

What makes us attractive?

Do you remember being in high school or college and noticing a group of females who had their own special group? More than likely they were the "popular" girls and the most pretty and conceited. When these kinds of people are depicted in movies they often get their egos crushed by plain classmates with better personalities. But, unfortunately, in real life this is unlikely. Being "beautiful" has its rewards and these usually continue throughout adulthood.

Studies show attractive people prefer to associate with others like themselves.

The secret of beauty and attractiveness has been a quest of humans for as long as we have been civilized. Many women (and some "metrosexual" men) spend up to one-third of their income on looking good. Why?

Besides being popular, beautiful people get special attention from teachers, the legal system and employers. Good-looking people tend to make more money than their plain-Jane counterparts, according to a study by the Federal Reserve Bank of St. Louis. Researchers found that beautiful people tend to earn 5 percent more an hour than their less comely colleagues. If that weren't enough, the Fed also discovered a "plainness penalty," punishing below-average-looks with earnings of 9 percent less an hour.

While we instinctively know what appeals to our own sense of beauty -- we know it when we see it -- defining what determines attractiveness is not always easy. In frustration, we often give up and claim that "beauty is in the eye of the beholder." But is beauty really a personal phenomenon?

Recent studies have shown that the secret of beauty may at last be understood. It seems that attractiveness may be hard wired in our brains.

Experiments designed to measure attractiveness usually involve showing a series of images of human faces and asking subjects to rate their visual appeal. Surprisingly, people from a variety of different ages, races and cultures agree on what is and isn't beautiful. Babies as young as 3 months can identify and prefer faces that most adults would deem beautiful. Europeans can pick out the same beautiful Japanese faces as Japanese subjects; Japanese can agree on which European faces another Europeans will view as beautiful. In fact, humans can even agree on the attractiveness of monkey faces, thus ruling out most unique racial, cultural and even species influences. So what's going on?

Facial recognition is a complex process. Only recently, with the need to spot criminals and terrorists, computer facial recognition programs have been developed to analyze the subtle variations of such things as the space between our eyes, the size of our noses and the proportions of our facial features. Scientists have discovered certain mathematical facial proportions that identify beautiful people. But is there more to beauty than the mere arrangement of eyes, noses and chins?

Our brains seem to do much more than simply recognize a beautiful face. Most people can assess emotions, personality traits and fertility -- as well as beauty -- almost instantaneously. In fact, the human brain has special part called the *fusiform*, located in the back of the head near the spine. It's the same neural pathway needed to recognize faces of family, friends and people we have met. When it's damaged, the patients cannot recognize anyone, even people they has just met. Also, in experiments, they cannot discriminate between photographs of plain and beautiful faces.

Studies show that when we recognize a face as "beautiful" we are actually making a judgement about the health and vitality of that individual. We interpret facial symmetry (the similarity of left and right halves of a face) and the smoothness of the skin to mean that a person has good genes and has been free from diseases. This is part of what we mean by "beautiful" but it is just the beginning.

Studies have shown that facial symmetry is one of the best observational indicators of good genes and healthy development and that these traits are what we mean when we say someone is attractive.

Which face do you think is more healthy?

A non-symmetrical face, or Facial Asymmetry (FA), increases with the presence of genetic disturbances such as deleterious recessives and with **homozygosity**. Also, FA increases with the exposure to environmental perturbations during development (i.e. extremes in temperature and pollution). Think of Facial Asymmetry as the inability of an individual to resist the disruptions in developmental symmetry. This implies a genetic weakness and less than optimum health.

Bilateral Symmetry (see image above) is thus equated with **heterozygosity** and resistance to infection and debilitating pathogens. Bilateral Symmetry and parasite resistance are factors that show optimum health and increase the success in intersexual and intrasexual competition.

Note: The term homozygosity refers to the similarity of genetic characteristics that can cause a weakening of a species -- such as occurs with in-breeding. Heterozygosity, on the other hand, is the result of genetic variety which is able to change and adapt to environmental conditions. The latter is believed to be more beneficial to a species.

A plethora of recent experiments have shown that, aside from symmetry and being "healthy," men and women form opinions about attractiveness based on slightly different criteria which can change depending on such things as their age, hormones and potential for being a mate.

Attractiveness from a female's perspective

In one experiment, the researcher selected photographs of a man with what has been described as "feminine" features. These included a small nose, narrow chin and large eyes. This image was digitally morphed with an image of a very "masculine" face, with a strong jaw, big nose and small eyes. The two images were morphed in progressive steps in such a way that the viewer could adjust the degree of either masculine or feminine features with a slider, corresponding to which image the female subjects thought was most attractive. Subjects were also asked about their menstrual cycles to determine their potential fertility and estrogen levels.

While most women preferred the middle range -- a combination of both feminine and masculine features -- subjects who were in their most fertile hormonal cycles preferred the more masculine image. The same women, when later tested during their infertile days, selected the more average looking male image as most attractive.

Scientists reason that fertility causes hormonal changes in the brain that seek out strong testosterone traits in their potential mates. These traits are usually associated with aggressive behavior, risk taking and verility -- traits that are advantageous in the act of procreation.

Some other interesting studies may be explained using this biological model. University of Aberdeen psychologist Ben Jones and his team tested the impact that the opinions of others has on our perception of beauty by giving women a test in which they had to choose the more attractive of pairs of male faces and to rate how much more handsome they found them. [*The Proceedings of The Royal Society*]

They were then shown a short video in which the same faces were displayed. But each face was being looked at by a woman smiling or one showing a bored or neutral expression.

After watching the video, the researchers repeated the initial test.

"We found that the slideshow caused women to become more attracted to the men who were being smiled at by other women," said Jones. This shows that people are using the attitudes of others to shape their own judgement about the attractiveness of some people.

In other words, a woman may not be sure how attractive a face is. But if other women show that they're attracted they dismiss their doubt. This may explain the "groupie" and the "cult of personality" phenomenon and why so many ugly men learn to play the guitar.

The test had the opposite effect on men. When they were asked to look at the same male faces, those who got the approving female glances were rated less attractive. Could this be jealousy?

When women are assessing a man's face for a marriage partner they usually react to a man with a wide smile, small eyes, a big nose and a large jaw. This is thought to indicate a strong testosterone level, a potentially good provider and protector for family life.

Studies show that younger women rely more on the physical attractiveness of a man than do older women. The latter incorporate such things as wealth, stability, power and faithfulness in their definition of attractive. This demonstrates wisdom since the most recent studies prove that less attractive men are more faithful and loving than handsome men.

Attractiveness from a male's perspective

As might be expected, females tend to place less of their criteria for beauty on physical attractiveness than do males. This might be a lucky break for unattractive men! A recent study published in *Psychological Science* found that when seeking a date, men do not factor in their own attractiveness (or lack of) when assessing their chances of success with a beautiful woman. Sometimes they are lucky, but the study did find that, most of the time, people with similar levels of physical attractiveness usually end up dating each other and they aspire to date people who are slightly more attractive than themselves.

When reality sets in, less attractive people justify their less than beautiful partners by emphasizing their personality traits, like a sense of humor or kindness.

The ideal face of an attractive woman, according to experiments with men, has high cheek bones, big eyes and a thin jaw. From infancy to adulthood, our faces are growing at different rates and proportions, depending on such things as hormones. When viewing the proportions of elements such as nose size and facial proportions, males usually select features that are characteristic of a woman of 24.8 years -- perhaps also related to the perceived age of optimal fertility.

Some men prefer even younger proportions because these child-like faces stimulate emotions of caring and protection. These emotions seem to be more significant than sexual urges and procreation in some men. This can be in the psychological realm that dangerously approaches pathology and the law. Yet this "lolita" proclivity seems similarly hard wired.

Professor Victor Johnstone, of the University of New Mexico studied this phenomenon and reported that, "We found that there definitely was a type of adult female face that men found attractive and that it was different from the average face," says Johnstone. "The two key measurements are the distance from the eyes to the chin, which is shorter - in fact it is the length normally found in a girl aged eleven and a half; and the size of the lips, which are fatter -- the size normally found on a fourteen-year-old girl".

When it comes to body proportions, most men usually like big breasts and hips -- again possibly linked to the ability to bare and nurture offspring. Estrogen, the hormone associated with female fertility, encourages fat deposits around the buttocks and thighs. So full buttocks and a narrow waist send out the same message as the ideal face: "I'm full of estrogen and very fertile." Studies by Dr Devendra Singh from the University of Texas show the optimal preferred waist to hip ratio was 0.67 to 0.80, while a larger waist was viewed by males as meaning the woman was more faithful and kind and a woman with a smaller waist was judged as being more aggressive and ambitious.

Dr Michael Cunningham of Elmhurst College, Illinois found that if a male is judging a female in an interview for a job, a woman with expressive eyebrows and dilated pupils has the edge and is likely to be considered more competent. The same features would not be judged as attractive if the same man was looking for a mate. Cunningham also found that attractive women with mature features, such as small eyes and a large nose, received more respect from men.

"Average" is beautiful -- not!

In the late 1870s, scientist and eugenicist Sir Francis Galton developed an image of the prototypical "face of crime" by creating composite photos of men convicted of serious offenses. Though Galton failed to discover anything abnormal in his composite criminal faces, he did find that the resulting visages were shockingly handsome. Later, Galton tried to make the case that a face with average proportions would always look more beautiful than a unique, individual face.

Subsequent studies of both men and women had shown that averaging features seemed to make the faces more attractive than any specific face. When a collection of computer averaged faces and real female faces were submitted to a famous modeling agency for comments, 80% of the computer generated faces were selected as having potential to be a model. Scientists believed that average faces were more easy for the brain to recognize and require less analysis and processing in the fusiform. This ease of recognition was perceived as attractiveness.

But this theory has recently been disproved by Dr David Perrett, of the University of St Andrews, who found that individual faces were judged more attractive than the composites.

"We found that not only were individual attractive faces preferred to the composites, but that when we used the computer to exaggerate the composite features away from the average, that too was preferred," he said.

Attractiveness - a summary of facts

Attractive people earn more salary and get more promotions than average looking people.

One main feature that is indicative of healthy genetics is the symmetry of the face.

Recognition of beauty fosters better mate selection and healthier breeding.

Beautiful people usually associate with other beautiful people.

Beautiful people prefer date people who are a little more attractive than themselves.

Beautiful people and less beautiful people judge beauty in the same way, although less beautiful people often consider other factors as equally important.

People consider facial characteristics similar to their parents to be more attractive.

Members of a family or relations judge facial characteristics as implying personality traits in the same way.

Studies find couples often resemble each other in facial characteristics.

Attractive people are viewed as honest and helpful while unattractive people are viewed as rude and unfair.

Women find a man more attractive in experiments when other women are pictured smiling at him.

Females find extremely masculine faces more attractive during their fertile periods.

Studies find less attractive men are more faithful and loving than handsome men.

Women looking for a mate like small eyes, a big nose and a large jaw.

Males in experiments prefer facial ratios similar to a woman of 24.8 years old.

The ideal figure of a woman is a waist to hip ratio of 0.67 to 0.80

Psychologist David Perrett found that young men and women prefer faces that most resemble their mothers and fathers. Members of a close family also often share the interpretation of certain facial characteristics in judging someone's personality. Although this does not relate directly with beauty or attractiveness, it demonstrates that some aspects of evaluating facial characteristics may be learned.

My own take on this is that it's a matter of nature vs. nurture. Various centers of our hard wired brain, like the *fusiform*, compete to control our daily decisions. One center is concerned with mate selection based on physical traits. Others brain regions respond to a potential mate who is also intelligent, honest, faithful, kind and sane. Attractiveness, in the end, actually *is* unique to each individual. It should be said that, "beauty is in the eyes (plural) of the beholder."

It's more a matter of [left and right brain politics](#) and somehow both hemispheres must work together to attract us to the perfect mate, as they usually do. Life is beautifully complex.