Beauty is in the algorithm of the beholder

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Manal El Rhazi, Arsalane Zarghili, Aicha Majda, and Anissa Bouzalmat of the Intelligent Systems and Applications Laboratory at Sidi Mohamed Ben Abdellah University, in Fez, Morocco, together with Ayat Allah Oufkir of the University's Medical Center of Biomedical and Translational Research, are investigating facial beauty analysis by age

and gender.

Writing in the *International Journal of Intelligent Systems Technologies and Applications*, the team explains that our faces are the first source of information we see and while beauty may well be in the eye of the beholder and perhaps more than skin deep, attractiveness is often tied very closely to the first sight of a person's face. As such, several studies have been conducted in aesthetic medicine and image processing that might allow attractiveness to be measured in the adult human face.

The team has now proposed an automatic procedure for the analysis of "facial beauty." In their approach, they first detect the face zone on an image and its feature areas, they then present a novel method to extract features and analyse aesthetic qualities.

"Experimental results show that our method can extract the features corners accurately for the majority of faces presented in the European Conference on Visual Perception in Utrecht (ECVP) and Faculdade de Engenharia Industrial (FEI) images databases," they report. They add "That there exists a difference in the facial beauty analysis by gender and age, due to anatomical differences in specific facial areas between the categories."

The main difference by gender is observed in the forehead and chin while the main differences by age take place in areas like the eyebrows, nose and the chin. The eyebrows descend from a high position to a lower one which makes the eyes look smaller, and thus suggestively less attractive. Similarly, the nasal tip descends gradually causing enlargement of the nose, and the chin descends in the same manner as the nose and eyebrows, aspects of facial characteristics that are often considered less appealing than their opposite.

More information: Manal El Rhazi et al. Facial beauty analysis by age

and gender, *International Journal of Intelligent Systems Technologies and Applications* (2019). DOI: 10.1504/IJISTA.2019.097757