

Are symmetrical
faces more attractive
than natural faces



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The aim of this experiment was to investigate whether people find symmetrical faces more attractive than natural faces. A computer was used to present 2 conditions: photos of natural faces and manipulated (symmetrical) faces. Participants were asked to rate the photos (1-5 likert scale) in terms of their attractiveness. A Willcoxon t test was used to calculate the findings. As the T value was less than the critical value, the hypothesis that participants will find the symmetrical faces more attractive was accepted.

The sexual selection process and preference for mate choice has been an important field of research in psychology and stems back to the evolutionary times. Various traits have been found to influence mate choice and selection, including parental investment, health, sexual dimorphism, and among these is the preference for physical attractiveness. However, the meaning of 'physically attractive' varies between individuals and cultures. Physically attractive individuals have been found to be associated with 'good genes', which indicate heritable benefits to offspring. This would be highly influential in the selection process and important for survival of the fittest during the evolutionary times.

Symmetry is one characteristic of being 'physically attractive' amongst many others, that have the ability to influence our perception of who is seen as attractive. The evolutionary advantage of this proposes that individuals with a symmetrical face are more attractive, and is indicative of how healthy the organism is. In turn, this represents their reproductive success. Thornhill & Gangestad (1994) found that symmetrical males have more sexual

partners than asymmetrical males. Thus demonstrating a link between symmetry and attractiveness, and the preference may have been adaptive.

Individuals that are able to withstand small imperfections (Asymmetries) and diseases are more likely to develop symmetrically. Fluctuating asymmetries (FA) are random deviations from perfect symmetry in bilaterally paired traits. Low FA signals the ability to resist developmental stressors from the environment, and that the organism has a healthy immune system and possesses the capability to prevent developing illnesses. Therefore, one reason individuals with low FA are more likely to be seen as attractive is due to their possession of healthy genes, as this increases their mate-quality. Thus they are more likely to be selected as mates.

This is supported by Grammer and Thornhill (1994), who examined the effects of averageness and symmetry on the attractiveness of faces.

Computer software was used to manipulate photographs and adjust facial measurements. They found that when averageness was taken into account, faces with low FA were rated more attractively than average faces by both male and female participants.

However, contrasting research has found that FA is associated with a variety of less-desirable psychological characteristics, such as depression and mental illnesses. For example, Shackelford and Larsen (1997) found weak associations between measured facial asymmetry and self-reported health. Males with increased FA reported being more depressed and neurotic, and high FA females reported more negative emotions.

Another field of interest is whether this preference varies between cultures. Gangestad and Buss (1993) conducted a cross-cultural study on symmetry. They gathered data from 29 cultures geographically on attractiveness ratings and the prevalence rate on various parasites, such as leprosy, malaria and spirochetes etc. They found that people living in areas with a greater prevalence of pathogens, value an individual's physical attractiveness more than people in areas with less prevalence. Pathogen refers to people with an increased concern with the physical attractiveness of possible future partners.

Due to modern technology, many studies conducted on symmetry use computer-manipulated face stimuli. This design-specific software generates faces and manipulates them across a range of characteristics e. g. health, symmetry and averageness.

This technique will be used in this experiment and will test previous research to see whether the general findings about preferences for symmetry are still applicable today. The hypothesis being tested is that; participants will rate the symmetrical faces significantly higher and more attractive than the natural faces.

Method

Design

A repeated measures design was used in both conditions of this experiment. The first condition presented was the natural faces and the second was the manipulated (symmetrical) faces. The independent variable being

manipulated was the symmetry of the faces, and the dependent variable being measured was the attractiveness rating (1-5 Likert scale).

Participants

There were 18 participants in total, including 3 males and 15 females. The age range of the participants was 18 to 47, and the mean age was 20 (SD= 9.17).

Materials

A computer was used to present the two conditions, collect the data responses, and generate a database of results. The experimental task was designed by the software programme 'DMDX'. The two conditions were presented as photographs; natural faces and symmetrical faces. These were developed by the Centre for the Coevolution of Biology and Culture Lab at Durham University. Each condition consisted of 32 trials each, totalling 64 trials. A total of eight female faces were used, four symmetric and four asymmetric. The same was presented with males. The symmetrical photos were all smoothed and had the background and hair removed. They were individually presented in the centre of the screen against a white background.

Procedure

The participants were given a set of instructions to follow and the procedure was performed in two parts. Part 1 required subjects to confirm via the computer whether they were male or female, thus collecting data about the subjects. In part 2, participants were presented with photos 4 times and 32
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trials of each condition. Then, instructed to rate the images in terms of their attractiveness on a scale of 1 (not attractive) to 5 (very attractive).

Requiring, participants to press keys 1-5 throughout the experiment. The photo did not change until they responded.

Results

Descriptives

The median calculated for symmetrical faces was 2.53 and 2.34 for natural faces. The range of scores for the symmetrical condition was 1.75 and 1.42 for natural faces.

Inferentials

The hypothesis tested was that participants would rate the manipulated (symmetrical) faces higher (more attractive) than the natural faces. The data were evaluated with a Wilcoxon (T) that illustrated a significant increase in ratings for the attractiveness of symmetrical faces compared to the natural faces. The critical value calculated was 47, $T = 14.5$ and $p < 0.05$ (one tailed). As the T value is less than the critical value, the hypothesis can be accepted. The ranks for increasing totalling was 156.5 and for decreasing totalling 14.5.

Discussion

The results from this experiment show that more participants rated the symmetrical faces higher on the likert scale than the natural faces and found them more attractive.

Although, the median values for the natural and symmetric condition were similar as the half way points between the two conditions were alike. Also, the range for both conditions was similar; therefore in both conditions the data was spread similarly.

The results support the evolutionary theory which states that symmetrical faces will be found more attractive due to their advantages for mating purposes, in particular their ' healthy genes'. However, although there is research to show that symmetry is more attractive, there is limited research showing that symmetry is positively correlated with health. Most evidence proves that facial asymmetries (FA) are linked with disorders (Thornhill & Moller., 1997). Therefore, other factors apart from evolution influence people's view of whether a symmetrical face is attractive.

Previous studies that have included head-on photos or symmetrical left-left and right-right view photos and have found a weak link between beauty and symmetry (Samuels et al., 1994). However, when photos were digitally smoothed, a strong relationship was found between symmetry and attractiveness. This supports my experiment as the symmetrical photos were adjusted and made smooth which increased the attractiveness ratings.

Although this study focuses on symmetry, it has been found that other factors may override this trait in terms of judging someone as attractive. Scheib et al., (1999) conducted a study and found that participants were able to assess attractiveness when only the hemi-face was shown. This demonstrates symmetry is not a critical determinant of beauty and that someone's beauty can be judged from seeing half a face.

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Another explanation for the high ratings of attractiveness in symmetrical faces could be due to gender bias. A more recent study by Gangestad & Thornhill (2003) investigated links between masculine facial features and symmetry in 141 men and 154 women. They found that women prefer the scent of symmetrical men and masculine faces during their fertile phase of the menstrual cycle. Given that there were 15 females out of my 18 participants, this could be a factor that influenced their judgment of what is more attractive out of the two conditions, although it is unknown how many females were in that phase.

The two main limitations of the study was age and gender bias. My sample consisted of 18 participants, only three were male, the rest were females. The participant ages ranged from 18 to 20, and one 47 year old. Therefore it is hard to generalise my findings to the rest of the population. A third limitation encountered was demand characteristics, as participants knew what was being tested. The sample size was also limiting my results.

For future study, the affects of demand characteristics can be minimised by issuing fewer instructions to participants and debriefing them at the end, as this could have had an effect on the overall results. Also, using a larger sample and age range, whilst taking ethnicity into account, would enable us to see whether age and culture is influential on judging symmetry as attractive. Cross-cultural studies have demonstrated a difference in ratings when symmetry is compared to natural faces as what is more attractive e. g. Gangestad and Buss (1993). As stated earlier, other factors effect people's judgement of who is attractive and who isn't, therefore it would be

worthwhile investigating other factors. Questionnaires could be distributed <https://assignbuster.com/are-symmetrical-faces-more-attractive-than-natural-faces/>

after the experiment to see participants' motives behind their judgement;
this would give us richer, in-depth qualitative data to work upon.