ELSEVIER

Evolution and Human Behavior 27 (2006) 443–456

Evolution and Human Behavior

Changing perceptions of attractiveness as observers are exposed to a different culture☆

Martin J. Tovée[a,*], Viren Swami[b], Adrian Furnham[c], Roshila Mangalparsad[d]

[a]*Department of Psychology, Newcastle University, UK*
[b]*Division of Public Health, Liverpool University, UK*
[c]*Department of Psychology, University College of London, UK*
[d]*Department of Gender Studies, University of Natal, South Africa*

Initial receipt 20 March 2006; final revision received 18 May 2006

Abstract

It has been suggested that certain physical cues can be used to predict mate quality and that sensitivity to these cues would therefore be adaptive. From this, it follows that in environments where the optimal values for these features differ, the attractiveness preferences should also be different. In this study, we show that there are striking differences in attractiveness preferences for female bodies between United Kingdom (UK) Caucasian and South African Zulu observers. These differences can be explained by different local optima for survival and reproduction in the two environments. In the UK, a high body mass is correlated with low health and low fertility, and the converse is true in rural South Africa. We also report significant changes in the attractiveness preferences of Zulus who have moved to the UK. This suggests that these preferences are malleable and can change with exposure to different environments and conditions. Additionally, we show that Britons of African origin, who were born and who grew up in the UK, have exactly the same preferences as our UK Caucasian observers. These results suggest that humans have mechanisms for

☆ The first author's research is supported by Wellcome Trust funding through the JIF initiative. The second author was supported by an Overseas Research Student Award from Universities UK.

* Corresponding author. Psychology Department, Henry Wellcome Building for Neuroecology, Newcastle University, Framlington Place, NE2 4HH Newcastle Upon Tyne, UK. Tel.: +44 191 222 8616; fax: +44 191 222 5622.

E-mail address: m.j.tovee@ncl.ac.uk (M.J. Tovée).

1090-5138/06/$ – see front matter
doi:10.1016/j.evolhumbehav.2006.05.004

acquiring norms of attractiveness that are highly plastic, which allow them to track different ecological conditions through learning.

Keywords: Physical attractiveness; Body mass index; Cross-cultural

1. Introduction

It has been proposed that certain physical features honestly signal an individual's health and reproductive potential (Buss, 1994; Symons, 1995). If one were sensitive to these features, then one would be able to gauge the health and fertility of a possible partner. Certain specific values of these features could signal optimal health and fertility; thus, an individual whose features correspond to these values would be regarded as optimally attractive. From this, it follows that in environments where the optimal values for these features differ due to differences in environmental pressures, the attractiveness preferences should also be different (Anderson, Crawford, Nadeau, & Lindberg, 1992; Brown & Konner, 1987; Ember, Ember, Korotayev, & de Munck, 2005). Moreover, as observers moved from one environment to another, it would be adaptive for them to alter their attractiveness preferences to those that accurately reflected optimal health and fertility in their new environment.

In women, two potentially critical physical features are shape and weight scaled for height (in kilograms per meters squared). This latter factor is called the body mass index (BMI; Bray, 1998). For shape, research has focused on the ratio of the circumference of the waist to the circumference of the hips [the waist–hip ratio (WHR)] among women. For women in Western Europe and the USA, a low WHR (i.e., a curvaceous body) is suggested to correspond to the optimal fat distribution for high fertility (Wass, Waldenstrom, Rossner, & Hellberg, 1997; Zaadstra et al., 1995); hence, this shape should be highly attractive within these cultures. The optimal fat distribution is proposed to correspond to a ratio of 0.7, and this is suggested to be optimally attractive (Furnham, Tan, & McManus, 1997; Henss, 2000; Singh, 1993, 1994). BMI also appears to be a strong predictor of attractiveness in Western observers (Fan, Liu, Wu, & Dai, 2004; Puhl & Boland, 2001; Thornhill & Grammar, 1999; Tovée, Hancock, Mahmoodi, Singleton, & Cornelissen, 2002; Tovée, Maisey, Emery, & Cornelissen, 1999; Tovée, Reinhardt, Emery, & Cornelissen, 1998). There are also advantages to using BMI as a basis for mate selection because BMI provides a reliable cue to female health (Manson et al., 1995; Willet et al., 1995) and reproductive potential (Frisch, 1988; Lake, Power, & Cole, 1997; Reid & van Vugt, 1987; Wang, Davies, & Norman, 2000). For Caucasian women in Western Europe and the USA, Tovée et al. suggest that the balance between the optimal BMI for health and fertility is struck at around a value of 19–20 kg/m^2, which, in their studies, is also the preferred BMI for attractiveness. However, they also suggest that the ideal may vary in different racial groups and different environments (Tovée & Cornelissen, 2001), and a number of studies have suggested that resource-poorer societies prefer a heavier female body than more affluent societies (Anderson et al., 1992; Brown & Konner, 1987; Ember et al., 2005).