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The Influence of Facial Feature Similarity on Preference under Different Gender

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Abstract: Many human beings spend mountains of time in their life in order to search for how to be liked by others and many might be confused about how to be liked. However, according to scientific study, it can be claimed that people's preference, love or like in another word, has its own rules and principles. What this paper want to discuss is that a critical amount of study done by social psychologists showed that people would be attracted by those who have similarity with them, including cultural background, childhood experience, habits and customs, and facial features. Among all these factors, facial feature similarity out to be one that deserves discussion. What is the difference between male and female when they are choosing a partner or children that they like? The answer may vary according to different groups of scientists. For instance, some may state that gender does not make a difference to similar facial feature preference because that ought to be some common traits whole human society have, something hidden behind out culture or DNA. On the other side of the coin, a part of people might hold the opinion that males' choice of preference can distinguish from women because different sex is affected by social norms and cultural background differently. In this article, the opinion is that males are more likely to be influenced by similar facial features when having preferences.

Keywords: facial feature, similarity, preference, gender

1. Introduction

Some interesting tends in this area of is that the level on influence of similarity facial feature on preference varies at different perspective. For example, "some people seem to prefer interacting with people with similar facial features because they believe it is an expression of identity," which may be due to social and cultural factors. In addition, "some people may develop a favorable impression of each other due to their appearance," which may also be because they are more likely to resonate in appearance. In summary, this paper explores the gender aspects of the topic of the impact of lower feature similarity on preferences. At the same time, it also provides some interesting and worth exploring findings: people may be attracted to each other's faces; however, these trends also require further research and exploration to better understand human behavior and social phenomena.

Under certain kinds of circumstances or conditions, individuals are more likely to be attracted. These rules and principles may be formed by the combined effects of various factors such as an individual's genes, environment, and culture. For example, some people may be naturally more susceptible to external influences and develop favoritism or attraction than others; in addition, people

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may also be attracted by the other person's appearance or other qualities. Many previous essays measured the influence of facial feature similarity on preference from different perspectives, such as gender, age, occupation, and cultural background. It is well believed that each group of people could be affected differently by similarity level of facial feature while choosing which person they like the most or want to start a relationship with.

However, it should be noted that everyone is an independent individual with their own thoughts and values, so even if there are some common rules, it does not mean that everyone will follow the same preferences or behavior.

1.1. Function of Facial Features

Nowadays, facial features are a momentous component of making up one's identification. For instance, it is mentioned in a research that when a witness identifies criminals, he or she successfully finishes the identification process by analyzing the facial feature[1]. Besides that, facial features affect social interactions in both positive and negative ways as well. We have a tendency to measure and evaluate someone else through the first impression about personality that they formed, and the way they form these kinds of trends is by encoding others' facial features[2]. For example, we often consider people with bigger eyes to have more agreeableness, which means big-eyed individuals present more kindness, empathy, and goodwill [3].

1.2. Facial Feature Detection Ability of Human

And in modern society, human beings' ability to identify facial features is already mature. In the early stage of vision analysis, humans usually process objects through a bank of spatial filters. It was observed in the study that detection of facial features initially spread bilaterally across left and right occipito-temporal regions to dynamically converge onto the centro-parietal region. Among the observers, the scientists found that information sensitivity shifts from the occipito-temporal to the parietal regions between 138 and 448 ms following stimulus onset. And that is basically the whole process of how modern human beings detect facial features[4].

1.3. Connection Between Similarity and Preference

A principle in psychology describes that we are more likely to be attracted by those who have similarity with us. The similarity here could include many perspectives such as individual's cultural background[5], eating habits[6], working or live experiences[7] and facial features[8].

In the experiment of measuring the influence of cultural background of similarity, the assumption was that students are more willing to cooperate with those with the same or alike cultural background. For example, it was assumed that Asian students prefer to work with Asians instead of European students even though they are similar in rest perspective. Finally, the research showed that the man-made group division has stronger influence than the cultural background on students. At the same time, students who come from the same culture still have a strong connection between each other[9].

During a study done by Fawcett and Markson in 2010, the authors have done an experiment by requiring kids from kindergarten aged about three years old to make a decision in order to see what kind of puppets and peers they prefer. It was stated by the previous research that three-year-old children have the ability to detect and distinguish facial features[10]. In the experiment, the similarity was measured through shared hobbies and facial features. To be more specific, the study focused on the eating habits and color of hair. By the end of the experiment, the data reflected that children would use similarity as a hint of building up friendship even when they are young. That is to say, preschool kids have preference for friends that have similar diets and appearance[11].

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Besides, similar working or life experience also has a critical influence on people. This research was done among college students who have difficulty in hearing and they were offered twelve kinds of counselors with different personalities and experiences to choose. Finally, the scientists found that the important role of similar experiences play while picking counselors [12].

Finally, human adults would also prefer those infants to have facial similarity with them from previous research. They tested the effects of vertical changes in eye height, eye width, eye height and width, iris size, and feature position on scores and found significant preferences for specific stimuli [13].

2. Method

Here is one experiment that was designed by the author to show that facial feature similarity has effects on people's preference while it has many problems and failed.

2.1. Participants

Author of this paper used to set up an experiment using a sample of eleven grade eleven high school female students. All of them are from Guangzhou, a city in south China.

In order to improve the externality of my experiment, researcher choose participants with diverse and multifarious facial features. For instance, some of the female students have big round eyes while others have long and thin eyes. Some female students have an aquiline nose while others have a small and dainty nose. Conclusively, researcher want to include as many kinds of facial features as possible not only for the experimental feasibility, but also for the experimental representative.

2.2. Experimental Process

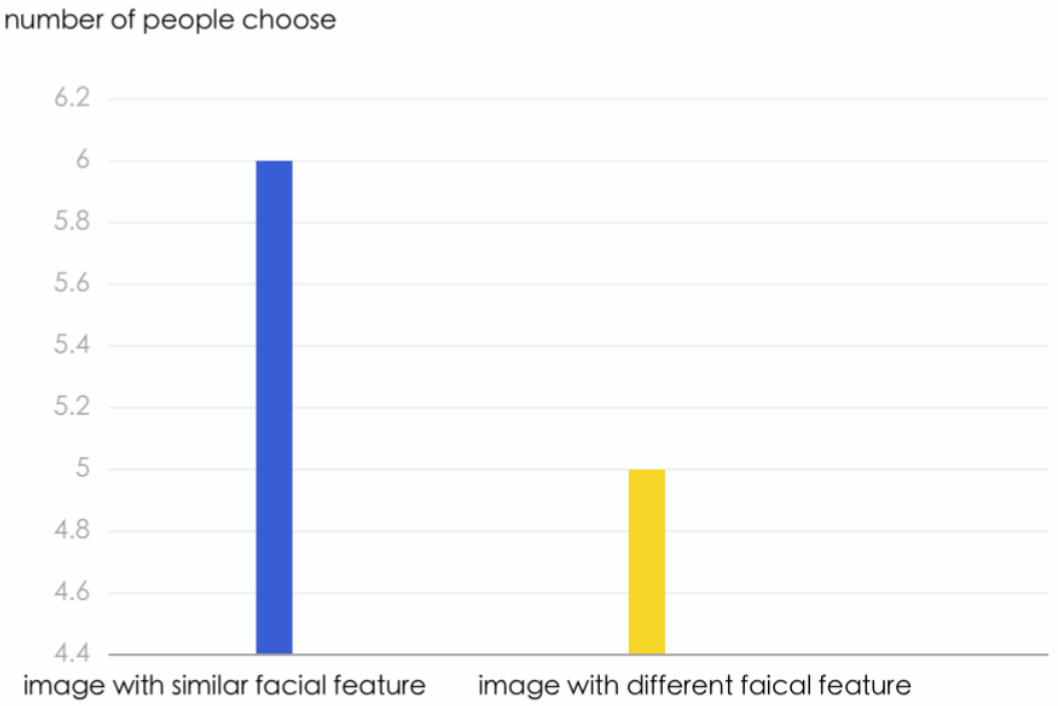

Figure 1: Experiment Result Collection.

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At the beginning of the experiment, experimenter took pictures of the eleven participants and used the skill of abstract painting to record their facial features. To be more specific, experimenter used lines to trace the edge of their face, drew their double eyelids if they existed, put small curly lines around their eyes if they had obvious eyelash. These images that were strictly based on participants' facial features were put together and named as group one. Based on group one, experimenter made some adjustments on the abstract painting, which is to change two to three facial features in group one graphs and made them look totally different from what participants looked like. Those new graphs that have different facial features were called group two graphs.

At the next stage, participants were asked to make a choice between two pictures: one was from group one that looks similar to them, another one was from group two that looks different. According to the data that this work gathered, among all eleven participants, there were six participants had preference towards image with similar facial feature, and five participants had preference towards image with different facial features. From figure 1 above, it could be inferred that there is no relationship between facial feature similarity and people's preference.

2.3. Discussion

A series of experiments were done to test whether males would prefer women with facial features similar to themselves. The facial features were detailed into color of eyes and hair, existence of dimple, thickness of lips and eyebrow, nose, expression, hair style and so on. By combining these facial features, experimenters selected the facial feature they wanted in order to use computer to mix four images for the participants to view, including one image that looks like participants, one looks different from the participants, one displays homogamy, one displays heterogamy. White male participants were asked to evaluate which image they want to have a romantic relationship with or choose to be their girlfriend. And the result came out to show that 37% participants had preference for females with similar facial features [14].

In another article, the phenomenon that males care more about facial feature similarity than females was also mentioned and analyzed. The main idea of the article is that male and females have different preference levels towards their own children, and the preference is also highly influenced by how much infants or children look alike with them. The previous research[15] showed that men are more likely to invest in those children who have similar facial features to them, especially when they are asked questions that required them to point out which child they wanted to adopt. On the other hand, facial similarity presents some positive relationship on the preference level of women choosing children, but the level of being influenced was less than that of men. Also, in another literature review, it is shown that males invest less in stepchild, who do not have similar facials with male parents[16]. In conclusion, this passage believed that the facial-alike level influences males more significantly than females on the preference of their next generation.

From these experiments, the paper can draw a conclusion that facial feature similarity has more significant influence on man than woman on preference. However, this conclusion is not one hundred percent correct since not too much research has been done in these areas and the data may be affected by chance. What is worse, some experiments only contain one side of the coin: only men evaluate their preference on women, but women do not have a chance to express their preference on women. Personally speaking, it is reasonable that males believe facial feature similarity is key towards their next generation because it is female that give birth to the kids directly, and they do not need to worry about whether she is a mother of the kids or not because the answer is certain. However, these do not happen in males. Men cannot be sure whether the kids share the same bloodline with him. And deep in males' minds, similar facial features may be the symbol of "security" in this way. So, when they are choosing a partner to develop a relationship, they may rely on the thinking pattern that similar facial feature means positive meaning and put that into a preference requirement.

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On the contrary, females do not need to rely on facial features or any appearance to make sure the bloodline of kids, so they may not develop this kind of unconscious thinking pattern and have less requirement on similar facial features.

2.4. Experimental Mistakes and Redesign

However, there were still many problems occurring in this experiment, which might lead to an improper conclusion. Firstly, the sample of the experiment was too limited. An experiment that only contains eleven participants could be highly influenced by chance. What is worse, the sample did not consider the male population or people from other ethnicities. In the future experiment, a more representative sample ought to be contained. Secondly, considering appearance such as facial features, the role of social norms cannot be ignored. Through social media and many other platforms, the public's standard of beauty is likely to be influenced by so-called "fashion" or by the whole society. For example, many people in China might consider big eyes, small noses as a signal of beauty. So, under this kind of influence, there is a chance that participants only choose those highly appreciated facial features and the effects of facial feature similarity were weakened. According to research, human beings' aesthetics, especially females, are likely to be affected by mainstream beauty-appreciation[17]. Thirdly, the abstract painting drawing skill can be a confounding variable since the abstract paintings are all done by humans and some details might not be precise.

Another problem in the experiment was the way of measuring facial features.This experiment used abstract painting as a method while that was not been proved. The mainstream method people in society use now is modified images with the help of computer programs. In the future, this research believes that further study can change it to be more scientific.

Though in the experiment, people who have preference for images with similar facial features were only about 9% more than people who had preference for images with different facial features, the difference would occur after errors and mistakes are eliminated in the future experiment. The possible resolution could be to find more representative samples from different cultural backgrounds to eliminate the influence of social norms and society aesthetic. Or to simply improve the number of participants.

2.5. Conclusion

Though the experiment shows that only about 9% of people have a preference for similar facial features more than different facial features, based on all the studies, it is believed that similar facial features motivate people to have preference.

3. Conclusion and Future Study

Conclusively, males are more likely to be influenced by similar facial features when having preferences than females because of evolutionary reasons. Similar facial features represent secure and maybe other positive meanings in their thinking process, so that they always have preference for women with similar facial features.

In the future study, researcher plans to set up a series of experiments to provide more data in order to prove the conclusion. And author of this paper plans to invite representative participants from all over society with multiple careers, and both males and females especially. To overcome the bias in previous experiment that caused by the no-symmetric, which means only men measure their preference on women but women did not evaluate, author plans to also set up one experiment to measure women's preference under the influence of similar facial features. And the experiment would be divided into four parts. Initially, the sample that meets the requirements ought to be selected, and experimenters in this stage take pictures of them and record. Next, use the computer program to

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qualify the facial feature into data, such as the thickness of lips and eyebrows, color of hair and eyes, shape of noses and so on. The purpose of this step is to make the whole experiment easier for other scientists to repeat. In addition, experimenters should use apps or websites to mix different facial features on one image, and for each participant, two groups of pictures should be provided for them to make choices. One is a graph with similar facial features just like them and another one has to look different. Last but not least, experimenters can collect the data and analyze the results.

It is worth mention that preference may be influenced by similar facial features and tend to choose women with the same appearance as partners or colleagues, but this does not mean that all men will have a preference for people with similar facial features. In addition, there are differences in people's appearance, personality, interests, and hobbies, so one cannot judge a person's value and quality solely based on their appearance.

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