

## SOCIOCULTURAL SPECIATION AND HUMAN AGGRESSION

*by Mihaly Csikszentmihalyi*

The subject of human aggression has been a recurrent topic in the literature of the behavioral sciences,<sup>1</sup> but it was not until ethologists<sup>2</sup> and their popularizers<sup>3</sup> began reformulating the question that aggression became one of the most controversial issues in the field of the studies of man. Despite all the concern, so far the controversy has generated more heat than light. In general, ethologists claim that aggression is a universal behavioral trait in the animal kingdom and that it has potentially positive survival value for man. The proponents of this position like to dispose of those who disagree with them as naïve "modern American optimists,"<sup>4</sup> while their critics hint that the ethological position leads to a reactionary, fascist attitude toward human relations.<sup>5</sup> The fact is that the study of aggression at the human level almost inevitably leads to evaluative implications, and once that point is reached objectivity is difficult to maintain.

The goal of this paper is not to participate in this controversy, except perhaps indirectly. What will be attempted is a clarification of one of the central theses of the ethologists, which will hopefully lead to a better understanding of the dynamics of aggression among human beings.

Ethological writers agree that intraspecific aggression is a useful mechanism in the spacing out of the population, in sexual selection, in the defense of the young, and in the creation of social order.<sup>6</sup> But they also claim that every carnivore species must develop, with time, inhibitions against extreme forms of conspecific aggression if it is to survive, otherwise the species might be completely destroyed. Thus every existing carnivore species appears to have developed a set of instinctual behavior patterns that allow its members to displace, ritualize, or otherwise innocuously release their aggression and at the same time serve the aggressive function—that is, intimidation of conspecifics. While isolated cases of intraspecific killing have been reported to occur among freely living carnivores,<sup>7</sup> there is no record of murderous interaction involving more than a few individuals at

Mihaly Csikszentmihalyi is associate professor of human development in the Committee on Human Development and in the College, University of Chicago.

any given time. Rats seem to be one of the two exceptions to this rule (although the evidence on rats has been questioned)<sup>8</sup> and the other is man, who has also failed to develop innate safeguards against large-scale intraspecific aggression.

#### THE CONCEPT OF SOCIOCULTURAL SPECIATION

When the concept of aggression-inhibition is applied to data on human behavior, it becomes immediately apparent that the ethological model has to be expanded if it is to be of any help. The most notable examples of intraspecific aggression in man are not cases of interindividual aggression but the instances of intergroup conflict such as wars; yet wars are not instinctual processes, nor are they, strictly speaking, intraspecific.

That wars are sociocultural phenomena is difficult to deny. They are based on often arbitrary cultural definitions of who the enemy is; they are often waged for abstract reasons or for the preservation of cultural values; and those who actually participate in wars often do so against their own wishes. In other words, to see wars as nothing but the manifestation of individual aggression is to blind oneself to their most salient objective characteristics. Even admitting for the sake of argument that there is such a thing as an aggressive drive in man, its relation to war would be of the same nature as the relationship of the sexual drive to the institution of marriage; the physiological knowledge of sex does not help us much in understanding the phenomena of human love and marriage in all their diversity and structural change through time. Both the conditions that facilitate the occurrence of wars and those that inhibit it are deeply embedded in the values and behavior patterns that men acquire from the social context into which they are born.

In this connection, one of the most fruitful areas of investigation is the study of sociocultural inhibitors of aggression. At a very general level, it can be said that aggression between human groups occurs in inverse proportion to the existing level of integration between the groups in question. Where two groups do not share each other's legal and administrative system, religion, language, and traditions, effective sociocultural inhibitors against resorting to mutual aggression are unlikely to be present. Laws against violence are valid only within limited administrative boundaries; religious and ethical sanctions usually do not apply to those who fail to share the religious or moral system. The strongest inhibitions against aggression are usually those developed within culturally recognized inbreeding populations, or kinship units. This truism is well illustrated by a quote referring to the Nuers and the Tivs of Africa: "These are

groups of close kin who must maintain their integrity against the outside, and an unsociable action in this context is sinful. The moral injunction is accompanied by a prohibition on the use of dangerous weapons. But the greater the lineage-segmentary distance, the more dangerous the permitted means of violence—from fists, to clubs, to arrows, to poisoned arrows, etc. Correspondingly, violence becomes more honorable in proportion to segmentary distance, reaching the extreme in dealing with foreign tribes. Here violence is an esteemed act—there are practically no holds barred on atrocity, and a state of war may well be the assumed normal relation.”<sup>9</sup>

In this paper we shall explore the theoretical and practical implications of using a particular measure of intergroup integration in view of the relevance that this concept has for a better understanding of the phenomenon of aggression. The measure of integration here proposed is that of intergroup marriage. When a man marries a woman, it means that they both belong to the same *sociocultural reproductive community*. The more unlikely marriage between two given persons is, the more one is entitled to say that the groups to which these persons belong are unintegrated groups, or discrete sociocultural reproductive communities. Clearly all men belong to the same biological species in that any human sexual union potentially results in the birth of a fertile offspring.<sup>10</sup> But it might be useful to see men as belonging, even temporarily, to socioculturally different reproductive groups, inasmuch as some categories of sexual union between members are not acceptable to one or both of such groups and cannot result in the birth of legally recognized offsprings.

The reproductive process in man can be analyzed into two distinct components: the biological aspect, which might or might not include conception and which is relatively unproblematic as far as society is concerned, and the social aspect that involves the acceptance and legitimation of an eventual offspring of the union. This latter aspect of the reproductive process is vitally important to the stability of human systems, and the forming of an intersexual partnership for reproductive purposes is universally regulated in every culture.<sup>11</sup> It seems justifiable, therefore, to select the rate of intermarriage between groups as a sociocultural equivalent to the concept of interbreeding that is used to define speciation in biology.

A biological species can be described in Dobzhansky's words as “the most inclusive population in time and space representing a discrete reproductive community”;<sup>12</sup> as Mayr observes, the decisive species criterion does not refer to the sterility of individuals but to the non-interbreeding of natural populations sharing the same geographical space.<sup>13</sup> Another biological definition of species, the one proposed

by George Gaylord Simpson, might help to develop the analogy even further: (1) community of inheritance among members, (2) capacity of the genes to spread throughout the group, and (3) inhibition of the genes from spreading to other groups.<sup>14</sup> If we substitute the term "culture traits" for the word "genes" in the definition above, and if we qualify "inhibition" to read "relative inhibition," we are left with a useful approximation of cultural speciation, despite the fact that the two processes are in some respect very different, as shall be discussed later. It is important to stress that this application of a biological analogy to social data is not intended to imply an identity between biological and social processes. The point is that by developing the analogy it might be possible to see a whole range of human behavior in a more systematic perspective.

For instance, it is obvious that the concept of "species" in biology is important because individuals belonging to the same species share the same genetic pool and therefore are distinguished by the same species-specific behavior, which is a function of the common genetic inheritance. But the behavior of human beings is not determined solely by the sameness of their genetic inheritance. The behavior of man is a function also of the early experience, the values, and the behavioral norms to which he is exposed as a result of being socialized by his parents. While this is true to a certain extent of other animal species as well, it is particularly true of man. Thus over and above the complement of genetic determinants he inherits from the parental lineage, a man's behavior is codetermined by the sociocultural inheritance that his parents carry. If two or more groups live together but are separated by endogamous rules which prohibit marriage outside each group, the norms and values of each group will be effectively segregated as they are passed down from generation to generation within the endogamous groups; thus one will notice persistent behavioral differences between the various nonintermarrying groups whose sociocultural inheritances are not shared with each other.

When a population competes with another for survival within the same eco-niche, it is possible for a dominant segment of the population to maintain its advantage over others by restructuring the patterns of intermarriage, thereby instituting a process of sociocultural speciation; when the sociocultural "species" are sufficiently distinct, the dominant group can proceed to ignore or to destroy the subordinate groups without feeling excessive compunction. It has been pointed out often that preagricultural subsistence societies tend to have a systematic intermarriage pattern that results in a thorough blend of both the genes and the socioeconomic statuses across all

segments of the population.<sup>15</sup> As soon as technological advances make it possible for resources to be accumulated, this pattern tends to change. Whenever a lineage group accidentally acquires a larger control over resources than other groups have, the temporarily dominant group will attempt to maintain its advantage by terminating the intermarriage of its members with members of disadvantaged lineages, usually by establishing a preferred marriage relationship with another relatively dominant lineage group. It is clear that such a change results in a permanent concentration of material and status resources within certain lineages, bringing about a vertically segmented society whereas a homogeneous one existed before. This change can now be seen as representing a sociocultural speciating process, with all the implications thereof; we can also see its relationship to other seemingly unrelated processes leading to sociocultural speciation. For instance, the fact that Jews and other ethnic minorities were relatively endogamous with respect to the host populations made it easy for the Nazis to develop the idea of "race." The next step was to increase speciation by the passage of laws prohibiting "racial" intermarriage, and thereby the stage was set for aggression that to a good many Germans did not appear to be "intraspecies" at all. Needless to say the Nazi concept of race was not based on genetic facts; nevertheless the effective sociocultural speciation that underlay the concept did have a reality of its own and was instrumental in determining the behavior of the groups involved. Whenever a group defines another as unfit for intermarriage, the social restraints on interpersonal aggression against members of the out-group are easy to lay aside.

Conversely, systematic intermarriage increases solidarity between potentially antagonistic groups.<sup>16</sup> The legendary rape of the Sabine women was concluded in marriage, and as a result the Romans gained the politically important help of the Sabine tribes. In primitive societies this function of mate exchange might have been unconscious, a random cultural pattern differentially selected out during evolution. But Alexander the Great is already supposed to have pursued a conscious policy of integration by encouraging his soldiers to marry women from the territories occupied by the Macedonian army. During the Middle Ages, Frederick I of Hohenstauffen was expected by his subjects to solve the economic inequalities among citizens of the empire through compulsory marriage of rich men with poor women, and vice versa.<sup>17</sup> Later, in Europe, systematic marriages between ruling dynasties were consciously used to decrease the likelihood of warfare between the nations. The Habsburgs were so successful in expanding and maintaining their territorial posses-

sions through marriages that for centuries it was said: *Bella gerant alii; tu felix Austria, nube!* (Let others make wars; thou happy Austria, marry!),<sup>18</sup> an injunction somewhat reminiscent of the contemporary “make love, not war.” At a less grandiose level, interparty political marriages were often used, as in Renaissance Florence, to reduce the enmity between warring factions of guelphs and ghibellines, of blacks and whites.<sup>19</sup>

Unfortunately, the historical record is unclear as to the effectiveness of such alliances. Nevertheless, it should hold true that when members of a group take it for granted that “you wouldn’t want one to marry your daughter” with respect to members of some other group, then they will also be unlikely to be bound by the cultural restraints against violence when dealing with such an out-group. As it has been said before, the reason for this is that in man, restraints against aggression—such as they are—are almost exclusively cultural rather than biological. The ethologists are right in noting the absence of instinctual inhibitory mechanisms against intraspecific aggression. Man has developed instead cultural inhibitions in the form of laws, religious prohibitions, ethical precepts, and so forth. Granted that these surrogate inhibitory mechanisms are not as foolproof as the innate ones that animals possess; yet it is doubtful that without them man could have survived even this long. The one limitation of sociocultural restraints which concerns us here is that they are culturally species specific. In other words, whatever curb on aggression we learn from our specific culture tends to apply only to fellow members and rarely applies to human beings that belong to nonmarriageable groups.

At this point it should be made clear that endogamy is not seen here as *the* major causal factor responsible for differentiation of distinct sociocultural groups in human communities. Endogamy appears to be most often a result of already existing differentiations; but endogamy serves to maintain and intensify existing differences. In any case, the absence of intermarriage between two potentially interbreeding groups can be taken as a *measure* of sociocultural speciation: the rate of such speciation can be expressed as a function of the rate of intermarriage.

Earlier biologists were much more confident in being able to determine the point at which two populations constituted separated species; sometimes clear numerical formulae for the definition of species were given.<sup>20</sup> More recently, the prevailing attitude has been the one conveyed by the following passage: “Species level is reached when the process of speciation has become irreversible. . . . To determine whether or not an incipient species has reached the point of

## ZYGON

irreversibility is often impossible.”<sup>21</sup> In this sense the process of sociocultural speciation is never complete in that the isolation of potentially reproductive communities is always reversible. But while sociocultural speciation is in effect and the rate of intermarriage between two sympatric (geographically coexisting) populations is close to zero, their mutual relations can acquire the characteristics of relations between different species, and hence lacking the sociocultural restraints on aggression.

The main cause of biological speciation is the geographical isolation of a formerly coexisting species. “A new species develops when a population, which is geographically isolated from its parental species, acquires during this period of isolation characters which promote or guarantee reproductive isolation when the external barriers [i.e., those that insure geographic isolation] break down.”<sup>22</sup> The barriers that promote reproductive isolation are called “isolating mechanisms.” To pursue the biological parallel, it might be useful to adopt the following summary outline of biological isolating mechanisms for the purposes of studying sociocultural speciation.<sup>23</sup>

### CLASSIFICATION OF ISOLATING MECHANISMS IN SOCIOCULTURAL SPECIATION

1. Mechanisms that prevent interspecific crosses (pre mating mechanisms):
  - a) Potential mates do not meet (social and cultural isolation).
  - b) Potential mates meet but do not attempt to marry (psychological isolation).
  - c) Marriage considered by potential mates, but not allowed by society (norms and laws enforcing endogamy).
2. Mechanisms that reduce full success of interspecific crosses (post mating mechanisms):
  - a) Union fails to produce socially accepted offspring (illegitimacy).
  - b) Union produces legitimate offspring that is socially ostracized (discrimination).
  - c) Offspring is socialized into only one of the parental cultures (unilateral assimilation).

Most of the entries are self-explanatory. Social isolation (1a) refers to mechanisms that prevent the meeting of individuals from different populations. An extreme instance of such a situation is presented by the Indian caste system. In the state of Kerala, for instance, until recently an untouchable had to keep a physical distance of twelve feet between himself and any member of the Ezhava caste, an Ezhava had to keep sixteen feet away from a Nair and thirty-six feet away from a Brahmin.<sup>24</sup> In the United States, the gap separating the higher social classes from the “invisible poor” produces essentially the same results.

Psychological isolation (*1b*) refers to the fact that even though two individuals from different speciating populations might meet, the diversity of their backgrounds will prevent them from considering each other as potential mates. And even though they might have sexual intercourse, their different value systems will lead them to avoid the chance of bringing up a common offspring through the use of contraception or by recourse to abortion. Laws enforcing endogamy (*1c*) attempt to minimize the birth of offspring from interspecific unions by prohibiting marriage. Extreme examples are the laws that forbade Roman citizens to marry aliens,<sup>25</sup> the 1935 Nuremberg laws "for the protection of German blood and honor,"<sup>26</sup> and the laws that recently were still on the books in seventeen of the United States prohibiting interracial marriage.<sup>27</sup>

Even though the union might be consummated and a child born, he might be declared illegitimate (*2a*), or ostracized to the point that his existence and/or further contribution to the society is decreased (*2b*); an example would be the case of the offspring of a "mixed" marriage being forced into deviancy by the social stigma attached to his status. Finally, if the child born to a "mixed" marriage is reared exclusively within the value system of only one of his parents, this will not reduce the trend toward sociocultural speciation, since the values of the child will not constitute a bridge between the two populations to which his parents belong (*2c*).

Sociocultural speciation is usually the result of an interaction of all six of the above isolating mechanisms. Social and cultural isolation is typically accompanied by psychological isolation, and if the other mechanisms fail to work unilateral assimilation still tends to occur. The summation of the isolating mechanisms at work in any given situation is negatively related to the rate of intermarriage.

#### SOCIOCULTURALLY SPECIATING UNITS, AS MEASURED BY THE RATE OF INTERMARRIAGE

Homogamy or assortative mating has been a favorite topic of social scientists for a long time,<sup>28</sup> yet the various forms of assortative matings have never been combined into a single index of speciation. Hollingshead, for instance, recognized the importance of race, religion, status, etc., in determining mate selection,<sup>29</sup> but these factors have been analyzed independently ever since. Moreover, good data are lacking even on the effect of single variables on the rate of intermarriage, probably because the theoretical importance of the phenomenon has not been fully recognized. And finally, the literature on assortative mating ignores some basic factors that contribute to sociocultural speciation. One of the most important of these is the



almost universal tendency to marry a person who is a subject of the same state, or national endogamy. It is true that this form of assortative mating is so obvious that one can easily take it for granted, yet its effects cannot be ignored and have to be accounted for at least on a theoretical level. Relatively little-studied forms of homogamy are those involving education, political values, and other less tangible behavioral and attitudinal attributes—yet it seems that these are becoming just as effective in isolating social groups as the more formal categories like class and religion had been in the past.

The most adequately researched barrier to intermarriage in the United States is probably the factor of race. Most studies show a slowly rising rate of racial intermarriage in recent years, suggesting that sociocultural speciation on the basis of race might be diminishing, at least in this country. In Hawaii, the state with the highest rate of interracial unions, the percentage of all marriages that are racially mixed has increased from 11.5 in 1916 to 38.5 in 1963, according to Schmitt.<sup>30</sup> Similar but slightly lower figures are quoted by Monahan and by Heer.<sup>31</sup> In Washington, D.C., with a much lower rate (of the order of 0.1 percent) a similar increase has been noted.<sup>32</sup> The five states studied by Heer—California, Hawaii, Michigan, Nebraska, and New York—all showed marked increases in the fifties and early sixties. In Michigan, for instance, the proportion of blacks marrying whites increased steadily from 0.75 percent of all black marriages in 1953 to 1.56 ten years later; the proportion of all whites marrying blacks in the same state and over the same period increased from 0.07 of all white marriages to 0.15 percent. These figures show a much higher rate of intermarriage for blacks and, despite the relative increase, a continuingly low absolute rate. Heer also found that the rate of racial intermarriage had a strong negative correlation with such sociocultural isolating mechanisms as occupational discrimination on the basis of race and residential segregation.

Despite the general increase in interracial marriages, it is possible that the rate has been too low for too long, and a quick breakdown of existing sociocultural speciation perhaps cannot be brought about. The new racial consciousness of black youth and the consequent white backlash might tend to freeze the separation between the two cultural groups. Whether this is going to happen or not depends to a great extent on the future rigidity of present isolating mechanisms.

Ethnic intermarriage is also a well-researched topic in the social sciences,<sup>33</sup> yet even here the evidence is not clear whether a “single” or “multiple” melting pot is a more adequate model to represent the integration of ethnic groups through intermarriage. It is clear that in favorable environments ethnicity is not in itself a very strong

barrier. Mittelbach and Moore show that currently in California 40 percent of marriages involving Mexican Americans are interethnic, and 25 percent of Mexican Americans are married outside their ethnic group, while the respective percentages earlier were 17 and 9—a trend which is continuing and which is correlated with socioeconomic status.<sup>34</sup>

Isolating mechanisms associated primarily with religious diversity have often been effective in preserving biological as well as sociocultural differentiation among populations; cases in point are the Dunkers sect in the United States,<sup>35</sup> and the Jewish ghetto in Rome.<sup>36</sup> It is generally accepted opinion that religious barriers are also losing some of their previous rigidity.<sup>37</sup> Hepps and Dorfman find that 17.6 percent of all marriages involving Jewish partners are interfaith, and the figure is 40 percent for Catholics.<sup>38</sup> While these figures might be somewhat inflated, it does seem that orthodox religious affiliation has become less binding.<sup>39</sup> Data collected by Besancey point out one peculiarity of sociocultural speciation: 60 percent of the interfaith marriages involving Catholics studied by the author were made homogamous by conversion of one of the partners; assimilation of course removes much of the integrative effect of the union.<sup>40</sup>

Homogamy associated with class—income, occupation, and status—has been less studied, although it is quite clear that this variable is very highly related to sociocultural speciation. Whenever the measure of class is very narrowly defined the results show little homogamy,<sup>41</sup> but when more realistically broad class groupings are compared homogamy is usually found.<sup>42</sup> Assortative mating based on social class is one of the major variables involved in sociocultural speciation, according to authors who have studied foreign societies.<sup>43</sup>

Education, which is usually one of the factors counted in social class, deserves independent analysis because of its increasing importance in determining marriageability.<sup>44</sup> It is now relatively easy, at least in theory, to conceive of a permanent union between members of different races or class backgrounds; but a modern marriage between people having widely different educational levels is becoming more difficult to imagine. Here again, data are scarce. What evidence there is suggests the existence of educational homogamy,<sup>45</sup> but there are no good data as to change in educational intermarriage rate. Some research points out that educational status is only one component in the general assortative effect of class: for instance, a woman's education can compensate for her original lack of occupational status in marrying a husband of higher occupational status.<sup>46</sup>

This brief review of the literature only serves to illustrate the embarrassing lack of information we actually have about the fre-

quency of intergroup marriages, or even about the question of whether such marriages are on the increase or on the decrease. One obvious hurdle in this respect is the lack of clear and constant definition of what constitutes a group. Interreligious marriage might be increasing if we use an orthodox definition of what the religious groupings are (i.e., Catholic, Jewish, Protestant); but perhaps it is stable or on the decrease if we use what might be more functional definitions of religion (i.e., mystical, fideistic, humanistic, etc.).

Studies done in France or in Hungary have provided the conclusion that geographic, social, occupational, and ethnic homogamy is persisting in the respective countries;<sup>47</sup> little change has been reported in this respect in other parts of the world.<sup>48</sup> But, as has been pointed out before, whether assortative mating (and therefore sociocultural speciation) is increasing or decreasing cannot be clearly established at this point due to the following reasons: (1) some basic forms of assortative matings (i.e., national endogamy) have never been considered; (2) new patterns of assortative mating that have possibly become very salient (i.e., educational, political, noninstitutionalized religious endogamy) have received insufficient attention; (3) the various forms of assortative mating have not been reduced to a composite "speciation index" on a factor-analytic model; (4) even the classic patterns of assortative mating have not been thoroughly investigated, in part due to the fact that their theoretical implication has not been generally recognized; (5) the various isolating mechanisms that allow for sociocultural speciation have not been studied systematically.

#### SOCIOCULTURAL SPECIATION AND AGGRESSION

But what is the exact nature of the relationship between assortative mating and aggression? It was stated earlier that whatever its causal status, the rate of intermarriage between various social groups can serve as an inverse *measure* of sociocultural speciation and hence as an index of the possibility that large-scale aggressive action may occur between the speciating groups. It is now time to state more clearly the concrete mechanisms whereby assortative mating contributes to speciation and hence to potential aggression.

In the first place, we have observed that premating isolating mechanisms prevent people belonging to different reproductive communities (based on racial, educational, economic, religious, and other similar characteristics) from meeting on equal terms and from looking on each other as potential mates. At the same time, the sociocultural isolating techniques label everyone else in the other reproductive community as "alien," "different," etc. So the mechanisms which prevent interspecific crosses are themselves responsible for creating and

maintaining speciation. In other words, whatever reasons we invent to account for the undesirability of a potential mate will become the reasons for considering undesirable the whole group to which the potential mate belongs. Once a group is recognized and labeled as "alien" and inappropriate to provide mates, it becomes easy to think of it as less than fully human and therefore as expendable.

But there is a second, and perhaps even stronger, causal link between assortative mating and large-scale aggression. We have seen that, in human groups, the sanctions for and against war are culturally determined. These sanctions are learned by the young organism through interaction in his earliest social environment, which in technological societies is usually the nuclear family. If the two parents have the same background, in the crucial stages of primary socialization the child will internalize the parental values regarding their own group's identity and the (usually negative) identity of the other speciating groups. Although there is still no clear-cut evidence as to whether the effects of primary socialization are reversible or not, most authors agree that the first values learned in the nuclear family tend to persist with a qualitatively stronger certainty than values acquired later outside the family.<sup>49</sup>

If, on the other hand, the two parents belong to different speciating groups, and provided that they both maintain, at least in part, their original group identity, the child will be exposed to a set of positive values concerning at least two groups.

Marriage thus has an active role in either maintaining or reversing sociocultural speciation through the socialization of children. Each married couple can either compound or decrease the psychosocial barriers that make assortative mating and large-scale aggression possible.

Of course this does not mean that the only way to reduce speciation is through the intermarriage of members from different speciating groups. It is possible for a married couple with the same background to instill their children with the most broad-minded values concerning other human groups, and it is equally possible for a couple of very different backgrounds to teach their children prejudice and intolerance. But the argument suggests that, other things being constant, a child born into an "integrated" (but *not* an assimilated or a disunited) family will be able to experience the unity of mankind in a way that is precluded to children born as a result of assortative mating.

Until recently, human groups could exist as relatively isolated sociocultural reproductive communities with their own languages, laws, values, and traditions. Whenever differentiated groups competed for survival in the same ecological niche, the struggle erupted

## ZYGON

into violence along the boundaries of sociocultural speciation, unchecked by the safeguards against aggression that each group developed to avoid violence within its own boundaries. This has been as true of international warfare as of intranational civil wars between speciating groups like the American North and South, the Spanish royalists and republicans, the French bourgeoisie and proletariat, and so on. Yet up to the current century great differences could be maintained safely between human groups simply because the widely dispersed units were not competing in the same ecological space: the values and behaviors of a Chinese were irrelevant to an African or to a South American, except as a matter of curiosity.

What has happened in the last few generations, however, is that the effects of technology have collapsed the ecological boundaries of the globe; practically every nation in the world is in simultaneous competition with all others for resources, diplomatic security, ideological ascendancy, or political domination. Under such altered conditions it is to be expected that cultural differences preserved by isolating mechanisms that result in endogamous patterns of marriage will provide sanction for violence, whereas in the absence of sociocultural speciation compromise and negotiation would be more easily resorted to.

Even within a relatively homogeneous society such as the United States deep divisions have been maintained by the patterns of endogamy. "Black power" has been answered with "Polish power" and "Italian power," revealing that beneath the surface assimilation, ethnic values have been solidly transmitted over several generations. It is probable that regional, economic, status, educational, religious, and political differences maintained by various forms of assortative mating in this country will allow internal violence to erupt if competition among the groups becomes exacerbated.<sup>50</sup>

At the same time, it should be recognized that the total elimination of differences between human groups is not a desirable goal either. Cultural variety can be seen as a positive survival strategy for mankind as a whole, in that it maximizes trial-and-error adaptation;<sup>51</sup> at the same time, it also provides grounds for psychological security and identity.<sup>52</sup> Is it possible, then, to preserve cultural diversity without speciation?

A set of consistent cultural values cannot be maintained except within a context of interactions among people who share such values. It would be possible, however, for the nuclear family to provide this necessary social context for each growing child.<sup>53</sup> If the married couple is homocultural, the child will internalize the values of a single culture; if it is heterocultural, he will tend to integrate the two sets

of values into a new pattern. In either case, the child will become a "carrier" for a given set of values.

The ideal condition would be one in which the cultural identity of the child would not preclude him from intermarriage with a person from a different sociocultural unit. If cultural groups could maintain all their characteristics except that of being reproductive communities, they would gain a flexibility which would make speciation, and hence large-scale intergroup aggression, more and more difficult.

It is painfully clear how difficult it would be to reach such an ideal condition. In the first place, all the isolating conditions—geographical, social, cultural, economic, etc.—militate against the decoupling of values from the context of reproductive communities. Second, the responsibility for each person to be a "carrier" of a culture, relatively independent of the social support of a community, would place great strains on individuals and might result in periods of anomy and anarchy.

Yet it is very difficult to imagine how mankind could ever achieve a species identity that will preclude large-scale conflicts, unless the processes of sociocultural speciation are checked and then reversed.

There are obvious limitations to any analogy between such disparate fields as the social sciences and biology.<sup>54</sup> In human beings, for instance, the learned inhibition of aggression against conspecifics need not always be transmitted through one's parents, while in animals innate inhibition of aggression against conspecifics is usually transmitted only by inheritance from the parents. Sociocultural as opposed to biological speciation is also easily reversible; the enactment of a law, such as the one that in A.D. 212 granted full citizenship to all free subjects of the Roman Empire, can suddenly broaden the limits of legal intermarriage.<sup>55</sup> Therefore the concept of sociocultural speciation will carry much less rigorous and determining implications than biological speciation does. Also, it is a peculiarity of human beings that they are able to redefine what the ecological niches of various groups are and thus avoid competition that might lead to aggression. In India several completely endogamous castes have survived for centuries physically intermixed, yet have not resorted to aggression against each other because the culture was able to evolve a world view common to all castes according to which the function of each was complementary to that of others. As Gorez has noted, historical evolution is distinguished by constant attempts to extend the boundaries of the human pack within which killing is defined as murder; by the invention of ever more inclusive social structures such as nation-states; by the creation of world religions asserting the brotherhood of man; and by the development of

secular ideologies such as democracy, communism, and so forth.<sup>56</sup>

Because cultural inheritance is so much more flexible than genetic inheritance, the elimination of barriers to intermarriage is not the only possible way to avoid the aggression of human groups against each other. Yet it appears that one of the safest means to avoid large-scale violence is to prevent sociocultural speciation from taking place. In the meantime it ought to be clear that the ethologists' contention that man is aggressive against his conspecifics has to be modified: large-scale aggression in humans takes place only against members of other sociocultural species; and the definition as to who belongs to another species is amenable to change.

NOTES

1. See L. F. Richardson, *Statistics of Deadly Quarrels* (London: Stevens & Sons, 1960); A. H. Buss, *The Psychology of Aggression* (New York: John Wiley & Sons, 1961); L. Berkowitz, *Aggression: A Social Psychological Analysis* (New York: McGraw-Hill Book Co., 1962).
2. J. D. Carthy and F. J. Ebling, eds., *The Natural History of Aggression* (London: Academic Press, 1964); Konrad Lorenz, *On Aggression* (New York: Harcourt, Brace & World, 1966).
3. R. Ardrey, *African Genesis* (New York: Atheneum Publishers, 1961), and *The Territorial Imperative* (New York: Atheneum Publishers, 1966); Desmond Morris, *The Naked Ape* (New York: McGraw-Hill Book Co., 1967), and *The Human Zoo* (New York: McGraw-Hill Book Co., 1969); A. Storr, *Human Aggression* (New York: Atheneum Publishers, 1968); Arthur Koestler, "The Place of Value in a World of Facts" (paper delivered at the Fourteenth Nobel Symposium, Stockholm, September 1969).
4. Storr, p. 18.
5. M. F. A. Montagu, ed., *Man and Aggression* (New York: Oxford University Press, 1968), pp. 57, 64, 90.
6. Lorenz, chap. 3; Storr, p. 22.
7. C. A. W. Guggisberg, *Simba* (Berne: Hallwag, 1960); R. Schenkel, "Play, Exploration and Territoriality in the Wild Lion," in *Play, Exploration and Territory in Mammals*, ed. P. A. Jewell and C. Loizos (London: Zoological Society, 1966), pp. 11-22.
8. Montagu, pp. 20, 47.
9. M. D. Sahlins, "The Segmentary Lineage: An Organization of Predatory Expansion," *American Anthropologist* 63 (1961): 333.
10. F. Mayr, *Animal Species and Evolution* (Cambridge, Mass.: Harvard University Press, 1963), p. 643.
11. B. Malinowski, "Parenthood, the Basis of Social Structure," in *The Family: Its Structure and Function*, ed. P. L. Coser (New York: St. Martin's Press, 1964), pp. 3-19; Talcott Parsons, "The Incest Taboo in Relation to Social Structure," *British Journal of Sociology* 5 (1954): 101-17.
12. M. I. Lerner, *Heredity, Evolution and Society* (San Francisco: W. H. Freeman & Co., 1968), p. 16.
13. Mayr, p. 19.
14. Lerner, p. 16.
15. F. Hulse, *The Human Species* (New York: Random House, 1963); Talcott Parsons, *Societies: Evolutionary and Comparative Perspectives* (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1966); M. H. Fried, "On the Evolution of Social Stratification and the State," in *Readings in Anthropology*, ed. M. H. Fried (New York: Thomas Y. Crowell Co., 1969), pp. 462-78; M. Segalen and A. Jacquard, "Choix du conjoint et homogamie," *Population* 26 (1971): 487-98.

16. Claude Lévi-Strauss, "Reciprocity, the Essence of Social Life," in *Sociological Theory*, ed. Coser and Rosenberg (New York: Macmillan Co., 1957), pp. 84-94; L. White, *The Evolution of Culture* (New York: McGraw-Hill Book Co., 1959).
17. P. Munz, *Frederick Barbarossa* (Ithaca, N.Y.: Cornell University Press, 1969).
18. O. Jaszi, *The Dissolution of the Habsburg Monarchy* (Chicago: University of Chicago Press, 1929), p. 34.
19. I. Montanelli and R. Gervaso, *Italy in the Golden Centuries* (Chicago: Henry Regnery Co., 1969).
20. I. Ginsburg, "Arithmetic Definition of Species, Subspecies, and Race Concepts, with a Proposal for a Modified Nomenclature," *Zoologica* 23 (1938): 253-86.
21. Mayr (n. 13 above), p. 26.
22. *Ibid.*, p. 482.
23. *Ibid.*, p. 92.
24. V. Mehta, "Indian Journal," *New Yorker*, April 11, 1970, pp. 94-160.
25. P. E. Corbett, *The Roman Law of Marriage* (Oxford: Clarendon Press, 1930).
26. R. Hilberg, *The Destruction of the European Jews* (Chicago: Quadrangle Press, 1961).
27. A. D. Weinberger, "Interracial Marriage, Its Statutory Prohibition, Genetic Import, and Incidence," *Journal of Sexual Research* 2 (1966): 157-68.
28. R. K. Merton, "Intermarriage and Social Structure: Fact and Theory," *Psychiatry* 4 (1941): 361-74; White (n. 16 above).
29. A. B. Hollingshead, "Cultural Factors in Mate Selection," *American Sociological Review* 15 (1950): 619-27.
30. R. C. Schmitt, "Demographic Correlates of Interracial Marriage in Hawaii," *Demography* 2 (1965): 466.
31. T. Monahan, "Interracial Marriage and Divorce in the State of Hawaii," *Eugenics Quarterly* 13 (1966): 40-47; D. M. Heer, "Negro-White Marriage in the United States," *Journal of Marriage and Family* 28 (1966): 262-74.
32. M. Anello, "Interracial Marriage in Washington, D.C.," *Journal of Negro Education* 36 (1967): 428-33.
33. M. L. Barron, *People Who Intermarry* (Syracuse, N.Y.: Syracuse University Press, 1946).
34. F. G. Mittelbach and Joan W. Moore, "Ethnic Endogamy—the Case of Mexican Americans," *American Journal of Sociology* 74 (1968): 50-62.
35. B. Glass et al., "Genetic Drift in a Religious Isolate," *American Naturalist* 86 (1952): 145-59.
36. L. C. Dunn, *Heredity and Evolution in Human Populations* (Cambridge, Mass.: Harvard University Press, 1959).
37. L. Bumpass, "The Trend of Interfaith Marriage in the United States," *Social Biology* 17 (1970): 253-59.
38. R. B. Hepps and Elaine Dorfman, "Interfaith Marriage and Social Participation," *Journal of Religion and Health* 4 (1966): 324-33.
39. P. C. Glick, "Intermarriage and Fertility Patterns among Persons of Major Religious Groups," *Eugenics Quarterly* 7 (1960): 31-38.
40. P. H. Besancey, "On Reporting Rates of Intermarriage," *American Journal of Sociology* 70 (1965): 717-21.
41. L. Rosen and R. Bell, "Mate Selection in the Upper Class," *Sociological Quarterly* 7 (1966): 157-66.
42. A. P. Sundal and T. McCormick, "Age at Marriage and Mate Selection: Madison, Wisc., 1937-43," *American Sociological Review* 16 (1951): 37-48; Z. Rubin, "Do American Women Marry Up?" *American Sociological Review* 31 (1966): 773-85.
43. P. N. Pimpley and K. Anoud, "Role of Occupation in Marital Alliance," *Indian Journal of Social Work* 25 (1965): 381-88; N. R. Ramsy, "Assortative Mating and the Structure of Cities," *American Sociological Review* 31 (1966): 773-85; J. H. Korson, "Residential Proximity as a Factor in Mate Selection in an Urban Muslim Society," *Journal of Marriage and Family* 30 (1968): 518-27.
44. B. K. Eckland, "New Mating Boundaries in Education," *Social Biology* 17 (1970): 269-77.



45. J. Bernard, "Note on Educational Homogamy in Negro-White and White-Negro Marriages, 1960," *Journal of Marriage and Family* 28 (1966): 274-76.
46. G. H. Elder, "Appearance and Education in Marriage Mobility," *American Sociological Review* 34 (1969): 519-33.
47. A. Michel, "Mate Selection in Various Ethnic Groups in France," *Acta Sociologica* 8 (1964): 163-76; E. Szabady, "Caracteristiques demographiques des familles honnoises," *Bevolking Gezin* 8 (1966): 1-20.
48. E. Haavio-Mannila, "Local Homogamy in Finland," *Acta Sociologica* 8 (1964): 155-62; F. Barth, *Ethnic Groups and Boundaries* (Boston: Little, Brown & Co., 1969).
49. P. Berger and T. Luckmann, *The Social Construction of Reality* (Garden City, N.Y.: Doubleday & Co., 1967); D. R. Young, "The Socialization of American Minority People," in *Handbook of Socialization Theory and Research* (Chicago: Rand McNally & Co., 1971), pp. 1103-40.
50. R. M. Williams, *Strangers Next Door: Ethnic Relations in American Communities* (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1964); R. H. Turner, "Integrative Beliefs in Group Crises," *Journal of Conflict Resolution* 16 (1972): 25-40.
51. D. Campbell, "Variation and Selective Retention in Socio-cultural Evolution," *General Systems* 14 (1969): 69-85.
52. A. Greeley, "The Re-discovery of Diversity," *Antioch Review* 31 (Fall 1971): 343-65; "The New Ethnicity," *Dissent* (Winter 1972), pp. 270-77.
53. H. de Jager, "The Socially Mixed Marriage: Some Considerations of Mate Selection and the Transmission of Culture," *Sociologia Neerlandica* 6 (1970): 14-35.
54. P. Sorokin, *Modern Historical and Social Philosophies* (New York: Dover Publications, 1963); E. Leach, "Don't Say 'Boo' to a Goose," in *Man and Aggression* (n. 5 above), pp. 65-74; Campbell (n. 51 above); M. Csikszentmihalyi, "From Thermodynamics to Values: A Transition Yet to Be Accomplished," *Zygon* 6 (1971): 163-67.
55. B. J. Stern, "Intermarriage," *Encyclopedia of the Social Sciences* (New York: Macmillan Co., 1932), 8:151-54.
56. G. Gorez, "Man Has No 'Killer' Instinct," in *Man and Aggression* (n. 5 above), pp. 27-37.