

SEXUAL ATTRACTION: A TEST CASE OF SOCIOBIOLOGICAL THEORY

by *H. V. C. Harris*

Abstract. A study of the place of human sexuality in religious systems indicates a possible universal stress on sexual attraction. This could be explained by using the theories of Richard Dawkins and other sociobiologists: the philandering male and the coy female express the best strategies for the survival of the "selfish gene." Closer analysis of four religious systems throws doubt on these theories. In some systems the strategies are contradicted while in others there is stress on cooperative restraint rather than on survival through selfish propagation. The principal objection to the sociobiological approach is its assumption of conflict between the sexes.

Genetic engineering is important for the future of the human species. The rapidly emerging technology of altering human somatic and germ line cells, thereby affecting the future of both individuals and the human gene pool, raises basic ethical, philosophical, and religious questions. It leads us to explore such riddles as What is and what makes a person? and How can we evaluate our own human nature?

In the course of discussing the issues raised by genetic engineering it is certainly appropriate to consider human sexuality. Such a topic is appropriate because of the basic importance of sexuality to the human person. Sexuality involves the body, the very animality of man and woman. It also involves the highest forms of love of which human persons are capable. Indeed many religious traditions use sexual love as the paradigm for the relation between the "soul" and "God."

I propose to examine human sexuality by cross-cultural analysis. All sorts of difficulties beset such analysis, but its great value is that it forces

H. V. C. Harris, coordinator of the religious studies department, McAuley College, 243 Gladstone Road, Dutton Park, Queensland 4051 Australia, presented this paper at the Thirtieth Annual Conference ("What is and what makes a person? Consequences of current genetic research for scientific and religious evaluation of human nature") of the Institute on Religion in an Age of Science, Star Island, New Hampshire, 30 July-6 August 1983.

[*Zygon*, vol. 19, no. 3 (September 1984).]

© 1984 by the Joint Publication Board of *Zygon*. ISSN 0044-5614

us to remove our own cultural blinkers. It shows that what is "common sense" in one culture is not necessarily so in another. This point was brought home to me when an Italian grandmother I met in Pescara years ago could see no sense in my need to get back to work at the university in Rome. As she said, "When you don't work, you eat all the same." This was common sense to someone used to close family economic support. My culture had taught me the opposite wisdom: "If you don't work, you don't eat."

Let me move then to a study I have recently completed of the place of human sexuality in four religious systems. These were the religious systems of Grazalema, an Andalusian village; the Ndembu, a central African tribe; the Desana, an Amazonian tribe; and the Sahajiyas, a Bengali cult group. The study emphasized the relations between religious systems and human sexual behavior, particularly heterosexual intercourse. It indicated that religious systems tend to have much to say about certain human sexual powers. Not surprisingly powers concerned with fertility received much attention.

Less predictable was the emphasis on human sexual attraction. A set of powers form a cluster around this aspect of sexual behavior: specifically, powers to attract and be attracted and powers to give and receive sexual pleasure. These powers feature strongly in the four religious systems I investigated and in a number of other widely disparate religious systems. Had I stumbled across a cultural universal in human behavior which might, in fact, be traceable to genetic influences? In short, had I found evidence for the principal tenet of sociobiology, that all forms of social behavior in all kinds of organisms, including man, have a biological, or genetic, basis (Wilson 1978, 222)? This finding would be important because, if human sexual behavior has a genetic basis, it may be possible to modify such behavior by genetic engineering.

We need, however, to be careful in pursuing such a suggestion. First, the complexity of human sexual behavior is enormous. The genetic engineering required to modify such behavior may be totally beyond foreseeable technological development. Second, we must ask a number of questions concerning the assumptions of sociobiology. Is sociobiology correct? That is, does human sexual behavior have a genetic basis? Even if it does have such a basis, are the genes the determining factor in deciding human sexual behavior, or are cultural determinants also important? In summary, if the genes have culture on a leash, how short is the leash?

To answer this question I propose, first, to examine what sociobiologists say about human sexual attraction and, second, to test this against the evidence presented by my four religious systems. Finally, I will examine further research into male/female differences.

THE TRIVERS-DAWKINS THEORY

The most well-known account of the genetic basis for human sexual attraction occurs in Richard Dawkins's *The Selfish Gene* (1976). Dawkins has popularized the work of Robert Trivers (1972), and the whole theory has been repeated in abridged form in chapter six of E. O. Wilson's *On Human Nature* (1978).¹

The sociobiologists' account ties human sexual attraction closely to genetic survival. A man's best chance of passing on his genes is to mate often, to be a philanderer. It is not to his genetic advantage to invest in his offspring; he can safely leave this to his mates. Women must invest a great deal in any one child: nine months pregnancy, followed by lactation. It is not to their genetic advantage to waste this "investment." Their best strategies in what Dawkins calls "the battle of the sexes" are to choose a mate who indicates that he is domestic, not the wandering kind; or to choose a he-man mate whose offspring are likely to be strong (and hence to demand minimum care if the woman is left alone); and/or to choose an attractive mate whose male offspring are likely to be attractive (and, hence, likely to be successful in mating). Clearly, easily domesticated or he-man types may be judged attractive; but there may be slightly built wanderers who are also perceived as attractive. Already culture can rear its head in a genetic theory, for attraction may have nothing to do with either domesticity or strength.

Wilson simplifies the issue: "It pays males to be aggressive, hasty, fickle and indiscriminating. In theory it is more profitable for females to be coy, to hold back until they can identify males with the best genes. In species that rear young, it is also important for the females to select males who are more likely to stay with them after insemination. Human beings obey this biological principle faithfully" (Wilson 1978, 125). Again it must be noted that human sexual attraction is explained in terms of fertility. Pleasure and delight in beauty may challenge the structures of a society, but in the sociobiologists' perspective they are part of a set of strategies for genetic survival. The best strategy for the male is to be a philanderer, for the female to be coy.

There has been a great deal of criticism of Trivers's original postulates as an imposition of human social terminology onto animal behavior followed by projection of animal behavior back onto human society (Sayers 1982, 58). I am not inclined to dismiss Trivers yet. As John Archer and Barbara Lloyd comment, the basic issue is not the source of Trivers's inspiration but the validity of his theory (Archer and Lloyd 1982, 52).

SEXUAL ATTRACTION: FOUR EXAMPLES

Let me now test the sociobiologists' theory against my four examples.

Andalusia. The first example I shall take is an Andalusian village, Grazalema, studied by the English anthropologist, Julian Pitt-Rivers (1969; 1977). Grazalema is an isolated *pueblo* perched high in the sierras to the west of Malaga. Pitt-Rivers describes its people as having strong gender expectations: Men are to be honorable (*honrado*), but women are to have honor (*honra*). The male quality is active, an aggression and a virility like those of a fighting bull. The female quality is more passive, a purity and fidelity which will preserve her from losing honor by entering any questionable sexual liaison. The two qualities complement each other in marriage where male aggression is channeled into protection of wife and family and female virtue becomes a loving fidelity to husband and children.

This idealistic vision may have little to do with reality. There is indication that Dawkins's battle of the sexes rages in Grazalema. Male philandering is manifested in a strong Don Juan mythology: male aggression wins its sweetest victories in the seduction of other men's wives or daughters. However, Pitt-Rivers demonstrates that this mythology may have little to do with fact. A certain Manuel el Conde, snubbed when trying to flirt with one of the local belles, boasts, "If it were not for the ring upon this finger, I would not let that girl pass by me as she has." Pitt-Rivers remarks, "He eats his cake and has it, albeit in fantasy" (Pitt-Rivers 1977, 29). The marriage bond allows Manuel to restrain himself and still remain a man of honor. Or, one could argue that for all his aggression he has been domesticated.

Indeed, female control over male philandering seems to have won in the Andalusian battle of the sexes. This appears even more clearly when one investigates other control mechanisms used in the village. The most obvious is the *noviazgo*, a long ritualized engagement in which the male must come, night after night, to the doorway of the female's house. The couple is allowed to chat under the constant supervision of the girl's mother. Another control mechanism is the *vito*, organized ridicule usually directed at a man who has left his wife and has gone to live with another woman in or near the village. Both these mechanisms are aimed at keeping the male from wandering. He is tested for domesticity and punished if he fails to show it.

For all this, there is something of a male club in the *pueblo*. As long as men remain outwardly faithful they are allowed more latitude in conduct than women. Even the *noviazgo* is a formal ritual of fidelity of man to woman which hides latent infidelity. Richard and Sally Price comment on its effect on Andalusian marriage: "The psychological effects of the length and formality of *noviazgo* can hardly fail to have implications on the conjugal relationship. The patterns of work and recreation firmly established during the long courtship do not change significantly in marriage. For example, men frequently revert to their pre-

marital patterns of sex in neighbouring towns even before their wife's first pregnancy" (Price and Price 1966, 321).

Grazalema appears, then, to be a good example of Trivers's theory in action. Males tend to be philanderers, but coy females manage to control them to the extent that they remain faithful, at least to their formal roles as protectors and providers.² However, the Andalusian example appears to call one of Wilson's theories into question. Wilson accepts Trivers's philanderer versus cautious maiden model but also sees pair-bonding as "programmed to some extent through the genetic hardening" of such compromises as those reached in Grazalema (Wilson 1978, 140). This does not seem tenable. Pair-bonding, in Trivers's version of human development, could only occur when each female consistently domesticates a single male, or when a society curbs male aggression and male wandering, so that one man stays with one woman.

Grazalema may, indeed, demonstrate a cultural rather than a genetic strategy. It may show not a fixed female drive to domesticate mates but rather a structured system which pairs male and female into permanent marriage rather than allowing the strongest male to dominate or the most attractive male to seduce and move on. It is to the advantage of the majority in a group to control the strongest and to curb the most attractive. Sexual attraction demands to be treated by cultural and religious systems because, if left uncontrolled, it can destroy system values.

It is important to point out that human pair-bonding is not easily compatible with Trivers's model, particularly as it is presented in Dawkins's popularized form. Wilson argues that sexual pleasure serves pair-bonding (Wilson 1978, 137-38). But an attraction and consequent pleasure may serve any mating even if the bonding be temporary. Further, attractiveness may be a problem for pair-bonding. Rather than being the cement for long-term relationships, it may lead to the breaking of them. The four religious systems studied use strong controls against undesirable attraction, that is, attraction which is disapproved of by system authorities.

The Ndembu. The second example I shall cite is that of the Ndembu, an African tribal group studied by Victor Turner (1957; 1967; [1968] 1972; 1975). This example may be less familiar than the Andalusian one and so introduce variations in strategy that Wilson, for one, notes but tends to play down (Wilson 1978, 128).

A typical Ndembu village consists of a senior woman, her sons, and their wives and children. One of the sons will be headman, and because of his leadership he may have attracted other kin to his village. The wives of the village men usually come from another village. Ndembu society is matrilineal and virilocal.

The marriage bond is extremely fragile. A headman will try to keep his wives and children with him because they give him prestige and power, but he will also try to attract his sisters back to their maternal village. Any married woman knows, then, that if she is mistreated or is unhappy for any cause, she will be welcome in her brother's village, particularly if she brings her children with her. As Turner puts it: "In the final issue village continuity depends on marital discontinuity" (Turner 1957, 261). Ndembu men express the quandary as follows: to live with his male kin, a man must lose a friend (his sister) to marry an enemy (Turner 1957, 78).

The application of Trivers's theory is more difficult here. Ndembu males can be classed as philanderers: village celebrations tend to break down into quarrels featuring outraged husbands as the injured parties. The men require, however, that their wives be faithful. Thus Trivers's position is supported: the male mates where he can but tries to avoid wasting whatever investment he makes. However, Ndembu women use quite other strategies than those suggested by Trivers. They are instructed during initiation to keep their husbands happy, but not to forget that their lovers can be their best friends. There is no inconsistency here, for the woman's aim is to produce children for the matrilineage. Legitimacy is not important for her.³ She ensures the passing on of her genes and knows she will receive protection, if not from her husband, then from her brothers.

The Ndembu example illustrates that both male and female strive to pass on their own genes. It also shows that the basic struggle may not be between man and woman but between matrilineages. One may say that Ndembu husbands struggle with their wives' brothers for possession of the female. Or, one may say that Ndembu women choose the better protector between husband and brothers. In either case the battle lines are drawn between matrilineages: one family group versus another.

Ndembu sexual relations have much to do with power; whichever man gains women and children gains in prestige, status, and hence political power. Ndembu women also gain prestige from the bearing of children. It can be argued that questions of power move the argument beyond any genetic considerations. Any given human behavior may have a genetic basis, but there is certainly a heavy cultural overlay. Surely power relations occur only at this cultural level!

This may very well be so, but it is interesting to note that in baboon troops there is constant quarreling among males even when none of the females is in heat. Robin Fox postulates that "status provocation rather than sexual provocation may be the guiding factor" (Fox 1972, 297). That is, a struggle for power may be even more basic than a struggle for genetic survival.

In his penetrating analysis of human sexuality Michel Foucault sums up much of his argument in the comment that sexuality "appears . . . as an especially dense transfer point for relations of power" (Foucault [1976] 1979, 103). Among the Ndembu, genetic survival and power correspond to a great extent; for example, children bring status. In Western societies there are many other forms of power the attainment of which may be hindered by children. The drive for power may prove a rival for the drive for genetic survival. This is all very much in the realm of surmise, but it does question Dawkins's assumption that genetic survival is the most basic goal of all living organisms, including human organisms. The selfish person may be a more basic unit than the selfish gene.

The Desana and the Sahajiyas. The remaining examples raise further questions for the selfish gene theory. The Desana, an Amazonian tribe, exert a series of sharp controls over sexual attraction (Reichel-Dolmatoff 1971; 1975). Sexual activity is restricted to exogamic marriage pairs, but even within marriage it is severely curtailed. Men are exhorted to conserve semen, for there is thought to be a direct link between male sexual potency and success in the hunt. This belief is stated in religious terms. The Sun Father's lieutenant, the *Vai-mahse*, controls the animals of the forest. In exchange for sexual energy he will release animals from his store-caves. If hunters take more than they have a right to, the *Vai-mahse* preys on the souls of the dead Desana and prevents their reaching *Ahpikondia*, a subterrestrial paradise.

There are clear conservation measures built into Desana religion. Both population and use of animal resources are controlled. This may or may not be a conscious aim of the religious system. After all, the system has little to say about manioc production, the work of the women. This, with gathering of nuts and fruits, provides the bulk of Desana food. But it is hunting which is given high status and is central to the religious system.

If one does argue that the Desana system stresses genetic survival, it does so at the expense of the selfish gene. Mating is controlled. As Janet Sayers notes, Trivers and Dawkins have departed from Darwin by their stress on survival through production of maximum numbers of offspring (Sayers 1982, 55). The Desana heap ridicule on large families; their strategy appears to see the best hope of survival in shared population control. In the long run, the genes most likely to survive belong to people who cooperate in sexual restraint. If, as they must do, sociobiologists argue that cooperation has been selected for, the Trivers theory appears simplistic. It stresses one set of strategies for survival, but there may be many others.

One needs to be careful, however, before pushing this analysis too far. The Desana do exemplify careful group control of sexual attraction. Control is achieved by casting women as dangerous—desirable but likely to lead a man to lose his important hunting powers. Men and women are controlled also by strong appeals to fear. The squandering of sexual energy is likely to be punished by the ever-jealous *Vai-mahse*. Yet for all this, and because of it, there are breakouts of violent rape. Desana society is marked by repression and consequent violence. Trivers's notion of demanding male and female strategies for genetic survival would seem supported by the Desana example, that is, such strategies are repressed only at high cost to human persons.

The Sahajiyas, too, stress sexual control, but as a means to spiritual enlightenment (Bose 1930, Dimock 1966). Sexual attraction is supremely important to this Bengali cult because it is perceived as stirring energy which, if controlled in yogic ritual, can lead to *sahaja*. This state of bliss occurs within the individual, whether man or woman, when the masculine and feminine elements are balanced. The enlightened one is as Krishna and Radha in union.

Genetic survival is of no interest to the Sahajiyas. Pregnancies indicate a failure of seminal retention and show spiritual gaucherie. It can be rightly objected that such cults as the Sahajiyas can survive only within more normal societies. Recruits to Sahajiya groups usually come from orthodox Hindu families. Nevertheless, Sahajiya criticism of normal family life is worth noting; they regard marriage as loveless, a contract in which man owns woman. Only outside marriage can true love develop, a love which can begin the process of lifting the individual to a divine plane. Only total complementarity between lovers can produce *kama* (passionate human love) which leads to *prema* (divine love).

This removes sexual attraction from its usual link with fertility. Attraction is prized for its potency in beginning a spiritual process. The sexes cooperate in producing mutual pleasure rather than battling for control over genetic investment. For the Sahajiyas, Dawkins's "battle of the sexes" is evil. They stress cooperation rather than conflict. The reason may be the very bracketing out of propagation, but there may also be a deeper question at issue.

IS CONFLICT NECESSARY?

The question is, has there been selection only for conflict between the sexes, or has there also been a selection for cooperation? Is it useful even at the genetic level to isolate strategies that depend on the conflict of goals between male and female? This question seems to me to be the greatest challenge which an analysis of human sexual attraction has for sociobiology.

The analysis of my four religious systems clearly shows that both genetic and cultural factors may be at work in this aspect of human behavior. I do not see this as a major problem for sociobiology. Certainly the debate over sociobiology has been bedeviled by arguments from extremes—biological determinism opposed to cultural determinism—but the chief proponents of sociobiology are not going for an either/or decision. Both biology and culture have their roles as providing constraints for human behavior. To quote Wilson: “Monkeys and apes utilize behavioral scaling to adjust aggressive and sexual interactions; in man the scales have become multidimensional, culturally adjustable, and almost endlessly subtle” (Wilson 1975, 548). Therefore, it may be time to move to an interactionist model of human development where there is no choice between either biology or culture as overriding control but, rather, where one recognizes a “continuous interplay between biology and environment” (Archer and Lloyd 1982, 210).⁴ This would have the great benefit of shifting social anthropology out of its one-sided stress on culture as the only constraint on human behavior. The dangers of such a stance have been demonstrated by Derek Freeman’s dismantling of the “Boasian paradigm” in his book entitled *Margaret Mead and Samoa* (1983).

However, even if the entire debate shifts to a more peaceful middle ground, debate there should still be. The challenge to sociobiology posed by an analysis of human sexual attraction is not that there is no evidence for a genetic basis for such behavior. Rather it is that the biological side of the analysis insists on opposing male and female interests. The whole matter seems vastly more complicated than this. Again, there may be need to move to a middle ground in this second phase of the debate.

It seems to me that investigations have proceeded from the point that male and female are fundamentally different and, hence, must be in conflict. It is not so much the idea of difference that I object to, but the supposition of conflict.

THEORIES OF MALE-FEMALE DIFFERENCE

I have already dealt with Trivers’s notion of different mating strategies for man and woman. Let me note three other lines of research. The first deals with the possibility that male and female human brains are structurally different; the second looks at male and female models of reality; the third examines male and female control of power.

The Brain. Research into sex-related brain types reaches back to Aristotle’s time. The great philosopher noted that women’s brains were smaller than men’s and that, therefore women were less intelligent than men. This argument resurfaced in the nineteenth century. It went

through a series of reformulations when it was realized that absolute brain size would give the advantage to whales and elephants. Some suggested measuring the ratio of the brain to body weight, but this was abandoned when it was found to favor women. Measuring the ratio of brain weight to body height was popular for a time, but it, too, was rejected as favorable to "Kaffirs, Negroes and Australians." In 1913, cranial capacity was tried and rejected by Jean Finot because it suggested that Eskimos were more intelligent than Parisians (Sayers 1982, 84-97).

Modern research is still speculating on the possibility of basic differences in male and female brains. The overviews of this research are seldom unequivocally positive, but some are more optimistic than others. Melvin Konner notes research which indicates more aggression in male behavior than in female. He is clearly fascinated by the possibility that differing hormonal levels in male and female brains may be responsible for differences in aggression: "There is increasing evidence that the accounting may lie deep in the brain." However, his final summation is cautious: "What are we to make of these extraordinary facts? For the immediate future, at least as far as I am concerned, nothing. It is simply too soon" (Konner 1982, 61).

Freda Newcombe and Graham Ratcliff pay more attention to research which indicates that differences between male and female in spatial and language skills may be caused by differences in brain hemisphere specialization. Newcombe and Ratcliff rightly point to methodological flaws in the research but go on to postulate that female brain structure may be disadvantageous in such occupations as music composition, mathematics, architecture, and chess. It appears an advantage in the writing of novels but not of poetry: "Is there something about verse form—its reliance on visual imagery and its elegant economy of expression—that makes it a less appropriate medium for the female author" (Newcombe and Ratcliff 1978, 195)?

Sayers is far more prosaic in her speculations concerning research into the physiological basis for male/female differences. She notes that testosterone levels cannot be linked to aggression in a simple cause-effect bond. It is quite possible that testosterone, a male hormone, may increase in level because of aggressive behavior. Further, differences in language and spatial abilities are so slight as to have little effect on the professions women are likely to follow. The differing ability levels may be caused by differences in hemisphere specialization, but the evidence is not conclusive (Sayers 1982, 74-82, 99-104).

Models of Reality. I wish to turn now to suggestions that men and women may have quite different models of reality. Prominent here are

the theories of Edwin Ardener (1972) who recognizes a problem of women in ethnographic research. Both male and female ethnographers continue to compile data which fail to register the beliefs and values of women in the cultures studied. He suggests that the cause is that "the models of society that women can provide are not of the kind acceptable at first sight to men or to ethnographers and . . . unlike either of these sets of professionals, they do not so readily see society bounded from nature . . . they will not necessarily provide a model for society as a unit that will contain both men and themselves. They may indeed provide a model in which women and nature are outside men and society" (Ardener 1972, 138-39).

Ardener postulates that men tend to define all people beyond their group as "wild," as "barbarians," as "nature." Women, less likely to deal with outsiders, concentrate on male/female differences within the group. Further, he sees quite different models of nature for men and women. Men see processes of menstruation and pregnancy as mysterious, as belonging to nature. Hence, even their own women appear in an ambivalent position, closer to nature than culture (Ortner 1974). But women may be equally puzzled by "natural" male aggression shown in war and hunting.

Power. Finally, I wish to deal with the notion of power. It is generally assumed in ethnographic literature that men have more power than women. Whether power is seen in terms of status, political clout, or ownership of land, property, and money, men have more of it than women.

A number of studies have challenged this assumption. For example, in rural Portugal men have more political power than women at the level of national elections. However, Portuguese peasant men often work alone in the fields and therefore do not have access to information. Women, who market produce and who often meet in groups, do have access to information and so have considerable power at local level (Riegelhaupt 1967, Rogers 1978).

Further, there is a need to distinguish between formal and informal power. In cultures where men control formal power, they may not control informal power within the home and the family. Jill Dubisch suggests that true criteria for testing power relations between man and woman are the respect shown by one for the other, publicly and privately; the interference of one in the sphere of the other; decision-making in regard to allocation of resources; and arranging plans for children (Dubisch 1971). These criteria look at power relations within the couple's relationship. There are other powers which may lie principally outside the relationship. The point is that it is all too easy to judge other cultures by our own stress on overt economic or political power.

CONCLUSION

I have spent some time outlining research which has concentrated on male/female differences. I do not wish to negate this research by stressing the considerable overlap in male and female physiology, psychology, and so on. I am content to acknowledge difference but not to accept conflict as inevitable. This I see as the principal problem in the sociobiological approach to human sexual attraction. In the Trivers-Dawkins view, attraction is a basically selfish affair leading to conflict. I do not see why this need be so at a genetic or at a cultural level.⁵ The research I have quoted indicates the possibility of strong male/female differences. These may or may not have genetic bases although the research points to the strong possibility of constant interaction between genetic and cultural factors.

A number of strategies follow from the recognition of male/female differences. Susan Rogers suggests both an ideological and a behavioral differentiation (Rogers 1978). In some cultures there is a clear behavioral differentiation between the sexes, but it is presumed that men and women share the same values, the same view of the universe. In other cultures, clear ideological differentiation is also made; for example, Ndembu men and women do not share great areas of ritual or of religious and cultural knowledge. It is possible to see male and female ideologies as conflicting, but it is also possible to see them as complementary.

At the level of scholarship, particularly in cultural anthropology, it is time we begin the move from separate studies of men and women to studies of how they cooperate (or compromise). My contention is that the Trivers-Dawkins approach to sexual attraction simply reinforces a polarity in studies of human behavior. Just as we are beginning to shift from a male-oriented methodology to one which takes notice of women, we now need to proceed to a methodology which examines social behavior as an interplay between men and women.

The implications of all this for genetic engineering are clear. First, the complexity of human sexual behavior is obvious. One cannot even assume the universality of a conflict of strategies in the Trivers-Dawkins sense. But, supposing that one decided that such a complex set of phenomena as human sexual behavior was to be changed for the better, how would one go about it? I suspect that the intricate manipulation of the genetic composition of the human organism necessary for such a change would always be beyond our technological skills. Why not instead take note of the importance of cultural factors influencing human behavior? If we do decide that human sexual behavior needs modification, it may be far simpler to turn to cultural rather than to genetic factors. This need not be a cynical form of social engineering.

There is a place for education for better things through more open discussion of the range of options in human behavioral patterns.

NOTES

1. Trivers's argument is far more subtle than it appears in Dawkins. It is formulated from examples in insect, bird, and animal life but does make reference to human behavior.

2. This fits Trivers's notion that an "optimal male course" may be a mixed strategy: to stay with one female but to miss no chances of impregnating others (Trivers 1972, 145).

3. The Ndembu exemplify Trivers's argument that the male is vulnerable to cuckoldry in species in which there is internal fertilization and strong male parental investment (Trivers 1972, 173).

4. Archer and Lloyd move P. P. G. Bateson's model for animal behavior into human studies. See Bateson (1976).

5. Note Trivers's stress on female choice being made on possible complementarity of self and mate. This important point is glossed over in later popularization. See Trivers (1972, 167).

REFERENCES

- Archer, John and Barbara Lloyd. 1982. *Sex and Gender*. Harmondsworth, England: Penguin.
- Ardener, Edwin. 1972. "Belief and the Problem of Women." In *The Interpretation of Ritual*, ed. J. S. LaFontaine, 135-58. London: Tavistock.
- Bateson, P. P. G. 1976. "Rules and Reciprocity in Behavioural Development." In *Growing Points in Ethology*, ed. P. P. G. Bateson and R. A. Hinde, 401-22. Cambridge: Univ. Press.
- Bose, M. M. 1930. *The Post Caitanya Sahajiya Cult of Bengal*. Calcutta: Univ. Press.
- Dawkins, Richard. 1976. *The Selfish Gene*. London: Grenada.
- Dimock, Edward C., Jr. 1966. *The Place of the Hidden Moon*. Chicago: Univ. of Chicago Press.
- Dubisch, Jill. 1971. "Dowry and the Domestic Power of Women in a Greek Island Village." Paper presented at the Seventieth Annual Meeting of the American Anthropological Association.
- Foucault, Michel. [1976] 1979. *The History of Sexuality*. Translated by Robert Hurley. London: Allen Lane.
- Fox, Robin. 1972. "Alliance and Constraint: Sexual Selection in the Evolution of Human Kinship Systems." In *Sexual Selection and the Descent of Man, 1871-1971*, ed. B. Campbell, 282-331. London: Heinemann.
- Freeman, Derek. 1983. *Margaret Mead and Samoa*. Cambridge, Mass.: Harvard Univ. Press.
- Janson-Smith, Dierdre. 1980. "Sociobiology: So What?" In *Alice Through the Microscope*, ed. Lynda Birke, Wendy Faulkner, Sandy Best, Deirdre Janson-Smith and Kathy Overfield, 62-88. London: Virago.
- Konner, Melvin. 1982. "She and He." *Science* (September):54-61.
- Newcombe, Freda and Graham Ratcliff. 1978. "The Female Brain: A Neuropsychological Viewpoint." In *Defining Females*, ed. Shirley Ardener, 189-99. London: Croom Helm.
- Ortner, Shirley. 1974. "Is Female to Male as Nature is to Culture?" In *Women, Culture and Society*, ed. M. Z. Rosaldo and L. Lamphere, 67-88. Stanford, Calif.: Univ. Press.
- Pitt-Rivers, Julian. [1954] 1969. *The People of the Sierra*. Chicago: Phoenix.
- _____. 1977. *The Fate of Shechem or the Politics of Sex*. Cambridge: Univ. Press.
- Price, Richard and Sally Price. 1966. "Noviazgo in an Andalusian Pueblo." *Southwestern Journal of Anthropology* 22:302-22.

- Reichel-Dolmatoff, Gerardo. 1971. *Amazonian Cosmos*. Chicago: Univ. of Chicago Press.
- . 1975. *The Shaman and the Jaguar*. Philadelphia: Temple Univ. Press.
- Riegelhaupt, Joyce. 1967. "Salio Women: An Analysis of Informal and Formal Political and Economic Roles of Portuguese Peasant Women." *Anthropological Quarterly* 40:109-26.
- Rogers, Susan Carol. 1978. "Woman's Place: A Critical Review of Anthropological Theory." *Comparative Studies in Society and History* 20:123-63.
- Sayers, Janet. 1982. *Biological Politics*. London: Tavistock.
- Trivers, Robert L. 1972. "Parental Investment and Sexual Selection." In *Sexual Selection and the Descent of Man, 1871-1971*, ed. B. Campbell, 136-79. London: Heinemann.
- Turner, Victor. 1957. *Schism and Continuity in an African Society*. Manchester, England: Univ. Press.
- . 1967. *The Forest of Symbols*. Ithaca: Cornell Univ. Press.
- . [1968] 1972. *The Drums of Affliction*. Oxford: Clarendon Press.
- . 1975. *Revelation and Divination in Ndembu Ritual*. Ithaca: Cornell Univ. Press.
- Wilson, E. O. 1975. *Sociobiology: The New Synthesis*. Cambridge, Mass.: Belknap.
- . 1978. *On Human Nature*. Cambridge, Mass.: Harvard Univ. Press.