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THE BIOLOGICAL BASIS OF ETHICS

We should all agree that each of us is bound to show kindness to his parents and spouse and children, and to other kinsmen in a less degree; and to those who have rendered services to him, and any others whom he may have admitted to his intimacy and called friends; and to neighbours and to fellow-countrymen more than others; and perhaps we may say to those of our own race more than to black or yellow men, and generally to human beings in proportion to their affinity to ourselves.

--HENRY SIDGWICK, *The Methods of Ethics*

Every human society has some code of behavior for its members. This is true of nomads and city-dwellers, of hunter-gatherers and of industrial civilizations, of Eskimos in Greenland and Bushmen in Africa, of a tribe of twenty Australian aborigines and of the billion people that make up China. Ethics is part of the natural human condition.

That ethics is natural to human beings has been denied. More than three hundred years ago Thomas Hobbes wrote in his *Leviathan*:

During the time men live without a common Power to keep them all in awe they are in that condition called War; and such a war, as is of every man against every other man.... To this war of every man against every man, this also is consequent; that nothing can be Unjust. The notions of Right and Wrong, Justice and Injustice have there no place.

Hobbes's guess about human life in the state of nature was no better than Rousseau's idea that we were naturally solitary. It is not the force of the state that persuades us to act ethically. The state, or some other form of social power, may reinforce our tendency to observe an ethical code, but that tendency exists before the social power is established. The primary role Hobbes gave to the state was always suspect on philosophical grounds, for it invites the question why, having agreed to set up a power to enforce the law, human beings would trust each other long enough to make the agreement work. Now we also have biological grounds for rejecting Hobbes's theory.

Occasionally there are claims that a group of human beings totally lacking any ethical code has been discovered. The Ik, a northern Uganda tribe described by Colin Turnbull in *The Mountain People* is the most recent example. The biologist Garrett Hardin has even claimed that the Ik are an incarnation of Hobbes's natural man, living in a state of war of every Ik against every other Ik. The Ik certainly were, at the time of Turnbull's visit, a most unfortunate people. Originally nomadic hunters and gatherers, their hunting ground was turned into a national park. They were forced to become farmers in an arid mountain area in which they had difficulty supporting themselves; a prolonged drought and consequent famine was the final blow. As a result, according to Turnbull, Ik society collapsed. Parents turned their three-year-old children out to fend for themselves, the strong took food from the mouths of the weak, the sufferings of the old and sick were a source of laughter, and anyone who helped another was considered a fool. The Ik, Turnbull says, abandoned family, cooperation, social life, love, religion, and everything else except the pursuit of self-interest. They teach us that our much vaunted human values are, in Turnbull's words, "luxuries that can be dispensed with."

The idea of a people without human values holds a certain repugnant fascination. *The Mountain People* achieved a rare degree of fame for a work of anthropology. It was reviewed in *Life*, talked about over cocktails, and turned into a stage play by the noted director Peter Brook. It was also severely criticized by some anthropologists. They pointed out the subjective nature of many of Turnbull's observations, the

vagueness of his data, contradictions between *The Mountain People* and an earlier report Turnbull had published (in which he described the Ik as fun-loving, helpful, and "great family people"), and contradictions within *The Mountain People* itself. In reply Turnbull admitted that "the data in the book are inadequate for anything approaching proof" and recognized the existence of evidence pointing toward a different picture of Ik life.

Even if we take the picture of Ik life in *The Mountain People* at face value, there is still ample evidence that Ik society has an ethical code. Turnbull refers to disputes over the theft of berries which reveal that, although stealing takes place, the Ik retain notions of private property and the wrongness of theft. Turnbull mentions the Ik's attachment to the mountains and the reverence with which they speak of Mount Morungole, which seems to be a sacred place for them. He observes that the Ik like to sit together in groups and insist on living together in villages. He describes a code that has to be followed by an Ik husband who intends to beat his wife, a code that gives the wife a chance to leave first. He reports that the obligations of a pact of mutual assistance known as *ayot* are invariably carried out. He tells us that there is a strict prohibition on Ik killing each other or even drawing blood. The Ik may let each other starve, but they apparently do not think of other Ik as they think of any non-human animals they find--that is, as potential food. A normal well-fed reader will take the prohibition of cannibalism for granted, but under the circumstances in which the Ik were living human flesh would have been a great boost to the diets of stronger Ik; that they refrain from this source of food is an example of the continuing strength of their ethical code despite the crumbling of almost everything that had made their lives worth living.

Under extreme conditions like those of the Ik during famine, the individual's need to survive becomes so dominant that it may seem as if all other values have ceased to matter, when in fact they continue to exercise an influence. If any conditions can be worse than those the Ik endured, they were the conditions of the inmates of Soviet labor camps and, more horrible still, the Nazi death camps. Here too, it has been said that "the doomed devoured each other," that "all trace of human solidarity vanished," that all values were erased and every man fought for himself. Nor should it be surprising if this were so, for the camps deliberately and systematically dehumanized their inmates, stripping them naked, shaving their hair, assigning them numbers, forcing them to soil their clothing with excrement, letting them know in a hundred ways that their lives were of no account, beating them, torturing them, and starving them. The astonishing thing is that despite all this, life in the camps was *not* every man for himself. Again and again, survivors' reports show that prisoners helped each other. In Auschwitz prisoners risked their lives to pick up strangers who had fallen in the snow at roll call; they built a radio and disseminated news to keep up morale; though they were starving, they shared food with those still more needy. There were also ethical rules in the camps. Though theft occurred, stealing from one's fellow prisoners was strongly condemned and those caught stealing were punished by the prisoners themselves. As Terrence Des Pres observes in *The Survivor*, a book based on reports by those who survived the camps: "The assumption that there was no moral or social order in the camps is wrong.... Through innumerable small acts of humanness, most of them covert but everywhere in evidence, survivors were able to maintain societal structures workable enough to keep themselves alive and morally sane."

The core of ethics runs deep in our species and is common to human beings everywhere. It survives the most appalling hardships and the most ruthless attempts to deprive human beings of their humanity. Nevertheless, some people resist the idea that this core has a biological basis which we have inherited from our pre-human ancestors. One ground for resistance is that we like to think of our own actions as radically different from the behavior of animals, no matter how altruistic those animals may be. Animals act instinctively; humans are rational, self-conscious beings. We can reflect on the rightness or wrongness of our actions. Animals cannot. We can follow moral rules. We can see what is good, and choose it. Animals cannot. Or so many people think.

Attempts to draw sharp lines between ourselves and other animals have always failed. We thought we were the only beings capable of language, until we discovered that chimpanzees and gorillas can learn more than a hundred words in sign language, and use them in combinations of their own devising. Scientists are now laboriously discovering what many dog owners have long accepted; we are not the only

animals that reason. As Darwin wrote in *The Descent of Man* "The difference in mind between man and the higher animals, great as it is, certainly is one of degree and not of kind." It is a mistake to think of all animals as doing by blind instinct what we do by conscious deliberation. Both human and nonhuman animals have innate tendencies toward behaving in particular ways. Some of these tendencies rigidly prescribe a particular kind of behavior--like the fly, so set on going in one direction that it buzzes repeatedly into the glass, instead of trying different directions until it comes to the part of the window that is open. Other innate tendencies merely set a goal which leaves room for a diversity of strategies--like the fox that "instinctively" wants a hen and, as those who keep hens learn to their cost, can think of dozens of different ways to get it. The "instincts" of the social mammals are mostly of this more open sort. In this sense human beings have "instincts" too: think about how hard it is for parents to hear their baby cry without picking it up, or for adolescent and older humans to avoid taking an interest in sex.

Another ground for resisting the idea that ethics has a biological basis is that ethics is widely regarded as a cultural phenomenon, taking radically different forms in different societies. As our knowledge of remoter parts of the globe increased, so too did our awareness of the variety of human ethical codes. Edward Westermarck's *The Origin and Development of the Moral Ideas*, published in 1906-8, consists of two large volumes, a total of more than 1,500 pages, comparing differences among societies on such matters as the wrongness of killing (including killing in warfare, euthanasia, suicide, infanticide, abortion, human sacrifices, and duels); whose duty it is to support children, or the aged, or the poor; the position of women, and the forms of sexual relations permitted; the holding of slaves, the right to property in general, and what constitutes theft; the duty to tell the truth; dietary restrictions; concern for non-human animals; duties to the dead, and to the gods; and so on. The overwhelming impression we get from Westermarck's book, and from most anthropological literature, is of an immense diversity in ethics, a diversity which must be of cultural rather than biological origin. Edward O. Wilson has conceded: "The evidence is strong that almost all differences between human societies are based on learning and social conditioning, rather than heredity." So it may seem that if we want to discuss human ethics we must shift our attention from biological theories of human nature to particular cultures and the factors that have led them to develop their own particular ethical codes. Yet while the diversity of ethics is indisputable, there are common elements underlying this diversity. Moreover, some of these common elements are so closely parallel to the forms of altruism observable in other social animals that they render implausible attempts to deny that human ethics has its origin in evolved patterns of behavior among social animals. I shall start with the ethical form of kin altruism.

KIN SELECTION IN HUMAN ETHICS

The Methods of Ethics, from which I have taken the quotation at the beginning of this chapter, is a philosophical treatise on ethics written by the Cambridge philosopher Henry Sidgwick and first published in 1874. The passage quoted is a description of the principles regulating the duty of benevolence, as this duty was generally understood at that time, rather than a statement of Sidgwick's own views. It gives a graduated list of those to whom we should be kind which fits neatly with sociobiological theories. First place goes to kin altruism; then come reciprocal and group altruism. In this respect late Victorian England was not unusual. As Westermarck notes in *The Origin and Development of the Moral Ideas*, a mother's duty to look after her children has seemed so obvious that most anthropological accounts scarcely bother to mention it. The duty of a married man to support and protect his family is, Westermarck says, equally widespread, and he backs up his claim with a score of examples. His account of the duties almost universally accepted among human beings parallels Sidgwick's list in placing duties to parents alongside duties to children and wives, with duties to aid brothers and sisters closely following, and those toward more distant relatives more variable, but still prominent in most societies. Benevolence to other members of the tribe or group comes next in importance, with benevolence to outsiders often lacking entirely.

The universal importance of kinship in human societies has been recognized by one of sociobiology's strongest critics, the anthropologist Marshall Sahlins. In *The Use and Abuse of Biology* Sahlins has written: "Kinship is the dominant structure of many of the peoples anthropologists have studied, the prevailing code not only in the domestic sphere but generally of economic, political and ritual action."

Sahlins goes on to deny that this has a biological basis, pointing out that who is recognized as "kin" in different cultures often fails to correspond to strict degrees of blood relationship. Sahlins, however, takes the sociobiological thesis too narrowly. His examples show that there is generally a considerable correlation between blood relationship and acceptance of someone as "kin." There is no need for a sociobiologist to demand more. Any reasonable sociobiologist will admit that culture plays a role in the structure of human societies, and biological forces therefore cannot always take the shortest and simplest route.

Today the unconcealed racial distinction referred to in Sidgwick's final sentence strikes a discordant note; but the reality of Sidgwick's account of the degrees of benevolence holds remarkably well, considering how many other elements of Victorian morality have changed in the past century. We still think first of our immediate family, then of friends, neighbors, and more distant relatives, next of our fellow citizens generally, and last of all of those who have nothing in common with us except that they are human beings. Think of our reaction to news of a famine in Africa. Those of us who care at all may send a donation to one of the agencies trying to help: ten dollars, or fifty dollars, or perhaps even a hundred dollars. Any more would be a rare act of generosity by the standards of our society. Yet those of us fortunate enough to live in Western Europe, North America, Australia, or Japan regularly spend as much or more on holidays, new clothes, or presents for our children. If we cared about the lives and welfare of strangers in Africa as we do about our own welfare and that of our children, would we spend money on these nonessential items for ourselves instead of using it to save lives? Of course, we have lots of excuses for not sending money to Africa: we say that our contribution could only be a drop in the ocean, or that the agencies waste the money they receive, or that food handouts are no good--what is needed is development, or a social revolution, or population control. In our more honest moments, though, we recognize that these are excuses. My contribution cannot end a famine, but it can save the lives of several people who might otherwise starve. While we seize on every newspaper report of relief efforts being wasted as a justification for not giving, how many of us bother to look at the overall efficiency of aid organizations, which is, in the case of voluntary organizations, actually very high by the standards of large corporations? And if we think that not food aid, but development, or revolution, or population control is the real answer to the famine problem, why aren't we contributing to groups promoting these solutions?

I have written and lectured on the subject of overseas aid, arguing that our affluence puts us under an obligation to do much more than we are now doing to help people in real need. At the popular level, the most frequent response is that we should look after our own poor first. Among philosophers, essentially similar replies are put in a more sophisticated manner. For instance, I have been told that while we should certainly do more to prevent poverty, we ought to do nothing inconsistent with our obligation to do the best for our children--an obligation which, it turns out, includes sending them to expensive private schools and buying them ten-speed bicycles. The proposal that we might risk lessening the happiness or prospects of our own children, to however slight a degree, in order to save strangers from starvation strikes many people as not merely idealistic but positively wrong.

The preference for "our own" is understandable in terms of our evolutionary history. It is an instance of the kin altruism we observed in other animals, with an element of group altruism added. This does not mean that a society must encourage its members to act in accordance with this preference. There have recently been concerted attempts to eliminate certain forms of preference for members of one's own group. In a multiracial society, preferences for members of one's own race or ethnic group often lead to strife, and in many countries it is now considered wrong to prefer those of one's own race or ethnic group in employment, education, or housing. Sanctions are invoked against those who do it. These efforts toward racial equality meet strong resistance, as one would expect from any attempt to counter a deep-seated bias, but they have generally been successful in changing people's attitudes, as well as their actions, toward fellow citizens of different races and ethnic backgrounds.

It has long been the dream of social reformers to carry out a similar equalizing process in respect of the family, so that members of a community no longer automatically prefer the interests of members of their family to those of the community. Like so many other perennial ideas, this goes back to Plato. In the

Republic, Plato argues that unity is the greatest good in a community, and unity occurs "where all the citizens are glad or grieved on the same occasions of joy and sorrow." To bring this about, at least among the Guardians who are the rulers of Plato's ideal state, he suggests that there should be no separate households or marriages, but a form of communal marriage. Thus instead of "each man dragging any acquisition which he has made into a separate house of his own, where he has a separate wife and children and private pleasures and pains," we will have a situation in which the Guardians "are all of one opinion about what is near and dear to them, and therefore they all tend towards a common end."

In his estimate of the divisive effect of the family within a strongly collective community, Plato was right. Yonina Talmon unconsciously echoes Plato in her sociological study of Jewish collective settlements, *Family and Community in the Kibbutz*. Referring to the early pioneering days of these settlements, when the need for unity was strongest, Talmon says:

Family ties are based on an exclusive and discriminating loyalty which sets the members of one's family more or less apart from others. Families may easily become competing foci of emotional involvement that can infringe on loyalty to the collective. Deep attachment to one's spouse and children . . . may gain precedence over the more ideological and more task-oriented relations with comrades.

But Plato's optimism over the prospects of doing away with the family has not been borne out by subsequent experiments. For the reasons Talmon gives, the kibbutz movement began by strongly discouraging family attachments. Children lived together in communal houses, apart from their parents. From infancy the kibbutz provided nurses and teachers, freeing both parents for work. Meals were taken in a communal dining room, not in family units, and entertainment was communal. Children were encouraged to call their parents by their names, rather than "father" or "mother." There was a ban on couples working in the same place, and husbands and wives who spent most of their time together were viewed with scorn. Upheld by deep ideological commitment to socialism and to Jewish settlement in what was then Palestine, these extreme limits on family relations were accepted as part of the settlement's struggle against an external environment that was hostile both in respect of the difficulties of growing food and in respect of the surrounding Palestinian population. In humans as well as other animals, an external threat leads a group to be more cohesive than usual. (Compare the sacrifices readily made by all sections of the British population during the Second World War, when there was a real external threat, with the lack of response to appeals by successive British Prime Ministers for a return to "the spirit of Dunkirk" to halt Britain's economic decline.) When the survival of the entire group is at stake, our concern with our own interests is subordinated to the need to ensure that the group survives; but in more normal times, individual interests return. Perhaps groups not able thus to mobilize resources in emergencies did not survive; while individuals who did not press their own interests when the emergency was over passed on fewer descendants.

In any case, for whatever reason, once the kibbutzim became established, and the twin dangers of starvation and Arab attack receded, the ideal of unity proved insufficient to maintain the original intensity of communal feeling. The kibbutzim have survived, but they have had to come to terms with the family. Couples spend more time in their apartments, often taking their meals there; children are with their parents for much of their free time, and often sleep in the family apartment rather than the children's house; it is no longer frowned upon for couples to sit next to each other on all public occasions; children once again call their parents "father" and "mother."

The experience of the kibbutz movement parallels that of other attempts to make the community, instead of the family, the basic unit of concern. After the Bolshevik Revolution, attempts were made in the Soviet Union to carry out the call of the *Communist Manifesto* for the abolition of the family. Within twenty years Soviet policy swung around completely, and began to encourage family life. (*The Manifesto* itself, incidentally, is equivocal about abolishing the family; not surprisingly, since Marx was as devoted to his family as any father.) Some religious communities have begun by bringing up children collectively; but the family has bounced back as soon as the bloom of spiritual enthusiasm fades. Monastic settlements have achieved a more permanent suppression of the family, but a community based on strict celibacy is hardly viable on its own.

A bias toward the interests of our own family, rather than those of the community in general, is a persistent tendency in human behavior, for good biological reasons. Not every persistent human tendency, however, is universally regarded as a virtue. (Compare attitudes toward another persistent human tendency, which probably also has a biological basis, the tendency to have sexual relations with more than one partner.) Why is it that in almost every human society concern for one's family is a mark of moral excellence? Why do societies not merely tolerate but go out of their way to praise parents who put the interests of their children ahead of the interests of other members of the community? The answer may lie, not just in the universality and strength of family feeling, but also in the benefits to society as a whole that come from families taking care of themselves. When families see that the children are fed, kept clean and sheltered, that the sick are nursed and the elderly cared for, they are led by bonds of natural affection to do what would otherwise fall on the community itself and either would not be done at all or would require labor unmotivated by natural impulses. (In a large modern community, it would require an expensive and impersonal bureaucracy.) Given the much greater intensity of family feeling compared with the degree of concern we have for the welfare of strangers, ethical rules which accept a degree of partiality toward the interests of one's own family may be the best means of promoting the welfare of all families and thus of the entire community.

RECIPROCAL ALTRUISM AND HUMAN ETHICS

Though kinship is the most basic and widespread bond between human beings, the bond of reciprocity is almost as universal. In his description of the Victorian moral view, Sidgwick lists a person's duty to show kindness "to those who have rendered services to him" immediately after the duty to be kind to kinsmen. Among the Ik, the mutual-assistance pact known as *asyot* survived when the family itself was breaking up. Westermarck says: "To requite a benefit, or to be grateful to him who bestows it, is probably everywhere, at least under certain circumstances, regarded as a duty." Since Westermarck wrote, anthropologists from Marcel Mauss to Claude Levi-Strauss have continued to stress the importance of reciprocity in human life. Howard Becker, author of *Man in Reciprocity*, finds our tendency for reciprocity so universal that he has proposed renaming our species *Homo reciprocus*. After surveying these and other recent studies, the sociologist Alvin Gouldner has concluded: "Contrary to some cultural relativists, it can be hypothesized that a norm of reciprocity is universal.

It is surprising how many features of human ethics could have grown out of simple reciprocal practices like the mutual removal of parasites from awkward places that one cannot oneself reach. Suppose I want to have the lice in my hair picked out. To obtain this I am willing to pick out someone else's lice. I must, however, be discriminating in selecting whom to groom. If I help everyone indiscriminately I shall find myself grooming others who do not groom me back. To avoid this waste of time and effort I distinguish between those who repay me for my assistance and those who do not. In other words, I separate those who deal fairly with me from those who cheat. Those who do not repay me I shall mark out to avoid; indeed, I may go further still, reacting with anger and hostility. Conceivably it will benefit me and other reciprocating altruists in my group if we make sure that the worst "cheats" are unable to take advantage of any of us again; killing them or driving them away would be effective ways of doing this. For those who do all that I hope they will do, on the other hand, I will have a positive feeling that increases the likelihood of my doing my part to preserve and develop a mutually advantageous relationship.

Let us take individually these outgrowths of reciprocal altruism. The first and most crucial is the distinction between those it is worth my while to assist and those it is not. Of course, if we all wait for each other to begin, we shall never get going. Initially someone has to remove someone else's parasites without knowing if there will be a return. After a bit of this, however, the track record of each member of the group will become clear. Then I can stop helping those who have not helped me. This requires a sense of what amounts to sufficient repayment for the help I have given. If I take an hour meticulously removing every louse from someone else's head, and she refuses even to look at my head, the verdict is clear; but what if she hurries over my head in ten minutes, leaving at least some of my lice in place? No doubt the practice of reciprocal altruism can tolerate rough justice at this point, but we would expect that as human

powers of reasoning and communicating increased, decisions as to what is or is not an equitable exchange would become more precise. They would begin to take into account variations in circumstances: If, for instance, I can remove your few lice in ten minutes, should I demand that you spend the hour it would take to get rid of the multitude on my scalp? In answering this kind of question we would begin to develop a concept of fairness. More than two thousand years ago the Greek historian Polybius observed:

. . . when a man who has been helped when in danger by another does not show gratitude to his preserver, but even goes to the length of attempting to do him injury, it is clear that those who become aware of it will naturally be displeased and offended by such conduct, sharing the resentment of their injured neighbor and imagining themselves in the same situation. From all this there arises in everyone a notion of the meaning and theory of duty, which is the beginning and end of justice.

To say that the duty to repay benefits is the beginning and end of justice is an overstatement; but that it is the beginning is plausible. To "repay benefits" we should add the converse, "revenge injuries"; for the two are closely parallel and generally seen as going together. In tribal ethics the duties of gratitude and revenge often have a prominence they lack in our culture today. (I am not saying that they are not important motives in our society. They are; but we are less likely now to praise vengefulness as a virtue, and even gratitude no longer ranks as high among the virtues as it used to.)

Many tribal societies have elaborate rituals of gift-giving, always with the understanding that the recipient must repay. Often the repayment has to be superior to the original gift. Sometimes this escalation rises to such heights that people try at all costs to avoid receiving the gift, or try to pay it back immediately in order to be free of any obligation.

In the Western ethical tradition, too, gratitude and revenge have had a leading place. The investigation of justice undertaken in Plato's *Republic* gets under way by dissecting the popular view that justice consists in doing good to one's friends and harm to one's enemies. Cicero wrote that it is "the first demand of duty" that we do most for him that loves us most; "no duty is more imperative," he added, than that of proving one's gratitude. This is also the attitude to which Jesus referred in the Sermon on the Mount, when he said: "Ye have heard that it hath been said, thou shalt love thy neighbor and hate thine enemy." (Jesus proposed that we love our enemies instead of hating them, but even he found it necessary to hold out the prospect of a reward from God for doing more than publicans and sinners do.)

From our positive feelings for those who help us spring the bonds of friendship and the loyalty that we feel we owe to friends; from our negative feelings for those who do not reciprocate we get moral indignation and the desire to punish. If reciprocal altruism played a significant role in human evolution, an aversion to being cheated would be a distinct advantage. Humans have this aversion; indeed, we have it to such an extent that it often seems counterproductive. People who could not be induced to work an hour's overtime for ten dollars will spend an hour taking back defective goods worth five dollars. Nor is this lack of proportion unique to our culture. Anthropologists observing many different societies report bloody fights arising from apparently trivial causes. "It isn't the five dollars," we say in defense of our conduct, "it's the principle of the thing." No doubt the San "Bushmen" of the Kalahari say much the same when they fight over the distribution of the spoils of a hunt. But why do we care so much about the principle? One possible explanation is that while the cost of being cheated in a single incident may be very slight, over the long run constantly being cheated is much more costly. Hence it is worth going to some lengths to identify cheaters and make a complete break with them.

Personal resentment becomes moral indignation when it is shared by other members of a group and brought under a general principle. Polybius, in the passage quoted above, refers to others imagining themselves in the same situation, with the same feeling of resentment, as the victim of ingratitude. Because we can imagine ourselves in the position of others, and we can formulate general rules which deal with these cases, our personal feelings of resentment may solidify into a group code, with socially accepted standards of what constitutes adequate return for a service, and what should be done to those who cheat. Though vengeance in tribal societies is often left up to the injured party and his or her kin, there are

obvious disadvantages in this system, since both sides will often see themselves as having been wronged, and the feud may continue to everyone's loss. To avoid this, in most societies blood feuds have been replaced by settled community procedures for hearing evidence in disputes, and pronouncing an authoritative verdict that all parties must obey.

Reciprocal altruism may be especially important within a group of beings who can reason and communicate as humans can, for then it can spread from a bilateral to a multilateral relationship. If I help you, but you do not help me, I can of course cease to help you in the future. If I can talk, however, I can do more. I can tell everyone else in the group what sort of a person you are. They may then also be less likely to help you in future. Conversely, the fact that someone is a reliable reciprocator may also become generally known, and make others readier to help that person. "Having a reputation" is only meaningful among creatures who communicate in a sophisticated manner; but when it develops, it immensely increases the usefulness of reciprocal altruism. If I have once saved a person from drowning, and am later in need of rescue myself, I will be lucky indeed if the very person I rescued is within earshot. So if my heroic deed is known only to the person I saved, it is unlikely to have future benefits. If, on the other hand, my saving someone increases the likelihood of any member of the community coming to my assistance, the chances of my altruism redounding to my own advantage are much better.

That the practice of reciprocal altruism should be the source of many of our attitudes of moral approval and disapproval, including our ideas of fairness, cheating, gratitude, and retribution, would be easier to accept if it were not that this explanation seems to put these attitudes and ideas on too self-interested a footing. Reciprocal altruism seems not really altruism at all; it could more accurately be described as enlightened self-interest. One might be a fully reciprocating partner in this practice without having the slightest concern for the welfare of the person one helps. Concern for one's own interests, plus the knowledge that exchanges of assistance are likely to be in the long-term interests of both partners, is all that is needed. Our moral attitudes, however, demand something very different. If I am drowning in a raging surf and a stranger plunges in and rescues me, I shall be very grateful; but my gratitude will diminish if I learn that my rescuer first calculated the probability of receiving a sizable reward for saving my life, and took the plunge only because the prospects for the reward looked good. Nor is it only gratitude that diminishes when self-interested motives are revealed; moral approval is always warmest for acts which show either spontaneous concern for the welfare of others or else a conscientious desire to do what is right. Proof that an action we have praised had a self-interested motive almost always leads us to withdraw or qualify our praise.

Early in the previous chapter, we accepted a definition of altruism in terms of behavior--"altruistic behavior is behavior which benefits others at some cost to oneself"--without inquiring into motivation. Now we must note that when people talk of altruism they are normally thinking not simply of behavior but also of motivation. To be faithful to the generally accepted meaning of the term, we should redefine altruistic behavior as behavior which benefits others at some initial cost to oneself, and is motivated by the desire to benefit others. To what extent human beings are altruistically motivated is a question I shall consider in a later chapter. Meanwhile we should note that according to the common meaning of the term, which I shall use from now on, an act may in fact benefit me in the long run, and yet--perhaps because I didn't foresee that the act would redound to my advantage--still be altruistic because my intention was to benefit someone else.

Robert Trivers has offered a sociobiological explanation for our moral preference for altruistic motivation. People who are altruistically motivated will make more reliable partners than those motivated by self-interest. After all, one day the calculations of self-interest may turn out differently. Looking at the shabby clothes I have left on the beach, a self-interested potential rescuer may decide that the prospects of a sizable reward are dim. In an exchange in which cheating is difficult to detect, a self-interested partner is more likely to cheat than a partner with real concern for my welfare. Evolution would therefore favor people who could distinguish self-interested from altruistic motivation in others, and then select only the altruistic as beneficiaries of their gifts or services.

Psychologists have experimented with the circumstances that lead people to behave altruistically, and their results show that we are more ready to act altruistically toward those we regard as genuinely altruistic than to those we think have ulterior motives for their apparently altruistic acts. As one review of the literature concludes: "When the legitimacy of the apparent altruism is questioned, reciprocity is less likely to prevail." Another experiment proved something most of us know from our own attitudes: we find genuine altruism a more attractive character trait than a pretense of altruism covering self-interested motives.

Here an intriguing and important point emerges; if there are advantages in being a partner in a reciprocal exchange, and if one is more likely to be selected as a partner if one has genuine concern for others, there is an evolutionary advantage in having genuine concern for others. (This assumes, of course, that potential partners can see through a pretense of altruism by those who are really self-interested--something that is not always easy, but which we spend a lot of time trying to do, and often can do. Evolutionary theory would predict that we would get better at detecting pretense, but at the same time the performance of the pretenders would improve, so the task would never become a simple one.)

This conclusion is highly significant for understanding ethics, because it cuts across the tendency of sociobiological reasoning to explain behavior in terms of self-interest or the interests of one's kin. Properly understood, sociobiology does not imply that behavior is actually motivated by the desire to further one's own interests or those of one's kin. Sociobiology says nothing about motivation, for it remains on the level of the objective consequences of types of behavior. That a piece of behavior in fact benefits oneself does not mean that the behavior is motivated by self-interest, for one might be quite unaware of the benefits to oneself the behavior will bring. Nevertheless, it is a common assumption that sociobiology implies that we are motivated by self-interest, not by genuine altruism. This assumption gains credibility from some of the things sociobiologists write. We can now see that sociobiology itself can explain the existence of genuinely altruistic motivation. The implications of this I shall take up in a later chapter, but it may be useful to make the underlying mechanism more explicit. This can be done by reference to a puzzle known as the Prisoner's Dilemma.

In the cells of the Ruritanian secret police are two political prisoners. The police are trying to persuade them to confess to membership in an illegal opposition party. The prisoners know that if neither of them confesses, the police will not be able to make the charge stick, but they will be interrogated in the cells for another three months before the police give up and let them go. If one of them confesses, implicating the other, the one who confesses will be released immediately but the other will be sentenced to eight years in jail. If both of them confess, their helpfulness will be taken into account and they will get five years in jail. Since the prisoners are interrogated separately, neither can know if the other has confessed or not.

The dilemma is, of course, whether to confess. The point of the story is that circumstances have been so arranged that if either prisoner reasons from the point of view of self-interest, she will find it to her advantage to confess; whereas taking the interests of the two prisoners together, it is obviously in their interests if neither confesses. Thus the first prisoner's self-interested calculations go like this: "If the other prisoner confesses, it will be better for me if I have also confessed, for then I will get five years instead of eight; and if the other prisoner does not confess, it will still be better for me if I confess, for then I will be released immediately, instead of being interrogated for another three months. Since we are interrogated separately, whether the other prisoner confesses has nothing to do with whether I confess--our choices are entirely independent of each other. So whatever happens, it will be better for me if I confess." The second prisoner's self-interested reasoning will, of course, follow exactly the same route as the first prisoner's, and will come to the same conclusion. As a result, both prisoners, if self-interested, will confess, and both will spend the next five years in prison. There was a way for them both to be out in three months, but because they were locked into purely self-interested calculations, they could not take that route.

What would have to be changed in our assumptions about the prisoners to make it rational for them both to refuse to confess? One way of achieving this would be for the prisoners to make an agreement that would bind them both to silence. But how could each prisoner be confident that the other would keep the

agreement? If one prisoner breaks the agreement, the other will be in prison for a long time, unable to punish the cheater in any way. So each prisoner will reason: "If the other one breaks the agreement, it will be better for me if I break it too; and if the other one keeps the agreement, I will still be better off if I break it. So I will break the agreement."

Without sanctions to back it up, an agreement is unable to bring two self-interested individuals to the outcome that is best for both of them, taking their interests together. What has to be changed to reach this result is the assumption that the prisoners are motivated by self-interest alone. If, for instance, they are altruistic to the extent of caring as much for the interests of their fellow prisoner as they care for their own interests, they will reason thus: "If the other prisoner does not confess it will be better for us both if I do not confess, for then between us we will be in prison for a total of six months, whereas if I do confess the total will be eight years; and if the other prisoner does confess it will still be better if I do not confess, for then the total served will be eight years, instead of ten. So whatever happens, taking our interests together, it will be better if I don't confess." A pair of altruistic prisoners will therefore come out of this situation better than a pair of self-interested prisoners, *even from the point of view of self-interest*

Altruistic motivation is not the only way to achieve a happier solution. Another possibility is that the prisoners are conscientious, regarding it as morally wrong to inform on a fellow prisoner; or if they are able to make an agreement, they might believe they have a duty to keep their promises. In either case, each will be able to rely on the other not confessing and they will be free in three months.

The Prisoner's Dilemma shows that, paradoxical as it may seem, we will sometimes be better off if we are not self-interested. Two or more people motivated by self-interest alone may not be able to promote their interests as well as they could if they were more altruistic or more conscientious.

The Prisoner's Dilemma explains why there could be an evolutionary advantage in being genuinely altruistic instead of making reciprocal exchanges on the basis of calculated self-interest. Prisons and confessions may not have played a substantial role in early human evolution, but other forms of cooperation surely did. Suppose two early humans are attacked by a sabertooth cat. If both flee, one will be picked off by the cat; if both stand their ground, there is a very good chance that they can fight the cat off; if one flees and the other stands and fights, the fugitive will escape and the fighter will be killed. Here the odds are sufficiently like those in the Prisoner's Dilemma to produce a similar result. From a self-interested point of view, if your partner flees your chances of survival are better if you flee too (you have a 50 percent chance rather than none at all) and if your partner stands and fights you still do better to run (you are sure of escape if you flee, whereas it is only probable, not certain, that together you and your partner can overcome the cat). So two purely self-interested early humans would flee, and one of them would die. Two early humans who cared for each other, however, would stand and fight, and most likely neither would die. Let us say, just to be able to put a figure on it, that two humans cooperating can defeat a sabertooth cat on nine out of every ten occasions and on the tenth occasion the cat kills one of them. Let us also say that when a sabertooth cat pursues two fleeing humans it always catches one of them, and which one it catches is entirely random, since differences in human running speed are negligible in comparison to the speed of the cat. Then one of a pair of purely self-interested humans would not, on average, last more than a single encounter with a sabertooth cat; but one of a pair of altruistic humans would on average survive ten such encounters.

If situations analogous to this imaginary sabertooth cat attack were common, early humans would do better hunting with altruistic comrades than with self-interested partners. Of course, an egoist who could find an altruist to go hunting with him would do better still; but altruists who could not detect--and refuse to assist--purely self-interested partners would be selected against. Evolution would therefore favor those who are genuinely altruistic to other genuine altruists, but are not altruistic to those who seek to take advantage of their altruism. We can add, again, that the same goal could be achieved if, instead of being altruistic, early humans were moved by something like a sense that it is wrong to desert a partner in the face of danger.

GROUP ALTRUISM AND HUMAN ETHICS

In the previous chapter we saw that most sociobiologists believe kin selection and reciprocity to have been more significant forces in evolution than group selection; nevertheless, we found some grounds for believing that group selection might have played a role. Whether or not group selection has been significant among non-human animals, when we look at human ethical systems the case for group selection is much stronger, although in view of the clear interest each society has in promoting devotion to the group, it is here even harder than in other cases to disentangle biological and cultural influences. What can be said for the biological side is that early humans lived in small groups, and these groups were at least sometimes reproductively isolated from each other by geography or mutual hostility; thus the conditions necessary for selection on a group basis existed. Cultural influences probably enhanced the tendency toward group altruism, by punishing those who put their own interests too far ahead of the interests of the group, and rewarding those who make sacrifices for the group.

In placing group altruism after kin and reciprocal altruism we are following, once more, Sidgwick's hierarchy of the degrees of benevolence. He reports the morality of his day as placing the duty to be benevolent "to neighbours and to fellow-countrymen" immediately after the duty to be benevolent to friends, and before the duty to be benevolent to members of our own race. That we have a duty to assist the poor of our own neighborhood or nation before we assist the poor of another neighborhood or country is still a popular sentiment. It is part of the common belief that we should look after "our own" before we make efforts to help the starving overseas. I have already mentioned this view in connection with the ties of kinship, but once the obligations of kinship are fulfilled the boundaries of "our own" expand to the next largest community with which we identify, whether this be a local or regional grouping, or an affiliation based not on living in the same area but on a shared characteristic like ethnic or class background, or religious belief. Beyond this priority of concern for the welfare of members of our particular group, there is also a loyalty to the group as a whole which is distinct from loyalty to individual members of the group. We tend to identify with a group, and see its fortunes as to some degree our fortunes. The distinction is easily seen at the national level, where "patriotism" describes a loyalty to one's nation that has little to do with helping individual fellow citizens.

Like kin altruism and reciprocal altruism, group altruism is a strong and pervasive feature of human life. When people live in small kinship groups, kin altruism and group altruism overlap; but the ethical codes of larger societies almost always contain elements of distinctively group altruism. It is very common for tribal societies to combine a high degree of altruism within the tribe with overt hostility to members of neighboring tribes. Similarly strong feelings of loyalty to one's group have been reported by anthropologists from many different cultures. The ancient Greeks particularly praised devotion to one's city-state, and we have seen how Plato thought that state loyalty should take precedence over family loyalty, at least among his Guardians. Cicero, in a characteristic piece of Roman rhetoric, wrote:

Parents are dear; dear are children, relatives, friends; but one's native land embraces all our loves; and who that is true would hesitate to give his life for her, if by his death he could render her a service?

The persistence of group loyalty in modern times was only too clearly demonstrated by Hitler's success in arousing the nationalistic feelings of the German people, and Stalin's need to appeal to "Mother Russia" rather than the defense of Communism to rally the citizens of the Soviet Union to the war effort. In a less sinister way we can witness the appeal of group loyalty every weekend by watching the behavior of the crowds at football games.

Our ethical codes reflect our group feelings in two ways, corresponding to the difference between group altruism manifested as a preference for altruism directed toward individual members of one's own group, and group altruism manifested as loyalty to the group as a whole. We have seen the group bias of our ethics in respect to the first of these—the widespread and socially approved attitude that the obligation to assist people in other countries is much weaker than the obligation to assist our fellow citizens. The group bias of our ethics in respect to loyalty to the group as a whole shows itself in the high praise we give to patriotism.

Why is it that "my country, right or wrong!" can be taken seriously? Why do we regard patriotism as a virtue at all? We disapprove of selfish behavior, but we encourage group selfishness, and gild it with the name "patriotism." We erect statues to those who fought and died for our country, irrespective of the merits of the war in which they fought. (One of the reasons why Robert E. Lee, leader of the Confederate Army in the Civil War, is such an admired figure in American history is that he put his loyalty to his native Virginia above his publicly stated moral doubts about slavery.)

Patriotism has had its critics, among them many of the most enlightened and progressive thinkers. Diogenes the Cynic declared himself to be the citizen not of one country but of the whole world. Stoic philosophers like Seneca and Marcus Aurelius also argued that our loyalty should be to the world community, not to the state in which we happen to be born. Voltaire, Goethe, and Schiller espoused similar ideals of world, rather than national, citizenship. Yet patriotism has proved difficult to dislodge from its high place among the conventionally accepted virtues. The explanation for this could be that patriotism rests, at least in part, on a biological basis; but the explanation could also be cultural. Culture can itself be a factor in the evolutionary process, those cultures prevailing which enhance the group's prospect of survival. The prevalence of patriotism could easily be explained in this manner.

That cultural and biological factors interact is something that should be borne in mind throughout our discussion of the biological basis of ethics. Biological and cultural explanations of human behavior are not inconsistent unless, foolishly, we try to insist that one of these two is the sole cause of a complex piece of behavior. With certain exceptions, that is unlikely. Culture may intensify, soften, or perhaps under special conditions altogether suppress genetically based tendencies. Earlier in this chapter I referred to the extent to which practices based on racial and ethnic group feeling have been softened or eliminated by changes in attitudes. Here we have a clear example of something that may well have some biological basis--but also contains a strong cultural component--being altered by a cultural change. In a multiracial society, strong racial feelings are a disadvantage; strong patriotic feelings, however, are not.

One other cautionary note before I bring this chapter to a close: Up to this point our discussion has been purely descriptive. I have been speculating about the origins of human ethics. No ethical conclusions flow from these speculations. In particular, the suggestion that an aspect of human ethics is universal, or nearly so, in no way justifies that aspect of human ethics. Nor does the suggestion that a particular aspect of human ethics has a biological basis do anything to justify it. Because there is so much misunderstanding of the connection between biological theories about ethics and ethical conclusions themselves, the task of examining claims about this connection needs a chapter to itself.