



Human Form—An Evolutionary Psychological Approach to Beauty ⁺

Karl Grammer

Abstract

Department of Anthropology, Center for Organismal Systems Biology, Faculty of Life Sciences, University of Vienna, 1010 Wien, Austria; karl.grammer@univie.ac.at

 Presented at Symmetry 2017—The First International Conference on Symmetry, Barcelona, Spain, 16–18 October 2017.

Published: 4 January 2018

Abstract: Humans tend to judge and sort parts of their social and non-social environment permanently into a few basic categories: those parts they like and those parts they do not. Indeed, we have developed aesthetic preferences for those things and people we are exposed to. Furthermore, needless to say, these preferences shape our behavioural choices—our tendency to seek out or avoid what the world has to offer to us. Humans and other animals have evolved preferences for food and habitats, for naturally occurring sensations such as smells and sounds, as well as for the broad array of culturally created artefacts.

Humans have also evolved aesthetic preferences for their sexual and social companions. In this talk, I will review the current approaches in attractiveness research, I will deal with the obsession about beauty, and review the biological constraints, which create the bases for beauty traits as honest mating signals. If evolutionary approaches to beauty are correct, beauty signals should have a direct relation to health, and reproductive success [1].

The pillars of beauty identified up to now are averageness, symmetry, and sex-hormone markers, which find their expression in form, skin texture, body motion, body odour, voices and hair complexion. One of the major players is symmetry and I will discuss several methods for the measurement of symmetry, the role of different types of symmetry and its relation to beauty perception. In fact, a preference for symmetry in mate selection is a general trait found in most bilateral animals and even plants. We suggest that the content of these signals is redundant, and points in the same direction [2]. For instance, how can it happen that people with symmetrical bodies have more attractive voices.

On the side of the perceiver, I will explore which brain structures are responsible for beauty perception and propose a perceptive model which is based on biologically based construction rules for "what is beautiful" and not on the content of the signals themselves. These construction rules can be modified by several constraints such as female hormonal cycle, socioeconomic status or self-perception—which makes beauty perception a plastic concept which is able to adapt to a range of socioeconomic situations and environments [3].

In the final part, I will present evidence on how beauty traits develop and consider the evidence for their relation to genetic factors such as genetic heterozygosis and developmental factors such as prenatal hormonal environment.

References

- 1. Grammer, K.; Fink, B.; Møller, A.P.; Thornhill, R. Darwinian Aesthetics: Sexual Selection and the Biology of Beauty. *Biol. Rev.* 2003, *78*, 385–407.
- Grammer, K.; Fink, B.; Juette, A.; Ronzal, G.; Thornhill, R. Female faces and bodies: n-dimensional feature space and attractiveness. In *Advances in Visual Cognition*; Volume I: Facial Attractiveness; Rhodes, G., Zebrobwitz, L., Eds.; Ablex Publishing: New York, NY, USA, 2001; pp. 91–125.

3. Johnston; V.S.; Hagel; R.; Franklin; M.; Fink; B.; Grammer, K. Male facial attractiveness: Evidence for hormone mediated adaptive design. *Evol. Hum. Behav.* **2001**, *22*, 251–267.



© 2018 by the author. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (http://creativecommons.org/licenses/by/4.0/).