

If an individual does not reproduce they cannot pass on their genes. Therefore any characteristics that maximise an individual's reproductive success are highly adaptive and likely to be naturally selected.

**Charles Darwin** outlined the theory of evolution by natural selection. However, some characteristics endure even when they appear to serve no purpose, for example a peacock's tails feathers, Darwin proposed these characteristics evolve as a result of sexual selection.

**Fisher (1930s)** put forth the **arbitrary drift** theory of sexual selection. This states that certain characteristics can be selected for no apparent reason. For example female birds may have a preference for long colourful tails and as a consequence of this subsequent generations of birds would show a marked increase of this trait. The cost of the long tail may be difficulty in mobility however the cost of not have a long tail may be significantly more important as it may mean less likelihood of being mated with, and so a smaller chance of reproductive success.

**Baker (1996)** suggested that sperm 'compete' with each other to fertilise the ova and further suggests that human ejaculate contains four types of sperm. **Blocker sperm** are slow and sluggish and effectively block entry to the womb by getting in the way of the cervical channels; **killer sperm** contain spermicide to kill rival sperm, **egg getters** are quick, sleek sperm with large head for fertilising the eggs and finally **family planning sperm** kill their own sperm if the time isn't right to produce offspring. This would strongly suggest that human females in the ancestral past were less monogamous than we might have expected.

**Baker (1995)** states that testicle size may be sexually selected, as larger testicles contain more sperm and faster sperm. For example the male chimpanzee has large testicles in relation to body size as the female chimp is promiscuous, whereas gorillas' testicles are smaller in comparison as the female gorilla is monogamous, thus there is no competition for fertilisation. Human testicles are medium sized in relation to body size which might suggest that in the EEA females had multiple partners.

**Sexual dimorphism** may come about as a result of female mating choices. Dimorphic characteristics include facial features, which differ between men and women. It has been found that a female face with neotenic features is seen as more physically attractive, whereas a male face is rated as more attractive if it is angular with a strong jaw line and chin (**Thornhill 1993**).

**Fleagle et al (1980)** suggest that sexual dimorphism in terms of physical size may demonstrate competition for females amongst humans as the biggest and strongest males would have more chance of securing meat in the EEA and a greater chance of staying alive, consequently being more likely to reproduce successfully.

**Zahari (1977)** put forwards the **handicap hypothesis** that states that a male bird that is able to support the adornment of a long tail or large feathers (such as the peacock) may be preferred by females because the male can support the obvious handicap such adornment causes. Consequently, strong healthy genes will be passed to the subsequent offspring. In terms of human sexual selection **Moller (1993)** suggested that humans show a preference for symmetrical faces, as this may be an indicator of strong genes and a resistance to disease.

**Singh (1993)** proposed males show a preference for females with a waist hip ratio of 0.7, as it demonstrates non-pregnancy and fat reserves that will be useful for reproductive success. Research has also found that women with a WHR of 0.7 are less likely to miscarry and more likely to have successive births.

**Buss (1989)** tested the evolutionary theory of human sexual selection by conducting cross-cultural research (37 cultures) of preferred characteristics in mates. He found that males in virtually all cultures preferred females who were younger than them, so more likely to have good reproduction capabilities. Females were found to prefer older males with good resources