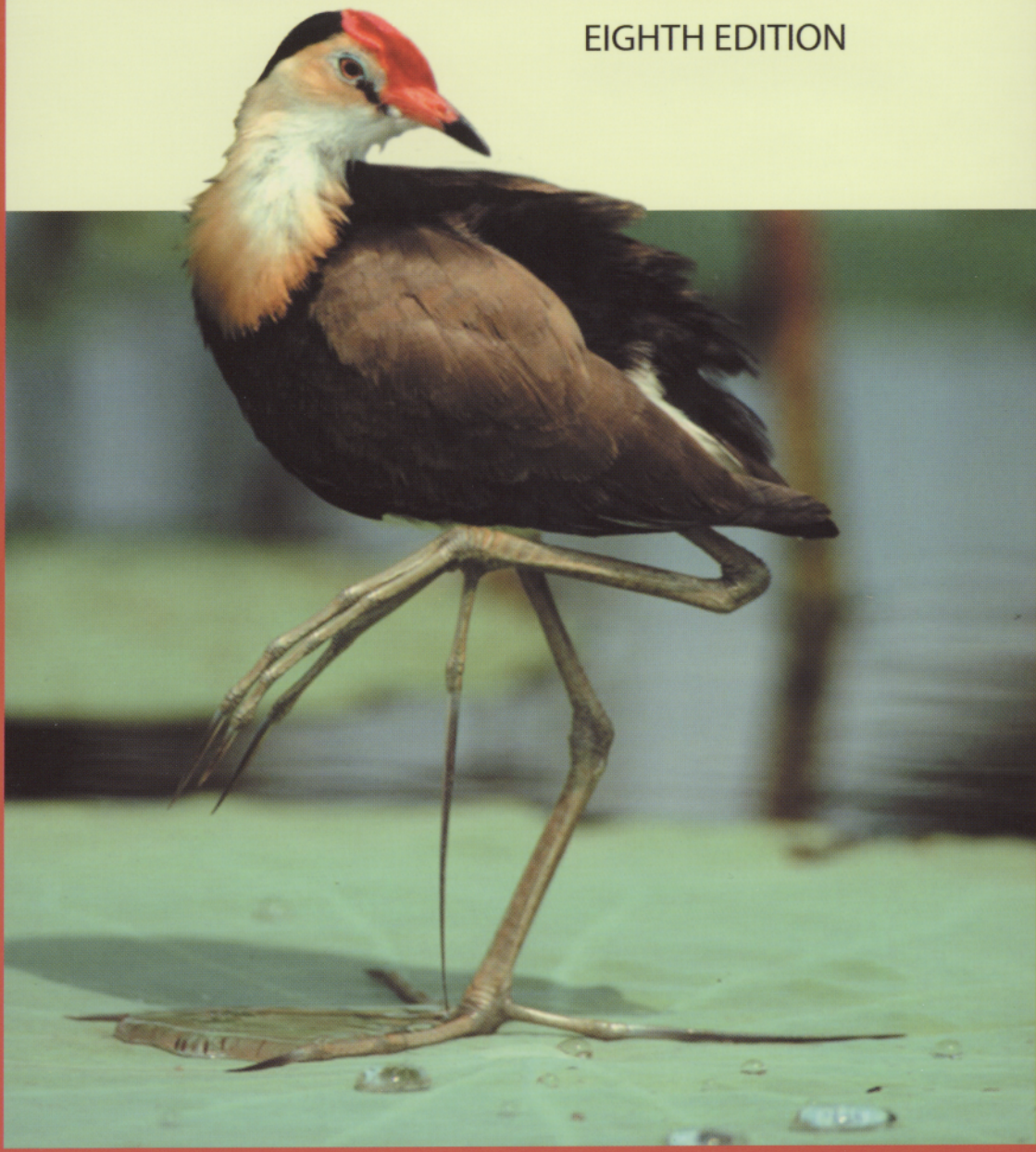


ANIMAL BEHAVIOR

EIGHTH EDITION



JOHN ALCOCK

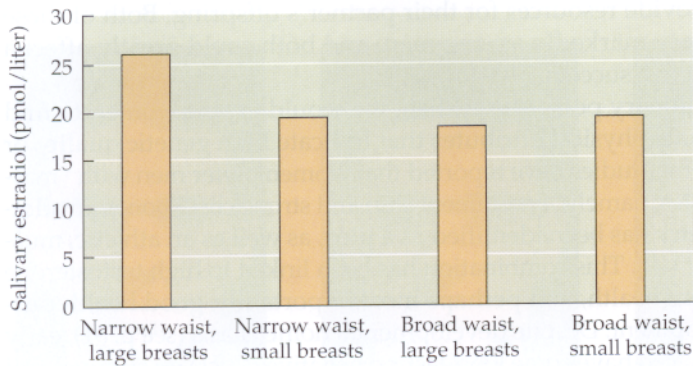


Figure 14.4 Body shape is correlated with fertility in women. Women with features that men often claim they prefer—namely, narrow waists and large breasts—are more fertile than women with other body shapes, based on a sample of healthy Polish women between 24 and 37 years of age who were not taking birth control pills. After Jasińska et al. [592].

female during her fertile phase over the odor of the same woman during her nonovulatory phase. Devendra Singh and Matthew Bronstad showed that, as predicted, men find the smell of a T-shirt worn by an ovulatory woman to be “more pleasant and sexy” than the scent of a T-shirt worn by the same woman when she is not fertile [1116]. Subsequently, another research group checked the prediction that women’s faces should be more attractive during the fertile phase than during the nonfertile phase of the menstrual cycle. Again, the actual results matched the expected ones. Men shown photographs of the face of a woman when she was and when she was not ovulating typically voted for the “fertile face” [1022]. Needless to say, the men were not consciously aware of the reproductive significance of their preferences, nor would they have to be in order to behave in ways that tended to encourage them to pursue women likely to conceive.

Discussion Questions

14.6 The research on male mate preferences outlined above has involved interviews of men in Western cultures. What objection might be raised to the conclusions based on this research? How might those objections be overcome? (You may find the following papers useful: [178, 266, 609, 694, 1279, 1350].) If men from two cultures have different standards of feminine beauty, how might a social scientist explain this finding, and how would an adaptationist account for the result?

14.7 Some persons believe that men in Western societies generally prefer sexual partners who are younger than they are because they have been taught what is an arbitrary cultural convention from an early age. What prediction follows from this hypothesis with respect to the dating preferences of teenage males for females of different ages? What conclusion follows from the data in Figure 14.5 [630]?

Adaptive Mate Preferences of Women

We have presented the argument that because women vary in fertility and because female fertility has a major effect on male reproductive success, men should find cues associated with high fertility sexually attractive. Although men also vary in fertility to some extent, the degree of variation is much less than in women, if only because there is no male equivalent of the menstrual cycle or of menopause. On the contrary, most men of any age can supply plenty of functional sperm on any day of the month to any woman willing to accept their gametes. Not surprisingly, therefore, evolutionary biologists have never bothered to explore whether female mate choice revolves around an assessment of male fertility. Instead, adaptationists have focused on two other factors: the capacity of men to supply good genes to their offspring, and their ability (and

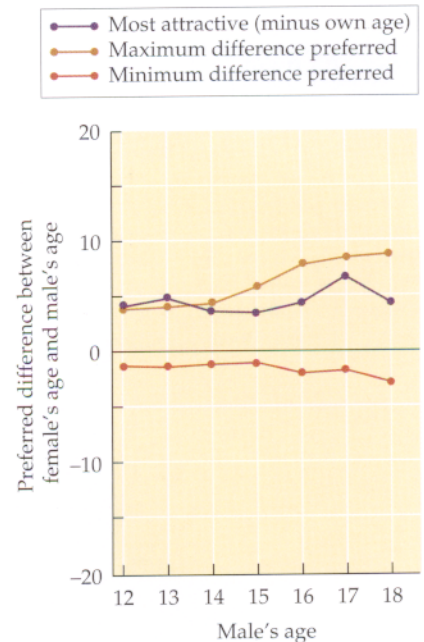


Figure 14.5 Preferred dating partners by age for male teenagers. The age of preferred dates is shown in relation to the age of the male subjects. After Kenrick et al. [630].

willingness) to provide resources for their partner's offspring. Both of these traits appear to vary markedly among men, and both could greatly affect a woman's reproductive success.

From an evolutionary perspective, then, we would expect women to find attractive those male physical attributes that indicate high genetic quality or parental ability. Some studies have reported that women prefer men with "masculine" facial features; namely, a prominent chin and strong cheekbones. In addition, facial symmetry has been identified as a plus, as well as an athletic, muscular upper body [440]. This combination has been linked to high testosterone levels, good current health, and perhaps most importantly, good health during juvenile development. Despite developmental homeostasis (see p. 81), early deficits in nutrition can have some long-lasting negative effects on survival and reproductive success in our species [748]. Male development is at special risk because of the potentially damaging side effects of the male sex hormone, testosterone. Therefore, the ability of a man to develop normally, despite high levels of circulating testosterone, is a possible indicator of a strong immune system capable of overcoming the handicap imposed by the hormone [395]. Considerable debate surrounds the idea that males of our species (and many others) have evolved honest signals of the quality of their immune systems [1021] (see Chapter 10). Nevertheless, one can make the case that women *should* (in fitness terms) find certain masculine signals appealing because strong, healthy partners may be able to pass on these characteristics, assuming that they are heritable, to their male offspring, which would then be sexually attractive to the next generation of women. Moreover, fathers of this sort ought to be able to compete effectively with rivals for dominance within their group, thereby securing the resources that go with high social status; men with political power usually have more material goods to provide their wives and children than do their subordinate companions [440].



You should know, however, that not every study has reported that women find men with the most masculine, big-jawed faces most attractive (Figure 14.6) [1172]. Moreover, few evolutionists claim that handsomeness, however evaluated, necessarily trumps direct evidence of a man's wealth and his willingness to share it with a partner and her offspring. In fact, most persons interested in the evolution of mate choice by women and men have predicted that good looks should be far less important for single women than for single men [178, 465]. According to this majority view, the extremely demanding task of rearing a baby to the age of independence puts a premium on securing a husband willing and able to assist with the children, whereas a man's fitness will be zero unless his sperm get to fertilize an egg, which requires a fertile woman.

The importance for women of having a wealthy partner has been established in studies showing that females in cultures without birth control who secure relatively rich husbands do tend to have higher fitness than females whose partners can provide them with fewer material benefits. Among the Ache of Paraguay, the children of men who were good hunters were in fact more likely to survive to reproductive age than the children of less skillful hunters [621]. Likewise, several studies of traditional societies in Africa and Iran have revealed a positive correlation between a woman's reproductive success and her husband's wealth, as measured by land owned or number of domestic animals in the husband's herds [118, 583, 764]. Even in modern societies, household income is correlated with children's health, with the effect growing larger as children get older. Chronic illnesses in childhood can reduce the earning power of children that reach adulthood, thus perpetuating poverty across generations [198], with all of the reproductive consequences this has for human beings.

Thus, it would make reproductive sense if females tended to put wealth, social status, and political influence ahead of good looks in partners. This evo-

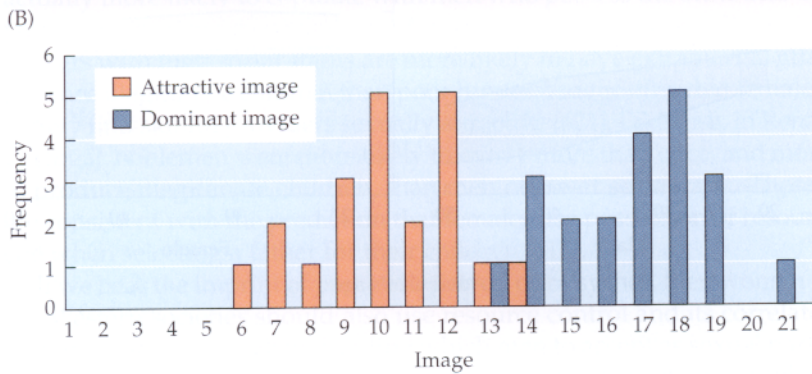


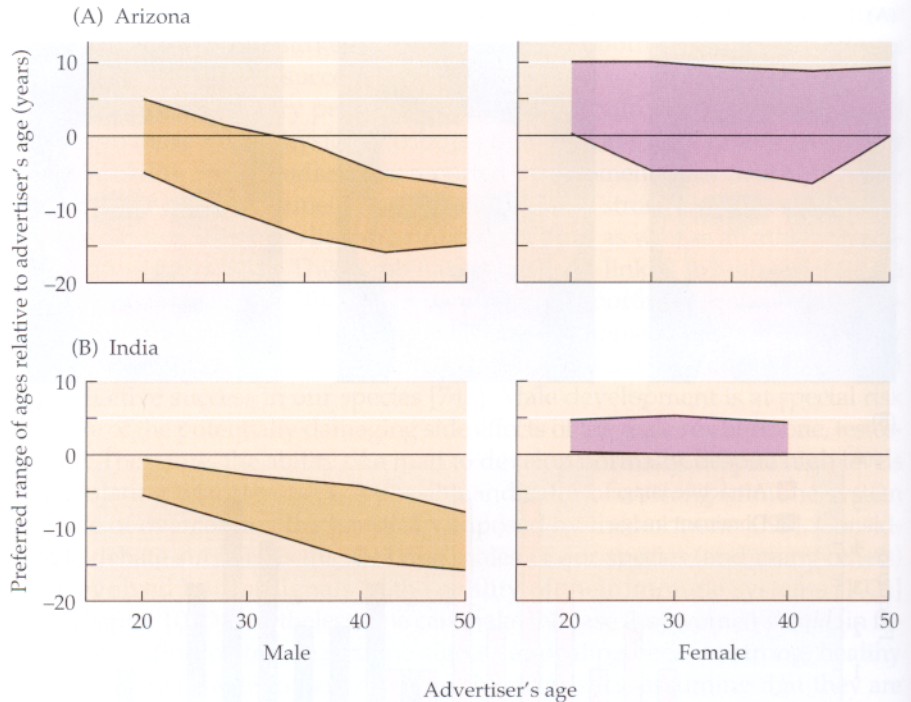
Figure 14.6 Testosterone and male facial attractiveness. (A) In this study, digital images of the same male's face were altered to reflect the developmental effects of testosterone from low to high levels (left to right). (B) When young women were asked to judge these photographs for physical attractiveness, they tended to pick images like the one in the middle, whereas when they were asked to rate the images in terms of social dominance, they tended to pick those similar to the right-hand image. After Swaddle and Reiersen [1172].



lutionary prediction has been supported by many questionnaire studies. However, even when researchers have found clear differences between the sexes in the value they attach to “good financial prospects” versus “good looks,” the absolute measures of importance given to these attributes have not necessarily been especially high for either sex. But the men and women in these studies typically have not had to specify which items among a list of attributes are absolutely essential to their choice of mates, and which would be nice to have in a partner, but not crucial. Therefore, a team of social psychologists led by Norm Li attempted to put constraints on the choices made by the people they interviewed by giving them a limited budget to expend on designing a hypothetical ideal mate. A subject was given a list of traits and told to decide how many of his or her limited supply of “mate dollars” to use when purchasing any one item, such as physical attractiveness, creativity, yearly income, and so on. To secure a partner at the second level of attractiveness, or creativity, or yearly income (the highest level was 10) would require 2 mate dollars; to get someone at the eighth level would require 8 mate dollars. When the persons interviewed had only 20 mate dollars to work with, their investments differed greatly according to their sex. Men devoted 21 percent of their total budget toward the acquisition of a physically attractive partner; women spent 10 percent of the same total amount to the same end. On the other hand, women on this tight budget devoted 17 percent of their money to boost the yearly income of an ideal mate, whereas men invested just 3 percent of their mate dollars on this attribute.

After having specified how they would spend their first 20 mate dollars, the participants were given two additional 20-dollar increments. By the time they reached the third 20 mate dollars, the sexes did not differ markedly with respect to the attributes they were buying. Having already purchased what they really valued, they could and did spend on other attributes. This experiment tells us

Figure 14.7 Men and women from different cultures show similar mate preferences. Men advertise for younger women and women advertise for older men in both (A) the *Arizona Solo* and (B) the *Times* of New Delhi, India. The advertisers indicated their own age and the maximum and minimum ages they would accept in potential partners. After Kenrick and Keefe [631]

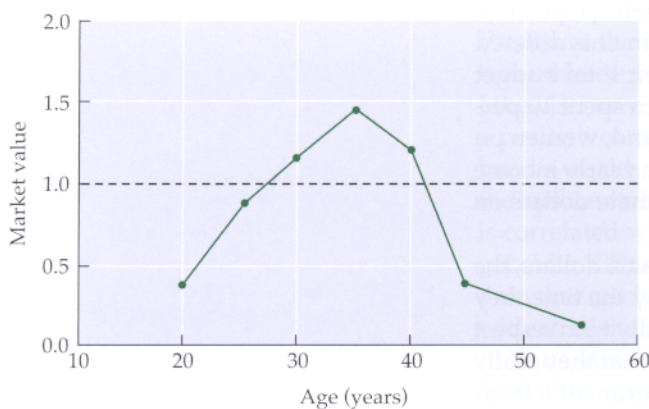


that people view some mate characteristics as essential items and others as mere luxuries, add-ons if you will. The essential elements are not the same for men and women, as predicted by an evolutionary approach [716].

Personal ads, whose cost limits the number of words used by the advertisers, also provide relevant evidence on what people consider fundamentally important in a mate. So, for example, women seeking partners through newspapers are far more likely than men to specify that they are looking for someone who is relatively rich [1256]. In keeping with this goal, women advertisers in both Arizonan and Indian newspapers also often specify an interest in someone older than they are (Figure 14.7) [631]; older men usually have larger incomes than younger men [178].

If women really are highly interested in a partner's wealth and capacity to provide for offspring, then men in their thirties should be most desirable because men of this age have relatively high incomes and are likely to live long enough to invest large amounts in their children over many years. One can calculate the "market value" of men of different ages by using samples of personal ads and dividing the number of women requesting a particular age class of partner in their advertisements by the number of men in that age class who are advertising their availability; this measure thus combines both demand and supply. Men in their late thirties have the highest market value (Figure 14.8) [932].

Figure 14.8 Age and the market value of men. Market value is measured by the number of advertisements in the Personals sections of newspapers by women requesting men of certain age classes divided by the number of men of those age classes announcing their availability. After Pawłowski and Dunbar [932].



Discussion Question

14.8 If an evolutionary approach to human reproductive behavior is useful, what should the market value curve for women look like? Add your predicted data points to the graph shown in Figure 14.8. Check your prediction against data in [932].