Beauty is in the Mind of the Beholder

April 01, 2011

There's no getting around it. In this world, you're better off being good-looking. At all ages and in all walks of life, attractive people are judged more favorably, treated better, and cut more slack. Mothers give more affection to attractive babies. Teachers favor more attractive students and judge them as smarter. Attractive adults get paid more for their work and have better success in dating and mating. And juries are less likely to find attractive people guilty and recommend lighter punishments when they do.

Many factors can play into personal attractiveness — the way you dress, the way you act, the way you carry yourself, even things that are hard or impossible to change, like social status and wealth, race, and body size and shape. But the first thing we notice when we meet someone is their face. There are faces that launch a thousand ships, and faces that only a mother could love, and we are supremely attuned to tell the difference. The brain, among its many other functions, is a beauty detector.

The brain is such a good beauty detector, in fact, that it can judge the appeal of a face before you're aware you've even seen one. When participants in a recent study were presented with attractive and unattractive faces for only 13 milliseconds, they were able to judge the faces' attractiveness accurately (that is, in accordance with experimenters' ratings), even though they were not consciously aware of the stimuli and felt like they were just guessing (Olson & Marshuetz, 2005).

There is no doubt that beauty (which here means both male and female attractiveness) is to *some* extent in the eye of the beholder, but across individuals and across cultures there is nevertheless considerable agreement about what makes a pretty or handsome face, and the evidence strongly counters the conventional wisdom that attractiveness preferences are mainly acquired through life experience. For one thing, the beauty bias is already present in infancy. Six-month-olds prefer to look at the same relatively attractive faces that adults do (Rubenstein, Kalakanis, & Langlois, 1999).

Truth in Beauty

The question is, is beauty really only skin deep, or does an attractive face actually reflect underlying good qualities? In a few ways, the stereotype that "beautiful is good" does hold. Evolutionary

psychology holds that faces really are windows onto certain fundamental and important characteristics indicative of a person's quality as a romantic partner and as a mate — qualities of health and genes, and even character.

Among the most important and consistent factors in facial attractiveness are structural qualities of the face that are highly sex-typical. An attractive man, in the eyes of female experimental participants, is generally one with relatively prominent cheekbones and eyebrow ridges and a relatively long lower face. Likewise, prominent cheekbones, large eyes, small nose, a taller forehead, smooth skin, and an overall young or even childlike appearance add to women's allure in the eyes of male raters.

Our faces are sculpted by our hormones. These sex-typical facial features of adult men and women reflect the ratio of testosterone to estrogen or estrogen to testosterone, respectively, acting on the individual during development. We are programmed to be drawn to strong indicators of maleness (for women) and femaleness (for men) partly because they reflect an individual's health (Fink & Penton-Voak, 2002). The reason hormones equate to health is somewhat counterintuitive. High levels of sex hormones during puberty actually *suppress* the immune system, raising vulnerability to disease and infection. It sounds like a bad thing. But when a person with a particularly "male" or "female" face makes it to adulthood with all his or her health intact, it means that the person has withstood the potentially debilitating influence of those high hormones. In other words it signifies a more robust constitution.

'Your Symmetry Lights Up the Room'

No two faces are alike, and no two halves of a face are alike. Countless small variables make faces somewhat asymmetrical – a slightly wider jaw on one side, one eye a fraction of an inch lower than the other, a cheekbone that sticks out just a wee bit more, a dimple on one cheek, etc. Some asymmetries (called directional asymmetries) are common across the population – for example, the left side of most people's faces is slightly larger than the right. But many asymmetries, called fluctuating asymmetries, arise when one's unfolding genetic program is perturbed during development, for instance by parasites or other environmental challenges. The slings and arrows of life's fortunes can literally knock our faces

off of kilter, just like a punch to the nose. A symmetrical face, like a particularly masculine or feminine one, is a sign of having stood up better to life's figurative schoolyard beatings.

Numerous studies have found that when men and women are asked to compare versions of faces that are more versus less symmetrical, the symmetrical ones garner significantly higher ratings of attractiveness, dominance, sexiness, and health, and are perceived to be more desirable as potential mates (Rhodes, Proffitt, Grady, & Sumich, 1998; Shackelford & Larsen, 1997). So as with masculine/feminine features, the appeal of symmetry makes perfect sense to evolutionary psychologists. In a beautiful face, we are really seeing the artistry of good genes. People prefer symmetrical faces even when they can't actually perceive the symmetry – that is, when only face halves are presented. It may be that symmetry covaries with other desirable characteristics that reflect the same genetic endowment and overall health (Penton-Voak et al., 2001).

It may not be all that surprising that we'd rather mate with a symmetrical Greek god or goddess than with someone who stepped out of a Picasso painting. Less obvious is that a pretty or handsome face is also generally one that is, well, *average*. When presented with individual faces and a composite of those individual faces, participants will judge the composite as more attractive than the individual, more distinctive faces. And the more faces that contribute to the composite, the more attractive it becomes (Langlois & Roggman, 1990). The most attractive faces appear to be those whose features are closest to the average in the population—that is, more prototypical.

Averageness, like symmetry, reflects a favorable genetic endowment. Those with average features are less likely to be carrying harmful mutations. Additionally, averageness reflects greater heterozygosity — having both a dominant and a recessive allele for given traits, rather than two dominant or two recessive alleles (an advantage that symmetry also reflects). Heterozygosity confers relatively greater resistance to pathogens, in many cases, and thus, along with all the other indicators of resilience, we may be programmed to seek it out through its subtle but telltale signs.

However, it has also been argued that there may be some much simpler cognitive reasons for the preference for averages. Besides faces, people show a preference for average-looking dogs, average-looking birds, and average-looking watches (Halberstadt & Rhodes, 2000). Prototypes are more familiar-looking than less typical examples of a given class of objects, be it the face of a potential mate or the face of a timepiece, and they are easier to process. Easy on the eyes = easy on the brain.

In the Sex of the Beholder

Men and women both show the above preferences when it comes to faces, but in general men's preferences tend to be more pronounced (Rhodes et al., 1998). Males may place greater importance on physical beauty when it comes to mate choice, while females also attend to characteristics like power and status. But a number of factors contribute to how much — and when — male face characteristics matter to women.

One factor is a woman's own attractiveness: Preference for masculine and symmetrical features has been shown to be higher for women who regard themselves as more attractive (Little, Burt, Penton-Voak, & Perrett, 2001). Another is time of the month: The degree of women's preferences for different attractive qualities fluctuates strikingly across the ovulatory cycle.

A group of University of Mexico psychologists have studied women's shifting preferences for symmetrical men. They have found that this preference (which women can not only see, but even *smell* in tee-shirts slept in by symmetrical men) increases dramatically around the time of ovulation, when a woman is most fertile and the chance of conception is highest (Gangestad, Thornhill, & Garver-Apgar, 2005). So does a woman's preference for more masculine-looking men. But this preference wanes during other times of the month. Again, evolutionary psychology provides a ready explanation.

Humans, like many other species, are socially monogamous but not necessarily sexually monogamous. When sex might result in getting pregnant, it's health and fertility that are particularly desirable in a mate. But good genes in the sense of physical health is not the same as good genes in the sense of character, and what makes a good sperm donor may not make the best long-term, nurturing, helpful life partner. The flip side of high testosterone is an increased tendency toward aggression and antisocial behavior, a tendency to compete rather than help. Thus a male with less testosterone, indicated by less masculine features, may invest more in caring for offspring (whether or not he's the biological father) and so may be better to have around for the long term.

A Thousand Ships

In myth, beautiful women are disruptive of men's reason, even causing them to go to war. We now know that there's truth to the idea that men make worse decisions when exposed to female beauty, and we even are beginning to understand the neural basis. A pair of McMaster University researchers found that looking at photographs of attractive women (but not unattractive women) caused a significant increase in delay discounting in men — that is, choosing a smaller immediate reward over a larger delayed one (Wilson & Daly, 2004). It's the same tendency found to a high degree in addicts and others with impaired self-control. Interestingly, viewing attractive men did not influence women's decisions.

The reason-unseating effect of a beautiful face partly involves the amygdala. Activation of the amygdala, which detects the value of social stimuli, has been associated with greater discounting of all kinds of future rewards, and sure enough, this brain area shows much stronger activation to attractive faces than to more ho-hum ones. (It is actually a U-shaped relationship; the amygdala is also highly activated by unattractive faces; Winston, O'Doherty, Kilner, Perrett, & Dolan, 2007.)

In both men and women, attractive faces cause greater activation in several other brain areas involved in processing of rewards. These include the nucleus accumbens, which also activates in response to rewarding stimuli like money; the medial prefrontal cortex; and the anterior cingulate cortex, which may be involved in shaping future behavior from learning reward outcomes. In men (but not in women), the orbitofrontal cortex, an area that evaluates the reward value of current behaviors, also activates in response to attractive female faces (Cloutier, Heatherton, Whalen, & Kelley, 2008).

Beautify Yourself

Beauty is unfair. Not everyone can be born with great genes. Not everyone can be born symmetrical. Not everyone can be born enticingly, well, average. But obviously there are many factors contributing to attractiveness that are potentially under our control.

For women, makeup does   have a strong effect. In one study, women wearing makeup were approached more, and approached faster, by men at a bar than they were on nights without makeup (Gueguen, 2008b). Effect sizes on beauty judgments for makeup have been found to be as high as those for the facial structural features mentioned earlier (Osborn, 2006).

Getting enough beauty sleep is something everyone can do to up their beauty quotient. A group of Swedish and Dutch researchers conducted an experiment in which observers rated the attractiveness (as well as health) of participants who were photographed both after a period of sleep deprivation and after a good night's sleep (Axelsson, 2010). Not surprisingly, individuals who were sleep deprived were rated significantly less attractive than those who were rested. They were also rated less healthy.

And then there are the emotions we project through our faces. Not surprising, positive emotions increase attractiveness. We are drawn to those who smile, for example. As when they wore makeup, women who smiled at men on entering a bar were more likely to be approached and were judged more favorably (Gueguen, 2008a). Even a smile perceived only in the periphery of one's vision will be seen as more attractive than a face with a neutral expression (Bohrn, Carbon, & Hutzler, 2010). And attractive faces that smile produce even more activity in the orbitofrontal cortex than do attractive faces wearing neutral expressions (O'Doherty et al., 2003).

So here's the timeless message of psychological science: Be beautiful—or, as beautiful as you can. Smile and sleep and do whatever else you can do to make your face a reward. Among its other social benefits, attractiveness actually invites people to learn what you are made of, in other respects than just genetic fitness. According to a new study at the University of British Columbia (Lorenzo, Biesanz, & Human, 2010), attractive people are actually judged more accurately—at least, closer to a subject's own self-assessments—than are the less attractive, because it draws others to go beyond the initial impression. "People do judge a book by its cover," the researchers write, "but a beautiful cover prompts a closer reading." œ

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