Preference Analysis of Traditional Handicraft Brocade Pattern in Fashion Art

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Abstract: With the improvement of consumers' income and aesthetic level, consumers' demand for products is more and more personalized and has certain artistic quality. Therefore, it is particularly important to understand consumers' preferences for product attributes, especially for clothing patterns, and to overlap different product portfolios for different market segments. Taking the students of Jiangnan University as an example and taking the pattern attributes of Brocade as the research object, this paper proposes two aspects, male, subjective and objective, through eye-tracking experiment and questionnaire survey. Research method of Brocade pattern Preference of traditional handicraft of women with different personalities. The proposed method is expected to provide a practical test for quarterly pattern planning. While protecting the inheritance of the pattern art of the traditional handicraft Brocade, it also puts forward the standardization of the development direction of the product pattern to help enterprises accurately locate the consumer groups, meet the market demand to the maximum extent, and help enterprises achieve the strategic goal of sustainable development of economic benefits.

1. The artistic characteristics of Brocade

Brocade is the last milestone in the history of Chinese silk weaving technology and the highest peak of ancient brocade art achievements. It condenses the history, culture and skills of Chinese brocade technology, and is the only "living cultural relic" of Chinese brocade technology.

1.1. Artistic characteristics of patterns

The brocade pattern is based on inheriting the ancient silk patterns of our country, constantly absorbing nutrients, continuously creating and gradually developing and maturing[1]. Through the research and analysis of the brocade pattern, the author concludes that the aesthetic characteristics of the brocade pattern are mainly reflected in the form, color and craft of the brocade pattern, that is the rich and diverse form beauty, the gorgeous and solemn color beauty and the exquisite craft beauty.

1.2. Artistic characteristics of Characteristics

Brocade is 700 years royalty background, Brocade not only pays great attention to materials, but also weaving skills and excellence. which was called "inch brocade gold" by the ancients. A makeup flower fabric has more than a dozen or even twenty or thirty different patterns, and is characterized by many colors and rich color variations. Despite the many colors of Brocade, through the profound understanding of the white drawing patterns by Brocade artists and the color matching according to the color matching tactics, so that the decoration can obtain a vivid and gorgeous artistic effect.
2. Material classification of brocade pattern

The brocade pattern is an important part of the traditional Chinese pattern. If the material gives brocade a shape, the pattern is the soul of brocade. Brocade not only inherited the essence of ancient Chinese silk weave patterns, but also flexibly merged the patterns reflecting the palace culture with the natural objects from the folk, forming a unique cultural pattern with the royal power of the palace. The brocade pattern can be divided into plants, animals and imaginary animals, fairy treasures, musical instruments and four treasures of the study, figures and other materials according to the classification of materials.

2.1. Plant material

The plant materials in the brocade pattern are mainly flowers, fruits and vegetables, and herbs. Its meaning is usually through symbolic, homophonic. For example, bergamot stands for "blessing", peaches meaning "life", pomegranate symbolizes "more children", in three plants combined into a "three" pattern, contains more happiness, longevity, more children auspicious meanings, to express the people to pray for A beautiful vision of family prosperity.

2.2. Animal and imaginary animal material

Animal patterns are more flexible and changeable, from concrete to abstract, from objective to myth, and in various forms. The patterns of animal materials in brocade can be roughly divided into the animal patterns that exist objectively and the mythological animal patterns that people imagine. Animal patterns are mostly used in court official clothes. Different patterns represent different levels of official ranks.

2.3. Fairy treasure material

Immortal road treasure pattern material mainly has "eight auspicious", "dark eight immortals", "miscellaneous treasure" and so on. "Eight auspicious" pattern can be used alone or in combination. For instance qing Dynasty red ground brocade auspicious double fish makeup damask, this satin by double fish, immortal peach, glossy and so on auspicious pattern combination and become, contain auspicious implication.

2.4. Eight sound, four treasure of study material

"Eight sound" refers to eight Musical Instruments in ancient times, including bell, chime, xiao, sheng, guqin, drum, Chuk and Xun. The four treasures of the study are qin, chess, calligraphy and painting.

2.5. Characters and other material

The themes of brocade include shou Sou Sou, fairy, fairy, baby and so on. For example, children play lotus, hundred child diagram, crane and deer spirit beast hundred child lines are relatively common and there are geometric patterns, fonts, etc.

3. Eye movement experiment design

Eye movement test is a process of analyzing and monitoring the user's eye movement and gaze direction when looking at a specific target through eye-tracking technology. Development of Eye movement experimental Research Methods and Techniques Eye movement experimental research methods can obtain the data of eye movement in the process of mental activities.

3.1. Experiment preparation

- Independent variables: 1.gender: male/female; 2.students with four personality types: powerful, extroverted, stable, mature; 3.pattern: The same silhouette and different patterns; the same fabric and different patterns; the same category and different patterns.
- Dependent variable: Participants pay attention to the picture with their eyes. The pattern of the picture is divided into 5 patterns. There are 3 classic patterns, which are divided into plants, animals and imaginary animals and fairy treasures. The remaining patterns are musical
instruments and four treasures in the study, figures and other materials. In order, they are A, B, C, D, and E.

Participant selection: Due to limitations of the conditions, the subjects selected for the experiment were 100 sophomore and junior apparel students and 100 non-apparel students from Jiangnan University for comparative study. Each of them includes 50 girls and 50 boys. Before the experiment, each participant went through a short structured interview to ensure that the subjects were all normal groups with normal mind and body. All subjects participated in a similar experiment for the first time. After the test, all the subjects had normal recognition ability and normal naked eyes or corrected vision. The personality test results meet the typical students of four personality types.

Type and location of the experiment: 1. Multiple simultaneous measurement experiments between the subjects; 2. Eye tracker test laboratory, School of Design, Jiangnan University.

Experimental instruments and materials: The instrument used in this experiment is a desktop eye tracker produced by the German SMI company. (Figure 1) The experiment was carried out in the eye tracker laboratory of the School of Design of Jiangnan University. It's divided into two parts: eye tracking experiment and subjective evaluation experiment; according to the experiment for the pattern selection in the independent variable, different picture groups are selected and made uniformly for use in the eye movement test. The experiment also have a mobile phone to measure time.

3.2. Experiment procedure
First, a questionnaire has been distributed to 100 people. In the clothing and non-clothing majors, 10 men and women are selected for strength, 10 men and women are active, 1 men and women are peaceful, and 10 men and women are perfect. Set for boys 1, set for girls 2. A total of 80 people.

- This experiment adopts the form of separate measurement. After entering the laboratory, the subject sits about 50cm in front of the eye tracker. Try to ensure that the head and the monitor are in a horizontal position;
- Subjects need to listen to the brief description of the whole experiment process by the subject before conducting the experiment;
- Subjects perform eye movement test calibration test according to requirements;
- After the calibration is completed, the formal experiment is conducted. The subject is told to choose a favorite color first, and watch the experimental sample clothing combination row freely.
- A total of 6 photos in the column, the picture viewing mode is set to timed automatic playback (according to the different information content of each picture, the picture playback time.
- Set to two time modes of 4000 ms and 6000 ms). (Note: The tests are conducted according to the previously divided silhouettes, fabrics, and categories);
- During the experiment, the eye tracker program will automatically record the results and time of the subject's visual attention, and the accuracy of the reaction time is milliseconds.
Then quantify the statistics of the residence time, including the score design of visual attention time. Finally, SPSS17.0 statistical software was used to analyze the data of the experiment, and the results of the square data analysis of the experiment were obtained, and each variable was analyzed to reach a conclusion.

### 3.3. Experiment results

According to the data in the experimental process, a statistical data table is drawn, as shown in Table 1:

#### Table 1. Four data of eye tracker experiment.

| Number | Start watching time/ms | First fixation time/ms | Fixation time/ms | People looking back |
|--------|-------------------------|------------------------|------------------|--------------------|
| A      | 708.14                  | 195.34                 | 2052.34          | 58.43              |
| B      | 1018.82                 | 198.24                 | 1567.32          | 66.21              |
| C      | 732.67                  | 201.66                 | 1635.88          | 60.23              |
| D      | 834.61                  | 210.87                 | 1724.91          | 54.33              |
| E      | 765.28                  | 184.34                 | 1552.43          | 59.21              |

Table 1 shows: the animal with the longest time to watch is the B animal and the imaginary animal, the D musical instrument and the four treasures of the study are second, and the shortest time to see is the A plant; The instrument with the longest fixation time is the D musical instrument and the four treasures in the study room, followed by the C Xian Dao treasure, the shortest time is the E character and other materials; the pattern with the longest fixation time is A Plants, D musical instruments and four treasures in the study room are second, the shortest is the E character and other materials; the most viewed colors are B animals and imaginary animals, C is the second treasure, D Musical instruments and four treasures are the least. It can be seen that animals and imaginary animals and fairy treasures are the colors preferred by consumers.

#### Table 2. Specific experimental data of people with different personalities under the eye tracker under gender.

|                      | 1(Boy) | 2(Girl) |
|----------------------|--------|---------|
| Number               |        |         |
| Powerful             | 834.24 | 201.22  |
| Outward-looking      | 799.34 | 201.22  |
| Stable               | 756.67 | 186.33  |
| Mature               | 764.23 | 179.27  |
| Start watching time/ms | 191.55 | 1967.65 |
| First fixation time/ms | 31.88  | 32.78   |
| Fixation time/ms     | 810.21 | 839.88  |
| People looking back  | 215.65 | 2158.53 |
| Fixation time/ms     | 2016.44| 2158.53 |
| People looking back  | 31.22  | 36.8    |

It can be seen from Table 2: Among boys, the longest fixation time is extroverted, and the shortest is stable; the largest number of retrospectives is extroverted, and the least is mature; the longest first fixation time is extroverted, the shortest is mature; the longest is the powerful one, and the shortest is the stable one. Among girls, the longest fixation time is extroverted, and the shortest is mature; the largest number of retrospectives is extroverted, and the least is mature; the longest first fixation time is extroverted, the shortest It is mature; the longest moment is the outward-looking type, and the shortest is the stable type. It can be understood that regardless of boys and girls, the longest time to pay attention to color is extroverted, the shortest is stable and mature, stable and extroverted are their own personal experience and personality have undergone a certain temper, to people I'm calm and calm about things Temperament, so there is also a certain "resistance" to the color.

#### Table 3. Color experiment data corresponding to eye tracker index data.
| Number | Start watching time | First fixation time | Fixation time | People looking back |
|--------|---------------------|---------------------|---------------|---------------------|
| 1      | B                   | D                   | A             | B                   |
| 2      | D                   | C                   | D             | C                   |
| 3      | E                   | B                   | C             | E                   |
| 4      | C                   | A                   | B             | A                   |
| 5      | A                   | E                   | E             | D                   |

It can be seen from Table 3 that animal B and imaginary animal and instrument D and four treasures in the study are the most preferred pattern direction for boys and girls, and plant pattern is also the preferred pattern. Using eye trackers to test consumers' preference for patterns, although there will be a lack of certain objective factors, but the experimental data of the test can still provide a more accurate prediction direction of the patterns of clothing.

4. Conclusion
Through the research on the artistic characteristics of traditional brocade craftsmanship and eye movement experiments, Brocade's exquisite and elegant decoration reflects the aesthetic connotation with cultural connotation. By taking Jiangnan University students as an example, the pattern preference experiment of the eye tracker was carried out, and subjective and objective situational choices were added at the same time, in order to provide a method for the preference of popular clothing patterns for people of different genders. It is hoped that it can provide brand companies and research enthusiasts with a practical theoretical guidance, so as to better grasp consumers' purchasing behavior and consumer psychology, and create huge benefits for enterprises.

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