**CHAPTER 15**

**SUPPLEMENTARY MATERIAL**

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In cultures where shaving is routinely practised, it is easy to forget that one feature that is strongly sexually dimorphic is facial hair. The beard emerges at puberty and thus looks like a prime candidate for sexual selection. The fact that adult males sport beards is not likely to be the result of natural selection, since children and women make do without them. As yet, however, there is no consensus on the adaptive function of the beard. Darwin (1871) speculated that the nearly hairless state of a women’s body, compared to that of men, was probably a product of atypical (since selection came from the male) sexual selection in the distant past. Barber (1995) suggested that beards were signals to women of maturity and social dominance. In the EEA, a man’s beard would have been difficult to trim (also, why bother?) and so its size would have increased with age. Since a man’s social status also tends to increase with age, so the beard became a signal of maturity and social standing. Women who found such men attractive did better than those who did not. The problem here is that such a theory might suggest that women should still find beards attractive, but the evidence on this topic is ambiguous. In some studies, the rating of men’s physical attractiveness increased with the quantity of facial hair (Pellegrini, 1973; Hatfield and Sprecher, 1986). But other studies have revealed negative attractiveness ratings of beards (Kenny and Fletcher, 1973; Feinman and Gill, 1977).

In some cultures, such as the native Andean Indians of Bolivia and Peru, men lack facial hair. It may be that beards are absent from cultures where there is a higher risk of parasite infection. Since parasites alter the appearance of facial skin, women might have demanded hairless faces to ensure that men honestly signalled their health status. The presence or lack of hair is not, however, obviously correlated with any ecological factors. A beard could serve as a dishonest signal by seeming to enlarge the size of the chin, a large chin generally being thought to indicate a high testosterone level.

It may be that beards once served as a weak signal of a good prospective mate, but a signal easily manipulated by cultural trends. Indeed, there is plenty of evidence linking the popularity of beards to changes in fashion and the behaviour of role models. The ancient Egyptians found beards on ordinary people unattractive. Roman emperors tended to be clean-shaven until the emperor Hadrian set a trend in the second century ad by growing a beard. This was partly to express his interest in Greek philosophy (he studied at Athens and Greek philosophers wore beards) and possibly, in part, as a way of concealing some facial blemishes. During and after World War I, mass propaganda successful sought to persuade people of the hygienic benefits of removing beards, and the clean-shaven state has been common among Western men ever since. Beards re-emerged in the counterculture of the 1960s as a deliberate gesture of rebelling against convention.

**15.2 Imprinting**

In an ingenious study, Bereczkei et al (2004) sought to disentangle the effects of phenotypic matching and sexual imprinting by looking at the similarities between a husband and his wife and a husband and his wife’s adoptive father. If phenotypic matching is the underlying mechanism then a husband and wife are attracted because they share phenotypic (and ultimately genotypic) traits in common. For this subject group then, since the wives all had adoptive fathers, we would not expect any similarity between husband and adoptive father (since the father is not genetically related to his adopted daughter. If, however, the underlying driving force is sexual imprinting, and daughters have used what their fathers look like as some sort of template of desirability, then we might expect an above chance resemblance between husband and his wife’s adoptive father. In the study independent judges had to match photographs of the adoptive father, as he appeared when his daughter was between 2 and 8 years old, to one of four photographs of potential sons-in law, only one of which was correct. Hence the chance accuracy of matching father to son-in law should be 25%. Table 15.1 shows the results. The results do not rule out phenotype matching between husband and wife but the high percentage of correct matches for husband to adoptive father does also point to a sexual imprinting mechanism.

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| **Relationship:** | **Husband- Wife** | **Husband-Wife’s adoptive father** | **Husband-Wife’s biological mother** |
| Correct Choice (%) | 31 | 37 | 27 |

Table 15.1 Percentage of correct matching of photograph of husband to wife and wife’s parents. The chance accuracy is 25% (since four pictures presented). Similarity between husband and wife and husband and wife’s adoptive father differ significantly from chance association (P<0,01 and P<0.001 respectively); similarity between husband and wife’s mother not significantly different from chance (P>0.5). Data taken from Bereczkei, T., Gyuris, P., & Weisfeld, G. E. (2004). Sexual imprinting in human mate choice. *Proceedings of the Royal Society of London, Series B: Biological Sciences*, *271*(1544), 1129-1134.

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