

Facial Attractiveness

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Why study facial attractiveness?

- It is known and has been proven that face is the strongest indicator or factor of overall physical attractiveness of a person.
- It is a common observation that people regard an attractive person as being intelligent, friendly, smart etc.
- Many people seek specialized orthodontic care for themselves or their children to improve their attractiveness. This makes study of 'what makes a face more attractive' important and beneficial.

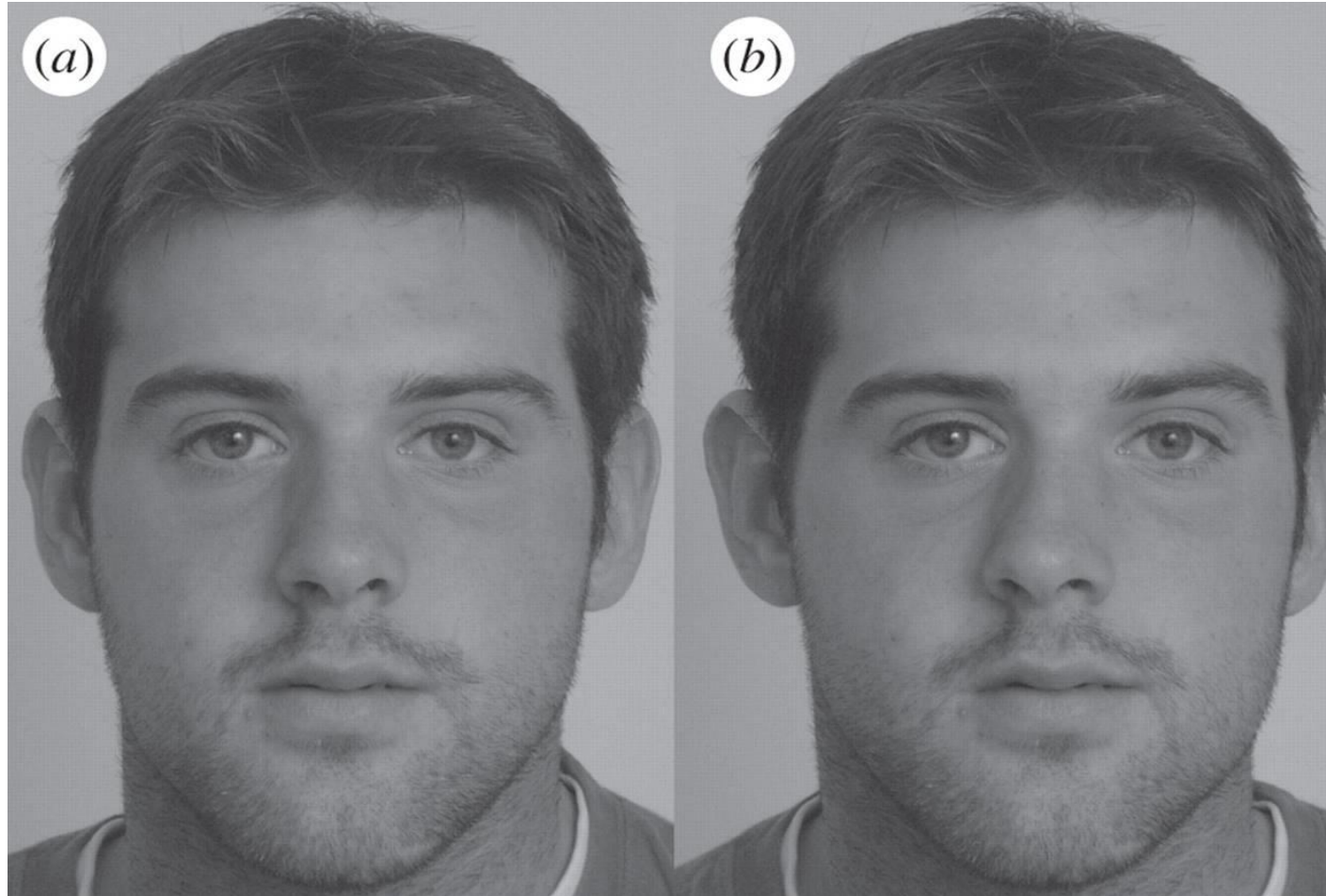
Introduction

- Evolutionary view: attractiveness and our preferences guide us to choose mates who will best provide chance of our genes surviving.
- Analysis of 3 facial features which make a person more or less attractive to general audience.
- Facial features considered- Symmetry, averageness and sexually Dimorphic features.
- Analysis made on the basis of people's response and rating of photos with subtle differences along the three features of our study.

Symmetry

- Successful symmetric development under environmental pressures: genetic quality.
- Fitness characteristics and symmetry positively related.
- How to analyze symmetry-
 - Mirror a face half
 - Calculate symmetry and compare ratings.

Symmetry and asymmetry



Little A C et al. Phil. Trans. R. Soc. B 2011;366:1638-1659

Averageness

- Averageness compares real photos of a person with their aggregate or intermediate photo.
- With averageness we shall analyze if an average face of a person is more attractive to people or real unedited photos.
- Averageness- Composite of multiple images of the same person.
- Rate the composite average image and the original image.
- Software: SquirlyMorph
- Present belief: average faces are attractive, but some asymmetry also causes attractiveness.



Dimorphic sexual features

- In male faces, how attractiveness varies with masculinity for girls and boys.
- Similarly for femininity of female faces.
- Male secondary features: pronounced brow ridges and jaws, beard, mustache, muscular face etc.
- Female secondary features: large eyes, full lips, eye lashes etc.



**Femininised
Female Face**

**Masculinised
Female Face**

**Femininised Male
Face**

**Masculinised Male
Face**

Dataset

- AR face database
- CVL database
- Physiological image collection at stirling(PICS)
- Yale face database
- Assignment 2 data
- 2D facesets

References

- *Little, Anthony C., Benedict C. Jones, and Lisa M. DeBruine. "Facial attractiveness: evolutionary based research." Philosophical Transactions of the Royal Society B: Biological Sciences 366.1571 (2011): 1638-1659.*
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- *Langlois, Judith H., and Lori A. Roggman. "Attractive faces are only average." Psychological science 1.2 (1990): 115-121.*
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