Name(s)	Project Number
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Project Title

Does the Golden Ratio Affect Facial Beauty?

Abstract

Objectives/Goals

My objective is to determine whether or not people regularly find celebrity faces with proportions closest to the Golden Ratio to be most attractive. I believe that if I calculate the Golden Percentage (how close a face comes to the Golden Ratio) for celebrity face images and ask people to rate those faces for attractiveness on a scale from 1 to 10, people will rate faces with the highest Golden Percentage (GP) as most attractive.

Methods/Materials

20 celebrity face images were obtained. A survey was created to rate perceived attractiveness of facial images. Informed consent was obtained from 35 randomly selected people. Each person was given the survey, results were recorded. Using survey results, an Average Attractiveness Rating (AAR) was calculated for each face and converted into percent form (10=100%).

Celebrity face images, ruler, pencil, calculator and ratio formulas were used to calculate Facial Feature Ratios (FFR) for each face. Each FFR was converted into decimal form. Results were used to calculate an Average Facial Feature Ratio (AFFR) for each face. A Golden Percentage (GP) was calculated for each face by converting the AFFR to its percentage of the Golden Ratio (1.618=100%). This demonstrated how close each face#s proportions came to the Golden Ratio.

For each celebrity face image, the AAR and the GP were compared. The conversion of AAR and GP results into percent form made for a clear comparison. Results of this comparison were evaluated to determine whether or not people regularly found celebrity face images closest to the Golden Ratio to be most attractive.

Results

6 out of 20 celebrity face images had a difference of 13.9% or less between their GP and their AAR. 14 out of 20 celebrity face images had a difference of 14.0% or greater between their GP and their AAR. Facial expressions, teeth, weight, coloring, makeup, hairstyle, apparent health and cleanliness, clothing, accessories, personality, humor, wealth and talents were factors in attractiveness ratings.

Conclusions/Discussion

The results of my science experiment did not support my hypothesis. Test subjects did not regularly rate faces with proportions closest to the Golden Ratio as most attractive. Factors beyond each faces GP influenced attractiveness ratings.

Summary Statement

I have examined the effect of the Golden Ratio on test subject perception of facial attractiveness by comparing data from a survey rating facial attractiveness against data from analyzing facial proportions and the Golden Ratio.

Help Received

Parents helped me brainstorm possible topics and helped me to acquire the materials to construct my board; Grandparents provided use of their printer; Mother helped me record data while I gave survey to test subjects, helped edit writing and helped me work through difficult spots in my mathematical analysis.