LAB #7: Human Mate Choice

Summary

Across cultures, there tends to be agreement as to which people are considered more or less attractive. It is less clear, however, which specific traits individuals are using to make this distinction. Today we are going to test a variety of hypotheses to determine if there is a particular way to measure ‘attractiveness’ in an individual.

Background

**Good Genes Hypothesis:** In sexual selection theory, the ‘good genes’ hypothesis posits that animals with the best and brightest traits will be most likely chosen as mates since bright colors and strong features can be a sign of parasite or pathogen resistance (Hamilton & Zuk 1982). In this case, mates are chosen because they are capable of advertising their health status.

Humans are not exempt from sexual selection theory. The human face contains secondary sexual traits, facial features that develop or increase in size at puberty under the influence of sex hormones (Grammer & Thornhill 1992). Humans make judgments (whether consciously or not) as to whether an individual is considered ‘attractive’ or not. If an individual is deemed attractive, then perhaps a courtship will ensue. But what is ‘attractive’, and why does there seem to be a general idea of what is attractive, even though it seems difficult to pick out specific traits?

**Facial Symmetry Hypothesis:** One hypothesis regarding human attractiveness is facial symmetry. Symmetry is positively correlated with heterozygosity in many animals, including humans (Thornhill & Gangestad 1993). Heterozygosity is also linked to parasite resistance, and therefore symmetry may be an indicator of ‘good genes’. There is evidence that facial symmetry is positively correlated with scores of attractiveness (e.g. Grammer & Thornhill 1994; Fink et al. 2006), and it may also act as a cue to an individual’s personality characteristics (Fink et al. 2006).

However, studies that find correlations between attractiveness and symmetry often do not differentiate between ‘attractiveness’ and ‘healthiness’ of individuals. When these two characteristics were focused on separately, symmetry was more highly correlated with scores of perceived healthiness than attractiveness (Zaidel et al. 2005). Zaidel & colleagues suggested that the human face along with the human brain have been shaped by evolution to be naturally asymmetrical, but agree that symmetry may be important for the appearance of health.

**Averageness Hypothesis:** Another hypothesis, which is not necessarily mutually exclusive from the facial symmetry hypothesis, is the averageness hypothesis (Thornhill & Gangestad 1993). Based on this hypothesis, researchers compiled photographs of different people. They find that the more people’s faces that were ‘averaged’ together, the higher the overall attractiveness score became. Thornhill & Gangestad (1993) propose that facial averageness is attractive because of its association with heterozygosity.

**Questions:** So, the question remains, are individuals with more symmetrical features perceived as more attractive, or have we been shaped by natural selection to find asymmetrical features more attractive? Can we create a more highly attractive individual by averaging multiple faces in a composite? Are there facial features that can be considered as secondary sexual characteristics? In today’s lab you will score the attractiveness of human faces (which may vary in symmetry, averageness, or expression of secondary sexual characteristics). You will then do an on-line activity to directly test the averageness hypothesis.


**Averageness Lab Instructions**

In this exercise, you will determine attractiveness scores for both male and female faces. You will score all faces on a scale from 1-10, with 10 as the most attractive. You will create average faces in which individual faces will be blended together.

- **General Instructions:**
  - Access the website at http://www.faceresearch.org/demos/average
  - To create averages, select the faces you want to average, and they will show boxed in yellow. To unselect an image, just click it a second time.
  - When you’ve selected the ones you want in your selection, click ‘average’. **Between trials, click the ‘reset’ button to clear your previous selections.**
  - (The resulting faces will have strange hair as a result of the averaging, so try to ignore the hair as much as you can and focus on the face.)

**PART 1**

1. Assign attractiveness scores to the first 20 faces of each sex on a scale from 1-10.
2. Of the 20 faces, choose the three women you assigned the lowest scores, and average their faces. Score the resulting face.
3. Of the 20 faces, choose three women with scores of 5, and average their faces. Score the resulting face.
4. Of the 20 faces, choose the three women you assigned the highest scores, and average their faces. Score the resulting face.
5. Repeat steps 2-4, using male faces.

**PART 2**

1. Of the 20 faces, haphazardly choose 3 females and average them. Score the resulting face.
2. Of the 20 faces, haphazardly add 10 females to that sample, (for a total of 13) and average them. Score the resulting face.
3. Average all the 20 female faces. Score the resulting face.
4. Repeat steps 1-3, using male faces.

**TO FINISH**

1. E-mail your excel spreadsheet to Sarah: bengston@email.arizona.edu
2. I’ll combine the data anonymously from the entire class, and e-mail you the combined data set
3. Note: If for any reason you are uncomfortable with sharing your results, you do not have to send them.

**ANALYSIS**

- Compare scores between the original faces and the average faces you created. How do they differ?
- Compare the score for the composite faces across the low, medium, and high scoring categories. What patterns emerge?
- Does the score of the average face change with how many individual faces are used to create it?
Answer the above questions with respect to male and female faces. Do the patterns differ?

Do you see any differences between scores given by male vs. female students?

Represent your results graphically, in a way that you think is most appropriate.

For your discussion, use information from the literature as well as your own speculations as to what might be causing the observed patterns.

References


