MAN AS A COMPETITIVE ANIMAL

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There are few more depressing aspects of human existence than the frequency with which old men with grey hair and some degree of authority get up and, in mellifluous and noble prose, talk nonsense about subjects to which they have seldom given much serious thought. What they say on such occasions is often very much what other men would like to believe is true; so it is only too often believed and, even when distorted, used to justify some particular kind of action.

You will realise that I come into the category I first referred to, and that I stand some risk of having what I say treated in the way I deplore, but then I have great hope that I shall behave more intelligently than my predecessors. To give an example, anyone who has had a classical education will remember Pericles' speech after the first year of the Peloponnesian War, praising the virtues of the Athenians and so justifying the continuation of the war. A pity, as the consequences of the war were so dispiriting and were almost entirely dependent on the Athenians' own actions. Luckily the speech is given in such glorious prose that its limited content is hardly noticed, so I prefer to deal with the Declaration of Independence.

American Declaration of Independence

Its beginnings are characteristic of such pronouncements. " We hold these truths to be self-evident " booms the magnificent prelude " that all men are created equal, that they are endowed by their creator with certain inalienable rights and among these are life, liberty and the pursuit of happiness". This was in a country where slavery was common, and when the signatories were about to risk or even lose their lives in a war or as a result of its natural consequences, because they believed it was justifiable when these inalienable rights were at stake. It is my contention that no rights are inalienable, and that rights are what you are able to enforce.

Stable systems in nature

It is clear that all plants and animals are in competition with one another. Plants by occupying larger areas, and by their shade, reduce the amount of energy available to other plants and by the extension of their root system deny nutrients to them. Animals compete by eating plants or one another; both plants and animals compete by devising ingenious methods of propagation and spread. Symbiosis, commensalism, and parasitism may be added to the evidence of the ingenuity by which animals and plants extend their sphere of conquest. A little further consideration shows, however, that animal and plant life are interdependent, and that their interdependence is partly self-regulating.

A simple case is that of a mass of vegetation eaten by herbivorous animals which are, in turn, the prey of carnivores. Obviously if the herbivores eat all the grass faster than it grows, some of them, perhaps all of them, will die—and so will the carnivores that depend on them for food. If the carnivores cut down the herbivore population too far, the grass will grow, but the carnivores will starve.

Ideally this situation leads to a stable system where there are so many carnivores and so many herbivores per square mile of vegetation. In practice, the system is usually somewhat unstable since animals can move, and plants, even allowing for their seeding, do so less readily; but over a long period fairly consistent averages develop, unless great changes occur in climate or geography.

There is nothing moral in this. Put roughly, if you want to live you have to keep to the rules, and these are not your rules but the rules of physics and chemistry, which you did not invent. You can interfere with them locally, but you cannot alter their general application. Nor is it useful to complain that the nature of the world has been changed by local flooding, by volcanic eruption, and by the local diversion of rivers, or in extreme cases by our sun developing into a nova. The rule is adapt, get out, or perish.

Man

For animals that can modify their environment very little, the choice is a hard one; but in most cases they have at least the advantage that it is not a conscious choice. Man has, unlike most animals, been able to modify his environment on an enormous scale and thereby to protect himself from the dangers inherent in a wild existence. In man in the wild state the average expectation of life at birth is probably about 35 years; certainly most degenerative changes begin at about that time. By his contrivances, man in a developed community has managed to stave off death for much longer than this, particularly by reducing infant mortality.

The net result of this and other changes is that man is now probably the most efficient species and, what is more, that he now decides which, if any, competing animals shall survive. This he has done by the use of his intelligence to grow plants for food, and to live in communities where labour is shared among many and where specialisation of activity can be developed, where the exclusion of predators is easier, and where weapons of war for defence and offence can be more readily manufactured.

Man is no longer condemned to a nomadic life, eating natural crops and catching animals for food, and then, when local supplies are exhausted, moving to another area to repeat the process. Moreover, although there is early evidence that primitive man respected animals and plants, thinking them little or no different from himself, and did no more damage than would ensure his own survival, his activities have more recently been much more destructive. This change has been partly due to the development of religious attitudes in which man is made in the image of God and animals and plants are on earth to serve him. These attitudes have been used to justify the expansion of man into more and more animal and plant territory, with more and more destruction of animal and plant life.

Worse still, they have been used to justify the mass slaughter of animals for sport. One need only instance the American bison, whose numbers were reduced from millions to a few hundred in the nineteenth century. For similar reasons trees have been cut down and replaced by food crops with the consequent failure of soil maintenance and the development of dust bowls. As more and more people have to be fed, more and more nutrients are taken from the ground and more and more fertiliser has to be applied to maintain the crop level; and then much of the crop may be wasted because many of the distribution and trade problems cannot be overcome.

The tendency of most, though not all, local communities is to grow larger, since they are much more protected than was nomadic man from the risks of existence. This leads to further migration from rural areas to cities, until the city becomes very large and problems of feeding, occupation, and disposal of waste become serious.

Increasing density of populations

The increasing density of populations raises problems not only of overcrowding but of infectious disease, the dissemination of which is improved by the proximity of the victims. Man then competes with disease organisms and also with animals like rats and mice which eat his food, contaminate what they do not eat, and act as reservoirs of infectious disease.

Because localisation in cities or large towns makes distances between communities fairly large, roads have to be driven through agricultural land and crops have to be grown in steadily reduced areas. Moreover, as land becomes less and less available, animals have to be grown in smaller and smaller areas until enormous numbers of them have to be maintained in a very limited space. The broiler chicken industry, in which thousands of animals are cooped into cages which they never leave save to be killed, will immediately come to mind. There is little doubt that these methods will be applied to more and more animals as world populations and the demand for food increase.

In primitive communities, human and animal excreta, often human and animal corpses, are returned to the land to restore it and maintain its fertility. Nowadays we regard the risk of dysentery as unreasonable and wrinkle up our noses at the smell of manure. But because of the concentration of animals and men we have to deal with vastly greater local amounts of human and animal waste which we discharge, in part treated to make it less offensive, into rivers, or without any treatment, into the sea. Until fairly recently the vast volume of the sea with the plants and animals that live in it have managed fairly well to deal with this load of oxygen-depleting material, but this ability seems to be declining. Serious examination of the problems of disposal of animal excreta produced by concentration of animals in small areas has only just begun.

Human competition

Lastly, man competes with his own species for space, for materials, and for what he regards as wealth, as well as for food. If his population exceeds what his food supply can support, he has only a limited number of reactions available—to grow more food by improving his methods, to indulge in activities that provide material that he can exchange for food, to obtain food or its equivalent by plunder, or to dispossess other inhabitants of land, or to reduce them to slavery by war.

Man has managed to improve his food production by fertilisation of the ground, by the use of modified plants and by better methods of harvesting, but this doesn't alter the fact that many human groups live at or below the subsistence level, and that richer countries are not at all willing to give up their surpluses. Indeed they might reasonably claim that the only effect would be the increase of the population of the country to which the surplus is given. The development of manufactured goods for exchange for food has obvious advantages and it also makes life a good deal more comfortable—for some people at any rate—than agricultural life can be.

The disadvantages of manufacture are the production of acrid industrial waste, with its effect on food production chains—particularly in the sea—and the slums that almost invariably accompany it. Plunder is, to say the least, an unsatisfactory institution, requiring a very delicate balance between the output of the plundered and what is taken from them. Obviously it is essential that the plundered should not be oppressed beyond the point at which they cease to produce, so an effective display of power and a suitable moderation in its use are essential. Not many plundering groups have been capable of such delicacy; some indeed have ended as agriculturists themselves.

Slavery

There is perhaps more to be said for slavery. Many civilisations have, of course, depended on slavery, and this is particularly true of the Greeks, whose magnificent philosophical and scientific developments were almost entirely based on slavery as a general support for the free community. Properly administered it provides a good living for the slave-owners, and a reasonable, though less satisfactory one, for the slaves. Slaves have to be kept alive and not foolishly ill-treated, or they are unproductive. Unfortunately the owners of slaves have a regrettable tendency to regard themselves as superior, and may ill-treat their slaves as beneath their regard. If this ill-treatment is pursued too far, slaves

will regard rebellion as preferable to their treatment, even at the risk of death. If they are successful they may well become slave-owners in their turn.

Slavery of a kind occurs in animals. Some ants, for instance, raid the nests of other ant species for slaves, but regrettably become excessively dependent upon them. Some slave-making ants indeed cannot feed themselves and have to be fed by their slaves, so a strict comparison with human slavery is hardly possible.

War

War is a form of competition. Biologists, observing the absurdity, even the idiocy of war, sometimes say that man is the only animal that kills its own species—or at least, that plants and animals do not get up and knock each other over the head. This may be true of plants, but as far as some animals go it is the plainest nonsense. Admittedly most of the fighting in animal mating seasons is symbolic rather than real, and deaths are usually due to accidents. But a pecking order is demonstrable in many animals, and it is not difficult to find animal species in which destructive competition is evident.

In the common whelk, for instance, whose egg-cases you have no doubt seen thrown up on the beaches, numerous eggs are laid in each capsule. The first young whelks to hatch promptly set about consuming the unhatched eggs and the young whelks that hatch after them, until the product of the egg capsule is one or two whelks instead of hundreds, and, as the books say, competition for food is reduced.

Some say that the origin of war was to obtain captives for sacrifice to the gods so that the earth might be renewed. Nowadays there is hardly any question of general usefulness in it. One side starts it—often it is none too easy to tell which—and the group attacked must either resist or submit. If it submits the conquerors plunder it and are usually stimulated to further conquests. If it resists it is condemned to a long deflection of its activity from useful pursuits and appalling destruction of its population and its environment. I need only perhaps refer to the use of defoliants in Vietnam. Even if it is not defeated in war, a country may find victory little preferable to defeat.

Unfortunately the invaluable intelligence of man, which has brought him up from small nomadic families, where death was an ever-present hazard, to the noble cities of today can also be used for propaganda to denigrate others or to justify their destruction or enslavement.

Risk of self-destruction

I have come a long way from the Declaration of Independence and the inalienable rights of man; what I have tried to do is to paint man in his world as one member of a vast community of interdependent plants and animals, a community he interferes with at considerable risk to himself. Until recently, in terms of his own existence as a species, he has not been able to do much to interfere. His recent development and increase in number and skills has made it possible for him to modify his environment and even to destroy it.

It is quite clear from the history of other species that man has no prescriptive right to survive and that life, liberty, and the pursuit of happiness are possible only if the environment is understood and manipulated in ways that provide them in a minimally destructive fashion. It is no use for man to complain of the cruelty of nature as if nature was an omnipotent goddess, malignantly disposed towards man.

There is no credit given for virtue, selflessness, or even intelligence in this world; the only creditable thing is survival of the species. Dinosaurs, if they thought at all, no doubt thought that dinosaurs were bound to last forever. We at any rate know that they were mistaken. It would be a pity if, with our vastly greater intelligence, we slowly destroy our environment; if, instead of a world where life and liberty are possible at least for a time and the pursuit of happiness is always possible (even if the goal is not often obtained), we destroy ourselves and follow the dinosaurs into oblivion, leaving insects

perhaps as our successors to demonstrate—if they can—that they are more fitted than we are to survive.

The title of this symposium is *The hostile environment of man.* We say that the environment is hostile, harsh or unfriendly, but this is to misunderstand its nature and to confer on it some of our own attributes, almost as if it were capable of choice. The blunt truth is that the rules of our world and universe are fixed, and we must learn to take advantage of them. We must do this, moreover, without destroying the systems that make our own enjoyment of life possible.

Above all, we must not deceive ourselves into believing that we are a privileged species, or that we can alter the rules of the world by making speeches. We want to survive; but it is no use saying that we have a right to survive—we shall soon find that we have not.

THE UNLOVING FAMILY

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The following three examples will help to make it clear what I mean by " the unloving family."

First example

A young woman found herself with an unwanted child; as she had no love for the father, it was not surprising that she had very little love for this child. She tried to bring him up, but failed, and in her distress she went to the child care authorities for assistance. She told them that she was neglecting her baby and that they should take him from her. The child care authorities told her that she was being very silly; she should try to be a good mother and keep the child. So the baby remained with her but he did not thrive and was increasingly neglected. Eventually her general practitioner heard her story and called on the child care officer for a conference. They agreed that the child should be taken into care, but the child care authorities said that this was nonsense and that the mother should keep her child. The mother kept her child. A few months later he died from neglect. The coroner commented that he was extremely puzzled as to why the child had to remain in the family, even to the point of death.

Second example

One day, as a man was leaving his house, his little boy tumbled down the steps and lay at the bottom crying. The father came out of the house, ignored the child, but very tenderly lifted up his whippet greyhound, carried it carefully down the steps and deposited it on the ground, commenting to a passer-by " I can't have him breaking his legs."

Third example

A mother was afraid that she might kill her second son. This was no idle threat, because the hospital notes showed that this child, when an infant, had been admitted with broken legs. The mother told me how she had caused the injury; one day she had been so angry that she had picked him up when he cried and squeezed his legs until they broke. A more recent record showed that this child had been admitted to the paediatric ward with a fractured skull. Again the mother had felt so hostile towards her child that she had broken his skull with a poker.