

Evolution and Ethics

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In an age of skepticism, the traditional foundations of ethics crumble. The central issue confronting the moral philosopher is whether ethics has or has not an objective basis and, if it has, what that objective validation is and whence it derives.

Many assert that ethical systems are mere subjective constructions by which specific societies, classes, peoples or power groups impose norms of their own choosing upon others. Under this hypothesis, the only scientifically acceptable study of ethics is its sociology, that is to say, the reasons why certain moral systems arose, their modes of change, and the factors which have led to the establishment of new ethical norms and the repudiation of older, pre-existing ones.

A variant of this subjective position is the view of Jean Paul Sartre that authenticity, regardless of the moral content of the action, is the sole ethical criterion.¹ "The individual's duty is to do what he wants to do, to think whatever he likes, to be accountable to no one but himself." Or again, "It is I who create and maintain the values in being . . . I make the decision, alone, unjustifiable, without excuse . . . This is the cause of my 'ethical anxiety'."²

If all ethics is subjective as to content, then no moral system can be more valid than any other. This attitude may seem attractive to the sort of mind which prides itself on freedom from parochial values and prejudices. But it has the fatal disadvantage of paralyzing all moral and most social action. It is a road to servitude, not freedom; to disintegration, not order.

Logically, the only verdict the pure subjectivist in morals can pass on, say the extermination of European Jewry, is that the act was wrong from the standpoint of Jewish and Western ethics, but right from that of Nazi ethics. A preference for due process of law over genocide—whether of the Nazi, Stalinist or Maoist variety—would then seem no less arbitrary and culture-bound than our preference for olive oil over rancid yak butter.

If no objective standards of human conduct exist, ethical judgments are mere reflections of the social milieu of the observer. One ethical system may be judged superior to another on the grounds that the society enforcing it is more powerful than the society which rejects it. As the Athenian delegation told the Melesians, ". . . you

¹ Martin Buber has taken a similar position.

² Jean Paul Sartre, *L'Age de Raison*, p. 143; Jean Paul Sartre, *L'etre et le neant*, pp. 75 and 77, quoted from Will Herberg, "The 'What' and the 'How' in Ethics," *Modern Age*, Vol. 15, No. 4, Autumn 1971, p. 355.

know as well as we do that right, as the world goes, is only in question between equals in power, while the strong do what they can and the weak suffer what they must."³ In short, this view amounts to the law of the jungle in morals.

THE QUEST FOR VALIDATION OF ETHICS

The millennium of faith, in which Christianity dominated the Western mind, was an era in which the quest for objectivity in ethics had little urgency. The general conviction that the Bible contained God's ethical commandments to man, that life on earth was significant primarily as a proving ground for the hereafter, that Christian faith and conduct would determine man's fate in the endless future life—these beliefs gave ethics validity, imbued it with a specific and definite content, and integrated it into a tightly woven *Weltanschauung*.

A common illusion is that specific ethical systems can be deduced from the bare premise of the existence of God. It is necessary to go beyond this and accept the divine origin of the specific moral code of the religion of one's choice.

The West often assumes, perhaps glibly and smugly, that the Hebraic conception of the oneness of God represented a giant step forward in man's thinking. Perhaps so. Nevertheless, there were advantages to the Greek cosmos. Given a plurality of deities, none with absolute power or of impeccable virtue, Greek thinkers did not have to try to reconcile the existence of evil with the omnipotence and beneficence of God. For similar reasons, they were unable to found their ethics on divine revelation and had to speculate about the relationship of moral values to the real world.

Objective, secular ethics presupposed the presence of forces in the universe from which those ethics derived. Plato's brilliant proposed solution to this problem—the hypothesis that archetypal ideas formed the underlying structure of the universe and that the world of phenomena was merely their experienced approximation—satisfied scores of generations of philosophers.

Probably the most intellectually daring modern attempt to find an objective foundation for ethics is that of Marxism. Morality derives from the conditions of social production. Human consciousness does not determine men's conditions of social existence, "but on the contrary their social existence . . . determines their consciousness."⁴

Morality is class ideology. The morality of moribund classes is negated and superseded by that of emergent ones destined for

³ Thucydides, *The History of the Peloponnesian War* (Rawlinson translation), Book V, chapter XVII,

⁴ Karl Marx, *A Critique of Political Economy* (N. I. Stone translation), pp. 11ff.

power. Proletarian ethics are deemed superior to all previous ethical systems, both because they are the ideology of the class to which the future belongs and because the dictatorship of the proletariat is destined to usher in a classless society, in which human exploitation ceases and the dialectical process, that was formerly the mainspring of history, ceases.

There is a dual aspect to Marxian morality. "In our opinion," Lenin told a gathering of Comsomols after the October Revolution, "morality is entirely subordinate to the interests of the class war. Everything is moral which is necessary for the annihilation of the old exploiting order."⁵ The obverse of this morality is a code of ethics, applicable among Communists or within a Soviet society where considerations of class-struggle expediency do not arise. This is rather similar to the repudiated morality of the putatively exploitative bourgeois order.

The validity of the Marxian solution to the problem does not depend on one's attitude toward the Soviet system or on its ultimate triumph or defeat, but on the far narrower issue of the validity of those dialectical "laws of motion" of modern society which Marx believed he had discovered. The collapse of this intellectually intricate ideological structure—one which seems inevitable in the long run regardless of the outcome of political conflicts, simply because the Marxian dialectic is basically incompatible with science—will reduce the logical validation of Marxian ethics to ruins.⁶

JEFFERSON AND NATURAL RIGHTS

To the extent that it is not predicated on religious revelation, contemporary American ethics derives largely from the natural rights doctrine. The most familiar, as well as the most forceful and eloquent, assertion of this view is the claim that "all men are created equal, that they are endowed by their Creator with certain unalienable rights, that among these are Life, Liberty and the pursuit of Happiness."

When these ringing words are considered in terms of meaning rather than rhetoric, it is plain that they are either psychological assertions or postulated moral norms. As statements of fact, the Declaration of Independence suffers from the fact that "we are all born unfree and unequal: subject to our physical and psychological heredity, diversely endowed in health and strength, in mental capacity and qualities of character."⁷ Nor are all men given the rights to life, liberty and the pursuit of happiness. Some are

⁵ Quoted by David Shub, *Lenin*, Doubleday, New York, 1948, p. 369.

⁶ This does not, of course, imply that it will therefore cease to dominate the moral thinking and conduct of the masses who live under the Soviet system or systems.

⁷ Will and Ariel Durant, *The Lessons of History*.

snuffed out by chromosomal imperfections, disease, famine or war.

The subjects of despotism enjoy little freedom. The victims of poverty and disease are denied happiness.

If many men never enjoy these rights, in what sense are they unalienable? Is man free in the last resort merely in the Stoic sense that he is always free to take his life? If the Jeffersonian assertion that man is endowed with these rights by his Creator is to be taken seriously, what is the evidence of this endowment and what is the form in which these rights exist in the human psyche? Are they envisaged as instinctual drives? If so, are they characteristics common to all men, including the worst? Was Aristotle wrong in believing that some members of the human race are natural slaves?⁸

Living at a time when man's knowledge of himself was intuitional and rudimentary, anxious to cast off the shackles of religious dogma, the philosophers of natural rights, from Locke to Rousseau, made *a priori* assumptions concerning man's nature and based their ethical systems upon these assumptions. Where the latter were intended to be factual, they were almost invariably erroneous. Where they were intended to be normative, they can best be described as arbitrary.

In such fields as sexual morality and familial relationships—areas of rapid change in the contemporary American scene—the natural rights approach is evidently being rapidly superseded by a pragmatic one. This highly significant change is occurring without any attempt to rethink the fundamental basis of ethics.

The natural rights approach reigns least challenged in areas so remote from civic experience that basic revision seems unnecessary. The pronouncements made in American presidential campaigns are often lofty generalizations based upon natural rights abstractions and it is perhaps for this reason that they are so seldom honored by successful candidates. In international affairs, the American stance is often a moralistic assertion that certain Jeffersonian principles must be realised—that the Greeks must restore complete freedom of the Press, the Vietnamese hold free elections, the Rhodesians accede to majority rule. This may provide a clue to the observed fact that American foreign policy often runs counter to the American national interest.

Perhaps the most fatal result of this heritage of questionable or untenable values is that Western ethics is not oriented toward the major problems of man's future, but rather toward the proliferation of certain political goals which follow from the doctrines of Locke, Jefferson and others. Unencumbered by this intellectual heritage, both the Nazis and the Communists focussed their political thinking

⁸ The answer given to these questions in the Declaration of Independence is that magnificent and impudent evasion, "We hold these truths to be self-evident . . ."

and activity on the organization of world power. Perhaps the major strength of the communist appeal to intellectuals is as a system of world power organization.⁹ However, crude and ruthless that plan for power is, it seems preferable, in the minds of many intellectuals, to drift.

In *A Study of History*, Toynbee suggests that Greek civilization disintegrated because the Greek mind was unable to take the giant step from the organization of political power on the basis of the *polis* to that of the nation-empire. This failure became crucial when military, technological and administrative institutions made the larger power concentration feasible. The Western inability to move from the national unit to a world system of order at a time when scientific and technological developments make the latter necessary may, in Toynbee's opinion, be equally tragic.

At the close of the Second World War, the United States enjoyed a paramount and unprecedented position of intellectual authority, political prestige, military power and economic strength. A war-devastated world looked to Washington for leadership and salvation, for international institutions which would provide order, security, individual freedom, and the preconditions of progress. Since the American mind was imbued with a political philosophy of natural rights and an egalitarian faith, we stressed democracy, self-determination, and nationalism as panaceas valid for all mankind. This approach brought neither order nor freedom.

The Free World was accused of obsessional devotion to subordinate political objectives of a doctrinaire and dubious sort and of failure to give serious consideration to modes of international organization, alternate and superior to the Soviet system. It is possible that the failure of the West to devise an effective institutional system to maintain international order, cope with world ecological problems, and effect the adjustment of world population growth to world resources, will be regarded by future generations as a turning point in history.

UNITS OF EVOLUTION: BOTH MAN AND SOCIETY

One virtue of the natural rights approach to ethics is that it sought to make morality objective by basing it on man as he exists. Its greatest defect was that its superstructure of morals rested on a foundation that was *a priori* and arbitrary.

Today, probably for the first time in history, we know enough about *Homo sapiens* to place secular ethics on a solid foundation.

⁹ The intellectuals often translate the realistic phrase *world power organization* into such moralistic surrogates as the elimination of war, the destruction of imperialism, the end of class oppression, etc., etc. The reality is world power centralization.

This knowledge derives primarily from evolutionary biology and genetics.

Some earlier approaches to ethics from the biological vantage point took the oversimplified view that man merely recapitulates the Darwinian struggle for survival. The fact that evolutionary processes often ruthlessly cull less fit individuals from animal species was adduced to justify similar ruthless winnowing processes in human society. Exponents of a biological approach to morals, particularly during the nineteenth century, made themselves deservedly unpopular by defending, or appearing to defend, such selective processes as war, hunger, poverty and epidemics, viewing them as beneficent means of pruning the human tree of its weaker branches. Advocates of this view often deprecated advances in public health and food production, since they increased reproduction by the lower classes. Others deplored advances in medicine which might pile up deleterious recessive genes in the human pool.

One of the most eminent of living biologists writes:¹⁰

Darwin and his followers could not understand the effect of selection on larger units and longer periods than the individual and his life. They also did not reckon with a selection of environments. Both these failures led to an error in their social arguments, an error which has had an abiding effect in the world ever since Darwinian doctrines came to be disseminated, vulgarized and applied to man. All the paraphrases of the idea of Natural Selection throw the same emphasis on the individual as the ultimate and sufficient unit of evolutionary change. This emphasis was dramatically effective, but analytically disastrous. Spencer's *Survival of the Fittest* and Malthus's *Struggle for Existence* equally ignored the stock and the race, the group or the community, as entities. They equally implied also a standardized environment. Haeckel fulminated against socialism with "many are called but few are chosen." With complacency and even satisfaction, he was able to point out that the great mass of mankind "starves and prematurely perishes in misery." Darwin heartily declared: "What a foolish idea seems to prevail in Germany on the connection between Socialism and Evolution through Natural Selection." (1879, *Life and Letters*.)"

The nineteenth century theorists of evolution whom Darlington castigates (and some of their twentieth century disciples) failed to perceive that co-operation may be as important as struggle in the competition for survival. Eugene Marais, the great South African

¹⁰ C. D. Darlington, *Genetics and Man*, Penguin, Middlesex, 1964, p. 363. Marx offered to dedicate the first volume of *Das Kapital* to Darwin, but the latter politely declined.

naturalist, described a baboon troop in flight before a leopard. Two male baboons, defended the fleeing troop by falling on the leopard, attacking him, and being disembowelled in the process.¹¹

When the struggle for survival is regarded solely from the standpoint of the individual, this and other instances of primate altruism seem suicidal and a ticket to extinction. But primate troops, defended by rearguard males who sacrifice themselves in suicidal defensive action against more powerful predators, survive. Those not so defended perish. If one postulates an anterior condition in which the drive to defend the troop among the rear-guards varied from zero to its maximum, those troops with cowardly defenders would be devoured and their genes eliminated from the baboon pool. In this way, natural selection would strengthen and generalize genetic combinations favorable to courageous self-sacrifice and would extinguish gene combinations conducive to egotistic cowardice.

This example could be paralleled by others. It serves to demonstrate, first, that altruism can be created and fortified in animals by natural selection and, second, that the social unit can be as significant as the individual in shaping the genetic nature, not only of non-human primates and other mammals, but also of man himself.

In these terms, argument concerning the primacy of the individual or society is generally non-productive. Motivated by a distaste for governmental regulations which unnecessarily inhibit individual freedom, some libertarians assert that the individual is all-important and society an artificial construction. Yet evolutionary forces operate directly, not only upon the individual, but also on the family, troop, subspecies, race and species. Territorial defense, pecking order, care of progeny, mate selection, population control and imposed sterility are all modes of response to habitat which arise within and shape animal societies.

At the opposite pole, the late Harry Stack Sullivan asserted that human personality does not exist *per se*, but is merely a bundle of interpersonal relationships.¹² That this bizarre theory, which completely ignores the rôle of genetics in forging human personality, could have been published in a reputable journal of psychiatry merely illustrates the unfortunate alienation of that discipline from the findings of the biological sciences.

Unlike other mammals, man can shape his own environment. This potential for control increases at an accelerated rate with time. Famine, pestilence and war held down population and eliminated the less fortunate and capable. Demographic and eugenic planning

¹¹ Eugene Nielen Marais, *My Friends the Baboons*, McBride, New York, 1940. Quoted by Robert Ardrey, *African Genesis*, Athenaeum, New York, 1961, pp. 80-81.

¹² Harry Stack Sullivan, "The Illusion of Personal Individuality," *Psychiatry*, Vol. XIII, No. 3, 1950, p. 329.

can humanely achieve the same results. Our preference for the rational over the involuntary and catastrophic solution is a natural consequence of man's evolution as a reasoning animal. It is a moral preference if the basic criterion of morality is species survival.¹³

GENERAL CONSIDERATIONS

The evolutionary approach to morals has the great advantage over the *a priori* natural rights viewpoint of starting with the axiom that everything conducive to the survival and ecological advance of *Homo sapiens* is moral and everything detrimental to that survival immoral.

The cardinal element in human evolution from mere member of the primate order to master of the biosphere was development of intelligence. Control by man of his habitat is vitiated by acceleration in the rate of change.¹⁴ This double acceleration means that the time available for crucial decisions is shortened. The contemporary human condition is burdened with the need to master clashing forces of continually increasing potential for good or disaster in an ever-shortening time-span.

Thus, the continuing development of man's intelligence seems a prerequisite to species survival. A shortfall in this area, not to mention a retrogression toward lower levels of mental ability, leads to calamity. The most obvious example is the barbarian or psychotic armed with nuclear weapons.

When harnessed to evil purposes, intelligence can self-evidently be, not benefit, but bane. As a general rule, however, there seems to be a strong positive correlation between intelligence and other desirable psychic qualities such as regard for the remoter consequences of any decision in space and time, sympathy, compassion, tolerance, the love of peace, order and justice. The assertion that intelligence is positively associated with these cognate beneficial psychic qualities probably cannot be proved, but it seems to be a matter of common human experience.

Perhaps the most fundamental ethical conclusion that follows from these generalizations is that any moral system based upon the hypothesis that men are of equal capacity or equal worth is predicated on fallacy. Man is not interchangeable, nor is his mind the Lockean *tabula rasa*. What may be moral conduct toward one man or group

¹³ As Mr Justice Holmes said in *Buck v. Bell*, 274 U.S. 200, 1927, upholding the right of a state to sterilize feeble-minded mothers: "It is better for all the world, if instead of waiting to execute degenerate offspring for crime, or to let them starve for their imbecility, society can prevent those who are manifestly unfit from continuing their kind. . . . Three generations of imbeciles is enough."

¹⁴ Alvin Toffler, *Future Shock*, Random House, New York, 1970.

of men may be immoral when applied to a different individual or group.¹⁵

An objectively based system of ethics should be invariable as far as its fundamental premise or premises are concerned, but variable with respect to the specific ethical conclusions which follow from these premises. Changing social conditions alter the impact, implications and effects of different types of conduct. An ethical system based on imposed commandments is generally rigid. This rigidity may make it seem irrelevant to a social pattern which was not foreseen at the time it evolved. Some of the Jewish dietary laws and the Mohammedan observance of Ramadan are perhaps cases in point. A similar rigidity may invalidate systems of ethics based on natural rights theory, where the code of conduct derives from assumptions concerning man's basic nature which are contrary to fact.

A morality based upon the criterion of whether conduct serves to increase or reduce the survival prospects of the human species is self-evidently highly flexible in its specific evaluations. What conduces to man's welfare under one set of conditions may lead to his downfall under another.

SOME IMPLICATIONS OF AN EVOLUTIONARY APPROACH

An evolutionary approach to ethics implies both changing some of the normal standards of human conduct and shifting the emphasis from comparatively unimportant to more crucial issues.

An interesting, but rather unimportant, test case for the application of biological knowledge to ethics is incest. Today, taboos against this practice are almost universal. How did they arise? If, as has been asserted, abhorrence of incest is instinctual in most men, why are not such instinctual rejection mechanisms present in the other primates? And how do we reconcile the hypothesis of instinctive rejection with the prevalence of brother-sister marriages in a large number of dynasties, the Persian, for instance, and of both brother-sister and parent-child marriages among the Ptolemies?

A few generations ago, sociologists might have conjectured that priestly leaders of ancient peoples decided that incestuous marriages frequently produced defective offspring and therefore invented and imposed religious taboos. A hypothesis which replaces conspiracy by evolutionary processes as the motive force might begin with the

¹⁵ Parenthetically, the assertion, common among today's intellectuals, that intelligence is merely one of many human qualities and the implication that all these qualities are of more or less equal worth verges on deliberate deception. Man's primacy and mastery are based, not on his biceps or penis, but on his mind. The unwillingness of Western intellectuals to stress the critical importance of mind to species survival may be commendable modesty, but it is not conducive to clear thinking.

assumption that different peoples originally had different attitudes toward incest. Those who condemned the process would produce more able, intelligent and aggressive ruling houses and classes. They would presumably conquer, kill, or enslave peoples ruled by incest-tolerant dynasties which had gone to seed genetically because of the emergence of faulty or even lethal double recessives. Processes of this sort would change the genetic pool and make rejection of incest innate among most of mankind.

Ethics based on evolution does not appeal to the past as its supreme court. The fact that sound biological reasons once existed for banning a practice does not necessarily justify continuing the ban. Incestuous sexual relations are not immoral from an evolutionary standpoint provided they do not lead to the production of genetically inferior progeny. A measure to legalize incest between consenting, sterile, adult partners would probably arouse widespread hostility, but the wise legislator would discount his own negative feelings as the probable byproduct of the conjectural evolutionary process already suggested.

Philosophy has been charged with preoccupying itself with meaningless questions.

Is man fundamentally good by nature as Mencius and Rousseau believed? Or basically evil as Hsun Tzu and Hobbes asserted? This question has engrossed great minds for millennia. Yet, if concepts of good and evil arise from observation of conduct, the scale itself is determined by human behavior and the question is meaningless.

A similar question is whether the means always or never justifies the end. The latter position is usually accepted in theory, but not in practice, in the West. If it were seriously entertained, warfare could never be justified since it implies that people may be treated, not merely solely as objects, but solely as objects for extermination, and this regardless of their worth as human beings and regardless of their responsibility. Warfare is justified on the practical grounds that the end—that of survival for a people, a nation or a complex of cherished institutions—putatively overrides the evil means necessarily adopted. Failure to use the ultimate force of war might mean placing the fate of mankind in the hands of those without such scruples.

The contrary position, that the means can always be justified by the end, would lead to total insecurity. No man's property would be safe if it could be stolen with impunity for a good cause. No man's life would be safe if his murder could be justified by the social advantage of his extinction.

From the evolutionary standpoint, that of preserving *Homo sapiens*, neither of these absolute positions has validity. The means-end process must be viewed as a single pattern of conduct. Bad means are justified when and only when the moral value of the desired

end, multiplied by the probability of its attainment, exceeds the evil effect of establishing or strengthening a precedent in favor of bad means. This is provided that no better means of effecting the desirable end lies at hand.

Equally perturbing to many moralists is the relationship between environmental handicap and responsibility and between responsibility and punishment. Two of the common conflicting attitudes were eloquently voiced by Shakespeare.

“We are men, my liege,” the First Murderer tells Macbeth. The latter believes men responsible for the evil they do and attributes character to heredity. He replies:¹⁶

Ay, in the catalogue ye go for men,
As hounds and greyhounds, mongrels, spaniels, curs,
Shoughs, water-rugs, and demi-wolves are clept
All by the name of dogs . . .

The Second Murderer, a modern thinker, environmentalist and egalitarian—perhaps even a precursor of the New Left—retorts:¹⁷

I am one, my liege,
Whom the vile blows and buffets of the world
Hath so incens'd, that I am reckless what
I do to spite the world.

The criminal is punished so that his example will deter others from crime, to incapacitate him from further offenses against society, and sometimes in the hope that he may be rehabilitated. Since crime is non-conducive to human survival, the necessity of socially imposed deterrents would seem evident.

Preoccupation with free will has led American justice into elaborate and imprecise probing into the relationship of crime and responsibility. Criminals may be exculpated because juries are told they were swayed by “irresistible impulse” or because of temporary insanity elaborately defined. The commonsense question, whether infallible punishment of culprits pleading temporary insanity would or would not deter others, is seldom asked.

The injection of free-will considerations into the criminal law has resulted in efforts to prevent or upset murder convictions because the defendants are double-Y chromosome males. This chromosomal trisomy probably makes them more prone to commit crimes than normal men. But if the possession of one bad chromosome can acquit for murder, why not the possession of many?

¹⁶ Shoughs were lapdogs, originally brought from Iceland. “An Island Dog,” wrote Holme in *Armoury* (Volume II, page 185) in 1688, “curled and rough all over . . . These Curs are much set by with Ladys, who . . . trim of all the hair of their hinder parts . . .” Water-rugs were another shaggy breed.

¹⁷ I am indebted to Dr. C. D. Darlington for this quotation.

Preoccupation with moral guilt and free will sometimes leads to exonerating of the mentally defective criminal, who is of no value to society and can be restrained only by fear or force. Drastic punishment is then reserved for the intelligent criminal, who is potentially useful to the world and who can in many cases be rehabilitated by an appeal to reason.

PROBLEMS OF FREEDOM

Freedom and order, John C. Calhoun once observed, are essential ingredients of the good society. Without freedom, a society cannot progress; without order, it cannot survive. If a choice must be made, societies can survive without progress, but they cannot progress without survival. This aphorism admittedly oversimplifies the relationship between these two cardinal values. Man is never confronted with the choice between freedom and order in the abstract or in their totality, but always with the choice of specific types and degrees of freedom as against specific types and degrees of order.

An ethical system based upon freedom in the abstract runs into difficulty that only specific types of freedom are conducive to the survival and progress of *Homo sapiens*. The freedom to shout four-letter words in church or to perform homosexual acts on stage is not tantamount to freedom of scientific inquiry. The belief, held by some rightwing libertarians that their freedoms are trampled upon when they are compelled to pay taxes to support government lighthouses shows, in a different direction, how the pursuit of freedom as an abstraction can verge on lunacy.

A belief that the basis of human morals must be evaluation of behavior in terms of its total impact on species survival does not negate the traditional freedoms that form such an important part of the secular ethical heritage of the West. A free society is generally more creative, diverse, and dynamic than a regimented one. However, freedoms may be extended in such a direction and degree to such an extent that centrifugal forces are generated which threaten to disrupt the social order totally. This may apply either to the freedoms to advocate, teach, and organize anti-social and revolutionary action or to the freedoms to undermine, ridicule, and demolish those institutions and commonly held beliefs which give a society its cohesion. Where the lines should be drawn between freedom and order is naturally an issue of great complexity and one which depends *inter alia* on the history, institutions, mores and structure of the society or nation concerned. What reference to the basic criterion of species survival does do is to reject the simplified view that such institutions as democratic government, self-determination, universal franchise or the free-enterprise economy

are the moral scales on which all societies must be weighed or that they provide the panaceas for the world's political sicknesses.

THE VALUE OF HUMAN LIFE

If we really believe that men are equally endowed with the natural right to live, we make little attempt to live by it. Famines and natural disasters in distant lands move few of us to the small sacrifices necessary to alleviate these catastrophes or save their victims from death. These calamities receive little more than our fleeting and emotionally undercharged attention.

The fact that Western society condemns and severely punishes extra-legal homicides is not necessarily related to a high valuation place upon human life in general. This condemnation serves the practical purpose of preventing rampant disorder and insecurity within our particular society. Thus, genocide in totalitarian countries arouses less concern and indignation in America than violence in our city streets. The morality of stern punishment for homicide derives from a recognition that, without security of life in our ambit, we are unsafe. The lack of safety prevents us from thriving or creating. A Hobbesian social order in which every man's hand is turned against his neighbor relegates man to the brutish condition which the author of *Leviathan* envisaged.

There is nothing in the evolutionary process which suggests that life is sacred. Nor does the evidence of history support that proposition. Organisms survive by adaptation to a changing environment. This adaptation, mainly through genetic recombination, mutation, and differential survival, necessarily involves both creation and extinction. For fitter lines to become predominant, the more inept lines must perish.

Today fortunately, genetic extinction need not be accomplished through Apocalyptic means. Reproductive restraint can make the grim Malthusian checks superfluous. But failure to make the former efficacious means that the latter must, sooner or later, supervene.

Contraception and abortion are opposed by some as destructive of either potential or actual life. But all sexual reproduction necessarily involves vast destruction of potential life. Without it, there would be no adequate mechanism for genetic improvement.

A growing recognition in the United States that population control is desirable has led to a masochistic flight from reproduction by the intellectual, power, and status élites. Yet restriction of reproduction by the upper classes and intelligentsia must lead to a deterioration in the human gene pool with respect to intelligence.

The reason for this is that the upper classes in any open society tend to be much more intelligent and talented than the average. Thus, in Great Britain, the average I.Q. of higher professionals

(139.7) was 55 points above that of unskilled laborers (84.9).¹⁸ Even if one assumes that the children of these two social groups should regress 50 per cent to the mean, their I.Q. difference would be twice that prevailing between American Whites and American Blacks.

If the higher-I.Q. groups in modern societies are persuaded to maintain their numbers at a constant level, while the average-I.Q. and mentally subnormal groups reproduce exuberantly, the average intelligence level must fall and the production of individuals of exceptionally high intelligence, those capable of constituting the creative élite of coming generations, must fall drastically. No ecological advantage can be obtained by this sort of restriction since the more intelligent and capable members of society are those with the ability to solve pollution problems.

The restriction seems flagrantly immoral since it is a crime against man's future. If the most urgent need of the day is to produce the sort of man capable of coping intelligently with the intricately intermeshing forces of our civilization, the sterilization of ability is a far more heinous crime than most of the offenses which preoccupy our police and judicial systems.

In short, man has reached a level of environmental mastery at which the cruel Malthusian processes of the past, which both held the quantity of human population to the level of available resources and improved the quality of population by winnowing out the less fortunate and less fit, have happily become unnecessary. They are unnecessary, however, only subject to the proviso that man substitutes internationally efficacious control mechanisms which both keep population numbers at tolerable levels and improve man's genetic heritage by giving reproductive advantage to the more intelligent, talented and creative. There are few signs on the horizon suggesting that either process is discernible.

In this connection, Nazi and Soviet totalitarian systems have been attacked on a variety of grounds, ranging from their inherent inefficiencies to their denial of freedom to their subjects. Because of our preoccupation with the great Jeffersonian illusion of human equality, few students have noticed the frightening fact that modern totalitarian genocide is also aristocide—that is to say, the extermination of the best. In short, these systems tend to impoverish the human genetic reservoir with respect to intelligence; they snuff out potential creativity and promise; they eliminate the leaven which enriches life for man in general.

Elsewhere, I have attempted to outline the general dimensions of this process and to indicate why it may be inherent in the modern totalitarian systems and not an extraneous and accidental by-

¹⁸ Cyril Burt, "Intelligence and Social Mobility," *British Journal of Statistical Psychology*, Vol. 14, 1961, pp. 3-24.

product.¹⁹ I shall not attempt to recapitulate that argument here. Suffice it to say that the cardinal importance of this process, if it is allowed to continue, is that it destroys man's genetic birthright. By doing so, it increases the already salient chasm between man's intelligence and the magnitude of the inanimate forces he attempts to control. A continued widening of this gap may well produce a situation in which human intelligence (including necessarily the intelligence of the ruling element since, in one way or another and even under dictatorships, this is responsible to the psyche of the general population) falls disastrously short of the minimum requirements for the continued existence of civilization. In short, we can pass a point of no return in which man's psychic resources are so profoundly degraded by aristocide and dysgenic reproduction that he is unable effectively to manage the complex instrumentalities of species survival.

SUMMARY

A secular system of ethics must be based on human species survival. The central problem of that survival is that human ability (consisting primarily of intelligence, with which sensitivity, responsibility toward others, and the moral sense seem positively correlated) should be increased sufficiently to ensure wise use of the human environment. Genetic evolution in this direction no longer occurs effectively in modern societies (as it does among the non-human primates and in primitive societies) by calamity and catastrophe. A general growth of human sympathy, or altruism, has largely vitiated all pre-existing natural checks upon human reproduction, both quantitative and qualitative. The positive alternative is man-directed reproduction towards the improvement of man. Thus, the larger, long-range problems of morality are related to man's ecological adaptation to the biosphere, to the adjustment of world population to available resources, to the qualitative redirection of reproduction towards increasing man's intelligence and cognate psychic qualities, and to the extension of forms of social organization and government appropriate to the solution of these tasks.

¹⁹ Nathaniel Weyl, "Artistocide as a Force in History," *Intercollegiate Review*, June 1967, pp. 237-245.

More Speculations on the Reduction of the Canines

By ALEXANDER MAMAK

It is becoming increasingly popular among some anthropologists to approach the problem of "origins" by drawing inferences from a comparative study of non-human primates. Observations on the behaviour of free-ranging non-human primates, for example, have given us some perspective on the evolution of tool-using behaviour. Nevertheless, the use of this method has not prevented observers from arriving at simplistic, and contradictory explanations. For instance, it has been suggested that selection for a reduced canine complex in man's evolution occurred as a result of tool and weapon use.¹ On the other hand, Holloway has postulated that canine reduction in man resulted from selection for reduced aggression.² The interesting fact to note about these two different hypotheses is that they are both derived from the assumption that what is common behaviour among non-human primates was also common among man's ancestors.

The main purpose of this paper is to emphasize that proper comparisons between man and the non-human primates are difficult to make. It is just as easy to draw false inferences from these comparisons.

I propose to make my point by attempting to compare some behavioural phenomena among non-human primates in order to discover some common thread pervading this type of behaviour. The behaviour I have chosen for analysis is the threat behaviour expressed by a wide variety of non-human primates. I believe that the inferences drawn from this study may give us some insight (*pro tempore*) on the reduction of the canines, and also explain how language could have arisen in the course of evolution.

The thesis that I will advance and defend here is as follows: (1) reduction in man's canines was due to the loss of selective pressure for maintaining the specialized structures for aggressive display; and (2) that the function of these specialized features was replaced by language which (when viewed in comparison with the rate of reduction of the canines and other associated anatomical features) must have arisen early in the evolution of the man-apes. I maintain that the alternate explanations arising from my analysis are just as feasible as those postulated by Washburn and Holloway.

¹ Sherwood L. Washburn, "Tools and Human Evolution," *Scientific American*, September 1960, pp. 3-15.

² Ralph L. Holloway, "Reply to Washburn," *American Anthropologist*, Vol. 70, No. 1, February 1968.