Jane Goodall, In the Shadow of Man, 1971.

## MAN'S INHUMANITY

A S THE BARBED ARROW sank into her flesh, Flo lurched and staggered, clinging to the branch. Flint clung to her, screaming in fright, and the blood from his mother's wound slowly dropped down onto his face. As I watched, unable to move, unable to call out, Flo put a hand to her side and stared as if in disbelief at the blood. Then, in slow motion she fell—down, down, down... Flint, like a limpet, still clung to her dying body and they hit the ground together with a sickening thud.

As the grinning human mask approached, white teeth gleaming in ebony face, Flo gave one final convulsive heave and then was still. Screaming, fighting, biting, Flint was pushed into the dank, evil-smelling sack, down, down, down. Yet even in the darkness I could see the black shadow of the man...

I woke in a cold sweat with the blanket over my face. So vivid was the nightmare that I could not sleep again. Yes—a nightmare. But it does happen, over and over, in parts of West and Central Africa. In many areas chimpanzee flesh is a much prized delicacy and there are horrifying tales of infant chimps tied up beside the sliced-up bodies of their mothers in the meat market, on sale for fattening and future consumption by the protein-starved Africans. Also, chimpanzee infants are in great demand by the medical research laboratories of Europe and the United States and, God forgive us, this is the way we capture them, too—by shoot-

ing their mothers. How many mothers must creep away through the dense upper canopy of the forest mortally wounded and die later so that their doomed infants are orphaned? How many babies that survive both the shot and the crash to the ground must die within the first few days of capture, shattered and desolate? I estimate that for every live infant that arrives in the Western world an average of six others have lost their lives.

There is another shadow that is spreading over the chimpanzee today: with the spread of agriculture and forestry, the habitat as well as the life of the chimpanzee is threatened. Forests are cleared to make way for cultivation and food trees are poisoned to leave more space for better timber trees. Moreover, since chimps are susceptible to all the infectious diseases of man, wherever their populations are near new human settlements the apes are endangered by epidemics.

Fortunately, some people are waking to the dangers threatening chimpanzees in the wild. The enlightened governments of Uganda and Tanzania offer protection to their chimpanzee populations, and a recent international conservation meeting agreed to put these apes on their list of endangered species needing protection. Programs are being set up in order that chimpanzees needed for research can be bred in captivity, and if large and successful colonies can be established for this purpose it will do much to relieve the constant drain on wild populations. The chimpanzee is only one of the many species threatened with extinction in the wild; but he is, after all, our closest living relative and it would be tragic if when our grandchildren are grown the chimpanzee exists only in the zoo and the laboratory - a frightening thought, since for the most part the chimpanzee in captivity is very different from the magnificent creature we know so well in the wild.

Many zoos today are beginning to display their chimpanzees in groups in fairly spacious enclosures, although there are still many apes imprisoned in the old-fashioned concrete and barred cells. One summer I came to know two old zoo chimpanzees, a male and a female. They were housed in a very small cage with an indoor and an outdoor section separated by a steel door. It was very hot that summer, and though they were kept outside with the dividing door closed there was no awning when the sun was overhead and the concrete burned to the touch. The chimps had no branch to sit on, only a very small wooden shelf that held one of them at a time; it was always the male who sat on this shelf when the sun was hot. They were fed only twice a day—once in the early morning and once in the late afternoon. Their water supply was normally finished by ten o'clock in the morning but it was not replenished.

How long ago, I thought as I watched them, they must have forgotten the vines, the soft ground, the swinging in the branches, and the excitement of rushing through the forest clinging to their mothers' bodies. By now their only pleasure probably lay in their food, but they could not enjoy the fishing for juicy insects, or the flavor of fresh-caught meat and never again could they climb, with grunts of pleasure, to eat their fill of sun-ripened fruit in a cool forest tree. Also, how long the gap between meals must be for animals who by nature like to eat on and off throughout the day. Except for feeding, they had nothing to do save listlessly groom each other or themselves. They could not even escape from each other, these two, not even for one minute; the male could never relax in the comfort of male companionship and the female could never get away from male society.

A chimpanzee in such a zoo is probably somewhat similar to a human who has been in prison for many years and has no hope of release. Even in a better zoo, where the chimpanzee may be part of a slightly larger group and have a bigger concrete enclosure, he is a very different creature from the chimpanzee we know at the Gombe Stream. The zoo chimpanzee, unless in a very large, imaginative enclosure with a highly compatible social group, has none of the calm dignity, the serenity of gaze, or the purposeful individuality of his wild counterpart. Typically, he develops odd stereotypes in his behavior. As he walks he may give one hand a slight rotation to the side, always the same hand, always to the same side. After shuffling across the confined space of his cage he may hit the iron frame of his door, always in the same place in the same way with the same rhythm. It is a pitiful vestige of the magnificent and impressive charging display of the wild male chimpanzee.

Most people are only familiar with the zoo or the laboratory chimpanzee. This means that even those who work closely with chimpanzees, such as zookeepers or research scientists, can have no concept or appreciation of what a chimpanzee *really* is. Which is, perhaps, why so many scientific laboratories maintain chimpanzees in conditions that are appalling, housed singly for the most part in small metal barred cells with nothing to do day in and day out except to await some new, and often terrifying or painful, experiment.

Recent work by physiologists and biochemists has shown that biologically—in the number and form of chromosomes, blood proteins, immune responses, DNA or genetic material, and so on—chimpanzees are extremely close to humans. They are more closely related to us than they are to gorillas. We share, with chimpanzees, ninety-nine percent of our genetic material. It is because of this similarity that medical science makes use of the living bodies of chimpanzees in its search for cures and vaccines for a variety of human diseases.

There are also, of course, behavioral, psychological, and emotional similarities between chimpanzees and humans. In these respects, the resemblances are so striking that they raise a serious ethical question: are we justified in using an animal so close to us—an animal, moreover, that is highly endangered in its African forest home—as a human substitute in medical experimentation?

In the long run, we hope that scientists will find ways of exploring human disease, and of testing cures and vaccines, that do

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steps in this direction already have been taken. But until alternatives are found, medical science will continue to use animals, including chimpanzees, in the battle against human suffering. And unfortunately, the conditions in most biomedical laboratories using chimpanzees are far from adequate; in some cases the conditions are, in my opinion, criminal. In the United States, for example, chimpanzees are often housed individually, one chimp to a cage, the standard minimum size of which is about five feet by five feet and about six feet high. Because federal requirements for cage size are dependent on body size, infant chimpanzees, who are the most active, are often imprisoned in the smallest cages. And the cages are bleak and sterile: there is nothing for the chim-

If we are to continue using chimpanzees for our own end, then it is imperative that we fight to improve this state of affairs. The chimpanzee should be an honored guest in the laboratory. His living space should be large; he should be provided with equipment to alleviate his boredom, with tempting and tasty food; and, above all, he should be housed with companions. Caretakers should be selected for qualities of patience, understanding, and compassion.

panzees to do. These conditions are worse than those in which,

today, we imprison the most hardened of criminals.

Sometimes I feel that the only way in which we might effect an improvement in the condition of most laboratory chimpanzees would be to take those responsible for their upkeep to see the chimpanzees of Gombe.

## FAMILY POSTSCRIPT

## August 1970

Eventually the detailed understanding of chimpanzee behavior that will result from our long-term research at the Gombe will help man in his attempts to understand more of himself. Hugo and I are convinced of this. Yet it is not only for this reason that we continue our work year in, year out; we are also fascinated by the chimpanzees as individual beings. We want to know how Fifi, whom we first knew as a small infant, will look after her own children; whether Flo survives to be a grandmother, and if so how she will react to Fifi's infant; what happens to Flint when his mother finally dies; whether Figan one day may become topranking male. In effect, we want to continue observing the chimpanzees for similar reasons to those which impel one to read on to the end of an exciting novel.

These days we cannot spend too much time at the Gombe because we have a child of our own, and, as I mentioned earlier, chimpanzees have been known to prey on small human children. When our own son, little Hugo-better known as Grublin or Grub-was very small, we kept him inside a building in a cage up at the observation area. When Rodolf and Humphrey and young Evered looked in through the windows and rattled the bars, with their hair on end and their mouths tight-lipped and