluar Yang Liuqing New Year painting in China. However, elements are just the surface of a culture which indicates a history and lifestyle of a nation. Even though the sneaker was piled up with all the elements, yet without a sense of deep meaning, it is still hollow and confused. Besides, it is even more embarrassing that the designer doesn't have a comprehensive understanding of these elements. Upon Buddhism, an important religion in China, dead people will enter heaven with lotus leaves on their feek, which may exactly look like the sneaker. Therefore, some people think that it is unlucky if the shoes like the one dead people wear, and it is totally contrary to the original meaning Nike wanted to express.

3.2. *The Washi Tapes*

There are many versions of legend about the Jade Hare and Laurel on the moon which have been passed down to this day and carry a strong Chinese culture. The laurel is known as an elixir of immortality, and the Jade Hare symbolizes purity, kindness, gentleness and intelligence. What is more, the elements are taken from the patterns on the traditional Chinese clothes of the Twelve Gods of Flowers, created through traditional techniques such as gold stamping, silver stamping and foaming. Therefore, Chinese culture, including customs, values, folklore, and craft, is performed via the washi tapes. The cultural connotation behind them brings people into the long history of the past and leaves them with unlimited imagination.

3.3. Comparison

Cultural and creative products, as its name suggests, need to have cultural as support. Here cultural is not exactly equal to culture elements which are just a form of cultural expression. If elements lose cultural connotation, they are just a body without soul. The elements Nike chose are indeed typical in Chinese traditional culture, but too many elements deliberately piled on the surface shows a touch of meaningless and messy. Besides, what makes people more confused is the pattern on the sneakers resembles the shoes worn by the dead according to Buddhism, which is of great infelicity. The patterns on the tapes are also representative, but instead of violate cultural taboos, they are backed by a strong cultural content and therefore resonates with Chinese people and captures their interest.

4. WAYS OF NAMING

4.1. *The sneaker*

Nike did not give Nike Foamposite Air Tianjing a new name, but rather added the suffix of Tianjing after the name of the series, with Foamposite being the material and Tianjing being the place where the inspiration came from, which echoing the low context culture of Western countries. The inclination for communicating in a clear and direct manner in a linear logic determines that they favor definiteness. Therefore, in general, the naming will offer a very specific image and perception, just like the naming of Western gardens. People will be clear about who built it, where it was built and the people it intends to in memory of from the name, such as Saxon gardens, Versailles gardens, Strelina gardens, and Villa d'Este etc.

4.2. *The Washi Tapes*

China, on the other hand, is a high context country that is used to intuitive thinking and subjective consciousness. Chinese people often communicate in a cryptic way, but they are also good at finding valid information they need in ambiguity. Thus they like to use stories or poems for naming, and people have to actively discover the cultural meaning behind to understand the creator's intention. The washi tapes, called "Jade Hare & Laurel", is named after a legendary about the moon. Typically, Chinese gardens, most of which tend to be named after characters in poems. Such as the Humble Administrator's Garden, was built by Wang Xianchen who returned to his hometown after he was forced to resign. The Garden was named "Humble Administrator" due to a passage in the Jin Dynasty. The author said that it is free and effortless to garden. He sold vegetables on the market just for his breakfast and dinner, which is exactly a humble administration for a humble man. Thus "Humble Administrator's Garden" is an ironic meaning of an earthy man administrating his garden. "Jade

Hare & Laurel" is like that of Chinese garden which are supported by the internal meaning.

4.3. Comparison

The name of the sneaker is more direct contrasting to that of the washi tapes which are named upon a folklore. Western low context society decides that they tend to a direct conversation. The sneaker was named Nike Foamposite Air Tianjing, telling people straightforward about what it is made of and where the inspiration came from. On the contrary, people can only understand "Jade Hare & Laurel" if they have enough knowledge in Chinese culture. The naming for Chinese people, which is under the high context system, often emphasizes on the significant meaning below the surface, like a treasure map for people to discover. The researcher does not judge any of the way of naming, yet if Nike wants to make the sneaker more like a Chinese style, a vague or poetic name will definitely generate a great effect.

5. THE PREFERENCE OF COLOR

5.1. Subjective Consciousness about Color

Chinese scholars have done a lot of research on what beauty is, among them Li (2009)^[11] talks about three kinds of beauty. The first is sensual pleasure, the second comes from ethical judgment, and the third is the aesthetic object, which is what the researcher focus on in this study. According to Zhu Guangqian, beauty, a natural, is produced by the combination of objective things and the subjective ideology of man. Only when the aesthetic object and the subjective consciousness of man reach a unity in thought can beauty be generated. The researcher considers that the consciousness about color is included.

The traditional Chinese subjective consciousness about color has been formed since ancient times. Ancient Chinese people believed that the Northern Star is where the Emperor of Heaven lives. Owing to the black color of the mysterious sky, black became the king of all colors. Hence, black also occupies an important position in the history of Chinese painting (Zhu, 1990).^[12] Later, Taoism put forward the theory of Yin-yang and five elements, with "metal, wood, water, fire, earth" being given the corresponding colors of "white, green, black, red and yellow". The early Confucian concept of color combined the five colors with "benevolence", "virtue" and "goodness" and applied them to rituals. Later, Confucianism added the Five Ethical Norms "benevolence, justice, ritual, wisdom, faith" to the meaning of the five colors, which promoted the socialization of colors at that time. Besides, the idea of the doctrine of the mean also had an great impact on the usage of color, thus light and elegant Chinese ink paintings were popular.

5.1.1. The Sneaker



Figure 4. Yangliuqing New Year's picture.

Upon conventional view in China, the five colors are the main colors of everything in the world that any other colors can be mixed through them. Thus the five colors were deemed noble, among which the main color of the sneaker is black. It enjoys the meaning of "wisdom" in the Five Ethical Norms. However, the green and red in the picture, a pair of intense contrasting colors, are too bright. Under the influence of the golden mean, people go for lighter colors. The original painting, Yangliuqing New Year's picture, has enough yellow (the analogous color of both red and green) blend the red and the green. Likewise, it together with green, cyan and blue, make the whole picture harmonious, without demonstrating too strong an impact.



Figure 5. Dunhuang grotto mural.

Even in heavy-colored paintings, the colors stay balanced. In Fig. 5., the main color, vermilion, and the secondary color, cyan, form a strong contrast in the picture. To match them, under traditional Chinese color concept, except analogous colors, artists were also accustomed to mellow it with achromatic colors, such as black, gray, white, and sometimes golden. Although Nike products also have white for harmony, yet the image still lacks integration in terms of the traditional Chinese aesthetic.

5.1.2. The Washi Tapes.

Regarding the relationship between color and pattern, Chinese folk artists believe that colors get people's attention from afar, while patterns surprise people when they get closer. Hence, color is more important than the pattern to an art craft (Tian et al. 2015).^[13] Taking green and white, one of the achromatic colors as main colors, the washi tapes make people very comfortable when they look at it from a distance. A closer look reveals that the green and blue of the leaves and the orange and red of the petals are analogous colors. Also, to enhance the texture of the picture, traditional golden hot stamp, silver hot stamp and foaming techniques were used. Whether seen from a distance or up close, the soft colors, clever transitions and traditional techniques present a sense of harmony and elegance.

5.2. Comparison

The main colors of the sneakers and the tapes, black, green and white, are taken from the traditional five colors, showing the designer's understanding of part of Chinese culture. However, the two have different ways of managing the overall color of the picture. The contrast between the red and green on the sneaker offer an acuter visual stimulation than the colors on the tapes. Although the former may draw people's attention, yet it does not have enough analogous colors or achromatic colors to neutralize, which is not in line with the traditional Chinese concept of harmony. On the contrary, the washi tapes add blue, red and yellow for mellow transition. Actually, the style of traditional Chinese art is more than elegance. Heavy-colored painting also takes up a significant place, but the painter will also cushion the contrast of the picture, showing the bright colors on the basis of harmony.

6. CONCLUSION AND DIRECTIONS FOR FUTURE RESEARCH

Findings of the research do not attempt to arrive at a conclusion on whether China or western countries is able to produce better Chinese style culture and creative products, but the analysis of the examples exposes that the different culture between the two countries may reflect on the products, and prompt us to consider what should people do to design a real Chinese style.

The result is divided into four parts in terms of way of expression, culture behind the products, way of naming, and usage of color. Researcher found out different philosophies favored in China and the West have had different influence on people, which are revealed on the products. Separation of the man and things in western philosophy determines the passion and intensity in the sneaker, while with the unity of man and things opinion in Chinese philosophy, the washi tapes demonstrate a sense of simple and elegance. What is more, under the low

context system, the naming of the sneaker is direct, focusing on the what the material is and where the inspiration came from. However, China, in high context society, is accustomed to express ambiguously, highlighting people's subjective mind and imagination, and therefore tends to name things after poets or legendary. Also, Chinese art emphasizes the culture it contains, rather than just elements showed on the surface. Thus designers should have a full understanding of Chinese culture, and importantly, of cultural taboos. The elements on the sneaker resembles that of the shoes worn by the dead according to Buddhism. Creators have to do enough research on Chinese culture before using the elements, so as not to cause unnecessary embarrassment. Likewise, traditional Chinese subjective consciousness about color should not be neglected. The colors on the sneaker demonstrates a strong contrast which is against Chinese art's preference. Even if it were a heavy-colored painting, achromatic colors will be added to soften the picture.

In sum, the comparative analysis of the materials illustrates that when using traditional elements, it is necessary to study the history of the culture and connotation. Only after a thorough understanding of the elements can they be used appropriately, or else they will be unsuitable, with counterproductive result instead of the desired effect. Further research will be divided into two parts. Firstly, it needs to explore more Chinese style culture and creative products produced by the Palace Museum and Nike, in that this study may has limitations due to the small sample size. Secondly, materials in the same categories ought to be further studied. Belonging to different categories, the two examples generate another limitation of the research, because they may have their particular properties, customers, and values. To advance the research, the author needs to analyze the materials from different dimensions.

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