

## THE GREAT APE PROJECT

*If there is a single person who has made people appreciate that chimpanzees are individuals with different personalities and complex social relationships, that person is Jane Goodall. Her book In the Shadow of Man, based on her long familiarity with a community of chimpanzees in the Gombe region of Tanzania, was an international bestseller. More recently she has also published a detailed academic study of chimpanzees, The Chimpanzees of Gombe, as well as the popular Through a Window. In the following statement of her reasons for supporting the Declaration on Great Apes, Goodall draws on more than thirty years' experience of observing chimpanzees and thinking about the human-chimpanzee relationship.*

When, in the early 1960s, I brazenly used such words as 'childhood', 'adolescence', 'motivation', 'excitement', and 'mood' I was much criticised. Even worse was my crime of suggesting that chimpanzees had 'personalities'. I was ascribing human characteristics to non-human animals and was thus guilty of that worst of ethological sins – anthropomorphism. Certainly anthropomorphism can be misleading, but it so happens that chimpanzees, our closest living relatives in the animal kingdom, do show many human characteristics. Which, in view of the fact that our DNA differs from theirs by only just over 1 per cent, is hardly surprising.

Each chimpanzee has a unique personality and each has his or her own individual life history. We can speak of the history of a chimpanzee community, where major events – an epidemic, a kind of primitive 'war', a 'baby boom' – have marked the 'reigns' of the five top-ranking or alpha males we have known. And we find that individual chimpanzees can make a difference to the course of chimpanzee history, as is the case with humans. I wish there was space to describe here some of these characters and events, but the information, for those interested, can be found in my most recent book, *Through a Window*.<sup>1</sup>

Chimpanzees can live more than fifty years. Infants suckle and are carried by their mothers for five years. And then, even when the next infant is born, the elder child travels with his or her mother for another three or four years and continues to spend a good deal of time with her thereafter. The ties between family members are close, affectionate and supportive, and typically endure throughout life. Learning is important in the individual life cycle. Chimpanzees, like humans, can learn by observation and imitation, which means that if a new adaptive pattern is 'invented' by a particular individual, it can be passed on to the next generation. Thus we find that while the various chimpanzee groups that have been studied in different parts of Africa have many behaviours in common, they also have their own distinctive traditions. This is particularly well documented with respect to tool-using and tool-making

Goodall, Jane. *Chimpanzees – Bridging the Gap*. Eds. Paola Cavaleiri and Peter Singer, *The Great Ape Project: Equality Beyond Humanity*, published 1993, London: Fourth Estate, reproduced with permission.



## THE GREAT APE PROJECT

behaviours. Chimpanzees use more objects as tools for a greater variety of purposes than any creature except ourselves and each population has its own tool-using cultures. For example, the Gombe chimpanzees use long, straight sticks from which the bark has been peeled to extract army ants from their nests; 100 miles to the south, in the Mahale Mountains, there are plenty of the same ants, but they are not eaten by the chimpanzees. The Mahale chimpanzees use small twigs to extract carpenter ants from their nests in tree branches; these ants, though present, are not eaten at Gombe. And no East African chimpanzee has been seen to open hard-shelled fruits with the hammer and anvil technique that is part of the culture of chimpanzee groups in West Africa.

The postures and gestures with which chimpanzees communicate – such as kissing, embracing, holding hands, patting one another on the back, swaggering, punching, hair-pulling, tickling – are not only uncannily like many of our own, but are used in similar contexts and clearly have similar meanings. Two friends may greet with an embrace and a fearful individual may be calmed by a touch, whether they be chimpanzees or humans. Chimpanzees are capable of sophisticated co-operation and complex social manipulation. Like us, they have a dark side to their nature: they can be brutal, they are aggressively territorial, sometimes they even engage in a primitive type of warfare. But they also show a variety of helping and care-giving behaviours and are capable of true altruism.

The structure of the chimpanzee brain and central nervous system is extraordinarily like ours. And this appears to have led to similar emotions and intellectual abilities in our two species. Of course, it is difficult to study emotion even when the subjects are human – I can only guess, when you *say* you are sad and *look* sad, that you *feel* rather as I do when I am sad. I cannot know. And when the subject is a member of another species, the task is that much harder. If we ascribe human emotion to nonhuman animals we are, of course, accused of anthropomorphism. But given the similarities in the anatomy and wiring of the chimpanzee and human brains, is it not logical to assume that there will be similarities also in the feelings, emotions and moods of the two species? Certainly all of us who have worked closely with chimpanzees over extended periods of time have no hesitation in asserting that chimpanzees, like humans, show emotions similar to – sometimes probably identical to – those which we label joy, sadness, fear, despair and so on.

Our own success as a species (if we measure success by the extent to which we have spread across the world and altered the environment to suit our immediate purposes) has been due entirely to the explosive development of the human brain. Our intellectual abilities are so much more sophisticated than those of even the most gifted chimpanzees that



## THE GREAT APE PROJECT

early attempts made by scientists to describe the similarity of mental process in humans and chimpanzees were largely met with ridicule or outrage. Gradually, however, evidence for sophisticated mental performances in the apes has become ever more convincing. There is proof that they can solve simple problems through process of reasoning and insight. They can plan for the immediate future. The language acquisition experiments have demonstrated that they have powers of generalisation, abstraction and concept-forming along with the ability to understand and use abstract symbols in communication. And they clearly have some kind of self-concept.

It is all a little humbling, for these cognitive abilities used to be considered unique to humans: we are not, after all, quite as different from the rest of the animal kingdom as we used to think. The line dividing 'man' from 'beast' has become increasingly blurred. The chimpanzees, and the other great apes, form a living bridge between 'us' and 'them', and this knowledge forces us to re-evaluate our relationship with the rest of the animal kingdom, particularly with the great apes. In what terms should we think of these beings, nonhuman yet possessing so very many human-like characteristics? How should we treat them?

Surely we should treat them with the same consideration and kindness as we show to other humans; and as we recognise human rights, so too should we recognise the rights of the great apes? Yes – but unfortunately huge segments of the human population are *not* treated with consideration and kindness, and our newspapers inform us daily of horrific violations of human rights in many countries around the world.

Still, things have got better in some Western-style democracies. During the past 100 years we have seen the abolition of enforced child and female labour, slavery, the exhibiting of deformed humans in circuses and fairs and many other such horrors. We no longer gather to gloat over suffering and death at public hangings. We have welfare states so that (theoretically) no one needs to starve or freeze to death and everyone can expect some help when they are sick or unemployed. Of course there are still a myriad of social injustices and abuses, but at least they are not publicly condoned by the government and, once public sympathy has been aroused, they are gradually addressed. We are trying, for example, to abolish the last traces of the old sadism in mental institutions.

Finally, there is a growing concern for the plight of nonhuman animals in our society. But those who are trying to raise levels of awareness regarding the abuse of companion animals, animals raised for food, zoo and circus performers, laboratory victims and so on, and lobbying for new and improved legislation to protect them, are constantly asked how they can devote time and energy, and divert public monies, to 'animals' when there is so much need among human beings. Indeed, in many parts of the world humans suffer mightily. We are anguished when we read of the millions of starving and homeless people, of police tortures, of children whose limbs are deliberately deformed so that they can make a living from begging, and those whose



Goodall, Jane. *Chimpanzees – Bridging the Gap*. Eds. Paola Cavalieri and Peter Singer, *The Great Ape Project: Equality Beyond Humanity*, published 1993, London: Fourth Estate, reproduced with permission.

## THE GREAT APE PROJECT

parents force them – even sell them – into lives of prostitution. We long for the day when conditions improve worldwide – we may work for that cause. But we should not delude ourselves into believing that, so long as there is human suffering, it is morally acceptable to turn a blind eye to nonhuman suffering. Who are we to say that the suffering of a human being is more terrible than the suffering of a nonhuman being, or that it matters more?

It is not so long ago, in historical perspective, that we abolished the slave trade. Slaves were taken from 'savage' tribes that inhabited remote corners of the earth. Probably it was not too difficult for slave traders and owners to distance themselves, psychologically, from these prisoners, so unlike any people their 'masters' had known before. And although they must have realised that their slaves were capable of feeling pain and suffering, why should that matter? Those strange, dark, heathen people were so *different* – not really like human beings at all. And so their anguish could be ignored. Today we know that the DNA of all ethnic groups of humans is virtually the same, that we are all – yellow, brown, black and white – brothers and sisters around the globe. From our superior knowledge we are appalled to think back to the intelligent and normally compassionate people who condoned slavery and all that it entailed. Fortunately, thanks to the perceptions, high moral principles and determination of a small band of people, human slaves were freed. And they were freed *not* because of sophisticated analysis of their DNA, but because they so obviously showed the same emotions, the same intellectual abilities, the same capacity for suffering and joy, as their white owners.

Now, for a moment, let us imagine beings who, although they differ genetically from *Homo sapiens* by about 1 per cent and lack speech, nevertheless behave similarly to ourselves, can feel pain, share our emotions and have sophisticated intellectual abilities. Would we, today, condone the use of those beings as slaves? Tolerate their capture and export from Africa? Laugh at degrading performances, taught through cruelty, shown on our television screens? Turn a blind eye to their imprisonment, in tiny barren cells, often in solitary confinement, even though they had committed no crimes? Buy products tested on them at the cost of their mental or physical torture?

Those beings exist and we *do* condone their abuse. They are called chimpanzees. They are imprisoned in zoos, sold to anyone who cares to buy them as 'pets', and dressed up and taught to smoke or ride bicycles for our entertainment. They are incarcerated and often tortured, psychologically and even physically, in medical laboratories in the name of science. And this is condoned by governments and by large numbers of the general public. There was a time when the victims in the labs would have been human; but thanks to a dedicated few who stood up to the establishment and who gradually informed the general public of the horrors being perpetrated behind closed doors, the insane and other unfortunates are now safe from the white-coated gods. The time has come when we must take the next step and protect our closest living relatives from exploitation. How can we do this?

## THE GREAT APE PROJECT

*For twenty years Francine Patterson has been communicating with Koko, a gorilla. Patterson began to study communication with Koko by means of sign language in 1972. Basing her thesis on this work, she received her doctorate in developmental psychology from Stanford University in 1979. Today she serves as President of the Gorilla Foundation, which she and her associates founded in 1976. This organisation, which serves as a trust on behalf of Koko and two other gorillas, Michael and Ndume, is currently working to establish a preserve in Hawaii where gorillas will be able to live semi-free in a protected natural environment. Wendy Gordon has worked at the Gorilla Foundation since 1990 as a research assistant, working regularly with both Koko and Michael; before that she spent four years as a zoo volunteer, educating the public about gorillas. This chapter describes some of the interaction in the 'multi-species family' of gorillas and the human beings who live and work with them.*

We present this individual for your consideration:

She communicates in sign language, using a vocabulary of over 1,000 words. She also understands spoken English, and often carries on 'bilingual' conversations, responding in sign to questions asked in English. She is learning the letters of the alphabet, and can read some printed words, including her own name. She has achieved scores between 85 and 95 on the Stanford-Binet Intelligence Test.

She demonstrates a clear self-awareness by engaging in self-directed behaviours in front of a mirror, such as making faces or examining her teeth, and by her appropriate use of self-descriptive language. She lies to avoid the consequences of her own misbehaviour, and anticipates others' responses to her actions. She engages in imaginary play, both alone and with others. She has produced paintings and drawings which are representational. She remembers and can talk about past events in her life. She understands and has used appropriately time-related words like 'before', 'after', 'later', and 'yesterday'.

She laughs at her own jokes and those of others. She cries when hurt or left alone, screams when frightened or angered. She talks about her feelings, using words like 'happy', 'sad', 'afraid', 'enjoy', 'eager', 'frustrate', 'mad' and, quite frequently, 'love'. She grieves for those she has lost – a favourite cat who has died, a friend who has gone away. She can talk about what happens when one dies, but she becomes fidgety and uncomfortable when asked to discuss her own death or the death of her companions. She displays a wonderful gentleness with kittens and other small animals. She has even expressed empathy for others seen only in pictures.



## THE GREAT APE PROJECT

Does this individual have a claim to basic moral rights? It is hard to imagine any reasonable argument that would deny her these rights based on the description above. She is self-aware, intelligent, emotional, communicative, has memories and purposes of her own, and is certainly able to suffer deeply. There is no reason to change our assessment of her moral status if I add one more piece of information: namely that she is not a member of the human species. The person I have described – and she is nothing less than a person to those who are acquainted with her – is Koko, a twenty-year-old lowland gorilla.

For almost twenty years, Koko has been living and learning in a language environment that includes American Sign Language (ASL) and spoken English.<sup>1</sup> Koko combines her working vocabulary of over 500 signs into statements averaging three to six signs in length. Her emitted vocabulary – those signs she has used correctly on one or more occasions – is about 1,000. Her receptive vocabulary in English is several times that number of words.

Koko is not alone in her linguistic accomplishments. Her multi-species 'family' includes Michael, an eighteen-year-old male gorilla. Although he was not introduced to sign language until the age of three and a half, he has used over 400 different signs. Both gorillas initiate the majority of their conversations with humans and combine their vocabularies in creative and original sign utterances to describe their environment, feelings, desires and even what may be their past histories. They also sign to themselves and to each other, using human language to supplement their own natural communicative gestures and vocalisations.

Many of those who would defend the traditional barrier between *Homo sapiens* and all other species cling to language as the primary difference between humans and other animals. As apes have threatened this last claim to human uniqueness, it has become more apparent that there is no clear agreement as to the definition of language. Many human beings – including all infants, severely mentally impaired people and some educationally deprived deaf adults of normal intelligence – fail to meet the criteria for 'having language' according to any definition. The ability to use language may not be a valid test for determining whether an individual has rights. But the existence of even basic language skills does provide further evidence of a consciousness which deserves consideration.

## THE GREAT APE PROJECT

Gorillas have suffered from a reputation for aloofness, low level of motivation and a contrary nature. Such gorilla stubbornness and negativism have been encountered and documented in our work with Koko and Michael, but certain findings indicate that this is evidence of intelligence and independence rather than of stupidity. And it is just this ornery independence that seems to spark episodes of humour and verbal playfulness. A characteristic incident involved Koko and assistant Barbara Hiller. Koko was nesting with a number of white towels and signed, 'THAT RED', indicating one of the towels. Barbara corrected Koko, telling her that it was white. Koko repeated her statement with additional emphasis, 'THAT RED'. Again Barbara stated that the towel was white. After several more exchanges, Koko picked up a piece of red lint, held it out to Barbara and, grinning, signed, 'THAT RED'.

The gorillas also communicate new meanings by making up their own entirely new signs. The intended meanings of some of the gorillas' invented nouns have been obvious ('nailfile', 'eyemakeup', 'barrette') because of their iconic form. The meanings of more abstract words such as verbs and prepositions ('above', 'below', 'take-off'), have to be worked out over time from records of the situations in which they occurred.

An analysis of the 876 signs emitted by Koko during the first ten years of the project<sup>4</sup> revealed that fifty-four signs, 6 per cent of her total emitted vocabulary, were her own inventions. Another 2 per cent (fifteen signs) were compounded by Koko from signs she was taught. Originally, only ten signs (1 per cent) were counted as natural gorilla gestures. New data from detailed observations of the gestures used by uninstructed gorillas indicates that these categories are fluid, and some of Koko's inventions are shared by other gorillas.

We have often noticed Koko giving an audible chuckling sound at the result of her own and her companions' discrepant statements or actions. She discovered that when she blew bugs on her companions, a predictable shrieking and jumping response could be elicited. Originally, she laughed at this outcome, but now she chuckles in anticipation of the prank as well. Accidents and unexpected actions by others can also cause Koko to laugh. Chuckles were evoked, for instance, by a research assistant accidentally sitting down on a sandwich and by another playfully pretending to feed sweets to a toy alligator. Developmental psychologists have found that the earliest form of humour in young children, incongruity-based humour, relies on similar principles of discrepancy applied to objects, actions and verbal statements.



## THE GREAT APE PROJECT

In stark contrast to the gorillas' ability to express humour is their ability to communicate their thoughts and feelings about death. When Koko was seven, one of her teachers asked, 'When do gorillas die?' and she signed, 'TROUBLE, OLD.' The teacher also asked, 'Where do gorillas go when they die?' and Koko replied, 'COMFORTABLE HOLE BYE.' When asked 'How do gorillas feel when they die – happy, sad, afraid?' she signed, 'SLEEP'. Koko's reference to holes in the context of death has been consistent and is puzzling since no one has ever talked to her about burial, nor demonstrated the activity. That there may be an instinctive basis for this is indicated by an observation at the Woodland Park Zoo in Seattle, Washington. The gorillas there came upon a dead crow in their new outdoor enclosure, and one dug a hole, flicked the crow in, and covered it with dirt.<sup>7</sup>

In December of 1984 a tragic accident indicated the extent to which gorillas may grieve over the death of their loved ones. Koko's favourite kitten, All Ball, slipped out of the door and was killed by a speeding car. Koko cried shortly after she was told of his death. Three days later, when asked, 'Do you want to talk about your kitty?' Koko signed, 'CRY'. 'What happened to your kitty?' Koko answered, 'SLEEP CAT'. When she saw a picture of a cat who looked very much like All Ball, Koko pointed to the picture and signed, 'CRY, SAD, FROWN'. Her grief was not soon forgotten.

*17 March 1985, with Francine Patterson*

F: How did you feel when you lost Ball?

K: WANT.

F: How did you feel when you lost him?

K: OPEN TROUBLE VISIT SORRY.

F: When he died, remember when Ball died, how did you feel?

K: RED RED RED BAD SORRY KOKO-LOVE GOOD.

Arthur Caplan argues that animal interests and human interests should not be counted equally, claiming that nonhuman animals lack certain traits that make a moral difference. He uses the following example to illustrate his point:

If you kill the baby of a baboon the mother may spend many weeks looking for her baby. This behaviour soon passes and the baboon will go on to resume her normal life. But if you kill the baby of a human being the mother will spend the rest of her life grieving over the loss of her baby. Hardly a day will go by when the mother does not think about and grieve over the loss of her baby.<sup>8</sup>

## THE GREAT APE PROJECT

But in this example the comparison is between outward behaviour in the case of the baboon mother, and a private mental state in the case of the human mother. In most such cases, the human mother also resumes her normal life: returning to her workplace, caring for her other children, going about her daily activities as before. Her grief is not necessarily apparent to the casual observer. Because the baboon mother cannot (or chooses not to) communicate *to us* her internal feelings about the death of her baby, it is assumed that it does not matter to her. While we cannot make any claims here about the emotional life of baboons, we have considerable evidence that Koko continues to mourn the loss of her adopted 'baby', All Ball, even years after his death.

19 March 1990

Koko comes across a picture of herself and All Ball in a photo album.

K: THAT BAD FROWN SORRY [emphatic] UNATTENTION.

Through conversations such as these the gorillas show not only that they are capable of experiencing emotions, but that they are aware of their emotions and can use language to describe them.

While we are a long way from any comprehensive understanding of natural gorilla communication, it is clear that non-signing gorillas use gestures to communicate with one another. Field researchers may not have always recognised the significance of semantic gestures used by free-living gorillas, because they were unfamiliar with the gorillas' communicative habits or with gestural communication in general, or because the presence of human observers inhibits the gorillas' normal behaviour. Recognition of semantically significant gestures and sounds becomes easier as we become more familiar with gorillas as communicators.

Perhaps our most interesting findings relate to how astonishingly like us gorillas are – or how like them we are. But the striking similarities between gorillas and humans are hardly surprising in light of the most recent studies of our genetic kinship. The scientific classification of living organisms is based on the apparent similarities between those organisms. Within the order Primates, human beings have always been set apart in a separate family. More recent studies involving comparisons of chromosomes and analysis of DNA leave little doubt that apes and humans should be classed together in the family *Hominidae*. Some researchers now propose that humans, gorillas and chimpanzees also belong in the same subfamily, though the arrangement within this subfamily is still to be determined.<sup>13</sup>

Through what they have taught us about gorillas, Koko and Michael are helping to change the way we view the world. They force us to re-examine the ways we think about other animals.

