rights of others to how 'to lead a moral life which includes obligations to myself and my family and people in general.' The problem then becomes one of limiting responsibilities without abandoning moral concern. When asked to describe herself, this woman says that she values 'having other people that I am tied to, and also having people that I am responsible to. I have a very strong sense of being responsible to the world, that I can't just live for my enjoyment, but just the fact of being in the world gives me an obligation to do what I can to make the world a better place to live in, no matter how small a scale that may be on.' Thus while Kohlberg's subject worries about people interfering with each other's rights, this woman worries about 'the possibility of omission, of your not helping others when you could help them.'

The issue that this woman raises is addressed by Jane Loevinger's fifth 'autonomous' stage of ego development, where autonomy, placed in a context of relationships, is defined as modulating an excessive sense of responsibility through the recognition that other people have responsibility for their own destiny. The autonomous stage in Loevinger's account witnesses a relinquishing of moral dichotomies and their replacement with 'a feeling for the complexity and multifaceted character of real people and real situations'[1] Whereas the rights conception of morality that informs Kohlberg's principled level (stages five and six) is geared to arriving at an objectively fair or just resolution to moral dilemmas upon which all rational persons could agree, the responsibility conception focuses instead on the limitations of any particular resolution and describes the conflicts that remain.

Thus it becomes clear why a morality of rights and noninterference may appear frightening to women in its potential justification of indifference and unconcern. At the same time, it becomes clear why, from a male perspective, a morality of responsibility appears inconclusive and diffuse, given its insistent contextual relativism. Women's moral judgments thus elucidate the pattern observed in the description of the developmental differences between the sexes, but they also provide an alternative conception of maturity by which these differences can be assessed and their implications traced. The psychology of women that has consistently been described as distinctive in its greater orientation toward relationships and interdependence implies a more contextual mode of judgment and a different moral understanding. Given the differences in women's conceptions of self and morality, women bring to the life cycle a different point of view and order human experience in terms of different priorities.

[*In a Different Voice: Psychological Theory and Women's Development* (Harvard University Press: Cambridge, Mass., 1982), 6–22.]

[2] Jane Loevinger and Ruth Wessler, *Measuring Ego Development* (Jossey-Bass: San Francisco, 1970), 6.

Section B

Common Themes in Primate Ethics

INTRODUCTION

The ancient Greeks cremated their dead. The Greek historian Herodotus tells how Darius, King of Persia, once asked some Greeks how much he would have to pay them to induce them to eat their fathers' dead bodies. They were shocked by the question, and would not do so for any sum of money. Darius then called in some Indians, whose custom it was to eat the bodies of their parents, and asked them how much they wanted to burn their fathers' bodies. The Indians implored Darius not to mention so dire a deed. The story illustrates the existence of diversity in ethics, but also of the interest that this diversity holds for Darius, for Herodotus, and, down through the centuries, for the modern reader.

Perhaps, however, in being so impressed by diversity, we overlook the more significant common elements in ethics. There seems to be a popular belief that the taboo on incest is the only moral rule that holds everywhere. The reality is that some much more significant ethical principles carry weight in virtually every human community. These include: obligations on members of a family to support their kin; obligations of reciprocity, to return favours done and gifts received; and constraints on sexual relationships. The readings in this section illustrate the widespread acceptance of these obligations and constraints from the time of Hammurabi to our own times, from the China of Confucius to the Melanesian islanders of the Western Pacific, and from the !Kung people of the Kalahari to Martin Luther. (The '!' indicates a kind of clicking noise that precedes the initial letter.) These common elements of human ethics manifest themselves in even the most unpromising circumstances, as Tony Ashworth shows in his study of reciprocity across the opposed trench lines of World War I. The precise form of the obligations or constraints varies from one society to another, but the significance of these universals lies in the fact that obligations of kinship, reciprocity, and sexual relationships form the core of all human ethical systems—and they also guide the behaviour of our close non-human relatives.

The scientific approach to the origin of ethics that began with *The Descent of Man* has become much more sophisticated in the past two decades. So in seeking the origins of the social rules that apply across a wide range of primate societies, we can now turn to evolutionary theory. Our knowledge

of genetics makes the existence of obligations between kin totally unsurprising; it also offers a possible explanation for the widespread 'double standard' of sexual morality, which judges female promiscuity more harshly than similar conduct by males. With regard to the evolution of co-operation, biological scientists have been able to draw on findings from another area of thought, known variously as decision theory, rational choice theory, or game theory. The work of Robert Trivers on reciprocal altruism broke new ground here; and Robert Axelrod's ingenious explorations of a situation known as the Prisoner's Dilemma (to be found in the selection from Axelrod that appears below) give us a sharper insight into the logic of reciprocity. This in turn helps to explain why reciprocity is found amongst all social mammals with long memories who live in stable communities and recognize each other as individuals; a description that has applied to human beings for most of their evolutionary history. It also shows that an ethic of 'turn the other cheek' is not only impracticable, but positively harmful.

To pursue questions about the origins and nature of ethics without looking at the full range of possible explanations is to remain wilfully ignorant. Yet, for most of this century, philosophers writing on ethics have focused on what other philosophers writing on ethics have written. The discipline has become ingrown, scrutinizing narrowly framed questions that can be advanced by careful reasoning and argument, while ignoring whole bodies of knowledge about the nature of ethics that have accumulated in other fields of study. Against that background, the readings in this section suggest a case for a change of direction. I write 'suggest' deliberately: the readings are no more than snapshots, taken almost at random, of the ethical practices of different societies. Much more work would need to be done to explore the suggested common themes of primate ethics. Then, when that was done, and we had drawn together all that we know about the nature of primate ethics, we would still have to make a serious attempt to incorporate this knowledge into our philosophical understanding of the subject.

At the same time, we must be careful to establish exactly what it is that the evolutionary explanations show, and what relevance they have to questions about how we ought to live. Attempts to deduce a 'scientific ethics' from the theory of evolution go back to the first reviews of Darwin's *Origin of Species*. Darwin himself rejected the idea that his theory can in any way support the view that 'might makes right', or that 'more evolved' means better. Some of his followers, however, have been so excited by the ability of their discipline to explain some aspects of human behaviour that they have leapt to embrace sweeping claims about the ability of science to eliminate or replace ethics entirely. Such claims are unfounded. We are thinking beings, able to make choices about what we do, choices that are based on our values. No recital of biological facts can dictate to us what our

values must be (though we may well want to take such facts into account in our reflections on why we hold the values we do hold, and on the likely consequences of our choices). But the extravagant claims of some over enthusiastic evolutionary theorists should not lead us to ignore the valuable insights that evolutionary theory can provide. As long as we remain on the level of the explanation of ethics, rather than the justification of a particular view about what we ought to do, evolutionary theory has an important role to play in helping us to understand the characteristics common to primate ethics, and why ethics exists at all.

i. Kinship

JANE GOODALL

13 Helping Kin in Chimpanzees

July 1974. Observer Eslom Mpongo followed Madam Bee as she headed slowly for Kahama Stream. Her two daughters, young adult Little Bee and adolescent Honey Bee, were far ahead along the trail that led to a stand of *Saba florida* vines with their large, lemonlike fruits. Madam Bee looked old and sick. Her arm, paralyzed by polio, dragged and several half-healed wounds were visible on her back, head, and one leg. It was very hot that summer, and food was relatively scarce so that the chimpanzees sometimes had to travel considerable distances from one feeding place to the next. Again and again Madam Bee stopped to rest. When soft food calls indicated that the two young females had arrived at the food site, Madam Bee moved a little faster; but when she got there, it seemed that she was too tired or weak to climb. She looked up at her daughters, then lay on the ground and watched as they moved about, searching for ripe fruits. After about ten minutes Little Bee climbed down. She carried one of the fruits by its stem in her mouth and had a second in one hand. As she reached the ground, Madam Bee gave a few soft grunts. Little Bee approached, also grunting, and placed the fruit from her hand on the ground beside her mother. She then sat nearby and the two females ate together.

[L]et me give some examples of helping and altruism in chimpanzee society. An early report is that of Savage and Wyman (1843–44).[1] They describe how a female chimpanzee jumped hastily down from a tree when approached by hunters, but then returned for her infant. She 'took him into her arms, at which moment she was shot.' At Gombe a mother will risk severe punishment by attacking an adult male who is harming her child (during a charging display, for instance). Melissa even leaped at alpha male Mike as he dragged her infant during excitement; he let go of the infant and attacked Melissa. Another time, when the high-ranking and unusually aggressive adult male Humphrey attacked the adolescent Little Bee, her mother and younger sister both hurled themselves at the aggressor—who fled! There are many occasions when an infant or juvenile tries to help his or her mother when she is being attacked. Sometimes this merely involves following at a distance and uttering loud waa-barks, but there are occasions when a child will actually hit or bite the aggressor, even when this is an adult male.

[1] T. S. Savage and J. Wyman, 'Observations on the External Character and Habits of the *Troglodytes niger* Geoff., and on its Organization', *Boston Journal of Natural History*, 4 (1843–4), 362–6.

Adults of either sex are likely to go to the aid of their mothers if they happen to be nearby. Goblin once ran some 200 meters when he heard the loud screams of his mother, Melissa, who was being attacked by another female. When he arrived, he displayed toward and attacked his mother's aggressor. Adult males often support their younger siblings, especially brothers, during aggressive incidents: thus Faben and Jomeo frequently hurried to help Figan and Sherry, respectively. Evered was very supportive of his grown sister, Gilka, and almost always intervened on her behalf if he was in the vicinity when she got into social difficulties. Other adult males too occasionally aided their sisters.

[*The Chimpanzees of Gombe* (Harvard University Press: Cambridge, Mass., 1986), 357, 376–7.]

EDWARD WESTERMARCK

14 A Universal Duty

There is one duty so universal and obvious that it is seldom mentioned: the mother's duty to rear her children, provided that they are suffered to live. Another duty—equally primitive, I believe, in the human race—is incumbent on the married man: the protection and support of his family. [. . .]

The parents' duty of taking care of their offspring is, in the first place, based on the sentiment of parental affection. That the maternal sentiment is universal in mankind is a fact too generally admitted to need demonstration; not so the father's love of his children. Savage men are commonly supposed to be very indifferent towards their offspring; but a detailed study of facts leads us to a different conclusion. It appears that, among the lower races, the paternal sentiment is hardly less universal than the maternal, although it is probably never so strong and in many cases distinctly feeble. But more often it displays itself with considerable intensity even among the rudest savages. In the often-quoted case of the Patagonian chief who, in a moment of passion, dashed his little son with the utmost violence against the rocks because he let a basket of eggs which the father handed to him fall down, we have only an instance of savage impetuosity. The same father would, at any other time, have been the most daring, the most enduring, and the most self-devoted in the support and defence of his child. Similarly the Central Australian natives, in fits of sudden passion, when hardly knowing what they do, sometimes treat a child with great severity; but as a rule, to which there are very few exceptions, they are kind and considerate to their children, the men as well as the women carrying them when they get tired on the march, and always seeing that they get a good share of any food. All authorities agree that the Australian Black is affectionate to

his children. 'From observation of various tribes in far distant parts of Australia,' says Mr Howitt, 'I can assert confidently that love for their children is a marked feature in the aboriginal character. I cannot recollect having ever seen a parent beat or cruelly use a child; and a short road to the goodwill of the parents is, as amongst us, by noticing and admiring their children. No greater grief could be exhibited, by the fondest parents in the most civilised community at the death of some little child, than that which I have seen exhibited in an Australian native camp, not only by the immediate parents, but by the whole related group.' Other representatives of the lowest savagery, as the Veddahs and Fuegians, are likewise described as tender parents. Though few peoples have acquired a worse reputation for cruelty than the Fijians, even the greatest censurer of their character admits that the exhibition of parental love among them 'is sometimes such as to be worthy of admiration'; whilst, according to another authority, 'it is truly touching to see how parents are attached to their children.' The Bangala of the Upper Congo, 'swayed one moment by a thirst for blood and indulging in the most horrible orgies, . . . may yet the next be found approaching their homes looking forward with the liveliest interest to the caresses of their wives and children.' Carver asserts that he never saw among any other people greater proofs of parental or filial tenderness than among the North American Naudowessies. Among the Point Barrow Eskimo 'the affection of parents for their children is extreme'; and the same seems to be the case among the Eskimo in general. Concerning the Aleuts Veniaminof wrote long ago:—'The children are often well fed and satisfied, while the parents almost perish with hunger. The daintiest morsel, the best dress, is always kept for them.' Mr Hooper, again, found parental love nowhere more strongly exemplified than among the Chukchi; 'the natives absolutely doat upon their children.' Innumerable facts might indeed be quoted to prove that paternal affection is not a late product of civilisation, but a normal feature of the savage mind as it is known to us. [. . .]

We have further to consider the duty of assisting brothers and sisters and more distant relatives. Among the Aleuts, says Veniaminof, a brother 'must always aid his brother in war as well as in the chase, and each protect the other; but if anybody, disregarding this natural law, should go to live apart, caring only for himself, such a one should be discarded by his relatives in case of attack by enemies or animals, or in time of storms; and such dishonourable conduct would lead to general contempt.' Among the Point Barrow Eskimo 'the older children take very good care of the smaller ones'; and of the Sia Indians (Pueblos) we are told that 'a marked trait is their loving kindness and care for younger brothers and sisters.' Dr Schweinfurth writes:—'Notwithstanding . . . that certain instances may be alleged which seem to demonstrate that the character of the Dinka is unfeeling, these cases never refer to such as are bound by the ties of kindred. Parents do not desert their children, nor are brothers faithless to brothers, but are ever prompt to render whatever aid is possible.' I presume that these examples of fraternal relations may, on the whole, be regarded as expressive of universal facts. According to Confucius, the love which brother should bear to brother is second only to that which is due from children to parents.

The duty of assisting more distant relatives is much more variable. It may be said that, as a general rule, among savages and barbarians—with the exception, perhaps, of those who live in small family-groups—as also among the peoples of archaic culture, this duty is more prominent and extends further than amongst ourselves. The blood-tie has much greater strength, related families keep more closely together for mutual protection and aid.

[*The Origin and Development of the Moral Ideas* (Macmillan: London, 1906), i. 526–39.]

DAVID BARASH

15 The Genetic Basis of Kinship

A number of years ago, the great biologist J. B. S. Haldane was asked one day in a pub if he would give up his life for his brother. No, said Haldane, he wouldn't do that, but he would sacrifice himself for *three* brothers or, failing that, nine cousins. His reasoning: humans share one-half their genes with brothers (or sisters), one-quarter with half-siblings, one-eighth their genes with cousins, and so forth. Therefore, any gene that influenced its carrier to risk its body in order to save three brothers (or nine cousins) would result in making more copies of itself than would be lost, even if the individual died in the attempt. Each of us is likely to have more copies of our own genes in the bodies of three siblings or nine cousins than we have within ourselves. In most cases, of course, the choices are not nearly so stark as life and death. But, any time a behavior involves a cost in terms of fitness, we are justified in looking for a benefit in terms of fitness. (Both costs and benefits are measured in the same way, in units of fitness—numbers of genes projected into future generations.)

Actually, relatedness between two individuals is not the only factor determining whether one will be altruistic toward the other. There are two other important considerations: the cost to the altruist in performing the act and the benefit derived by the recipient. Kin selection is a rather complex equation. If we could eavesdrop on a gene's advice to its body, it would go something like this: 'You should be more inclined to help someone the more closely related to him you are. At the same time, you should be more inclined to help him if he really will benefit from it and less inclined if the risk to you is high.' Expressing it quantitatively, we can say

that for altruism to evolve via kin selection, the benefit gained by the recipient multiplied by the proportion of genes shared by the would-be altruist and recipient must exceed the cost in fitness suffered by the altruist. This in a nutshell, was Hamilton's great insight. Living things tend to maximize their *inclusive fitness*: the total of their reproductive success through their offspring *plus* that of their relatives. Of course, in maximizing its inclusive fitness, each living thing is expected to devalue relatives proportionately as they are more distantly related—that is, as they share fewer genes with the would-be altruist. A brother or child 'counts' one-half as much as one's self, a cousin one-eighth, and so on.

Does this mean that genes must be good at elementary algebra? Absolutely not. The fact is that evolution has done the arithmetic during the many long generations of every species' history. In the course of time, some genes have directed their bodies to make bad choices, that is, they made errors in solving the critical equation that includes costs, benefits and relatedness. These error-prone genes have left fewer descendants than those whose calculations were more accurate. The result is that we and everything else that lives might not get A's in arithmetic, but we behave as though we are mathematical geniuses. We are selected to do the right things although we may not know why. We are very calculating creatures: How do I love thee? Let me count thy genes.

Before considering ourselves in some detail, let us look at a few more animal examples of genetically selfish altruism. Imagine you are a prairie dog peacefully nibbling at the edge of your colony. There are other prairie dogs nearby, similarly occupied. Suddenly you see a hawk: what do you do? The safest thing, of course, is to hightail it for the nearest burrow, and, indeed, that is what most prairie dogs do. In addition, however, they often give an alarm call that alerts the others. By doing so, they have conferred a benefit on these others, who now have a greater chance of escaping. However, in alerting the other prairie dogs, the alarmists have suffered a personal cost, since they made themselves more conspicuous to the predator and used time calling that might have been time spent running away.

Imagine two prairie dogs: a caller and a non-caller. The altruistic caller stands a better chance of dying (and therefore not reproducing) than the non-caller, who selfishly keeps quiet and therefore is more likely to survive and reproduce. Doesn't that suggest that calling is therefore selected against? Wouldn't there be fewer callers in succeeding generations? Yet, alarm calling in small rodents is very common. When would we expect natural selection to favor the evolution of such apparent altruism? Clearly, when the benefit is high, the cost is low, and the relatedness between alarmer and hearers is high enough to make the equation give a positive fitness benefit to alarmist genes. We have every reason to believe that this is exactly what happens, and although not all hearers and callers are necessarily related,

enough are to permit the system to evolve. In point of fact, though, calling is generally reserved for situations in which relatives are nearby.

Round-tailed ground squirrels are rodents similar in many ways to prairie dogs. The males wander quite a bit, especially in the spring, and if we look at a colony of these animals in the spring, we'll find that the males are likely to be unrelated to their neighbors. What happens when a predator appears? You guessed it: Christopher Dunford of the University of Arizona observed twenty-five alarm-calling episodes, between January and April: of these, twenty-three were performed by females. There is a further test. The young are born later in the year, and by summer those juveniles remaining near their mothers are surrounded by close kin. At this point, more than coincidentally, males are as likely as females to give alarms. Zoologist Paul Sherman of the University of California, Berkeley, has found similar results in an intensive study of another species of ground squirrel. Reproducing females do more alarm calling than those without offspring nearby; those with living relatives nearby do more than those without; residents do more than transients; and females generally do more than males. As you might expect, males in this species live far from their relatives (male animals are often less likely to associate with relatives, probably because males tend to be the more competitive sex), whereas females live nearby. [. . .]

In its most extreme form, the converse of altruism is probably antagonism, resulting in a reduction in the fitness of the victim. Japanese monkeys don't usually hurt each other seriously. But it is significant that, when they do, the aggressor is usually a non-resident and non-relative. Closer to home, pre-industrial human societies are often at war—not the organized full-scale wars of conquest that we practice in our 'advanced' societies, but rather a continuing pattern of feuds and skirmishes. And, no less than among Japanese monkeys, kinship counts. These human hostilities are especially difficult to halt, since they often seek to avenge 'blood debts' incurred in the past. A killing requires revenge, and all relatives on each side must help. Of course, successful revenge demands further revenge from the most recently injured party, and so it continues. Although this system of kin avenging kin is somewhat hard on its victims, it does serve as a damper to massively destructive antagonisms, since everyone concerned knows that injustice visited upon someone else will be a cause for retaliation. Each individual is in a sense protected by his or her own network of relatives. For this reason particularly, young women of many tropical Amazonian tribes are terrified of being married to a man in a distant village—among strangers, they will have no relatives to defend them from their husband's likely brutality.

We all live within a very real and personalized fabric of relatedness, most densely woven near ourselves and progressively thinner as we move away. Accordingly, we expect—and find—the greatest altruism within our

immediate family, less among those to whom we are less closely related, and finally perhaps, outright antagonism toward (and from) strangers. We can all recognize this pattern in our daily lives. We *give* Christmas presents to those that are close to us, without reckoning what we get in return; we *exchange* cards with those we know but don't 'love'; and as for a total stranger such as a merchant, we may have little compunction about cheating him—or he us—when either party can get away with it. We are hardly alone in this pattern. University of Michigan anthropologist Marshall Sahlins has shown that among non-industrialized societies, something close to selfless altruism prevails within a household and to a lesser extent among more distant relatives; tit-for-tat holds within the village or the larger ethnic group; and interactions between villages or tribes may be frankly exploitative. The close fit between the expectations of sociobiology and the facts of human social behavior is especially striking when we consider that Sahlins's description was not developed with evolutionary considerations in mind. [. . .]

So the sharing of genes appears to be crucial for certain aspects of social behavior. Although groups of living things can reside together without sharing genes, they are unlikely in such cases to show much in the way of altruistic behavior. On the other hand, when genetic relatedness is high, altruism is to be expected.

My dictionary defines nepotism as 'favoritism shown towards a relative, on the basis of relationship.' Webster and his associates were not sociobiologists and neither are most people, but we are all carriers of genes that have scored well on their evolutionary cost-benefit calculations. This is, in part, probably why nepotism is a virtually universal human trait. Kinship is a basic organizing principle in all human cultures. It is the backbone that supports *Homo sapiens* society, and sociobiology provides a coherent explanation for why: we maximize our inclusive fitness when we treat relatives differently from strangers. Obviously, not every peculiar detail of human social life is determined by the requirements of our inclusive fitness, but biology does provide the underlying matrix—the cake—on top of which human cultural diversity lavishes the icing. What could be more natural?

[*The Whisperings Within* (Harper and Row: New York, 1979), 135–41.]

ii. Reciprocity

FRANS DE WAAL

16 Chimpanzee Justice

The influence of the recent past is always overestimated. When we are asked to name the greatest human inventions we tend to think of the telephone, the electric light bulb and the silicon chip rather than the wheel, the plough and the taming of fire. Similarly the origins of modern society are sought in the advent of agriculture, trade and industry, whereas in fact our social history is a thousand times older than these phenomena. It has been suggested that food sharing was a strong stimulus in furthering the evolution of our tendency to reciprocal relations. Would it not be more logical to assume that social reciprocity existed earlier, and that tangible exchanges such as food sharing stem from this phenomenon?

Be this as it may, there are indications of reciprocity in the non-material behaviour of chimpanzees. This is seen, for instance, in their coalitions (A supports B, and vice versa), non-intervention alliances (A remains neutral if B does the same), sexual bargaining (A tolerates B mating after B has groomed A) and reconciliation blackmail (A refuses to have contact with B unless B 'greets' A). It is interesting that reciprocity occurs in both the negative and the positive sense. Nikkie's habit of individually punishing females who a short time before joined forces against him has already been described. In this way he repaid a negative action with another negative action. We regularly see this mechanism in operation before the group separates for the night. This is the time when differences are squared, no matter when these differences may have arisen. For example, one morning a conflict breaks out between Mama and Oor. Oor rushes to Nikkie and with wild gestures and exaggeratedly loud screams persuades him to attack her powerful opponent. Nikkie attacks Mama and Oor wins. That evening, however, a good six hours later, we hear the sound of a scuffle in the sleeping quarters. The keeper later tells me that Mama has attacked Oor in no uncertain manner. Needless to say Nikkie was nowhere in the vicinity. [. . .]

The principle of exchange makes it possible actively to teach someone something: good behaviour is rewarded, bad behaviour is punished. A development in the relationship between Mama and Nikkie demonstrates just how complex such influencing processes can be. Their relationship is ambivalent. There are numerous indications that the two of them are very fond of each other. For example, when Mama returned to the group after

an absence of over a month, she spent hours grooming Nikkie, and not Gorilla, Jimmie, Yeroen or any of the other individuals with whom she normally spends her time. And of all the children in the colony Moniek, Mama's daughter, is obviously Nikkie's favourite. But for a while it was the hostile side of their relationship which got the upper hand. This was at the beginning of Nikkie's leadership. Yeroen used to mobilize adult females against the young leader and Mama was his major ally. At the end of such incidents, when Nikkie had been reconciled with Yeroen, he would go over to Mama to punish her for the part she had played. This could take a very long time, because Mama usually punished Nikkie in return by rejecting his subsequent attempts at reconciliation. For instance, Nikkie slaps Mama, but a little later he comes back and sits down by her 'shyly' plucking at some wisps of grass. Mama pretends she has not seen him, gets up and walks off. Nikkie waits a while, then starts all over again, with his hair on end. This was clearly a phase of negative reciprocity.

As Yeroen's resistance to Nikkie decreased, Mama became more favourably inclined towards Nikkie. She still supported Yeroen, but when Nikkie made his peace with her later she no longer took any 'affective revenge' and their conflict remained brief. Later still—a process taking years—Mama reconciled her differences with Nikkie before his conflict with Yeroen had ended. One moment the two older apes were chasing after Nikkie, the next moment Mama affectionately embraced him. The conflict then continued between the two males, but Mama declined to take any further part.

In time the situation became even stranger. Nikkie began kissing Mama before or even during his display against Yeroen. This developed gradually from their reconciliations, until it took place without any preceding conflict. It could be seen as a mark of Mama's neutrality. Nikkie and Mama were showing positive reciprocity.

I have done a statistical study of the bilateral nature of coalitions by comparing how each individual intervenes in the conflicts of the others. In periods of stability such interventions are symmetrical, both in a positive sense (two individuals support each other) and in a negative sense (two individuals support each other's opponents). If we are to get a full picture of reciprocity, however, we will have to analyse more kinds of behaviour. Interventions need not necessarily be offset by other interventions. The receipt of regular support may be answered by greater tolerance towards the supporter, or by grooming. Perhaps we will eventually be able to conduct such an analysis in Arnhem. For the time being I should like to sum up as follows: chimpanzee group life is like a market in power, sex, affection, support, intolerance and hostility. The two basic rules are 'one good turn deserves another' and 'an eye for an eye, a tooth for a tooth'.

The rules are not always obeyed and flagrant disobedience may be punished. This happened once after Puist had supported Luit in chasing Nikkie. When Nikkie later displayed at Puist she turned to Luit and held out her hand to him in search of support. Luit, however, did nothing to protect her against Nikkie's attack. Immediately Puist turned on Luit, barking furiously, chased him across the enclosure and even hit him. If her fury was in fact the result of Luit's failure to help her after she had helped him, this would suggest that reciprocity among chimpanzees is governed by the same sense of moral rightness and justice as it is among humans.

[*Chimpanzee Politics* (Jonathan Cape: London, 1982), 205–7.]

TONY ASHWORTH

17 Live and Let Live

Live and let live was a truce where enemies stopped fighting by agreement for a period of time: the British let the Germans live provided the Germans let them live in return. Essentially, the term live and let live denoted a process of reciprocal exchange among antagonists, where each diminished the other's risk of death, discomfort and injury by a deliberate restriction of aggressive activity, but only on condition that the other requited the restraint. The 'profound difference' between the quiet sector and the active sector was, therefore, the exchange of peace, according to the rules of live and let live on the former, and the exchange of aggression according to the rules of kill or be killed[1]—the high command policy for normal trench war—upon the latter. The quietness of a sector did not signify either a social void or vacuum between enemies but the replacement of one form of exchange with the enemy by another, which trench fighters found more consistent with their needs.

Truces were usually tacit, but always unofficial and illicit. The agreement between antagonists was unspoken and expressed in certain actions—or non-actions—which were meaningful to front fighters but not always to others. Truces were illegal at all times for they were neither created nor legitimated by authority but explicitly forbidden. The unofficial policy of live and let live was the antithesis of the official kill or be killed.

The size of truces varied considerably. The smallest truce involved only two adversaries, chatting, perhaps, after a chance meeting in no-man's-land, like that described in his diary by an officer of the 24th division:

> Visited the sentry posts at 7 a.m. and at the bottom of the largest crater I found Pte Bates . . . who was rather undersized and comical looking . . . fraternising with a German . . . The following was their conversation. Bates: 'What rank are you in

[1] Lord Wavell, himself a trench fighter, used the phrase 'kill or be killed' to describe the official trench war policy. See R. H. Kiernan, *Wavell* (George Harrap: London, 1945), 173.