

SIX

Sexual Choice



. . . many men are goats and can't help committing adultery when they get a chance; whereas there are numbers of men who, by temperament, can keep their purity and let an opportunity go by if the woman lacks in attractiveness.

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SELECTION CAN BE EXPECTED to favor humans who prefer to copulate with and to marry the fittest members of the opposite sex, and since human female parental investment may typically exceed male investment, females might be expected to be choosier than males. By and large, these expectations probably are fulfilled, but the matter is more involved than it may at first appear. Crook (1972) argues that among preliterate peoples, and by inference among our Pleistocene ancestors, the constraints of marriage rules and restrictions leave little room for mate selection based on personal choice. Indeed, the fact that marriages normally are negotiated by elder kinsmen narrows the scope for personal choice of spouses still further, and especially narrows the scope for female choice. Thus, one might argue, as Crook seems to do, that during the course of human evolution opportunities in which individuals could make their own choices were encountered so infrequently that selection favored sexual indifference and complete acquiescence to the decisions of elders or to the dictates of culture and society. To explain why this did not occur, it is necessary to distinguish the outward behaviors associated with marriage and copulation from the underlying psychology of sexual choice; to distinguish, that is, between action and desire.

Because sexual emotions are closer to the genes than sexual behaviors

are, emotions are central to an evolutionary perspective on sexuality. The organism—at least the human organism—is neither a passive mediator between stimulus and response nor a mindless vehicle of culture, but an active assessor and planner. Psyche becomes important precisely where the external environment is unpredictable or complex. The overwhelming majority of an organism's biological processes and energetic transactions with the external world are unconscious; in fact, it appears that every process—digestion, oxygen transport, breathing, reflex blinking—that can be carried out unconsciously is more efficiently carried out this way, and conscious processes seem to become unconscious whenever possible. In the learning of a complex skill, for example, component movements are practiced until they no longer require attention—until they become automatic, or reflexlike—and consciousness then is freed to monitor larger groupings of components and to plan future strategies (see Symons 1978a). In short, mind is usually about the rare, the difficult, and the future; the everyday becomes unconscious habit. Proust remarked that love, “ever unsatisfied, lives always in the moment that is about to come,” and Montaigne observed that “Nature makes us live in the future, not the present.” It is the “us,” which is living in the future, rather than the observable body, which is behaving in the present, that is of primary importance in understanding human sexuality. Sexual experience is largely adapted to the exceptional. We react consciously to the rare opportunity or threat, and we fantasize about desired and feared states of affairs, imagining how the former might be realized, the latter coped with or avoided.

The primary issue with respect to sexual choice, then, is not whether our ancestors usually were able to choose their own mates, but whether they sometimes had a voice in mate choice, and, still more important, whether they were occasionally able to choose their sexual partners. All available evidence points to the conclusion that everywhere the complexities of human social life provide scope for the occasional satisfaction of desires, hence selection can be expected to favor the existence of desires, though they may rarely be translated into behavior. In this regard it is crucial to distinguish between sex and marriage. Although the opportunities for individuals to arrange their own marriages—at least their initial marriages—may have been slight, there must have been much more scope for individuals of both sexes to arrange their own copulations. As argued in Chapter Four, human sexual dispositions should be considered not so much adaptations to strengthen marriage as adaptations to maximize reproductive success in an envi-

ronment in which marriage is ubiquitous. Although individual humans constrain one another's sexual activities to an unprecedented degree, the complexities of human social life everywhere provide opportunities for occasionally evading such constraints. One's own evasions must be planned for, the evasions of others guarded against.

If modern ethnographies are reliable guides to the past, in ancestral populations a young person's initial marriage probably was arranged by elders, especially male elders. Now the *ultimate* basis for the decisions that elders made was their own genetic "interests," which could not have been identical with the genetic "interests" of the principals. Trivers (1974) calls attention to the existence of inevitable "conflicts" between parent and offspring owing to the fact that they are imperfectly related genetically. Choice of spouse may constitute one such conflict. Indeed, the literature on preliterate peoples suggests that all the individuals involved in a marriage arrangement attempt to influence the marriage for their own ends. Usually, this means that men use women for barter to get other women, but women themselves exercise whatever influence they can. This point is clearly illustrated in Hart and Pilling's (1960) account of sex and marriage among the Tiwi. Although a Tiwi woman had no power to choose her first mate, after her husband's death she sometimes exercised considerable influence in making subsequent marriages (also see Goodale 1971). A young Tiwi male could not exercise control over his mother and sisters because a female was controlled by her husband or father. Later in life, however, a man with power and influence might gain some control over the remarriages of his elderly sisters and mother. Hart and Pilling (1960:24) write: "Whenever this occurred, although the resulting situation might have the superficial appearance of clan solidarity—with sons, mothers, brothers, and sisters all acting and planning together as a partnership—such surface appearance was illusory. The motivations involved in it were scarcely altruistic desires on the part of the brothers to look after their mothers and elderly sisters, but rather efforts by the brothers to use to advantage, in their intricate political schemes, some women of their own clan. . . ." But when Hart and Pilling write "altruistic desires" and "use to advantage" they are referring to proximate human motives; the relationship of these motives to fitness and ultimate causation is an open question (see Chapter Two).

Offspring receive many benefits from their parents, and it is possible that in some parent-offspring conflicts there is not, in fact, a great deal of "conflict" in terms of fitness. Adults' far greater knowledge and ex-

perience may result, on the average, in a better choice of spouse than an offspring would be likely to make on its own. Williams (1966) has even suggested that the hypertrophy of the human cerebral cortex is not the result of selection for adult intelligence but rather is a by-product of selection for the abilities to understand and to respond to parental verbal commands in childhood. Whether or not this hypothesis is correct (I doubt that it is), it provides a useful corrective to excessive emphasis on parent-offspring conflict. If a child wants to play with the saber-toothed tiger and the child's parent has a different view of the matter, the parent may be 100 percent right and the child 100 percent wrong, even though they share only 50 percent of their genes. Yet it is the existence of an environment containing watchful parents that permitted the evolution of juvenile desires to experiment with playmates.

Until very recently, selection occurred within a fairly narrow range of environments, and impulses selected in one set of circumstances may be maladaptive in others. Consider, for example, the potential parent-offspring conflict Trivers (1974) outlines over weaning. Mothers may be selected to want to wean an offspring when it is X months old, whereas offspring may be selected to want to nurse beyond X months. But if offspring are, in fact, *always* weaned before the theoretical "ideal" age—from their genetic point of view—selection would have no way of "knowing" what the ideal age is, and it might favor the relatively simple infant disposition *always* to resist weaning. If such an infant were raised in an artificial environment in which it was allowed to nurse as long as it liked, its disposition always to resist weaning would certainly prove maladaptive. Similarly, in an environment in which young people have relatively little say in spouse choice, selection might favor strong adolescent emotions about members of the opposite sex, emotions that have been designed by selection specifically to function in a milieu in which an adolescent's actual behavior will be constrained by the necessity to compromise with elders. Just as a child's desire to play with the saber-toothed tiger or always to resist weaning might be adaptive precisely because social constraints and safeguards exist in a natural environment, so an adolescent's desire to marry person A rather than person B (whom the elders favor) might be adaptive even if B is, in many cases, the better mate choice. An adolescent's desires may be designed to function primarily as one important item of information that the elders will consider in reaching their decision. These emotions may prove to be poor guides when adolescents are free to

choose their own mates. Elwin's data, discussed in Chapter Four, for example, indicate that arranged Muria marriages are less likely to end in divorce than elopements are.

In considering the circumstances that promote human sexual arousal it is useful to keep in mind: first, the concept of a natural environment; and second, that arousal is experience as well as behavior.

Sexual arousal

Kinsey *et al.* (1948, 1953) reported that men are sexually aroused far more easily and frequently by visual stimuli than women are, and they pointed out that everywhere and always, pornography is produced for a male audience. Furthermore, Kinsey *et al.* found that males almost universally fantasize visually during masturbation, and require visual fantasy to orgasm, whereas two-thirds of their female informants did not fantasize during masturbation. But recently, a number of investigators have challenged Kinsey's conclusions: the current trend in the literature on human sexuality is to minimize sex differences in visual arousal and to attribute Kinsey's findings to the sexual repression of women in that era and to Kinsey's reliance on retrospective reports instead of immediate reports or physiological measurement.

As with theories of the evolution of female orgasm and the loss of estrus, much of the recent scientific writing about visual arousal implies that underlying the everyday world—in which there appear to be enormous sex differences in sexual response to, and interest in, visual stimuli—is a deeper reality in which males and females are virtually identical. Some insight into this strange state of affairs can be gained from a major American sex researcher's response to recent findings that women are sexually aroused by pornography: he remarked that these new data eliminate the last claim for human female hyposexuality. In my view, as long as the matter is phrased in terms of hyper- versus hyposexuality (with hypersexuality assumed to be good or desirable), and as long as evidence for sex differences in sexuality is felt to be necessarily detrimental to women, experiments will continue to be designed, and their results interpreted, to emphasize similarities between men and women, and the everyday world will continue to suffer neglect.

According to *The Report of the U.S. Commission on Obscenity and Pornography* (1970), the pornography industry in the United

States—including books, periodicals, and motion pictures—grosses between \$537 and \$574 million annually, almost entirely from men. The Commission characterized patrons of adult bookstores and movie theaters as “predominantly white, middle-class, middle-aged, married males, dressed in business suit or neat casual attire . . .” (p. 21). The male fantasy realm—“pornotopia”—portrayed in Victorian pornography (Marcus 1966) appears to differ little from the realm portrayed in modern pornography (Smith 1976); the major social changes that have occurred during the last century have left pornotopia largely untouched. Written pornography gives scant description of men’s bodies (unless, of course, it is aimed at the homosexual market), but describes women’s bodies in great detail (Smith 1976). The most striking feature of pornotopia is that sex is sheer lust and physical gratification, devoid of more tender feelings and encumbering relationships, in which women are always aroused, or at least easily arousable, and ultimately are always willing. There is no evidence that a similar female fantasy world exists, and there appears to be little or no female market for pornography.

But although women apparently are rarely motivated to read or to watch pornography, a number of recent studies demonstrate relatively minor sex differences in sexual arousal when subjects are exposed to explicit depictions of sexual activity. The Commission on Obscenity and Pornography sponsored a number of such studies, reviewed in the Commission’s report, which found that 60 to 85 percent of males and females experience sexual arousal when reading or viewing erotic material. Similarly, recent studies of West German university students indicate relatively minor male-female differences in sexual arousal to pictures, films, and stories that explicitly depict human sexual activities (Sigusch *et al.* 1970, Schmidt and Sigusch 1970, 1973). Heiman (1975) measured changes in penile and vaginal blood volume and pressure pulse among forty-two male and seventy-seven female college students as they listened to taped descriptions of human activities. Students were divided into four groups on the basis of the content of the tapes to which they listened: (1) erotic description, with no romantic content; (2) romantic description, without explicit sexual content; (3) combined erotic-romantic description; and (4) control description, neither erotic nor romantic content. Heiman reports that both men and women responded most strongly to the erotic tapes (although the accompanying figure shows little difference between responses to the erotic tapes and responses to the erotic-romantic combinations). Fur-

thermore, both men and women responded most strongly to tapes in which the female was the sexual aggressor and in which description centered on the female's rather than the male's body. The figure accompanying Heiman's article shows that males responded more strongly than females, but Heiman does not discuss this, nor does she mention whether the difference is statistically significant.

In summary, recent studies indicate that both men and women usually experience sexual arousal when they voluntarily expose themselves to erotic stimuli; but for several reasons, this fact may reveal little about sexuality as it exists in ordinary life. First, although men and women respond sexually once they have agreed to view, read, or listen to erotic material for experimental purposes, sex differences in motivation to be exposed to such material in everyday circumstances apparently have not diminished: there is an enormous male market for pornography, and no female market. Second, there may be major sex differences in the psychological processes that produce sexual arousal to pornography. Money and Ehrhardt (1972) suggest that although males and females may respond with equal intensity to erotic pictures, they do so in different ways. To a man, the female in the picture is a sex object, and he imagines taking her out of the picture and copulating with her. A woman is aroused by the same picture because she subjectively identifies with the female as an object to whom men sexually respond, and she becomes, in her imagination, the sexual object. Heiman's data showing that both men and women are aroused most strongly by descriptions that emphasize the female's body provide support for the hypothesis that a basic sex difference exists in the psychology of sexual arousal. Third, pornography is, in a sense, an artificial stimulus, and responses to it may provide little insight into the everyday interactions and experiences of men and women. All peoples seek whatever privacy is available to copulate: the everyday human environment very rarely provides visual stimuli of humans engaged in sexual activity. Experimental data on human responses to more normal stimuli substantially reduce the apparent discrepancies between the evidence of science and the evidence of daily life.

Although Heiman (1975) found few sex differences in sexual responses to erotic tapes, she did find major differences in responses to the "control" tapes, which did not depict explicit sexual or romantic interactions. She notes that "a small proportion of the men and even fewer women" were sexually aroused by control tapes, but, in fact, her published figure shows that in the first session the male change in

penile pressure pulse to the control tape was at one point as strong as any male sexual response observed during the entire study (11 mm above baseline), while the maximum female response to a control tape was extremely small (1 mm above baseline). To put the matter another way, the male response to a control tape was stronger than the strongest female response to an erotic tape. Heiman writes: "I have always suspected that men can interpret the most unsexy situations as erotic, and there they were, turned on by a bland narrative of a student couple discussing the relative benefits of an anthropology major over pre-med" (p. 93). She suggests that the male response to the control tape disappeared in the second session because the men had learned that nothing erotic was going to happen. Now in my view, the marked sex difference in responses to control tapes has far more significance for understanding ordinary interactions between men and women than does the lesser sex difference in responses to erotic tapes. I wonder, in fact, whether a male investigator would have been as likely as Heiman to consider a conversation between a young man and woman to be a "control" tape at all.

While a natural human habitat seldom provides pornographylike stimuli, it regularly provides the visual stimulus of members of the opposite sex in varying states of dress. Photographs, drawings, or paintings of nudes approximate normally encountered stimuli far more closely than pornography does, and therefore the responses of men and women to nudes are much more relevant than their responses to pornography in understanding what goes on in everyday life. Kinsey *et al.* (1953) reported that 54 percent of the men in their sample had been erotically aroused by seeing photographs, drawings, or paintings of nude females, whereas only 12 percent of the women had been erotically aroused by seeing such depictions of nude males or females. (Unfortunately, Kinsey *et al.* did not distinguish between women who had been aroused by male nudes and women who had been aroused by female nudes; as discussed below, there is reason to suspect that many of the 12 percent may have been aroused by female, but not male, nudes.) Kinsey *et al.* (1953:652-53) write: "It is difficult for the average female to comprehend why males are aroused by seeing photographs or portrayals of nudes when they cannot possibly have overt sexual relations with them. Males on the other hand, cannot comprehend why females who have had satisfactory sexual relations should not be aroused by nude portrayals of the same person, or of the sort of person with whom they have had sexual relations." Given the apparent

changes that have occurred in women's sexual arousal to pornography since Kinsey's investigations, it seems highly significant that recent studies of university students find, just as Kinsey did, that men are far more likely than women to be sexually aroused by depictions of nude members of the opposite sex (Sigusch *et al.* 1970, Steele and Walker 1974); both of these studies report minimal sex differences in sexual arousal to pornography.

Commercial portrayals of nude human figures provide a natural experiment on sex differences. Kinsey *et al.* (1953) noted that enormous numbers of photographs of nude females and magazines exhibiting nude or nearly nude females are produced for heterosexual men; photographs and magazines depicting nude males are produced for homosexual men, not for women. Since Kinsey's time, two nationally distributed women's magazines depicting nude males have appeared in the United States, *Viva* and *Playgirl*. In 1976 *Viva* eliminated male nudes. Editor Kathy Keeton (*Viva*, Aug. 6, 1976:8) listed a number of reasons for this decision: photographs of nude males were distasteful to many potential advertisers as well as to many women; supermarkets and drugstores—where women typically shop for magazines—often would not stock *Viva* because of the photographs; furthermore, Keeton cited an industry poll which showed that women of every age are consistently less approving of nudity in magazines than men are. Keeton also called attention to a study conducted by Stauffer and Frost (1976) of 50 male and 50 female Boston college students, aged 16 to 23 years, which evaluated male reactions to *Playboy* magazine and female reactions to *Playgirl* magazine. Stauffer and Frost reported that 88 percent of the men and 46 percent of the women gave the centerfold and photo essays high ratings for "interest"; no man rated these features low, but 14 percent of the women did. The students were asked to rate on a 10-point scale the degree of sexual stimulation they experienced from the magazine's nude photographs: 74 percent of the women responded on the lower half of the scale, and one-third said male nudity is not sexually stimulating at all; 75 percent of the men responded on the upper half of the scale, and 58 percent reported photographs of nude females to be definitely stimulating. Eighty-four percent of the men said they might buy future issues of *Playboy*, but 80 percent of the women said they would not buy future issues of *Playgirl*. In her *Viva* editorial, Keeton expressed her own opinion—that men look silly posing without clothes—and remarked that the novelty of male nudes had simply worn off. She went on to say, however, that *Viva* would continue to feature

occasional female nudity because women are interested in, and are not embarrassed by, other women's bodies.

In 1976 *Playgirl* also considered discontinuing photographs of nude males, and decided to base their action on a privately commissioned survey; 537 urban women aged 18 to 59 were asked to list their reactions to photographs of nude men: 26.1 percent said that they enjoyed looking at them "a great deal," 35.7 percent "somewhat," 22 percent "a little," 11.7 percent "not at all," and about 4 percent were undecided¹ (unfortunately, the question of sexual arousal was not posed). On the basis of this survey, *Playgirl* decided to continue featuring photographs of nude men.

One difficulty with natural experiments is that they are uncontrolled. At this writing, *Playgirl* continues as a viable business enterprise, but there is a serious question of the extent to which its readership actually is composed of women. According to *New York Magazine* (Feb. 14, 1977: 57), *Playgirl* is having subscription problems because a large percentage of its readership has always been homosexual men, and these men are shifting to new publications specifically geared to homosexuals (*Playgirl* editors deny that their readers, or viewers, are primarily male). My own modest efforts at assessing *Playgirl's* readership—interviewing clerks at newsstands—suggest that most *Playgirl* purchasers are men, but perhaps women readers are more likely to subscribe to than to buy the magazine at a newsstand. (According to Keeton, private surveys showed that since *Viva* dropped male nudes a greater proportion of their readership is female.) Another difficulty in evaluating the significance of the existence of *Playgirl* is that, unlike dozens of men's magazines whose sole purpose is the portrayal of nude women, *Playgirl* carries articles and features that are likely to interest young women. My own opinion is that *Playgirl* editors design photograph and comic strip layouts largely, but not exclusively, for homosexual men, and the rest of the magazine largely for young women. In summary, as in Kinsey's era, some women are sexually aroused by photographs of nude men, but it is not clear that even in a country the size of the United States there are enough such women to support a single magazine featuring photographs of nude males, and it is extremely unlikely that such a magazine would have a substantial female market if that were all it featured.

Although inexperienced girls may wish to satisfy their curiosity

¹ *Los Angeles Times*, June 16, 1976, Part II: 1.

about the nature of the male genitals, cross-cultural evidence suggests that the tendency of human males to be sexually aroused by the sight of females—especially the female genitals—and to make great efforts to see female genitals (and any other part of the female body that is typically concealed), simply has no parallel among human females, and is often intuitively incomprehensible to women. In describing his travels through Europe and parts of Asia and Africa during the latter half of the 19th century, the author of *My Secret Life* (“Walter”) notes that wherever possible, men bored holes through thin walls in order to peep at undressed women. At one French railway station, the men’s closets adjoined the women’s; with the help of the women’s closet attendant, Walter spent an entire day peeping through a hole at an endless parade of women. Although the closet attendant was a lusty, non-prudish, working-class woman, she nonetheless “wondered ‘*pourquoi mon Dieu,*’ why they wanted to see women, when they were doing their nastiness.”

According to Marshall (1971:117-18), “Little stimulation is required to prepare the Manganian male for sexual intercourse; custom and habit seem sufficient. However, the Manganian does admit to increased sexual excitement and desire upon hearing music. Somewhat more exciting is the sight of the nude female body—a knowledge used by Manganian females to arouse flagging interest in their partners. Perfume, the sight of a woman’s well-rounded hips, and the actions of the Polynesian dance also incite the male Manganian to thought of copulation, as does the sight of female genitalia. . . .” One of Schapera’s (1940) Kgatla informants remarked that when girls wear short skirts “you can then easily see the girl’s thighs, and so you begin to wish for her” (p. 47). Elwin (1968) described the Lotus Stalk Dance, performed by Muria ghotul girls—but rarely in public as it is considered risqué—in which each girl rests one leg on her neighbor’s waist. On one occasion a boy

sat down near the dancers and tried to peep in a rather unpleasant manner. The girls stopped dancing and took him inside the ghotul. “What were you sitting down for?” “Nothing.” “You wanted to look at us, you dirty little beast, so we’re going to punish you.” They tied his hands together and bound them to the roof for fifteen minutes. When he was released, he had to salute each of the girls in turn and beg forgiveness (pp. 84-85).

Muria boys carve symbols of the vagina, erect penises, and breasts (with details of the areola) on combs, tobacco-pouches, walls or pillars of the ghotul, and tree trunks. Similarly, adolescent Grand Valley Dani

boys of West New Guinea make charcoal drawings of vulvas on rock overhangs, or scratch them in sand, or carve them in the bark of trees (Heider 1976). This typically adolescent male behavior is especially interesting because Heider characterizes the Grand Valley Dani as having substantially lower sexual interest and activity than any other known people. The ethnographic literature does not indicate that girls make similar drawings or carvings.

Anthropological discussions of sex differences in dress and posture emphasize the likelihood of male sexual arousal at the sight of the female genitals. Ford and Beach (1951:102) write: "There are no peoples in our sample who generally allow women to expose their genitals under any but the most restricted circumstances. The wearing of clothing by women appears to have as one important function the prevention of accidental exposure under conditions that might provoke sexual advances by men." Davenport (1977) reports that concealment of women's genitals is much more widespread than concealment of men's genitals; in the few instances in which women do go naked, inevitably there are strict rules against males staring at women's genitals (perhaps not unlike Western nudists), and women always sit so that their vaginas are not exposed. Mead (1967) points out that in all societies girls are permanently clothed before boys, and that a little girl is taught to cross her legs, or to tuck her heels under her, or to sit with her legs parallel: "Older boys and men find little girls of four and five definitely female and attractive, and that attractiveness must be masked and guarded just as the male eye must be protected from the attractiveness of their older sisters and mothers" (p. 105).

I interpret the evidence on human sexual arousal as follows: pornotopia is and always has been a male fantasy realm; easy, anonymous, impersonal, unencumbered sex with an endless succession of lustful, beautiful, orgasmic women reflects basic male wishes. Pornography has changed so little in the last century compared with other aspects of social life and relations between men and women because pornotopia lies closer to the genes than behavior does. One of Hite's (1976:199-200) informants writes: "There have been several men who seemed to care whether I was happy, but they wanted to make me happy according to *their* conception of what ought to do it (fucking harder or longer or whatever) and acted as if it was damned impertinent of me to suggest that my responses weren't programmed exactly like those of mythical women in the classics of porn."

That the female nature portrayed in pornography really does exist

almost exclusively in the male imagination is perhaps most strikingly revealed in recent novels that are often alleged to constitute evidence for the opposite conclusion. While this is not the place for extended literary exegesis, I believe that an unbiased reading of Erica Jong's *Fear of Flying*, for example, will reveal that although Isadora Wing, the protagonist, and presumably the author, are able to entertain the notion of a "zipless fuck"—intercourse unencumbered by zippers or personal relationships—and to imagine in a rather detached way that such intercourse might eliminate the trauma usually associated with heterosexual relations, the zipless fuck is not primarily an emotionally based fantasy in that it is not what the protagonist really wants, although it is perhaps what she would like to want. Indeed, she does not really feel strongly about this fantasy in the sense, for example, that she obviously feels strongly about Germans. Taken as a whole, *Fear of Flying* reflects fairly typical female sexual desires, not because the protagonist eventually returns to her husband, which is irrelevant, but because strongly felt sexuality always is imagined in the context of relationships with specific men who are more than sex objects. Indeed, Isadora Wing brings to mind the marital restiveness and sexual/romantic longings of 19th-century fictional ladies, such as Emma Bovary and Anna Karenina, much more strongly than she brings to mind, say, the lusts of a Henry Miller.

The intractably male nature of pornography is problematical for those who wish to see men and women as in some fundamental sense sexually identical. Individuals who believe that human sexuality is basically a male sexuality, and thus imagine that sexually liberated women will act and feel as men do, must cope first with the evidence that while many women respond sexually to pornography in an experimental setting, few apparently are motivated to seek it out, and second with the evidence that sex differences in sexual arousal to depictions of nude members of the opposite sex seem to be as substantial as they ever were. On the other hand, individuals like Brownmiller (1975), who imply that human sexuality is basically a female sexuality, and that liberated men will act and feel as women do, generally interpret heterosexual interactions in political rather than in sexual terms; thus Brownmiller avoids directly confronting the challenge pornotopia poses to her theoretical position, yet indirectly acknowledges the difficulties when she states that pornography is *inherently* sexist, and advocates a political solution, viz., the total elimination of pornography.

The recent evidence of women's sexual arousal to pornography has

demonstrated, in my view, primarily what was already known: first, that women are capable of being aroused by erotica, mainly via the subjective process of identification with the female participant; and second, that once heterosexual activity is under way, women have the potential to be at least as strongly aroused as men. To the extent that exposure to pornography during scientific experiments simulates anything in a woman's everyday life, it simulates an actual heterosexual interaction to which she has already consented and in which she is a willing and eager participant. I regard a female subject's agreement to participate in an experiment on sexual response as approximately equivalent to her agreement, or decision, to have sexual relations with a man in everyday life; her erotic responses during the experiment simulate her ordinary response during sexual interaction. Men and women differ far less in their potential physiological and psychological responses during sexual activities *per se* than they do in how they negotiate sexual activities and in the kinds of sexual relationships and interactions they are motivated to seek. This may explain the anomaly (from the male point of view) that although women can be strongly aroused by pornography they are unlikely to seek it out. It also may explain women's general lack of sexual response to nude males: a woman may be "interested" in a nude male, in that she evaluates him favorably as a potential sex partner and wishes to become sexually involved with him and to be sexually aroused by him, but a wish for future sex is not the same as immediate arousal.

One observation of the Committee on Obscenity and Pornography may be especially relevant in the present context: "When viewing erotic stimuli, more women report the physiological sensations that are associated with sexual arousal than directly report being sexually aroused" (*Report 1970:24*). Obviously this finding is subject to a number of possible interpretations,² but I believe that the most parsimonious interpretation also is the most likely: I suggest that during such experiments some women experience the physiological changes that prepare their bodies for sexual intercourse without, in fact, experiencing emotional sexual arousal, and that this ability is the result of the unprecedented independence of receptivity and proceptivity in the human

² The usual, quasi-political, interpretation is that women are sexually aroused but do not recognize their arousal. On the other hand, Rossi (1973), in criticizing studies of women's genital responses to visual stimuli, writes: "many women experience clitoral engorgement in situations of stress and tension without sexual stimuli or association. . . . The physiological manifestation may *appear* sexual, but the emotions associated with it are not" (p. 165).

female (see Mead 1967). This independence is, I believe, a basic human female adaptation to use sexual intercourse and the possibility of sexual intercourse to advantage in an environment in which males wield physical and political power.

Male-female differences in tendencies to be sexually aroused by the visual stimulus of a member of the opposite sex—whether this stimulus is a drawing, painting, photograph, or actual person—can be parsimoniously explained in terms of ultimate causation, although their proximate bases remain obscure. Because a male can potentially impregnate a female at almost no cost to himself in terms of time and energy, selection favored the basic male tendency to become sexually aroused by the sight of females, the strength of such arousal being proportionate to perceived female reproductive value; for a male, any random mating may pay off reproductively.³ In other mammals, female reproductive value is revealed primarily by the presence or absence of estrus; that is, by ovulation advertisements. But human females do not advertise ovulation, hence selection favored male abilities to “assess” reproductive value largely through visual cues, as discussed below. Human females, on the other hand, invest a substantial amount of energy and incur serious risks by becoming pregnant, hence the circumstances of impregnation are extremely important to female reproductive success. A nubile female virtually never experiences difficulty in finding willing sexual partners, and in a natural habitat nubile females are probably always married. The basic female “strategy” is to obtain the best possible husband, to be fertilized by the fittest available male (always, of course, taking risk into account), and to maximize the returns on sexual favors bestowed: to be sexually aroused by the sight of males would promote random matings, thus undermining all of these aims, and would also waste time and energy that could be spent in economically significant activities and in nurturing children. A female’s reproductive success would be seriously compromised by the propensity to be sexually aroused by the sight of males.

³ The relationship between “girl watching” and sexual intercourse is implicit in Irwin Shaw’s classic short story “The Girls in Their Summer Dresses,” which may well be the most concise summary of sex differences in sexuality ever written (see *Short Stories from the New Yorker*, New York: Simon and Schuster, 1940). And in *Remembrance of Things Past*, Proust writes: “The men, the youths, the women, old or mature, whose society we suppose that we shall enjoy, are borne by us only on an unsubstantial plane surface, because we are conscious of them only by visual perception restricted to its own limits; whereas it is as delegates from our other senses that our eyes dart towards young girls. . . .”

The male's desire to look at female genitals, especially genitals he has not seen before, and to seek out opportunities to do so, is part of the motivational process that maximizes male reproductive opportunities. There is no corresponding benefit for females in wanting to look at male genitals, hence selection has not favored female impulses to become sexually aroused by the sight of male genitals or to seek out opportunities to look at them. If females tended to be sexually aroused by the sight of male genitals, men would be able to obtain sexual intercourse via genital display; but the deliberate male display of genitals to unfamiliar women is understood to be a kind of threat, whereas a similar female display is understood to be a sexual invitation. Although the practice of covering the genitals with clothing is almost universal, the underlying reasons for concealing male and female genitals probably are different.

While the most significant question for an evolutionary analysis is how human dispositions develop in natural environments, it is likely that selection so consistently favored males who were sexually aroused by the sight of females and the female genitals, and so consistently disfavored females who were aroused by the sight of males and the male genitals, that the resulting male-female differences approach "innateness," and are manifested even in artificial, modern environments. I hasten to add that this does not mean that environments could not be designed in which most females would develop malelike dispositions and vice versa; but such environments probably never existed, nor are they likely to exist in the future. The profoundly different natures of men and women are dramatically illustrated by Bryant and Palmer's (1975) study of masseuses in four "massage parlors." The primary service these women offer their male clients is masturbation, but in the process the clients are allowed to massage or fondle the naked masseuses. The purpose of this is to arouse the clients sexually as quickly as possible and hence to generate maximum business: the masseuses' motto is "get 'em in, get 'em up, get 'em off, and get 'em out" (p. 233). Although masseuses regularly look at, masturbate, and are masturbated by naked men, and although most of the women expressed a positive attitude toward their clients, only one masseuse reported that she herself experienced sexual arousal during her work, and this apparently occurred as a result of being massaged rather than massaging. To overcome her arousal, she would stand up, look at her client, and lose interest. The ability to engage in these activities without being sexually aroused represents a uniquely female adaptation. This adaptation can-

not be accurately characterized as "hyposexuality," since the masseuses may be strongly sexually aroused and active with partners of their own choosing; rather, it represents this ability *not* to become sexually aroused simply by the stimuli of male bodies *per se*. Few heterosexual men could massage and masturbate naked women without being themselves sexually aroused, and I suspect that if the women clients also masturbated their masseurs, even many homosexual masseurs would find themselves aroused.

The natural experiment of commercial periodical publishing provides further evidence of human sex differences: attractive women—in varying states of dress and exhibiting varying degrees of sexual provocativeness—are featured not only in men's and in general interest magazines but also in magazines designed exclusively for women. *Viva's* decision to continue publishing occasional female nudes, but to eliminate male nudes, was based on the editors' understanding that women enjoy looking at other women's bodies. Indeed, women's magazines—especially fashion magazines—are saturated with an eroticism that often seems more genuine than the male fantasy-simulating eroticism of men's magazines. My impression from unsystematic discussions with women (especially during the seminars on primate and human sexual behavior that D. E. Brown and I have taught for a number of years) is that most young women prefer the photographs in *Playboy* to those in *Playgirl*, and that many young women "girl watch" as much as or more than they "boy watch." Parallel male preferences and behaviors would probably indicate homosexuality, and a magazine featuring photographs of men who exude the erotic narcissism of women's fashion magazines almost surely would be intended for a male homosexual market. But women's interest in other women's bodies is not—as a male bias might suggest—evidence for lesbianism. Heterosexual women do not look at other women as sex objects; rather, they *identify* with women in photographs and become, in their imagination, erotically alive and desirable objects (see Money and Ehrhardt 1972).

I believe that women's magazines provide vivid, albeit grossly exaggerated, evidence of a basic human female adaptation, which Colette referred to as women's "instinct for spontaneous comparison": viz., to learn from observing other females how to stimulate, and use to advantage, male desire. This is analogous to the human abilities—which almost surely represent adaptations—to observe another person's skilled tool-using performance, to imagine oneself performing the same activity, and to use this imagined performance as a template with which to

compare the sensations of one's own performances. Human females have always been objects of male sexual desire, and it is difficult to believe that a natural environment ever existed in which females did not have some opportunity to increase their reproductive success by learning to manage and manipulate this desire. Learning to be effective as an erotic stimulus is underpinned by the abilities to imagine oneself as a sex object and to discriminate and identify with sexually attractive women. Although female intrasexual competition ultimately underlies women's interest in other women's bodies, competitive emotions apparently do not normally interfere with women's abilities to learn through identification.

Perhaps substantial numbers of women will never be sufficiently interested in magazines whose *raison d'être* is photographs of nude men to make the publishing of such magazines profitable; nevertheless, the hypotheses presented here generate several predictions about how more effective magazines could be designed. First, the notion must be abandoned that women are simply repressed men waiting to be liberated: large numbers of women will not be appealed to by the slavish mimicking of men's magazines. Selection has not only not favored a female propensity to become sexually aroused by the sight of males, but very likely it has disfavored this propensity. Selection has, however, favored female abilities to discriminate visually, and to be sexually interested in, males who evidence fitness. Sexual arousal—primarily via touch (Money and Ehrhardt 1972)—may eventually result from this female interest. To stimulate most effectively female sexual arousal, as opposed to sexual “interest,” photographs of males must suggest not just the possibility of a future sexual interaction but rather an actual sexual interaction.

I thus offer the following unsolicited advice to would-be editors of magazines for the sexually liberated woman. (1) Photographs of men with erect penises will be far more effective than photographs of men with flaccid penises in sexually arousing women. The former suggest an actual sexual interaction, not just the possibility of a future interaction. (2) Because female sexual arousal by visual stimuli appears to depend more on subjective identification with females than on objectifying males, photographs in which women appear along with nude men will be more effective than photographs of men alone. The former provide a vehicle with which the observer can project herself into the photograph. (Photographs in which the man and woman touch each other, not necessarily sexually, will be especially effective.) While

the presence of women in photographs may also arouse emotions such as competition and jealousy, which conflict with sexual arousal, the net effect for most women will be increased erotic appeal. (3) Few women desire anonymous sexual variety, hence the potential for sexual arousal is unlikely to be maximized by photographic layouts of a series of men. Young women who were exposed to *Playgirl* magazine in Stauffer and Frost's (1976) study reported that they would prefer photographs that depict a believable, developing heterosexual relationship that could reasonably result in nudity and sex. (This female preference is the opposite of pornotopia, which deliberately and consistently excludes believable relationships, reasonable contexts, and, in fact, any intrusion of the realities of sexuality in everyday life.)

The widespread failure to appreciate the extent of sex differences in sexual arousal has a number of possible explanations. One possibility is the (generally adaptive) human tendency to conceive other minds in terms of one's own. For example, although it is regularly alleged that men believe, and propagate the myth, that women are "hyposexual," in fact, men often grossly misunderstand women's experiences because they imagine women to be repressed men waiting to be awakened. Kinsey *et al.* (1953:653) write:

We have histories of males who have attempted to arouse their female partners by showing them nude photographs or drawings, and most of these males could not comprehend that their female partners were not in actuality being aroused by such material. When a male does realize that his wife or girl friend fails to respond to such stimuli, he may conclude that she no longer loves him and is no longer willing to allow herself to respond in his presence. He fails to comprehend that it is a characteristic of females in general, rather than the reaction of the specific female, which is involved in this lack of response.

Women themselves sometimes imagine that their failure to respond as men do is primarily a matter of repression. As Stauffer and Frost (1976) note, the fact that the editors of *Playgirl* magazine copied *Playboy's* format so closely reflects the misconception that liberated women will be like men.

Sexual attractiveness

Nowhere are people equally sexually attracted to all members of the opposite sex; everywhere sexual attractiveness varies systematically

with observable physical characteristics (Ford and Beach 1951). In their review of the social psychological literature on physical attractiveness, Berscheid and Walster (1974) note that this topic has been neglected in part because appearance is closely tied to the genes, hence the importance of physical attractiveness in everyday life is antagonistic to the optimistic environmentalistic bias of American psychology: it seems undemocratic that hard work cannot compensate for genetic happenstance. Berscheid and Walster argue that nonscientists are more likely than scientists to assess accurately the importance of physical attractiveness because nonscientists have not been misled by social science theories:

. . . social scientists have taken longer to recognize the social significance of physical appearance than have laymen; the accumulating evidence that physical attractiveness is an important variable to take into account if one is plotting the course and consequences of social interaction may be more startling to social scientists than to those who were never exposed to the strong "environmentalist" tradition of psychology, who did not take at face value beliefs of equal opportunity, and who were not aware that an interest in physical appearance variables relegated one to the dustbin of social science (p. 207).

But even Berscheid and Walster may be guilty of an environmentalistic bias when they state that "culture transmits effectively, and fairly uniformly, criteria for labeling others as physically 'attractive' or 'unattractive'" (p. 186). As discussed below, the extent to which criteria of physical attractiveness are transmitted by culture is debatable.

Berscheid and Walster's review indicates: (1) People generally agree very closely in rating the physical attractiveness of others, regardless of the sex, age, socioeconomic status, or geographical region (within a given country) of the individuals doing the rating. (2) Physical attractiveness greatly influences the formation of heterosexual relationships; as Murstein (1972:11) writes, "physical attractiveness, both as subjectively experienced and objectively measured, operates in accordance with exchange-market rules." Naturalistic studies of heterosexual couples in public places indicate that members of a pair tend to be approximately equal in physical attractiveness. Experimental studies confirm the importance of physical characteristics. For example, men were paired randomly with women (except that the man was always taller than his partner) at a college dance, and subsequently participants were asked how much they liked their partner. Liking proved to be a direct function of the partner's physical attractiveness; every at-

tempt to discover other factors failed. Needless to say, such findings are at variance with young people's statements about what they value most in a member of the opposite sex, which tend to emphasize "personality" and "character."

Berscheid and Walster call attention to the "dazzling variety" of characteristics considered attractive in various societies and in times past and also to the absence of theories capable of bringing order out of this chaos. Although physical attractiveness is both easily assessed and of great importance in everyday life, "an answer to the question of who is physically attractive is neither available currently nor foreseeable on the immediate horizon" (Berscheid and Walster 1974:181). They do note, however, that in the West tallness is considered attractive in men, and that people of high socioeconomic status are judged, on the average, to be more attractive than people of low socioeconomic status. In discussing standards of beauty in cross-cultural perspective, Ford and Beach (1951) also emphasize the diversity of standards, both in what characteristics are admired, and in what parts of the body are considered to be most important.

But standards of physical attractiveness may be neither so variable nor so arbitrary as they seem. I suspect that variability and arbitrariness have been overemphasized for the same historical and ideological reasons that physical attractiveness itself has been ignored in the social sciences: physical characteristics are close to the genes and are distributed undemocratically. If standards of attractiveness can be shown to vary arbitrarily, attractiveness itself is made to seem trivial. Thus Rosenblatt (1974), in reviewing cross-cultural standards of physical attractiveness, describes beauty as an "impractical" criterion on which to base mate choice, whereas economic and political gain are said to represent "practical" criteria. I shall argue that the tendency to discriminate physical attractiveness among members of the opposite sex and to be more sexually attracted to some than to others represents an adaptation whose ultimate basis is that people vary in reproductive value. That humans universally assess one another in terms of physical attractiveness and universally desire attractive partners indicates that these assessments and desires—like economic and political considerations—are "practical" in the sense that they are designed to promote reproductive success.

The perception of physical attractiveness seems to originate in three different kinds of psychological mechanisms. These mechanisms do not, of course, operate independently, but they can be considered

separately for analytical purposes. First, some physical characteristics, which can be specified in an *absolute* sense, universally indicate high reproductive value. The ability to discriminate these characteristics and the tendency to desire them in a partner are relatively "innate," in that humans who make these discriminations and experience these desires tend to develop in all natural environments and probably in most unnatural environments as well. Second, some physical characteristics, which can be specified only in a *relative* sense (by comparing individuals in the population with one another), universally indicate high reproductive value. The ability to discriminate these characteristics is acquired through experience, but this does *not* mean that relative standards of physical attractiveness are transmitted from one individual to another, much less from culture to individuals. The mechanisms underlying the learning of these relative standards may be best considered "innate" *rules*, or programs, that specify how standards of physical attractiveness are to be derived from experience; the development of these relative standards may occur completely outside of consciousness, and the standards thus developed may be unavailable to introspection. Third, individuals derive some criteria of physical attractiveness from one another. Whether these "cultural" criteria are systematically related to reproductive value is an open question, but if they are not, selection can be expected to oppose tendencies to adopt other people's standards of physical attractiveness.

Absolute Criteria. Health obviously is very closely associated with reproductive value, and at least some characteristics predictive of good health are universally attractive. As Byron said, "health in the human frame / Is pleasant, besides being true love's essence." Ford and Beach (1951) report that among all peoples good complexion and cleanliness are considered attractive, poor complexion and filthiness unattractive. These characteristics very likely are the most reliable available indices of good health, and tendencies to pay close attention to skin condition and to be attracted by a clear, clean complexion probably are "innate" human dispositions. Furthermore, the ethnographic record suggests that evidences of disease or deformity render individuals less physically attractive. Perhaps many other physical characteristics—clear eyes, firm muscle tone, sound teeth, luxuriant hair, or a firm gait, for example—are reliably associated with health and vigor and are universally attractive, but the topic has yet to be investigated systematically. Social psychologists have not emphasized the importance of indices of health and

skin condition on physical attractiveness perhaps in part because their study populations are often middle-class college students who are, on the whole, extremely clean and healthy; the effect of ringworm on physical attractiveness, for example, is unlikely to be disclosed in such a sample. Furthermore, many social psychological studies of physical attractiveness rely on photographs, in which skin condition may be virtually undetectable; in the case of yearbook photographs, blemishes and irregularities may even have been deliberately eliminated.

A human female's age is very closely associated with her reproductive value, and physical characteristics that vary systematically with age appear to be universal criteria of female physical attractiveness; Williams (1975), in fact, remarks that age probably is the most important determinant of human female attractiveness. The correlation of female age and sexual attractiveness is so intuitively obvious that ethnographers apparently take it for granted—as they do the bipedalism of the people they study—and the significance of female age tends to be mentioned only in passing, in discussions of something else. For example, in discussing Kgatla adultery, Shapera (1940:207) describes one embittered woman “whose husband had recently been carrying on with a younger and more prepossessing rival. . . .” Davenport (1977: 142) writes that in modern China, before the revolution, “one of the motivations for taking concubines was to gain young and attractive sex partners.” Chagnon (1968a:66) discusses a Yanomamö wife “who is quite jealous of her [younger] co-wives because they can command some of the tasty morsels of food that would otherwise be her own prerogative. And, since the younger wives are more attractive physically, [the husband] does pay considerable attention to them.” According to Goodale (1971:227), it is often the fate of a Tiwi woman to outlive several husbands and eventually to become the wife of a younger man: “If this happens, the young man may have several quite young wives whom he prefers as sexual partners.” The woman's opportunities to engage in extramarital affairs also diminish at this time, and, in fact, Tiwi women believe that the “stopping of sexual intercourse causes menopause.” In discussing human sexual competition in cross-cultural perspective, Mead (1967:198) alludes to “the struggle between stronger older men and weaker younger men or between more attractive younger women and more entrenched older ones. . . .”

Since Western studies of physical attractiveness have focused on people of college age or younger, age is seldom mentioned as an important variable, except incidentally, as in Mathews, Bancroft, and

Slater (1972), but the waning of female attractiveness with age is well known. Social scientists may also have neglected age as a variable influencing female attractiveness because in the artificial environments of modern Western societies women can maintain a youthful appearance far longer than is possible under more natural conditions. Where women begin their reproductive careers at seventeen, spend most of their lives pregnant and nursing, and engage in strenuous gathering and domestic activities in which they are regularly exposed to the elements of nature—especially to the effects of the sun on skin texture—the aging process is manifested dramatically in physical appearance.

How age affects female sexual attractiveness can be expected to depend on whether the male's (unconscious) mechanism for "evaluating" female physical characteristics has been designed by selection primarily for wife-detecting or primarily for sexual partner-detecting (Williams 1975). Montagu (1957) provides data relevant to this question in his discussion of "adolescent sterility": in cross-cultural perspective, menarche, accompanied by anovulatory cycles, occurs at $13-16 \pm 1$ years of age; nubility, the beginning of fertile, ovulatory cycles, occurs at $17-22 \pm 2$ years of age and is accompanied by high rates of maternal and infant mortality; maturity, in which full growth is attained, occurs at $23-28 \pm 2$ years of age. Hence, "the best time for conception, pregnancy, and childbirth in the human female is, on the average, at the age of 23 ± 2 years and for about 5 years thereafter" (p. 193). If males have been designed by selection to "evaluate" females primarily as sex partners, males should be attracted most strongly by females of $23-28 \pm 2$ years, since they are most likely to produce a viable infant; but if males have been designed by selection to "evaluate" females primarily as wives, males should be attracted most strongly by females who are just about to become nubile, at $17-22 \pm 2$ years, since a male who marries a female of this age maximizes his chances of tying up her entire reproductive output. In the West, males might be expected to be attracted most strongly by somewhat younger females (depending on what physical characteristics males use to assess age) since the age of menarche (and presumably of nubility and maturity as well) has been steadily dropping for the last century (Melges and Hamburg 1977), hence most of the observable signs of fertility appear earlier among Western females.

Among many higher primate species that do not form harems, adult males are known to prefer older females as sex partners; more dominant rhesus males, for example, tend to copulate with older females

(see Symons 1978a). Ultimately, this preference is the result of the relative infertility of the younger estrous females. On the other hand, hamadryas baboons form harems, and a hamadryas male may start his harem by "adopting" permanently a prepubescent, two-year-old female (though his motive may not be sexual). While the relevant data on human male preferences have yet to be collected, it seems very likely that the male "evaluative mechanism" has been designed more for detecting the most reproductively valuable wives than for detecting the most reproductively valuable sex partners. The probabilities that a 30-year-old woman and a 20-year-old woman will produce healthy, viable offspring from a given act of intercourse would seem to be far too similar to explain their differential attractiveness; but, in a natural environment, the 30 year old would have completed perhaps half of her reproductive career and hence, other things being equal, would make a far less valuable wife than the 20 year old. Although I have argued that marriage is not primarily based on lust, marriage may sometimes be motivated by lust, and, more importantly, lust may motivate the male's attempt to accumulate young wives. In *Don Juan*, Byron describes a Turkish sultana who is still an overpowering beauty despite her advanced years: "there are forms which Time to touch forbears / And turns aside his scythe to vulgar things." She is twenty-six years old.

There has recently been a good deal of public discussion of romantic relationships in which the woman is substantially older than the man. With respect to the issue of sexual attractiveness, the following points may be pertinent: (1) Humans are flexible, and individual ontogenetic histories vary enormously in modern societies; no doubt some men are most strongly sexually attracted to older women. (2) The competition for older women is much less keen than the competition for younger women, and, as a group, young men—like most young male mammals—are in a weak competitive position. Among rhesus monkeys, for example, young, low-ranking males tend to mate with the youngest females—who are least likely to produce viable offspring—because the dominant males monopolize the older, more fertile females (see Symons 1978a). (3) Physical sexual attractiveness is only one component of a romantic relationship; older women are likely to be much more interesting intellectually, less inhibited sexually, more highly skilled in lovemaking, and, perhaps, less demanding.

The universal, absolute criteria of physical attractiveness associated with health and female age have been neglected by physical attractive-

ness theorists perhaps because these criteria are obvious and not very interesting; nevertheless, they may account for much of the variance in physical attractiveness within a given population. Anthropologists may have failed to emphasize these criteria because anthropology takes culture to be its subject matter and universals appear to lie outside the province of culture. But, as argued below, some of the standards of physical attractiveness that do vary cross-culturally probably also lie outside the province of culture.

Relative Criteria. The tendencies to find healthy people and young women attractive are relatively "innate" because they are universally associated with reproductive value⁴ and because some indices of health and age (such as unblemished and unwrinkled skin) can be specified in an absolute sense. But the reproductive value of most characteristics can be specified only relatively; hence selection may favor "innate" mechanisms that specify the *rules* by which the individual is to develop standards of attractiveness by comparing members of the population with one another.

The human female tendency to detect and to be attracted by high-status males may constitute one such "innate" rule. When the males of a species regularly compete for status, high rank will, on the average, confer reproductive advantage (Wilson 1975). Females of such species might be expected to prefer dominant males—other things being equal—because such males are more likely than low-ranking males to produce reproductively successful sons. Ford and Beach (1951:94) write that, in cross-cultural perspective, "One very interesting generalization is that in most societies the physical beauty of the female receives more explicit consideration than does the handsomeness of the male. The attractiveness of the man usually depends predominantly upon his skills and prowess rather than upon his physical appearance." Social psychological studies have found that female "popularity" is more closely correlated with physical attractiveness than is male popularity, and that males are more likely than females to report that physical attractiveness is important to them in evaluating a member of the opposite sex (Berscheid and Walster 1974).

⁴ Indeed, "innate" development may protect the individual from developing maladaptive sexual preferences owing to random environmental influences or Machiavellian attempts to influence his or her taste. If there were any hope of success, might a man attempt to convince his reproductive competitors that forty-year-old women are much more attractive than twenty years olds? Certainly similar attempts are typical of human economic transactions.

In *Remembrance of Things Past*, Proust writes that the women the aristocratic Charles Swann found to be beautiful and charming

. . . were, as often as not, women whose beauty was of a distinctly "common" type, for the physical qualities which attracted him instinctively, and without reason, were the direct opposite of those that he admired in the women painted or sculptured by his favourite masters. Depth of character, or a melancholy expression on a woman's face would freeze his senses, which would, however, immediately melt at the sight of healthy, abundant, rosy human flesh.

These sex differences are precisely what evolutionary theory predicts: since, in a natural habitat, females appear to vary relatively little in the number of children they produce during their lifetime, female reproductive value is primarily a function of age and health; but male reproductive value varies substantially with prowess and status, and may increase with age.

Because male reproductive value is not a function of age, the passage of time can have different—even opposite—effects on men's and women's sexual attractiveness. In her novel *The Vagabond*, Colette, that quintessential observer of the aging process, makes the thirty-four-year-old protagonist write to her lover (whom she is about to abandon) as follows:

Max, my dear love, I asked you yesterday the name of that young girl playing tennis with you. I need not have bothered. As far as I am concerned she is called *a girl, all the girls, all the young women* who will be my rivals a little later on, soon, tomorrow. She is called the unknown, my junior, the one with whom I shall be cruelly and lucidly compared, yet with less cruelty and clear-sightedness than I shall use myself.

Triumph over her? How often? And what is triumph when the struggle is exhausting and never-ending? Understand me, please understand me! It is not suspicion, not your future betrayal, my love, which is devastating me, it is my own inadequacy. We are the same age; I am no longer a young woman. Oh my love, imagine yourself in a few years' time, as a handsome man in the fullness of your age, beside me in mine! Imagine me, still beautiful but desperate, frantic in my armour of corset and frock, under my make-up and powder, in my young, tender colours. Imagine me, beautiful as a full-blown rose which one must not touch. . . .

The attractiveness of high-status males may shed light on the question of whether the female "evaluative mechanism" is designed primarily to detect husbands or primarily to detect sex partners (assum-

ing, of course, that ancestral females sometimes had some say in choosing their husbands). If male A has higher status or greater hunting ability than male B, A's wife or wives can expect, other things being equal, to be better off than B's wife or wives; but if B's wife has an affair with A (assuming that she receives no material compensation), all she has to gain, ultimately, is the possibility of conceiving a child by A instead of by B. Selection can be expected to favor the female desire for high-status sex partners, as distinct from husbands, only to the extent that the variance in male status has a genetic basis.

The situation is not as clear-cut as the previously discussed effect of age on female attractiveness: from the male's point of view, the ideal age for a wife is different from the ideal age for a sex partner; but from the female's point of view, a high-status male is both the best choice for a husband and for a sex partner. Nevertheless, I suspect that the proportion of the variance in male status that is caused by genetic differences among males is far too small to account for the persistent female interest in male status and prowess and therefore speculate that the human female "evaluative mechanism" has been designed by selection more for detecting the most reproductively valuable husbands than for detecting the most reproductively valuable sex partners.

The human female preference for high-status males is rapidly becoming a sociobiological cliché (for example, van den Berghe and Barash 1977) and perhaps is not worth belaboring. Good data are needed on this question. In gathering such data, it will be important (and difficult) to distinguish between intellectual judgments and actual sexual attraction: there is no question that humans of both sexes can calculate rationally that they are likely to benefit materially from marriage—or even from association—with a high-status member of the opposite sex. But the interesting question is the extent to which the emotion of sexual attraction varies with the status of the individual being evaluated. Berscheid and Walster (1974) report that middle-class people are, on the average, perceived as more physically attractive than working-class people; this may result from class differences in nutrition and medical care; genetic differences between classes arising from the tendency of attractive women to marry high-status men; and/or specific cues associated with social class. Possibly the effect of status on male attractiveness is not linear, but instead, only a few males of the highest status benefit substantially from intense female interest. This possibility should be considered in designing experiments to assess the effects of status on attractiveness.

Rosenblatt (1974) argues that Ford and Beach's finding—that cross-culturally, male attractiveness is based more on prowess than on handsomeness, while female attractiveness is based largely on beauty—is an artifact of women's lack of power in most societies to choose their own mates. He predicts that women will be equally concerned with handsomeness, and equally unconcerned with prowess and status, when they have equal power to choose their own mates. The question of whether there are "innate" male-female differences in the importance of status as a criterion of sexual attractiveness may be resolved in the near future as Western women achieve economic and political equality. My own prediction is that even when men become used to women in high-status positions, and are not emasculated by the fear of such women, and women become used to holding high-status positions, status will not substantially affect women's sexual attractiveness but will continue to affect men's attractiveness. (The rise of the 20th-century groupie is food for thought.) It might prove interesting to study individuals who regularly move between environments in which they have high status and environments in which they are unknown. I suspect that many men experience dramatic fluctuations in their attractiveness to the other sex as a result of such transitions, and that women generally experience little or no such fluctuations.

If high status is desirable in a mate or a sex partner, and humans are disposed to detect and to be attracted by such individuals, the next best thing to possessing high status is appearing to possess it, hence people may imitate signs of status in order to enhance their own attractiveness. "Fashion" in Western societies may be largely status-imitation run amok: change for its own sake must occur constantly at the top because signs of status are constantly being imitated at lower levels and thereby rendered useless. Imitation may, of course, be prevented by penalties, such as those for impersonating an officer, but the existence of penalties among many peoples implies the existence of impulses to violate them.

Health and status are unusual in that there is no such thing as being too healthy nor too high ranking. But with respect to most anatomical features, natural selection produces the population mean, either directly, in that individuals exhibiting the mean tend to be the most reproductively successful, or indirectly, in that the extremes of the population distribution tend to be reproductively less successful. Thus sexual selection can be expected to favor an "innate" mechanism to detect the population mean (or other measure of central tendency)

of most physical characteristics and to find it attractive. Cross-cultural variation in standards of physical attractiveness must be in part the result of racial variation; *Homo sapiens* is an extremely polytypic species. Darwin (1871) argued that peoples tend to admire characteristics peculiar to their own race, characteristics, that is, which distinguish their race from others, and that sexual selection would therefore tend to exaggerate racial differences; in fact, Darwin believed that sexual, rather than natural, selection is primarily responsible for racial differences. It seems more likely, however, that during most of human evolution individuals rarely encountered members of races very different physically from their own, that racial differences are primarily the result of natural selection, and that any tendency to prefer one's own race is an artifact of the tendency to prefer the norm, a norm which is reinforced rather than exaggerated by sexual selection. That is, sexual selection may simply tend to reduce variability by eliminating the tails of the population distribution.

Almost a century ago, Galton (1883) developed a method of making a composite photograph from many individual photographs of faces, thus generating a kind of pictorial average. He found that "All composites are better looking than their components, because the averaged portrait of many persons is free from the irregularities that variously blemish the looks of each of them" (p. 224). Galton also quotes from a letter (to Charles Darwin) from A. L. Austin of New Zealand, who blended portraits of women in a stereoscope and noted "in every instance, a *decided improvement* in beauty" (p. 226). If the ideal of facial beauty is largely the population average (more likely, the average of individuals of the most desirable age, in the case of adults), individuals *must* possess an unconscious, "innate" mechanism that operates in a manner analogous to composite portraiture and derives a standard of facial attractiveness by averaging observed faces. Individuals—not culture—must possess this mechanism, as it is difficult to see how a cultural tradition of preferring the composite face could originate unless some actual persons could average observed faces, and even if such a tradition somehow got started, the ideal would tend to drift away from the composite unless individuals possessed an average-detecting mechanism which limited drift. Averaging clearly is done unconsciously, although the adjective "regular" does frequently crop up in attempts to describe facial beauty; in fact, the ideal must almost always be a face that no one has ever seen.

The human beauty-detecting mechanism probably evolved to deal

with small, relatively homogeneous groups of people. How this mechanism operates in large communities, often of varied racial composition, provides interesting problems for research. In a small, relatively homogeneous population there may be a single ideal face, but if the averaging mechanism is designed to detect *relations* among facial features, rather than absolute dimensions, in a large, heterogeneous population a number of "ideal" faces may exist, each characterized by a different harmony in the relative proportions of its features. Moreover, one wonders whether humans have completely distinct criteria of attractiveness for different racial groups, or whether exposure to a number of races results in a mutual influence of standards. Elwin (1968) found the same Muria attractive that the Muria themselves did, but he had associated with them for many years prior to the time of this writing. Malinowski (1929) makes the intriguing observation that after he had lived in the Trobriand Islands for some time his judgments of Trobriand beauty began to agree with the Trobrianders' judgments. (I see no reason to assume that Malinowski simply adopted Trobriand standards, as he showed little inclination to adopt natives' opinions in other matters.) Perhaps Malinowski initially judged Trobrianders by European standards; if so, one wonders whether his standards of European physical attractiveness were different upon completion of his fieldwork, or whether he had developed entirely separate systems of evaluation, just as he had developed entirely separate languages.

The means of such adaptively significant characteristics as body height and skin color can also be expected to be perceived as most attractive. Relevant data should be fairly easy to gather. My impression from the ethnographic literature is that some peoples prefer lighter than average skin (although albinism, like all deformities, is generally considered decidedly unattractive). But in these cases one would like to know whether skin color varies with status, whether colonialism is perhaps implicated, and whether informants attempt to spare the feelings of the light-skinned ethnographers. Although Trobrianders generally found Europeans physically hideous, they graciously emphasized that Malinowski himself was a notable exception to this rule, and, in fact, informants remarked that in many ways Malinowski looked rather more like a Trobriander than a European (Malinowski 1929). (Malinowski also notes that the bearer of such good tidings expected to be recompensed with a gift of tobacco.)

According to Berscheid and Walster's (1974) review, tallness is valued in American men, which appears to contradict the hypothesis that

the most attractive height will be the population mean. But the evidence on this question is equivocal, and raises a number of interesting issues. How sexual attractiveness varies with male height has not, in fact, been systematically investigated; furthermore, the data Berscheid and Walster cite have more to do with political success and the hiring practices of American businessmen than with male attractiveness to females. Berscheid and Walster report no evidence that men taller than the mean (about seventy inches) are consistently judged to be more sexually attractive than shorter men; according to their discussion, the male's absolute height does not appear to be as important as his height relative to that of the female doing the evaluating. Women clearly prefer men somewhat taller than themselves, but how much taller is not known.

The following points—which are intended to be hypotheses rather than conclusions—may be worth considering. First, humans are designed by selection to live in small, relatively homogeneous groups in which the variability in body height is far less than the variability existing in the United States today. In a natural human habitat, virtually all adult men will be taller than all adult women, so perhaps it is “natural” for women to prefer men somewhat taller than themselves. The problem of a “restricted field of eligibles” faced by tall women and short men in the United States (Berscheid and Walster 1974) probably is peculiar to modern, heterogeneous societies. Second, although inquiries into the effects on attractiveness of posture, gait, and body carriage have not, to my knowledge, been made, these characteristics probably influence attractiveness and may tend to favor shorter men. Third, although there are no data to show that men taller than seventy inches are considered more attractive than seventy-inch-tall men, it does seem likely that a man whose height is above the mean generally will be considered more attractive than a man who is the same distance from the mean in the other direction. Since at least the beginning of this century, mean body height (for both sexes) in the United States has steadily increased;⁵ perhaps it is not too farfetched to imagine that, as a refinement on a mean-detecting mechanism, humans also are able to detect major trends—presumably by comparing members of different generations—and have a tendency to prefer individuals who deviate from the mean in the direction of the trend. Such a mechanism would be adapted to long-term environmental changes; the perceived trend

⁵ *Advance Data from Vital and Health Statistics*, No. 3, United States Department of Health, Education, and Welfare, November 19, 1976.

in phenotypes naturally need not be the result of genetic evolution, but a trend-detecting and -preferring mechanism might lead to genetic tracking (Wilson 1975) of facultative responses.

According to Darwin (1871), the human male's preference for physically attractive females resulted in sexual selection for beauty. Crook (1972:248), however, argues that "since in tribal societies virtually all women marry, the case for differential selection is poor because the less beautiful are not known to be less fecund than the more beautiful." But it is also true that the less beautiful are not known *not* to be less fecund than the more beautiful. Data are lacking. If higher-status males were able to obtain a disproportionate share of physically attractive wives, beautiful women may have had a slight reproductive edge. Nevertheless, if for most anatomical characteristics the population mean is considered most attractive, male preference for beauty would have reinforced natural selection and reduced population variability. Indeed, it is difficult to believe that sexual selection acted very strongly among hominid females, nor is there convincing evidence that the function of any human female anatomical characteristic—such as breasts—is to stimulate males visually. Most likely, female anatomy is stimulating to males owing to evolution in male brains, not female bodies. Consider that in cross-cultural perspective the sight of the female genitals, more than any other feature of female anatomy, is consistently reported to stimulate males, yet no one (to my knowledge) has yet suggested that any part of female genital anatomy was designed by selection for the purpose of visually stimulating males (although artificial elongation of the labia minora is sometimes thought to enhance attractiveness).

Much of the cross-cultural variation in standards of physical attractiveness reported by Ford and Beach (1951) is in body build, especially in the amount of body fat that is considered to be ideal. Among most peoples, plump women are considered more attractive than thin women. Rosenblatt (1974:87) remarks that "in a world where food is often scarce and nutritional and digestive-tract illnesses often epidemic, plumpness is an indication of wealth and health." Tobias (1964) suggests that the characteristic steatopygia of Bushmen women is adaptive in an environment of periodic food shortages, and he notes that Bushmen men prefer women with the fattest bottoms. Body fat is one of the most variable physical characteristics: major intra- and inter-population variation occurs, in part owing to differing nutritional opportunities, and the amount of body fat an individual possesses can change noticeably in the course of a few days. Humans do not seem to

have an "innate" preference for a particular body build; rather, individuals learn to associate variation in body build with indices of health and status. Plumpness has gone out of fashion in Western societies during the last century, probably as a result of the changing relationship between body fat and status: when food was scarce for many people, plumpness was a sign of wealth, but as circumstances improved for the majority, the rich began to distinguish themselves through thinness. (A similar argument sometimes is made with respect to suntans.)⁶ That a preference for plumpness is not "innate" seems to support arguments that hunter/gatherers (and by inference our Pleistocene ancestors) do not exist in a state of perpetual nutritional insufficiency. Alternatively, humans may have a tendency to prefer plumpness, a tendency that can be overridden by the enormous influence of health and status on standards of physical attractiveness.

Ford and Beach (1951) report substantial cross-cultural variability in the particular anatomical features that are considered to be most relevant to assessing beauty: this group emphasizes the lips, that group the nose, another group the ears, and so forth. I confess to a certain amount of skepticism. Such data are almost always obtained in an un-systematic and haphazard way, and must depend heavily on what features one or a few informants happen to mention. We know from more careful and systematic studies in the West that physical attractiveness—at least facial beauty—is perceived more as a total Gestalt than in isolated features (Berscheid and Walster 1974). Neither is the fact that a people adorn one facial feature and not another convincing evidence for the overriding importance of the former. It would be incorrect to assume, for example, that because many more Western women color their lips than their noses that lips are a more important criterion of beauty than noses are.

None of the foregoing is intended to deny the existence of cultural traditions of beauty that are unrelated to fitness, or of personal idiosyncrasies that result from unusual learning experiences; rather, it is intended to suggest first, that the ability to detect and to be attracted by members of the opposite sex who evidence high reproductive value is an important adaptation, and second, that humans have "innate" pref-

⁶ Suntans may, once again, go out of fashion in Western societies. If there are marked class differences in access to information about the sun's effects on the skin, upper-class people may tend to avoid the sun, despite some loss of physical attractiveness, both to avoid cancer and to maintain a youthful appearance. And if untanned skin comes to be reliably associated with the upper classes, it may come to be perceived as attractive.

erences for certain physical characteristics (for example, good skin), and “innate” rules by which other preferences are learned (for example, “prefer characteristics associated with high-status people”). If one argues, as so many people continue to do, that behavior must be caused either by the genes or by the environment, and that any exception to a general rule demonstrates environmental causation (unless the exception can be shown to have a genetic basis), one can deny the existence of any genetic influences on human sexual preferences. But if one acknowledges that behavior and psyche result from the interactions of genes and environments, and that human genes were selected on the basis of their ability to perpetuate themselves within a limited range of environmental circumstances, then, despite exceptions, one can interpret the cross-cultural regularities in standards of physical attractiveness as powerful evidence for “innate” dispositions. There is no a priori reason to doubt that a human child could be taught to be sexually attracted to anyone or anything; but this in no way diminishes the significance of the standards of attractiveness that develop in existing human environments.

Sex Differences in the West. In *The Selfish Gene*, Dawkins (1976) ends the chapter on the “battle of the sexes” as follows:

One feature of our own society which seems decidedly anomalous is the matter of sexual advertisement. As we have seen, it is strongly to be expected on evolutionary grounds that, where the sexes differ, it should be the males who advertise and the females who are drab. Modern western man is undoubtedly exceptional in this respect. It is of course true that some men dress flamboyantly and some women dress drably but, on average, there can be no doubt that in our society the equivalent of the peacock’s tail is exhibited by the female, not by the male. Women paint their faces and glue on false eyelashes. Apart from actors and homosexuals, men do not. Women seem to be interested in their own personal appearance and they are encouraged in this by their magazines and journals. Men’s magazines are less preoccupied with male sexual attractiveness, and a man who is unusually interested in his own dress and appearance is apt to arouse suspicion, both among men and among women. When a woman is described in conversation, it is quite likely that her sexual attractiveness, or lack of it, will be prominently mentioned. This is true, whether the speaker is a man or a woman. When a man is described, the adjectives used are much more likely to have nothing to do with sex.

Faced with these facts, a biologist would be forced to suspect that he was looking at a society in which females compete for males, rather

than vice versa. In the case of birds of paradise, we decided that females are drab because they do not need to compete for males. Males are bright and ostentatious because females are in demand and can afford to be choosy. The reason female birds of paradise are in demand is that eggs are a more scarce resource than sperms. What has happened in modern western man? Has the male really become the sought-after sex, the one that is in demand, the sex that can afford to be choosy? If so, why (pp. 177-78)?

I have tried to show that the ultimate cause of the greater importance of female than of male physical attractiveness is easily explained by the nature of reproductive competition during the course of human evolution: a female's reproductive value can be assessed more accurately from her physical appearance than a male's reproductive value can. Human females compete with one another in the currency of physical attractiveness because that is primarily what males value. (Appearance is enhanced in large measure by making the skin look healthier and younger.) A woman's physical attractiveness is significant not only in heterosexual interactions that may result in sexual intercourse, but in almost any heterosexual interaction in which male sexual interest can be advantageous to the woman or to her employer. Thus women employers are likely to be no less concerned than men about the physical attractiveness of their female employees, since they recognize that beauty is a tangible economic asset. Of course this is true also of male employees, but to a markedly lesser extent.

Furthermore, the fact that most men in modern Western societies wear more drab or conservative clothing than women does not mean that men are uninterested in being sexually attractive to women; on the contrary, this mode of dress is attractive to most women. Drabness connotes a responsible, hard-working family man, and almost all criteria of conservative good taste in men's clothing are simply signs of high status and membership in the upper classes. Men with the most to conserve—that is, those with the most power—tend to be the most conservative and to require conservative appearance of their subordinates. And in any species that typically exhibits both male-male competition and some female choice, visible signs of success in intrasexual competition are also likely to be important determinants of male attractiveness to females. Overt, flamboyant, sexual advertising in male attire is often perceived by women as a sign of promiscuous tendencies, which few women find attractive. As homosexual men are much less likely to be put off by signs of promiscuity in a potential sex partner,

they are much freer than heterosexual men to use clothing as sexual advertising.

Dawkins's discussion does, however, raise some interesting questions about the peculiar circumstances of modern societies. Although Western women's concern with physical attractiveness doubtless does in part reflect female intrasexual competition, I trust no one believes that women compete for opportunities to copulate. In the West, as in all human societies, copulation is usually a female service or favor; women compete for husbands and for other relationships with men, not for copulation (when prostitutes compete for customers they are competing for money, not copulation). This competition is artificially magnified in Western societies because, by custom and by law, polygyny has been almost eliminated. Mead (1967: 196-97) writes: "In modern societies where polygamy is no longer sanctioned and women are no longer cloistered, there is now a new problem to meet, the competition of females for males. Here we have an example of a problem that is almost entirely socially created, a product of civilization itself imposed upon an older biological one. . . . So in those societies in which there are more women than men—our normal Western sex ratio—and in which monogamy is the rule, we find the struggle of women over men also."

There is a second feature of modern Western societies that may conceivably increase female competition. Mead (1967) maintains, in effect, that the desire to be a mother is more "innate"—that is, develops under a wider range of environmental circumstances—than is the desire to be a father. She argues that "men have to learn to want to provide for others, and this behaviour, being learned, is fragile and can disappear rather easily under social conditions that no longer teach it effectively. Women may be said to be mothers unless they are taught to deny their child-bearing qualities" (p. 192). In modern Western societies not only may males be relatively ineffectively taught to want children, but many of the former economic motives for having children have disappeared. If more women than men do desire to have children (a proposition which has yet to be established), female competition may be rendered more fierce. Finally, modern women's sexual emancipation may have the effect of making some men reluctant to form durable heterosexual relationships (thus exacerbating female competition) not because men desire such relationships less strongly than women do, but because more males than females desire sexual variety for its own sake. The opportunities to satisfy this desire probably are

greater, for the majority of men, in modern Western societies than in any other time or place, and the opportunities are greatest for the most desirable men.

The male peacock's tail and the bright, ostentatious plumage of male birds of paradise, to which Dawkins refers, were produced by intersexual selection, which results from the combination of individual differences in the males' "power to charm the females" and female choice. Among species in which females have the power and opportunity to choose their mates, if male fitness happens to be reliably associated with an observable physical characteristic, selection favors females who are predisposed to choose males exhibiting this characteristic. As this female predisposition becomes widespread in the population, selection begins to favor males who manifest this characteristic in the most extreme form—that is, males with the most effective advertising—and females who choose such males, since these females produce sons who are differentially chosen as mates. The resulting "run-away" sexual selection exaggerates the male characteristic until sexual selection is eventually halted by the counter-pressure of natural selection (the more flamboyant the male peacock's tail, for example, the more energy is expended in its development, the more conspicuous the male is to predators, and the more his mobility is limited).

There is no evidence that any features of human anatomy were produced by intersexual selection. Human physical sex differences are explained most parsimoniously as the outcome of intrasexual selection (the result of male-male competition) and perhaps natural and artificial selection, not intersexual selection or female choice. Analogies between humans and birds, and the perspective of modern Western societies, both lead to serious overestimation of the importance of female choice in human evolution. Also, the natural desire to have one's views accepted may—given current standards of acceptability—lead evolutionary theorists to exaggerate the importance of female choice: perhaps it is felt that the often unwelcome messages of an evolutionary view of life—an amoral universe and a creative process that is founded on reproductive competition—can be to some extent ameliorated by the welcome news that in the battle of the sexes nature has given females the upper hand.

Although copulation is, and presumably always has been, in some sense a female service or favor (Chapter Eight), hominid females evolved in a milieu in which physical and political power was wielded by adult males, and the substantial evidence, documented in the ethno-

graphic record, that men will use their power to control women should not be underestimated. A particularly brutal example is provided by Chagnon (in press) from his studies of the Yanomamö: "the wife of one of the village headmen began having a sexual affair with another man. She came from the other large lineage in the village, and her brother, also one of the village headmen, attempted to persuade her to stop the affair. The two headmen were brothers-in-law and had exchanged sisters in marriage. The woman in question refused to follow her brother's advice, so he killed her with an ax." And Steadman (n.d.) writes that among the Hewa "when a married woman runs off with a lover, she is likely to be pursued by her brothers and her husband and, if caught, killed." Women, of course, evolved to use their assets to their own advantage. In modern Western societies males are severely limited in their opportunities to accumulate wives or to capitalize on their greater strength, and male political dominance is being steadily eroded; hence female choice (of mates and sex partners)—the psychological underpinnings of which presumably have always been present—is now manifested to an unprecedented degree in behavior. Ironically, the social, political, and sexual features of modern societies that have increased women's opportunities to chart the course of their own lives and to choose their own sexual partners and mates are the same features that have increased female intrasexual competition.

A final point: Dawkins writes that "a man who is unusually interested in his own dress and appearance is apt to arouse suspicion," which I take to mean "suspicion of being homosexual." Probably many heterosexual men are, in fact, as concerned with dress and appearance as any homosexual man (although heterosexuals may be more reluctant to admit such concern); nevertheless, homosexual men in general undoubtedly are more concerned with their appearance than heterosexual men in general are. As with all behaviors that characterize homosexuals, this emphasis on appearance provides a powerful insight into the nature of human sex differences (Chapter Nine). Homosexual men tend to be interested in dress and appearance not because they are, as a group, effeminate, but simply because they face the same problem that heterosexual women face: they wish to be sexually attractive to males, and males assess sexual attractiveness primarily on the basis of physical appearance.

To some extent the artificiality of modern Western environments can be considered to constitute an unplanned experiment (see Chapter Two). Although most human behavior in such environments is not

explicable as adaptation (since the environments have existed for an infinitesimal amount of time), the modern world may dramatically reveal formerly adaptive human dispositions by allowing them, to an unprecedented degree, to be realized in behavior. For example, mate selection tends to be based on physical attractiveness to a much greater extent when young people arrange their own marriages than when marriages are arranged by elders (Rosenblatt 1974). It is a mistake to imagine either, as Rosenblatt does, that beauty is a totally "impractical" criterion, or, as a sociobiological perspective might imply, that young people "know" what is in their reproductive interests, and that elders and principals disagree over mate choice only because elders are "looking out" for their own inclusive fitness at the expense of the principals' inclusive fitness (although this undoubtedly is sometimes the case). Perhaps the typical differences between the criteria of elders and the criteria of the principals in matters of spouse selection can be thought of as a division of labor, elders taking account of factors they are uniquely situated to perceive owing to their age and experience, and principals assessing reproductive value evidenced largely in physical attractiveness, the final choice being a compromise (heavily weighted in favor of the elders).

By the standards of preliterate peoples, modern human communities provide an enormous pool of potential sexual and marital partners, relatively few taboos, unprecedented freedom from parental influences, and thus great scope for personal attraction based on physical appearance. While the choices made under such circumstances perhaps are not often the most adaptive ones possible, the underlying psychological mechanisms that determine physical attractiveness are strikingly illuminated, since they are regularly manifested in behaviors and marriages. These mechanisms represent adaptations to maximize reproductive success in the environments normally encountered during the course of human evolutionary history.