

WE CAN CHANGE THE WORLD

BUILDING BRIDGES OF HOPE

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On 11 November 2006 Jane Goodall visited the Nanzan Institute and delivered a public lecture to a full house on the campus of Nanzan University. What follows is a literal transcript of her talk. The event, which coincided with an ongoing dialogue between science and religion at the Institute, was made possible through the kind auspices of Dr. Matsuzawa Tetsurō, Japan's leading primatologist and a collaborator in the dialogue. Elsewhere in this year's Bulletin, Paul Swanson, who is spearheading the discussions, provides the wider context for Dr. Goodall's visit.

Thank you all for coming. Unfortunately I can't speak Japanese, and some of you can't speak English, so I'm going to start off by giving you a greeting in the chimpanzee language, which one or two people here can understand: Whoooh, whooh, whooh, whooh, ohfu, ohfu, ohfu, oooh, oooh, whoooooh (laughter). That's the "distance" greeting. I often think how extraordinarily lucky I was that when I saved up all my money and got to Africa, I met the famous anthropologist Dr. Louis Leakey, who offered me the opportunity to study not just any animal, but chimpanzees, who are more like us than any other living creature. Since 1960 when I began, all the information we have been collecting makes them seem more and more like us. They all have their vivid and unique personalities just as we do. They have brains that are more like ours than anything else, so obviously they can show intellectual abilities that we used to think are unique to humans. As you have heard, they have emotions, they have a sense of humor, they have a sense of self.

The reason it was so extraordinary that I was offered the chimpanzees to study is that at the time I had no degree of any sort. I arrived from England and I'd been to high school. And yet Louis Leakey gave me this opportunity. It was such a crazy idea, really, for this young, untrained girl to go out into this pos-



sibly dangerous jungle of Africa, that it was very hard to find money to start that study, and eventually Louis got the money for just six months. I had dreamed about going to Africa and living with animals since I was a small child. Although when I got to the Gombe National Park, which is on the shores of Lake of Tanganyika, I was living in my dream, I became increasingly worried as weeks turned to months, and I still hadn't seen anything really exciting. The chimps would take one look at me and run away. It was the amazing observation of the chimpanzee using pieces of grass to fish termites from out of their underground nest that enabled Louis Leakey to go to National Geographic Society and get money for me to continue this study.

Of course, since I began, many other chimpanzee field studies have started in different parts of Africa, and many of them are carried out by Japanese primatologists. We now know that wherever different chimpanzees are being studied, there are different tool-using behaviors. It is very clear now that these behaviors are passed on from one generation to the next, through observation, imitation, and practice. And this is the definition of human culture. So one by one all the things that are supposed to make us so different from all the other animals—chimpanzees have shown they can do them, too. Indeed as Dr. Matuzawa has found with his studies of Ai and her brilliant son Ayumu in the Kyoto Primate Research Institute, there are some things that chimpanzees can do better than us intellectually.

What has fascinated me right from the beginning was what seems to happen in the development of infants and their relationships as they grow up with their mothers. The relationship between the family members—between the mother and her growing offspring, and between maternal brothers and sisters—is absolutely fascinating. In fact, it turns out that in the chimpanzee society, as in human society, there are good mothers and bad mothers. And the kind of maternal behavior makes a very big difference in the subsequent life of the child. So the mothers who are protective—but not overprotective—and affectionate and playful, and above all supportive, have a very good affect on their growing child. And that offspring tends to grow up to have a relaxed relationship with other adults in the community and to play an important role in the reproductive success of that community. The males who are like leaders become dominant. And right on the other end of the scale we have mothers who are much more harsh and punitive and less supportive and less affectionate. Their offspring tend to have difficulty making relaxed relationships with other adults when they grow up. It is important to realize that in addition to all of this, mothers need to be able to maintain discipline over the child. A lot of human child psychologists have come to believe that these years—age one to two—and this early experience is very significant in shaping the human adult years and behavior as well.

What about the fathers? Only recently have we been able to determine, through analysis of DNA samples, exactly who the fathers are. Up until now we haven't known. But by and large, males patrol the territory; they keep the resources safe for their own female and young, and on certain occasions when the need arises, they are very capable of giving child-care and nurture to, for example, an orphan or a child in trouble. Indeed we had one infant who lost its mother when he was three years old and had no older brother or sister to adopt him. We thought for sure he would die. To our amazement he was adopted by a non-related twelve-year-old adolescent male, and this young male saved his life. His story illustrates what I mean when I talk about the long-term affectionate supportive bond between family members lasting throughout life.

Imagine that we are following this splendid young adult male, twenty-three years old, named Saturn. We are following him through the trails of the forest. Suddenly he hears some sound, a large group of chimpanzees excitedly feeding among the trees on the trail: Uu-ahh ahha uu ahha aah—many chimpanzees making that sound. So Saturn gets excited and his hair bristles a little bit. He hurries along the trail until he comes to the huge tree filled with chimpanzees and fruits, and he quickly climbs up. He hurries to the nice bunch of red fruit and finds there's a younger male feeding on that fruit now. But Saturn is dominant to him, so he threatens the younger male and starts to feed. Ugh-ugh, the younger male screams. What Saturn doesn't realize is that higher up in that tree is that younger male's older brother. When he hears his kid brother is in trouble, he

comes swinging down the branches and the two brothers start attacking Saturn. Now Saturn screams. To my amazement a very old female with her teeth worn to the gums, her hair thin, shrunken with age—she must be at least fifty—has been quietly feeding but now comes swinging down towards this battle that's going on. With her old fists she starts hitting at the two brothers, and I think that it so startles them that they stop fighting Saturn and mildly threaten her. Saturn gets away. That was Saturn's ancient mother Sprout.

I have great empathy for this mother-child relationship, because I was lucky enough to have an amazing mother who supported me throughout my childhood. She was the only one who did not laugh at me when I began dreaming of going to Africa and living with animals and writing books about them. And remember, when I was dreaming about this—which was fifty years ago, or even sixty years ago—girls didn't do this kind of thing. Absolutely not! She used to say "Jane, if you really want something and if you work hard, and if you take advantage of opportunities, if you never give up, you will find the way."

It's very unfortunate that chimpanzees, like human beings, have a dark side to their nature. They are capable of extreme violence and brutality. Even a kind of primitive warfare can break out between males of two different social groups. It's possible that we may have inherited some kind of aggressive trait from some ancient common ancestor leading to the chimps on one hand, to us on the other hand, about seven million years ago. Certainly it's true that all around the world we find signs of humans being very aggressive in many contexts. Nevertheless, let's take heart from the fact that, if this is true, it is also true that we have inherited the tendencies of compassion and altruism. So there are two warring elements in each one of us, and we have to make a decision which way we personally are going to go.

One of the advantages of studying the being that's most like us is that it gives us the chance to pinpoint those ways in which we as a species are most different. There are various theories as to which ways we are most different, but if I must choose, I would choose the fact that we—and apparently only we in the animal kingdom—have developed this sophisticated spoken language. In the wild chimpanzees indeed have rich communication gestures and postures, as well as sound. In captivity they can be taught human languages such as the American sign language used by deaf people. But what the spoken language does for us is that it gives us the ability to make plans for the distant future. It means we can teach our children about objects or events that are not present. Above all, it gives us the ability to sit down in a group and discuss an idea, so that the idea will change and grow, because the different individuals in a group can contribute their own particular knowledge.

In Gombe National Park there are some magnificent waterfalls, and one in particular drops eighty feet down a sheer rock face. The falling waters create



Photo courtesy of Matsuzawa Tetsurō

a breeze, so it's always cool, and the ferns are swaying. Sometimes when the chimpanzees arrive, particularly the males, you see their hair bristling with excitement and they will perform this amazing rhythmic display, rather like a dance, swaying from foot to foot, splashing in the water, which they normally avoid. The stream bed is filled with rocks, and they may throw these rocks ahead of them—rock after rock after rock—making a banging sound in the silent valley. Sometimes they are upright. Sometimes they climb the slender vines and push out into the spray. If you sit, and if you are lucky enough to see their eyes afterward, they may sit on the rock in the stream and watch the water as it falls and passes by. Do you think these magnificent displays could be caused by some kind of feeling we would call “wonder” or “awe”? If chimpanzees could sit around and talk about this afterward—talk about what it means to them—might that not lead to something like a primitive animist religion in which people used to worship the elements, the water, the sun, the moon?

Very clearly over the years that we've all been studying these amazing beings in the wild and in captivity, they form a kind of bridge between the animal kingdom and us humans. Of course we are animals, too; in fact we are the fifth great ape. Biologically we are a great ape. And chimpanzees, whom I believe more than any other being help us realize that we are not the only creatures with personalities and minds, and above all with feelings. So, how sad that chimpanzees

and other cousins like gorillas, bonobos, and orangutans in Asia are gradually becoming fewer and fewer. There may have been between one and two million chimps a hundred years ago; there are no more than, at most, two hundred thousand today, and, we think, less. They are losing their habitat and they are being hunted. They are hunted to some extent as pets for the pet trade, and also for food, the bush meat trade. Today hunters can follow the roads made by the foreign logging companies deep into the heart of the vast forest. They shoot everything: elephants, gorillas, chimpanzees, antelopes, birds, bats—everything. This is very different from subsistence hunting where people went out and shot animals for themselves and their families. This is commercial; this is done for money. It's bought by the wealthy people in towns, and even to some extent is shipped overseas. It's totally not sustainable, and many, many different animals in the forest are becoming extinct. As slopes are cleared by the hungry people to find more crops, erosion sets in and the desert spreads. The draught is getting worse and floods are getting worse. And at the same time, the human population is still growing. This is leading to massive suffering for many, many people. People are living in crippling poverty, suffering from hunger and disease right across Africa, and of course in many other parts of the developing world. And in addition to that, now there are civil wars across Africa, with all the refugees they bring.

What else is happening in our world? Well, we are poisoning it. We have one planet to live on and we are poisoning it. We are poisoning the air, the water, and the land. We have all the emissions that spill out into the environment from the industries. Much of household waste is poisonous, too. I think the worst of all is the agriculture chemicals, because these are poisons put on the land as fertilizer and as pesticides that were discovered after World War II by the scientists who were working on chemical warfare. There are places around the world where children are born into an environment where the air they breathe, the water they drink, and the food they eat make them sick. Wherever they are from, these are toxins on the land, and the rain washes them into the streams, into the drains, and they end up in the lakes and seas. And many of them, especially the heavy metals, accumulate in the bodies of fish, so that in many parts of the world it is actually dangerous to eat fish from the sea or from the lakes.

Added to that, all around the world the water is becoming more scarce as the water table falls and the surface water and deep underground waters are decreasing. There are thousands and thousands of people living today who have absolutely no access to clean drinking water. And just think: today we fight wars over oil. We can live without oil, but what is going to happen as the water gets less and less? We can't live without water. We have to mention these greenhouse gases, especially the reckless burning of fossil fuel, creating the greenhouse gases that have already led to heating up the temperatures around the globe. Ice in

the South and North Pole is melting and the sea level is rising. The glaciers of the great mountains are disappearing and shrinking. I suspect Mt. Fuji has less snow on it than it used to have.

Unfortunately in the political climate of today we also have to think, again, of the threat of the nuclear warfare. And for Japan this must be particularly shocking after Hiroshima and Nagasaki. Not surprisingly, as I began traveling around the world initially to raise the awareness about the plight of chimpanzees and their forests in Africa, and as I was traveling in Africa, I realized how the problems of Africa are linked in many cases with other problems in the world. I kept meeting young people who seemed to have lost hope. They are depressed, they are apathetic, or they are bitter. Sometimes they are angry and violent. These were thoughtful young people—high school students, university students, people who had just left university. I began talking to them and they all told me more or less the same thing: we feel this way, that you have harmed our future and there is nothing we can do about it. This led to the program “Roots and Shoots,” which has a symbolic meaning. “Roots” make the firm foundation, and “shoots” seem too tiny to reach the sun, and yet together they can break through a great brick wall. Imagine that the brick wall is all the problems that we human have inflicted on this poor old planet—the environmental ones and social ones, the equal distribution of wealth, and all the rest of it, and yet, we choose to have hope. Hundreds and thousands of young people around the world can break through and can make this a better world. The most important message is that every individual, every one of us, makes a difference every day. And we all have a choice. What sort of difference are we going to make? Every group in Roots and Shoots chooses three different kinds of projects, mostly hands-on projects, to make the world a better place for people, for animals, and for the environment.

And here we see the value of this language that I was talking about: the fact that we can discuss these things. If only the kids would just sit around and think about the problems, and discuss which ones we should do something about! The kinds of projects that young people will choose depend first of all on how old they are, because now we have programs for young people from kindergarten right through university. And it will depend on where they live: in a city, or out in the country in the rural area. Or it will depend on whether they are rich or poor. And it will depend on which county they are in, perhaps even which religion they belong to. This program is now in more than ninety countries. All together there are about 9,000 active groups, and a group can be an entire school. Of course, some of the projects are simple, like collecting trash and recycling. Some of them are more complex, like cleaning up a stream, talking to the people upstream who are polluting, perhaps writing them letters. Maybe they are learning about endangered species and raising money to help them. Or maybe they are concerned about stray dogs or cats, or animals in bad zoos, or

animals used in medical research. Or maybe they are concerned about elderly people abandoned in homes by their families. Or they are concerned about the victims of HIV/AIDS or street children, or the homeless.

I think what gives me the energy to keep traveling around the world—and it's more than 300 days a year now—is that everywhere I go I meet young people with shiny eyes wanting to tell Dr. Jane what they've done to make the world a better place. And they are increasingly linked with other groups interested in the same things all around the world, wherever Roots and Shoots is. We are developing youth councils at the high school level and university level, and these youth councils are made up of young people who are articulate, passionate, and have leadership qualities. When we bring these young people together to brainstorm, then indeed you do feel there is hope for the future, because again we get this discussion coming in. And here's where technology comes in to serve us, because with technology you can have video-conferencing in addition to the internet.

I think the question I get asked the most while I'm traveling the world is, "Do you really have hope?" Do I really have hope, knowing what I've seen—chimpanzees disappearing, all the poverty and crime, all the terrorism—do I honestly have a hope for the future? People have challenged me; they say, "Can you look into my eyes and honestly maintain you have hope"? Well, the answer is "Yes," but there is a "but," and the "but" is that hope depends on us. It doesn't depend on the government or corporate leaders; it depends on us, the people.



As we learn more about industries or companies that have unethical practices, whether towards the environment or people, we get angry. But there is something we can do about it. It's very simple; we can refuse to buy their products. Then they have to change the way to make their products, or they go out of business. And of course people need more education; they need to think more about these things to find out which are the good companies and which are the really bad ones.

There are, sadly, many countries that are unable to have a free choice of their representatives because they are not democracies. But those of us who are in a democracy have a choice and a responsibility to make our votes count to use that opportunity we have to cast that ballot. Many people think that the reason George Bush won the last election is that young people who say they hate everything about what is happening just didn't bother to go out and vote. Another reason people don't bother to do what they can to make things better is that they look at all the problems in the world, think of what they can do, and then think they can't make any difference. So they do nothing.

This is where the kids get it. Kids seem to understand much better that what I do *is* going to make a difference. And of course if we get more educated about these things, and everyone makes those small changes in their daily lives that make them live more ethically, then, yes, we *are* going to get the massive changes we need, when it is multiplied millions of times.

So, given that we all do our bit, I have four very simple reasons for hope, very naïve reasons, but they seem to work.

The first is something we already talked about: the energy, the commitment, the passion, and sometimes the courage of young people once they know what the problems are and are empowered to take action.

The second is this extraordinary bit of grey matter that we have in our skulls, the human brain. Think what we have done with it, taking people to the moon, developing the internet. . . . We humans are problem-solving creatures. That's how we have achieved this dominant position on the planet. Already technologies are developing that help us to live in greater harmony with the natural world. We do our best when our backs are set to the wall, and we need this wake-up call, because actually our backs are very close to the wall and the world is deteriorating as we speak. Again, the internet can do a great job, along with documentary films, of helping people to understand how close we are to the irreversible destruction of nonrenewable natural resources.

Third, we have the resilience of nature. Places that were completely destroyed can become beautiful again. There are many examples of rivers that were stinking and polluted but have been restored. Wetlands and prairies have been restored. Forests probably won't grow back exactly as they were before they were destroyed, but the trees will grow back and the animals and birds will return.

Destroyed and poisoned and polluted farmlands can be restored once again to grow organic foods, and then it's our job to buy that organic food. When I went to Nagasaki they showed me pictures taken just after the atomic bomb was dropped. The devastation looked like the surface of the moon. I'm sure many of you are familiar with those pictures. They told me that nothing would grow back for about thirty years, but they were wrong. The green came back much more quickly. Of course it was radioactive, but it grew back. And there was a little sapling which didn't even die, and I understand that for a long time it stayed small, but it began to grow and today it's a huge tree. And every spring it puts out new leaves and they gave me this leaf to carry around as the symbol of hope. Animal species on the very brink of the extinction can get a second chance through captive breeding or extra protection in the wild.

Finally, there is what I call the indomitable human spirit, the spirit of people who have tackled the impossible task, who set themselves a seemingly impossible goal and won't give up. We all know people like that. There are some big historical political figures, and there are just people living all around us who overcome unbelievable obstacles and lead an inspirational life. There was somebody like that, an American whose name is Gary Horn, who gave me my mascot. Gary Horn went blind when he was twenty-five years old, and he decided he'd like to be a magician and everyone said, "Gary, you can't be a good magician if you can't see." He said, "Well, I'm going to give it a try." When he does his magic show for kids, they don't know he is blind. Then he will tell them, and he'll say, "You know things may go wrong in your life, but if you never give up, there is always the way forward." And he does crazy things like scuba diving and sky diving.

So he was giving me this stuffed chimpanzee, Mr. H, for my birthday eleven years ago. I said, "Gary, I know you can't see that this is the wrong color, but I made him hold this, the tail, and asked, "What's this? You have no excuse!" Among other things Mr. H helps me to teach children around the world that chimpanzees don't have tails. Gary said "Well, it doesn't matter. Take him with you, and then you will know that my spirit is with you." So for at least eleven years, Mr. H and I have been together to fifty-seven countries, and he's been ten times to Japan. He's been touched by about three million and more people, because when you touch him inspiration rubs off. So he is my partner as we go around the world telling people that there is hope, and that if they lose hope, then maybe there isn't. So he is my companion and my helper in taking hope around the world.

But the world is such a big place, and, you know, I've been to only a third of the countries and I talked to only a minute percentage of the people in those countries, and I'm getting older and so is he. So last year Mr. H junior was born. And this is what he used to look like, same shape, same color, same soft fur. The message around his neck, with a picture of Gary Horn and his story, says:

Please take Mr. H junior and help Jane and Mr. H take the message of the hope around the world. So of course the money from Mr. H goes to help the Jane Goodall Institute and all the programs we have to help people and animals and the environment.

Since I know that in this room there are many students, and you come from high schools and universities, if the idea of Roots and Shoots appeals to you, please leave your name with us. And if there is one or the other smaller person here, Roots and Shoots is for you, too. Yes, for you, and so please leave your name with us, because we'd really like to get more Roots and Shoots groups going in Japan. Students, teachers, parents—it's easy. Just sit down and talk to a group of people and decide what you can do to make this world a better place. For English-speaking people there is the absolutely fantastic new web site called "rootsandshoots.org."

So, yes, there's hope, but it's up to us. It's in our hands. And sometimes people say to me, well I'd like to buy all those things made in more ethical ways, but they cost more money so I can't afford it. Perhaps you can think of some of the things you buy that you really don't need, and buy those ethical products instead. And anyone who has children, grandchildren, nieces, and nephews, little brothers and sisters: can't we afford a few more pennies to buy the world for their future? So that's the message I have for you tonight. Thank you for listening.