

WE MUST CHANGE PEOPLE IN ORDER TO SAVE GORILLAS
CONSERVATION VALUES EDUCATION IN RURAL CAMEROON

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We Must Change People in Order to Save Gorillas **Conservation Values Education in Rural Cameroon**

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"At best, 'communication' is the name for those practices that compensate for the fact that we can never be each other." ~ John Durham Peters (1999, p. 268).

Worldwide, millions of people work in fields related to the social sciences. Psychology, anthropology, sociology, political science, history, and economics are basic disciplines which inform fields such as education, marketing, organization & community development, justice and law enforcement, communication and linguistics, politics and diplomacy, military strategy, and many others. Basic and applied social science research enhances our academic understanding and our practical ability to predict and control attitudes and behaviors, interpersonal dynamics, and social change. Sadly, the involvement of social scientists in the wildlife conservation arena is minimal, even though it is accepted by most conservationists that the job of saving wildlife “has more to do with clothed people than hairy animals” (Rose, 2001c). Our intention in this chapter is to initiate a process that merges social science and conservation agendas. We shall do this by exploring the fascinating discoveries that have emerged from our efforts to study and inspire conservation values in people who live in some of the most challenging biodiversity hotspots in west and central Africa.

Among the many powerful theories in social science which have been tested during the past 100 years, there are two which we find especially useful in our work to develop enduring conservation values. Carl Rogers’ person-centered principles have been honored over sixty years as a solid psychological foundation on which to influence human development (Rogers, 1942). Since their first appearance in scientific journals nearly fifty years ago, Leon Festinger’s theories of cognitive dissonance have been used extensively to explain people’s attitudes and actions (Festinger, 1957). We have seen cognitive dissonance at work in the conservation arena, and have applied person-centered approaches in conservation values education efforts for almost a decade.

A familiar example of cognitive dissonance is found in a famous fable:

“Aesop tells a story about a fox that tried in vain to reach a cluster of grapes that dangled from a vine above his head. The fox leapt high to grasp the grapes, but the delicious-looking fruit remained just out of reach of his snapping jaws. After a few attempts the fox gave up and said to himself, “These grapes are sour, and if I had some I would not eat them.” (Griffin, 1997)

The concept of “sour grapes” exemplifies a mental process people follow when attempts at achievement fail. Rather than suffer the discomfort of having sought something we could not get, we reduce our cognitive dissonance by rationalizing that the objective was not worth pursuing. Perhaps the most vital example of this in the field of conservation is the postulate that trying to save most of the gorillas still living in Africa is not worth the trouble. Intricate cost benefit analyses are constructed to show that a few thousand wild gorillas are all we need to “save the species.” Ironically, those gorillas that are deemed worth saving are usually the ones that field conservationists are studying and trying to protect. We value the gr--- apes we can reach, and let the others go sour (Rose, 1998d).

Once a position is taken on a subject, be it which gorillas to protect or what grapes are worth tasting, people are careful to expose themselves to supportive input, to prevent cognitive dissonance. Festinger and his fellow scientists explain why we chose reading material, television programs, and friends that present information which is consistent with our beliefs. We stick with our own kind to maintain the relative comfort of our own cognitive status quo. "Like-minded people buffer us from ideas that could cause discomfort. In that sense, the process of making friends (and work associates) is an example of selecting our own propaganda." (Griffin, 1997).

Turning this theory to illuminate the topic at hand, we can analyze why there are so few social scientists involved in wildlife conservation. Wildlife conservationists and social scientists have certain fundamentally different beliefs and interests. To put them together is as uncomfortable as scratching a piece of chalk on a chalkboard. Why would either party want to submit to such dissonance?

For the conservation of wild gorillas, the most important and conflict-inducing disagreements between these two factions have to do with two elemental questions:

- 1) Can people be changed?
- 2) Are wild gorillas worth saving?

The person-centered practitioner instructs us to look behind those questions to the formative experiences of the individual (Rogers, 1961; Rogers, Rose, & McGaw, 1973). Each of us carries biases and prejudices that have been shaped by the rituals and myths of those social systems in which we have grown, from family to university to workplace (Rose & Auw, 1974). The person who has spent most of a lifetime trying to protect gorillas in the mist may be expected to judge poachers and politicians as incorrigible. Conversely, one who has spent decades acting out of compassion for the human condition cannot help but view the plight of apes as a minor tragedy. These divergent life experiences produce oppositional values.

Can we get people to change their attitudes and behaviors?

-- *The conservationist says "no." The social scientist says "yes."*

Are wild gorillas worth saving in the face of all the world's challenges?

-- *The conservationist says "yes." The social scientist says "no."*

A decision must be made on both sides to overcome the contradictions of our experience and our beliefs. We must not let the discomfort of cognitive dissonance keep us from joining forces. Conservationists need to show social scientists that wild gorillas are worth saving. Social scientists need to show conservationists how people can be changed. *We must change people in order to save gorillas.*

As social scientists who have long been convinced that apes and other fauna are worth saving, we will attempt to demonstrate some of the ways that the attitudes, behaviors, and social processes of people can be changed, for the good of the people and our ape relatives. We shall focus on a series of experiments in conservation values education based on research on interspecies epiphanies first reported by the senior author in Bali, Indonesia, at the Congress of the International Primatological Society nearly a decade ago (Rose, 1994).

The fundamental finding of this research, now replicated in diverse settings worldwide, is that people who make profound personal connections with animals of other species are likely to alter their attitudes, and to construct a cognitive kinship relationship with their non-human affiliates (Rose, 1996a, 1998b, 2001d). Our current mission is to expand these private world-view shifts into public life-style changes aimed at protecting threatened wildlife and wilderness.

The sequence of change events which will convert humanists to conservationists, poachers to protectors, and consumers of ape meat to defenders of wildlife must go beyond the psychological dimensions to the alteration of behaviors, social dynamics, and community structures. While studies proliferate defining attitude constellations in global consumer societies (Kellert, 1993, 1996), there is an urgent need for experimental research on psychosocial change in conservation values and behavior in the world's biodiversity hotspots (Mittermeier et al, 1999; Rose et al, 2003).

The bushmeat crisis in west and central Africa, identified nearly a decade ago (Ammann & Pearce, 1995; Rose, 1996 c,d,e; Ammann, 1997), has risen to the top of the global conservation agenda (see websites of BSI Bushmeat Project, 1996; Bushmeat Crisis Task Force, 1999). Leaders in the conservation movement have affirmed that a vast expansion of alliances must be formed. We must involve critical sectors of civil society -- political, economic, military, religious, and social change experts and agencies -- if the extinction of the world's remaining Pleistocene mega fauna is to be avoided (Rose et al, 2003). The eye of the storm that is deluging African wildlife and wilderness with destructive exploitation is in the northern hemisphere. But it is in the wilderness areas, rural villages, and urban centers of Africa where chaos reigns (Rose, 1999, 2001a, b, c). That is where we must test our capacity to change minds and to restore the harmonic interface of humanity and nature.

At the urging of scores of field primatologists and conservation activists, we decided to investigate the “epiphany potential” of certain conservation education processes. We began in Cameroon (Rose, 1996b, 1998a, c) by exposing local conservationists, community leaders, and hunters to certain North American perspectives of non-human primates. Similarities between apes and humans were emphasized. The aim was to stimulate cognitive dissonance among those who had been taught by outsiders to see wildlife as a material resource, to revive traditional perceptions of nature, and to enable restoration of totemic kinship-with-animals to reduce inclinations to hunt and eat endangered species.

The balance of this chapter will review methods, results, and conclusions drawn from the most recent of a series of experimental interventions carried out by the authors in consort with local scientists, educators, and community leaders who make up the Conservation Values Education Project (CVE), based in Yaoundé, Cameroon. The aim is to provide conservationists with insights into various innovative social change processes. As you read, we urge you to consider ways to tailor and apply these kinds of programs in other parts of Africa, and invite you to contact us for more information and ideas. The challenge of changing people in order to save gorillas demands our collaboration and mutual encouragement. We must treat all options as feasible and consider all the grapes to be sweet.

Intervention One – Assessing Rural People’s Perceptions of Gorillas Before and After Recital and Discussion of *Koko’s Kitten* Story.

This intervention took place in the Western Province of Cameroon, in a small village on Mount Cameroon. Ekona Lelu is one of the oldest settlements on the mountain. Most of the people are subsistence farmers, growing mainly cassava, plantains and yams. The village is 7 km from the nearest town at the base of Mount Cameroon, and can only be reached by continuous climbing through a stony and winding road. Their buildings are made from wooden planks; most are in disrepair, and just two houses and the community hall have cement floors. There is one primary school with classes 1-3, and a number of small churches within the village. Most young children have to walk 5km down the mountain on a daily basis to receive education. If children want to continue to secondary school, they then have to move to a different area, usually living with relatives or friends. Life is very hard in Ekona Lelu, and the people are committed to making a better life for themselves and their children.

The purpose of the intervention at Ekona Lelu Village was to gain new insights into the impact of the recital and discussion of an empathy inducing story about gorillas on anglophone west Cameroonian villagers’ perceptions of gorillas and other primates. The story of *Koko’s Kitten* (Patterson & Cohn, 1985) has been used for these purposes in francophone urban schools in the Yaounde area since 1999, and was first tested in rural settings in five francophone villages in central Cameroon and in two villages at the southeast edge of the Dja National Park in Cameroon’s Eastern Province (Elliot & Rose, in press). The current interventions were conducted by the CVE Team composed of school teachers from Yaounde and consultants from Limbe Botanical and Zoological Gardens (LBZG) in the Western Province who had experience working in Ekona Lelu.

Description of the Procedures

Participant Selection Process

The Village Development Committee (VDC) helped the CVE Team to organise the programme for three distinct groups of people: children, hunters, and adults (non-hunters). VDC members informed the people in these groups, inviting them to come to the village hall on their workshop day.

Perception Assessment - Pre-Intervention Methods

Separate sessions were held with each of the three groups. The children's group went first, hunters second, and then non-hunter adults. The children's meeting began with discussions on whether or not they had seen or heard anything about gorillas. Facilitators explored the participants' perceptions of the gorilla, leading with questions followed by open discussion. Similarly with hunters and non-hunter adults, the sessions began with questions, asking what they knew about gorillas, based on either their experience or stories they had heard. Discussion followed. In all meetings the participants' responses were recorded on audio tape and the flow of events was noted by the CVE Team observers. This represents the raw data to be used for the investigation of Pre-Intervention perceptions.

Intervention Process -- Recital of Koko's Kitten

When the Pre-Intervention discussion was exhausted, *Koko's Kitten* was narrated in Pidgin English by an animator who had conducted most of the previous discussions. Participants followed the picture story, page by page, with their own copies of the book. The different images indicated in the story were described/explained by the animator, with occasional help of other CVE Team observers. Care was taken to assure that all participants were looking at the relevant page / picture while its text was being recited. A Pidgin English (west Cameroon style) translation of *Koko's Kitten* is now available.

Attitude Assessment - Post Intervention Methods

At the end of the story, discussions were held. Initial interrogations from the animator elicited participants' thoughts and questions about the content of the Koko story, and their feelings about Koko and the events that had been recited. This progressed into more open discussion that arose from the participants' questions about gorillas and other primates, their life in the wild, their consumption as bushmeat, and their care and conservation. Participant responses and questions were recorded, as were observers notes on flow of discussion. This represents the raw data for Post-Intervention Attitudes.

Results -- Oral and Behavioral Reactions and Interventions.

As in all group process investigations, many elements of intervention are not under the control of the investigator. The emergent reactions of individuals influence the flow of discussion and ultimately can shape the responses of participants, and their perceptions. In the action-research model, these interactive factors are considered vital elements of the study. They ensure that participants invest their own experience into the program, provide the most candid information obtainable regarding true impact of the core intervention process, produce results that are empowered and carried forward by the participants in ways that suit their culture and social situation. Thus the intervention becomes an integral activity of the community (Stebbins, Hawley, & Rose, 1982).

Results recorded in the quantitative mode are often of negligible value, and even misleading, in this kind of setting. The question-answer interrogative format for collecting reliable data, when applied in this kind of rural African setting, will produce rote "tell the teacher the right answer" reactions, and provide little or no valid insight into the participants true attitudes and perceptions. We are thus reliant on recording emergent discussions and providing strings of anecdotes extracted from those recordings which transmit the self-directed reactions of the community and its members.

Procedural Difficulties

The children's intervention was intended for children between the ages of 10 and 12 years old. Although those that fall in this category were the ones that were informed, the younger children came to the community hall where the event was held before the older children. It was difficult to ask them to stay away because they were under-aged, as they were very composed and anxious. They were allowed to stay in the background, on the understanding that they would participate as observers and afterwards discuss a little about what they observed. The hunters' meeting had to begin with some of the participants absent. The impact of their arrival during the pre-test discussion changed the tone of interaction, adding an element of disagreement which required careful facilitation. The non-hunter adults, having the last meeting of the day, had heard about some aspects of the intervention. The extent to which specific hunter and youth viewpoints were the stimulant for discussion initiated in the non-hunter group could not be ascertained. Clearly a village is a village -- not a disciplined group of experimental subjects who can be sworn to secrecy till the study is complete. Thus it is important that the CVE team be facile at eliciting and recording open discussion which reveals an intervention process as it is constructed in concert with village participants in the context of community life.

Alterations of Intervention Processes Caused by the Villagers

Discussion played a larger and more successful role than expected. Participants visibly enjoyed discussing and arguing; they enjoyed offering and exploring their views. The facilitators helped to steer this, with questions and comments, but there was much spontaneity to it. Subsequent phases of the collaboration were proposed by participants themselves – e.g. visit to the Limbe zoo. Participants themselves raised the issue of the dates and content of the next workshops, prompting the CVE team to make decisions and schedules then and there. They steered this, proposing two or three months later as an appropriate time for the next workshop. Expressing interest in hearing the story of Michael, who had been referred to in discussion, the adult participants nominated individuals who would help translate the story of Michael into Pidgin and Bakweri. The hunters and other adults suggest that when translation was complete, they would go to other villages on Mount Cameroon to do presentations. Their enthusiasm in general, and interest in learning more about the issues raised, gave the CVE team a sense of success and obligation.

Major Stories Told by the Villagers.

The children were more reactive to the questions of the animator, and less spontaneous. A school-house atmosphere prevailed. They did not relate the kinds of legends that emerged from adult groups. It is likely they had not heard these tales which were reserved for discussions among young adults as they began to go into the forests, and joined the village hunting society.

The hunters' pre-test discussion, exploring knowledge of and attitudes towards gorillas, eventually revealed that none of the participants had ever seen one. They had only heard tales about them from grand-parents. The hunters spontaneously recounted some tales, as an explanation of their belief that the gorilla has the shape of a man and did things exactly like people do. Many tribes in Cameroon frequently use stories to make a point or express a viewpoint, rather than directly comment about a situation or event being discussed.

For example, one tale asserted that gorillas are often seen gathering firewood (fuel wood) in the forest, well arranged and tied in a bundle. They were not aggressive or harmful, but whenever a human collected the gorilla's wood, the ape would follow after the person and make sure it got back its wood. What the participants said their elders found interesting was the impression that the gorilla was very kind and intelligent, because whenever it discovered its wood was missing, it would walk directly to the person who collected it and recover just the pieces that belonged to the gorilla. Even more fascinating to them was the fact that when a gorilla arrived at the guilty person's home and the wood had been burnt, it made sure that it collected the ash from its own wood, and left without causing any

problem. This was considered extraordinary, as the hunters had been told by their grandparents that gorillas are very strong, stronger than man and all the other animals in the forest with that shape (chimpanzee, baboon, drill).

The non-hunter adults -- during their pre-intervention discussion -- recounted the same story about the gorilla's wood collecting that was told by the hunters. They told a second story in the post-test period, which was re-called during discussion about their attitude toward the hunting of gorillas. This story has similarities to that of Koko and her kitten, and was said to have discouraged people from killing gorillas. An elder put it this way: 'If we see a gorilla being killed, we would not be happy because of the stories our parents told us -- that when you meet a gorilla with her baby and you attempt to kill her, she would start feeding the baby and beg, with show of hands, 'why do you want to kill me, is this not how you mother fed you before you became strong? So why do you want to kill me now and leave my baby to suffer?'

Anecdotal Results -- The Children

In the pre-test survey --

- About 50% said they have not heard of the gorilla. The other's said they have, but had never seen one before.
- Of those who have heard of gorillas, their understanding is that it is a very wild animal. It lives very far in the thick forest where people can not easily have access to it.
- Some of them mentioned that they would love to see a gorilla since it is a strange animal but would however not want to see it loose but rather in the zoo where it is protected inside a cage and can not harm people.
- A few children questioned whether people eat gorillas, and if they do how do they manage to kill it when it is so wild.

In the post test they responded --

- I like koko's story because it teaches us how we can live with other animals, how man can live together with animals, how it is possible that you can stay with a wild animal at home and it will not harm you.
- Have learnt that it is important to be kind to all animals because they feel like us.
- That Koko is intelligent, being able to say what she wants, communicate about her thoughts. That she is kind in the way she lived with her kitten, and that she is particularly very interesting in behaviour and characters that are similar to those of a human being.
- To some children, gorillas should not be killed in the wild, should be brought to the town to live with people or be kept in the zoo.
- They said that because of Koko's story, they would obviously feel sad if they saw someone killing a gorilla. They expressed the belief that even though people kill them, they will always exist, since those living keep on reproducing.
- They asserted that it is very normal for people to talk about gorillas; that it's good that people who know about animals like this; that we should help inform others and teach them how they can be protected. Questions asked included -
 - Can other wild animals be trained like Koko?
 - How can you catch a small gorilla, when its mother is by its side?
 - Why is it that there is no lion at Limbe Zoo, when the gorilla is also as wild as the lion?
 - Would like to see a lion behave like Koko, is this possible?

Anecdotal Results -- The Hunters

In the pre-test survey -

- 60% agreed that gorillas look like a human being, and it is a very wild animal.
- They unanimously confirmed that it is found in their forest although very far, and that you can always hear them calling a few kilometres away – say about 1.5 km and that it is seen by chance. They said gorillas always move in groups of about 20.
- They regretted that the gorillas have decreased in number due to sickness and hunting.
- One hunter said he last saw a gorilla 7 yrs ago in the thick forest ; one other said he saw one 2 weeks ago. The remaining 40% who arrived late said that the above was based on confusion between gorilla, chimpanzee, baboon, and drill. Serious arguments resulted eventually in 100% agreement that they had never seen a gorilla but had heard of stories about them from their grandparents, that the first group had been talking about chimpanzee and not gorilla.

In the post-test discussions they remarked that Koko -

- is intelligent, being able to learn how to communicate using sign language, and being able to express her feelings.
- is friendly, seen in the way she plays with her kitten
- is loving and can feel pain to the point that she was greatly affected by the death of her kitten.
- is gentle, and not harmful as they think an animal like that should be.
- is very interesting in the strange things that she does and how she does it.
- has feelings like men and can express this freely.

Even though they said that they now understand that it possible and comfortable living with gorillas, they are of the opinion that they should be kept in the zoo where people have been trained on how to get them from the wild, and on control and maintenance. Others will have difficulty getting a gorilla from the wild, and even those who would like to have them as pets would not even be able to sustain it. It is also good to have gorillas in zoos so that children who can not get far into the forest to see it live, get a chance to see what it looks like.

The hunters were happy with Koko's story because it shows that there are animals in the bush that can be trained to behave like humans to the point that they can live together and communicate effectively. But in general they thought it is normal for people to kill gorillas as animals for bush meat: "it can be very delicious as the chimpanzee is, and would also provide a greater quantity of meat than the chimpanzee." To these hunters the idea of the gorilla becoming extinct is completely out of the question because it is found every where in the world (in zoos) and they reproduce. However they also said the gorilla needs to be protected to ensure that we have them in future generations to come.

The hunters mentioned that they would like to know about other animals like the gorilla found in Cameroon forests. They strongly believe that it is good to have people from other countries to assist by providing them with more information and skills, but they felt that ultimately they should be the main actors. Cameroonians should control their own forest, but will accept and encourage expertise from other countries that come to build their capacity. They concluded that it is very important to talk about gorillas, and were excited to promote folk tales that will help people understand these animals better.

Anecdotal Results – Non-Hunter Adults

Pre-intervention discussions about gorillas among non-hunter adults were less contentious than in the hunter group. They did not dispute gorillas and chimpanzees in nearby forests. They recounted the story of the the gorilla collecting wood, and agreed that these animals were intelligent, and similar to people. Overall they seemed to reiterate much of what had been said in the hunters' group.

Post-intervention responses of the non-hunter adults to the story of Koko were similar to those of the hunters insofar as they recognized the sensibility, friendliness, etc. However, while the hunters had seemed to classify Koko as a very different creature from the wild gorillas, the non-hunter adults

considered Koko as a gorilla, connecting her more closely with wild gorillas. After hearing *Koko's Kitten*, this group began to discuss the complex issue of hunting gorilla mothers and their babies. They felt that it is normal to see people kill the gorilla, so long as it is in the forest. What makes it troublesome is the fact that it looks like a human being physically and does the kinds of things we do. It was at this point that the legend of the mother gorilla begging the hunter to spare her and her child was told again in the non-hunter adult group.

Like the hunters, these villagers think gorillas will always exist, if hunting is controlled. Otherwise they will vanish like other animals, due to extensive hunting. They think gorillas must be protected but are conflicted as to why. Many villagers believe it is important to know and talk about gorillas, since they were created naturally by God. But the question of whether God created another animal that is so much like us for us to eat, or for us to love and protect as our family, is yet to be decided.

Summary – Intervention One: Humane and Utilitarian Values Conflict

The children's responses indicated that they saw Koko as a representative of her species to a far greater extent than did the adults. What children learned about Koko being able to learn language, having a sense of family, vital emotions, and ability to communicate seemed to generalize easily to their attitudes about wild animals. It was not difficult for them to accommodate the ape's similarities with humans, and they were quick to transfer their new sense of kinship into sadness about the killing of gorillas. Their attitudes towards gorilla hunting and consuming of gorilla meat emerged in congruence with their feelings – causing them to declare that gorillas should be protected, not killed. Having experienced little or nothing of the forest and its wildlife, and being relatively uninitiated into the rigors of hunting and food production, village children seemed similar to urban youth in their access to humane values. Their life experience had not produced the kinds of utilitarian cognitive positions with which the Koko story would induce dissonance leading to rationalization or denial.

The adults (hunters and non-hunters) introduced traditional tales and knowledge of primates into the discussions at a very early stage in the process. Both groups used new knowledge to support, justify and explain their own personal attitudes and beliefs. After recitation of Koko's Kitten, the non-hunters used the Koko story to further support their questioning of the practice of ape hunting. Introduction of the story of the gorilla mother begging for its baby's life was a clear indicator that at least some of the adult non-hunters were relatively comfortable considering humane treatment of gorillas. This can be explained insofar as these adults were not directly involved in wildlife hunting, and apparently had little experience with the killing and consuming of apes. Thus the story of Koko, and recitation of other empathetic ape tales, did not evoke dissonance with perceptions formed by utilitarian behavior, experience, and social position.

The hunters resisted taking a humane position on gorillas. They distinguished the captive and wild gorillas as different creatures. It seemed to them that wild apes that are 'untrained in human sensitivities', do not deserve our empathy. For the hunters, a well trained captive gorilla's actions and feelings don't justify cessation of the slaughter of apes in the wild for quality bushmeat. Hunters asserted their utilitarian value set by soliciting additional information from the animator and CVE team members about the life of apes and other primates -- for their own use. Their welcoming of outsiders to inform them about forest wildlife, while asserting their own need for dominion over the forests, could be interpreted as a request for the CVE team to help them become better more effective hunters. They declared the importance of controlling hunting so gorillas will remain in the forest for future generations. Since they see captive gorillas as a safeguard against species extinction, we might interpret this as a wish to have wild gorillas available for future villagers to hunt and to eat.

The hunters were amongst the most forward in expressing their interest in continuing to work with outsiders; they pressed to organize details for the next intervention. Because they are the most active and adventuresome members of the village community, their wish to take what they learn about wildlife to other villages is not surprising. But we must scrutinize their motives. Are they wishing to gain status and favors in the region, to build competence as hunters, to reduce their vulnerability to dangerous wild beasts, or, possibly, to learn how to undertake a successful hunt for delicious apes?

It is a tenet of cognitive dissonance theory that people avoid involvement with others who might present them with information that runs counter to their prevailing perceptions and attitudes. But a corollary is that when new information cannot be avoided, people transform even the most contrary concepts into acceptable ideas through processes of denial, rationalization, and revision. In the face of disturbing news about the sensitivity of a potential prey species, the hunters of Ekona Lelu may have chosen not to reject message and the messengers, but to co-opt them for a very different purpose.

Intervention Two -- Community CVE Workshop Integrating Knowledge Base About Apes and Introducing the Story of *Michael's Dream*.

The second intervention at Ekona Lelu village on Mount Cameroon was designed and conducted by the CVE Team in partnership with professional educators from Limbe Botanical and Zoological Garden. The involvement of LBZG professionals enabled integration of their experience with languages and cultures of the Western Province into the program. Approximately three months had transpired between the first and second interventions (June and September, 2002). Because the first intervention had been the topic of intense discussion in the village for much of the intervening period, it was decided to construct this follow-up program as an information integration opportunity, rather than a more controlled experiment. Prior to presentation of a new story about another sign-language gorilla, various educational and culture-specific exercises were conducted to stimulate new experience and energy. Only adults participated in this workshop, mainly in plenary session and occasionally in smaller groups.

Description of the Procedures

Participant Selection Process

Prior to the workshop, the chief of the Ekona Lelu village was asked to prepare participants for the visit. Four days before the arrival of the CVE team, 33 participants were selected from adults who had participated in study one and eight new people chose to join. Hunters and non-hunters participated together. Children did not participate. The full group consisted of 17 women and 24 men, with ten individuals coming from the aging population of the village (senior elders). Amongst the men, 6 were hunters and the rest were non-hunters but all are engaged in farming activities.

General Workshop Process

Unlike the first intervention where participants were divided into three categories (children, hunters and non-hunter adults) and all perception assessment discussions were carried out in separate groups, participants in this workshop worked together in most elements of the program. Furthermore, a variety of structured assessment-intervention techniques were used rather than keeping uniform pre and post intervention testing. Thus the entire workshop must be considered as an intervention, which lasted nearly four hours. Throughout, a participatory training approach was used – professional animators facilitated experience sharing, ice-breaker games, role playing, and group brainstorming sessions. Visual aids were used, and local protocol – prayers and workshop ‘rules’ were respected. The language used was pidgin English, with explanation in Bakweri (local dialect) when necessary.

To start the meeting, goals and procedures of the program were explained by facilitators and a prayer said by a community member. A pairwise exercise was then used as an introductory icebreaker. Participants made pairs, each pair stood in front of the group, and each person introduced their partner, stating his name, occupation, whether he or she had ever seen a gorilla and where. The second activity was for participants to present their individual expectations of the workshop. This was followed by establishing the rules of the meeting (a local tradition). Participants volunteered these, which were recorded on large chart paper. A pre-intervention perception summary session began the experimental phase of the meeting. This was followed by a structured brainstorming session to record perceptions of similarities and differences between gorillas and humans. A new story about Michael, a wild-born gorilla poached as an infant, who came to live with Koko and learn sign language, was recited in Pidgin English. The workshop ended with a structured question and answer session.

Recap & Brainstorm Assessment-Intervention Methods

In plenary session a participant was asked to recap/summarize the stories and ideas that were presented and discussed in the first intervention that had been held three months earlier, and to reiterate group conclusions of that meeting. The group added to and completed his summary, orally. Then the participants were divided into three groups: Group One – 18 non hunters, Group Two – 17 non-hunters, Group Three – 6 hunters. Each group brainstormed the differences and similarities between gorillas and human beings and recorded their conclusions on flip chart paper. One participant from the group did a presentation of the subgroup results in a plenary. These various inputs and comparisons are presented below in the results section.

Introductory Recital of *Michael's Dream*

A new story-book was written for this intervention (Rose & Patterson, in press). It relates the life of a male silverback gorilla, Michael, who was poached in childhood from a Cameroon forest and ended up living and learning sign language with Koko. The core of the story is Michael's dream about his gorilla mother in the forest, and his trauma witnessing her slaughter. The tale of Michael's Dream was narrated in pidgin, followed by a picture presentation, showing page by page and explaining the events in the pictures. This review process, along with question and answer interchange, enabled the participants to have a more complete understanding of the subject matter.

Guided Assessment – Q & A Intervention Methods

After discussion of Michael's Dream was completed, a guided assessment – intervention was conducted, followed by a summing up by the facilitators and CVEP director, and solicitation of recommendations for the future from participants. The assessment was done with a set of guided questions presented orally to the group in three categories: 1. From all said about gorillas what have you learned? 2. How did you see gorillas before and what impression do you have about them now? 3. Has the workshop filled the gaps that participants expressed as expectations? Participants were also invited to offer recommendations for the program, which communicated their interest, enthusiasm and their considered reflection on how best to develop the program.

Results -- Oral and Behavioral Reactions and Interventions.

Procedural Difficulties

Children had been omitted from this workshop because the most immediate concern was to test methods to influence adult attitudes. Nonetheless, seven or eight children observed through the windows and doors, indicating their interest and perhaps affecting the candor of the adult participants and facilitators. Plans to video record the workshop failed due to faulty generator and lack of electricity in the village. Some of the crucial discussion data was not recorded – most problematic being post recital informal discussion of the Michael's Dream book.

Overall in this workshop detailed reactions of participants were not recorded as fully as in the prior intervention. Summary statements written on flip chart paper were used. As a result, differentiation of responses according to participant type (eg: hunter, adult, elder, male or female) is difficult. In the anecdotal notes, as well as in the interpretations of participant reactions and brainstorming, we can only guess how demographic factors are influencing discussion and potential change in attitudes. Furthermore, directive question-answer data gathering in groups tends to narrow the scope of reaction and create bandwagon effects. Nonetheless, there is sufficient information in the recorded results to suggest possible attitude shifts, and to point towards procedural improvements that are needed for subsequent interventions and assessments.

Alterations of Intervention Processes Caused by the Villagers

In contrast to the more malleable format of the first intervention, this workshop proceeded according to a fixed structure. No major process alterations were initiated by the participants or the facilitators. Most participants enjoyed the group brainstorming sessions (similarities and differences), resulting in more time given to this element of the program. Overall the enthusiasm continued to move the process for more than four hours within the pre-set structure. The great interest of the children who participated in study one, and observed in study two, has encouraged us to develop a program specifically for the village school.

Major Stories Told by the Villagers.

During the summary, brainstorm, and Q & A sessions participants frequently recounted and discussed their family experiences and folk-tales. The tales told were those which had been discussed during the first intervention three months earlier: the wood gathering tale and the story of the gorilla mother begging a hunter not to orphan her infant. Experiences and stories were recorded by observers mingling amongst the groups and listening to discussions unobtrusively.

After the recital of Michael's Dream one especially relevant new topic was raised. A woman reported how her mother had told her during childhood that gorillas were like people and that it is taboo to eat gorilla. She didn't quite know why except for the kinship (totem) factor. She said that she wouldn't eat them, because of what her mother told her. Other people thought the issue of totemic kinship no longer matters, and that tradition is less strong now and influences behavior less. There ensued a small debate on the strength of traditions, who heeds them, and why some people follow them and others ignore them.

We have received feedback suggesting that lively discussion and story telling has occurred amongst the villagers in the evenings and weeks after the second workshop, in their homes and every day situations. Assessment and facilitation of such longer-term in-vivo outcomes by village based staff is being organized for future interventions.

Anecdotal Results

Summary Assessment of the villagers' discoveries and learnings from the previous workshop reflects the voluntary output of individuals in the plenary group. This may be more indicative of what outspoken members of the village are willing to say in a public forum, and of facilitator recording skills, than of the community-wide recollections and shifts in perceptions and values. Nonetheless, this list of recorded items suggests that certain fundamentals were remembered.

- Gorillas could be as friendly as human beings.
- They could be trained or tamed to live with people.
- Koko acted as a mother by breastfeeding her kitten using a feeding bottle just like a caring human mother usually does when she has a young baby.
- Wild animals could be trained on how to communicate to our understanding.

Brainstorming Assessment of similarities and differences between gorillas and humans produced more detailed results than the public summary. The first two brainstorming groups, composed of 18 and 17 non-hunting adults, produced more than double the number of items in both categories, than were recorded by the third group of 6 hunters. This may reflect group size, with larger groups producing more ideas. Alternate hypotheses are that the hunters were less open to brain-storming, or that they did not recall as much about the prior intervention as did the other adults.

Similarities and Differences between Gorillas and Humans

Group	Similarities	Differences
ONE (n=18)	<ul style="list-style-type: none"> ▪ She breasts feeds like humans. ▪ She expresses distress when she is alone. ▪ She demands for what she likes. ▪ She indicates when she is ill. ▪ She signs when she feels sleepy. ▪ She gathers wood like a person. ▪ She knows a friend. ▪ Her structure is almost like a human being. 	<ul style="list-style-type: none"> ▪ The gorilla does not take a bath. ▪ She does not cook. ▪ She does not put on clothes. ▪ She does not go in for paid jobs like humans. ▪ The gorilla does not walk on two legs for long ▪ She does not go to school. ▪ She does not worship God. ▪ They cannot talk like people
TWO (n=17)	<ul style="list-style-type: none"> ▪ They breast feed like humans. ▪ When you think bad of him he will plead ▪ They use pad during menstruation period ▪ Sometimes he think good and evil like us ▪ They stand and walk like men with two legs ▪ They have five fingers like us ▪ They do fight like us ▪ Give birth through sex ▪ Speak in signs 	<ul style="list-style-type: none"> ▪ They do not take a bath. ▪ They do not cook ▪ We dress in clothes while they do not dress ▪ We plan and prepare for our future; they don't ▪ They don't practice hygiene ▪ The don't go for facial circumcision ▪ They don't take alcohol ▪ They do not harvest honey raw ▪ We do go to the market while they don't. ▪ They do not go to school. ▪ They do not worship God. ▪ They cannot talk like people.
THREE (N=6)	<ul style="list-style-type: none"> ▪ It breasts feeds like humans. ▪ It eats with five fingers like a person ▪ It collects wood in the forest like a person ▪ It travels with two legs as a person ▪ They do communicate and live in a family 	<ul style="list-style-type: none"> ▪ We people cook but they don't. ▪ We people wear clothes but they don't ▪ We read and write but they don't ▪ We play football but they don't play as we do

Group

Similarities

Differences

Interpretation of the content of these lists can be useful to highlight areas for further intervention and investigation. Most important in this context is the absence of any mention that the gorilla (Koko) loved and cared for her kitten and grieved over its death. That is the core element of the *Koko's Kitten* story, and participants discussed this fully in the first intervention. Not reporting it in this brainstorming session suggests some kind of censorship was operating. Africans are often surprised with the affection Americans show to their pets. Many consider it a cultural aberration which we taught to Koko; not a natural feature to be found in wild gorillas. Koko's emotional link to the kitten is similar to some people, and different from others. Perhaps it was omitted to avoid disagreement.

It is not clear the extent to which the word-use differences between groups reflect the style of the recorders or the perceptions of the participants. It is fair to suggest that the differential use of pronouns -- she, they, and it – may reflect perception and attitude differences between the three groups and/or their respective data recorders. Group One may have focused on the female Koko or might have been dominated by women participants, although the consistent use of she may simply be an artifact of the recorder’s perspective. Group Two appears more gender neutral both in its subject pronoun use (they) and in the topics listed in both columns. Most intriguing is the data presented for Group Three. Use of the pronoun “it” in the similarities list signifies a depersonalizing posture vis-à-vis gorillas. Emphasis of “we people” in the differences list further suggests that the hunters are motivated to separate their own self-concept from that of the apes.

Guided Assessment Question & Answer Session results were tabulated by asking for a show of hands to determine the percentage of participants who agreed with statements made by individuals in the plenary session in reaction to three overarching questions. Again the interests and beliefs of outspoken members of the community, and of the facilitators, can be expected to shape the results in this kind of procedure. The extent to which these percentages reflect the true viewpoints of all the people who raised their hands on these specific issues requires further investigation. Nonetheless, taking these tallies at face value, they do suggest that sympathetic concern for gorillas (and other primates) has increased in the village, and that villagers’ interest in knowing more about apes and other forest animals has grown.

Question One: From all said about gorillas what have you learned?

- 90% indicated that they learned that Gorillas can be tamed to live with people as well as easily domesticated and controlled.
- 75% favored safeguarding and conserving gorillas based on the similarities that have been taught exist between man and the gorilla.
- 25% held the opinion of gorilla as meat, since to them it is a habit, and apes will continue to behave like other animals in the forest no matter the amount of training that they receive.
- 50% said they believe that with the kind of training the gorillas are able to receive, they are convinced that gorillas will one day drive a car to the market and do shopping as we do. This stemmed from a participant comment about evolution and gorillas being ancestors of humans – that evolution continues, to the extent that opportunities are available.

Question Two: How did you see gorillas before and what impression do you have of them now?

- 95% changed from seeing them as frightful animals in the forest, to ones which can be domesticated.
- 80% said they have learned that gorillas can easily be tamed and controlled.
- 25% had the view that gorillas are wild animals in the forest because our knowledge is more advanced than theirs and no matter the training we give them, they would behave the same if they go back to the forest.
- 50% said they feared it because they had not known that it had some resemblance with man, whereas now they cannot afford to eat it, on account of this similarity.

Question three: Has the workshop filled the gaps that were expressed as expectations?

- 100% indicated that all doubts have been clarified.
- They were told how possible it is for trained and untrained animals to live together and to understand each other.
- They had learned how Michael and Koko shared their experiences.
- They had found out how long Koko and Michael lived together before they became familiar with each other.
- They had heard the story of Michael’s Dream as promised during their first workshop.

- They learned about Michael's response to Koko, since Koko is educated and he is not.
- They had been given more general information:
 - in depth knowledge about gorillas,
 - how possible it is to train wild animals found in the forest.
- The participants, nearly all of whom had never seen a gorilla, reiterated their interest to see the orphan apes at the zoo in Limbe.

The emphasis on domestication and training of gorillas emerged more strongly in this workshop than it had in the first intervention in Ekona Lelu. Comparison and relationships between wild and captive (educated) gorillas was also a strong interest. The main gaps in understanding that participants wanted filled in this intervention related to these topics. Desire to learn more about the core issue presented in Koko's Kitten -- bonding between adult apes and members of other species (humans, cats) -- was not part of the expectations list for this workshop. One explanation is that the first intervention answered all questions on this topic. Another is that this topic produces discomfort (cognitive dissonance) and is being avoided.

The seemingly unanimous reaction that all doubts have been clarified and all expectations for this workshop were fulfilled cannot be taken at face value. More likely, it is an expression of the readiness of participants and facilitators to end the long meeting. This is verified by the fact that many villagers asked for yet another workshop in which they could learn more about gorillas by observing the orphan primates at the Limbe Zoo, a sanctuary nearby in Cameroon's Western Province where some of the facilitators live and work. While the opportunity to get a free trip to Limbe is a big incentive, it is fair to assume that many questions about apes and their relationships to one another and to humans are still motivating the villagers to seek more involvement with the CVE program.

We can be confident that the 75% -- 25% split between villagers who favor protection of gorillas and those who still view apes as acceptable targets for bushmeat hunting is valid. The minority view (also 25%) that if you put gorillas back in the forest they will revert to wild animals, underscores the position of those people who remain committed to hunting and eating whatever wildlife is available. It is clear from the results of the second workshop that there is more work to be done to rejuvenate taboos against hunting and consuming apes among the leaders of Ekona Lelu village.

Summary – Intervention Two: Mastery takes Precedence over Knowledge

The second workshop built on the events and discoveries of the prior intervention and on intervening discussion among the villagers. It exposed people to new information and ideas as well. While lack of detail and demographics associated with recorded data precludes certainty in interpretation, the study as a whole offers rich grounds for hypothesizing and for constructing new interventions to test theory and procedure aimed at influencing attitudes and behaviors.

Most vital to our research interests is the divergence of discussion topics between the first and second interventions at Ekona Lelu. The emotional qualities of the Koko story -- her love and grief for the kitten, her connection with people, and the general discovery that gorillas have deep feelings similar to humans -- was discussed extensively in the first meeting. In contrast, animal emotionality and human-animal bonding was down-played in the second workshop. Our interpretation is that more recent un-facilitated discussions of this particular topic in the village had been uncomfortable, and people were avoiding debate of the issue at this workshop. This could explain why an even more emotion laden story about the terror and despair felt by Koko's gorilla friend Michael when he dreamed about his mother's death at the hands of bushmeat hunters was not mentioned in any of the recorded results. The interest in hearing Michael's story expressed during the first intervention had more to do with comparison of educability and interaction between wild-born and captive-born gorillas. Michael's nightmare was not anticipated, and may have turned out to be a taboo topic.

The tale of the ape mother begging a hunter to spare her so that her baby will not suffer was discussed at the first intervention, and mentioned again in the beginning of the second workshop. But this is seen as an old myth, and not often treated as factual reporting. It is likely that the story of Michael's dream, presented as modern fact, creates too much cognitive dissonance in too many influential villagers to be discussed openly. Hunters and other adults who want to consider apes as fair game are likely to be very uncomfortable talking about Michael's dream. It sets them up as provokers of suffering. The Ekona Lelu hunters had already constructed self-protective rationalizations about wild animals being less sensitive than captive born and trained gorillas like Koko. The fact that a wild gorilla baby's trauma from poaching is recalled by him when he grows up would be expected to make the hunters even more defensive.

Without the video record of the story recital and of participants' immediate reactions to it, we can only hypothesize that key individuals in the group signaled somehow to the community that this story should not be discussed. This signal may have been given in post-recital discussion when the woman recalled her mother's admonishment to avoid eating apes and stated that she would feel bad about it. Debate ensued on an intellectual level about why some villagers honor old taboos against eating apes, and others have set these folkways aside. If the people arguing against compliance with totemic kinship restrictions were men and women of power and influence in the community, intimidation would be expected to shut down the inclination of other community members to discuss the inhumane implications of Michael's dream. This is where time-flow tracking of oral interaction is required to understand the social dynamics that impact outward expression and confound information processing and attitude development.

If the *Michael's Dream* story evokes such severe cognitive dissonance that its discussion must be squelched, we might assume that the *Koko's Kitten* story, which was discussed at length, produces relatively little dissonance. The first exposure of the Koko story to a gorilla hunter (Rose, 1998a, c) evoked excitement and intrigue, and a wish to show the book to other hunters. Subsequent recital of the story in urban schools and other rural villages has stimulated similar enthusiasm about spreading the message that great apes can be taught to communicate their emotions and wishes (Elliot and Rose, in press). The current study which contrasts reaction to *Koko's Kitten* and *Michael's Dream* reveals nuances that were not obvious before, and reveals a very different motive for this enthusiasm.

In the past we have assumed that the excitement people show when learning about Koko and Michael relates to the revelation that great apes are more like humans than ever before realized. New discoveries that enhance knowledge about the wonders of nature seem less important in the context of rural Africa. In the case of the Ekona Lelu villagers, what appears more exciting to them is the fact that people are capable of raising and training big powerful animals to talk and to become domesticated into a civilized way of life.

We must now explore the possibility that in some cultures and societies the stories of Koko and Michael are read as tales of human mastery over the wild beast, with the revelations of human-ape similarity being secondary issues. Clearly in Ekona Lelu there are very mixed feelings, even among those who do recognize that the gentility of these two trained gorillas is inherent in the species. Docile as the apes may become, many African villagers want the gorillas kept in zoos for the protection of people, and of the apes. But one issue the people all seem to agree upon: they want to learn more about gorillas, how they act and think, how they live and relate to others, how the wild-born gorillas react to the more educated captive born apes.

Could it be that this high interest is motivated by higher order desires for intellectual stimulation? Or might it reflect the villagers' need to feel in control of an otherwise difficult and dangerous world. If we humans can learn to tame and talk with the great and dangerous gorilla, perhaps we have grounds to believe in our capacity to master this harsh environment and to face and withstand the grip of global forces that are invading our continent.

Conclusion – We Must Change People in Order to Save Gorillas

Social scientists have taught us that the need for mastery will prevail over the higher order desire for knowledge, especially among people who are living on the edge of survival (Maslow, 1993). To bring humane conservation values to the forefront in rural African societies will require us to pay much greater attention to the utilitarian values that shape attitudes and influence behaviors. Otherwise we can expect our attempts at conservation education, no matter the form or objective, will be transformed into opportunities to survive, to make a better living, to master at least one element of a harsh and unforgiving world.

What an irony it would be if our many and varied attempts to teach conservation biology to people in great ape range countries were being twisted into information gathering programs to improve peoples' ability to hunt and market wildlife. And yet, why would we expect people who can barely get food on the table to be interested in great ape behavior, socialization, evolution, intelligence, or emotionality? Preserving biodiversity, saving endangered species, keeping apes alive in the wild -- none of these enlightened ideals are likely to motivate a hunter to leave the forest and return to hunger in the village or to unemployment in the city.

We expected to enable hunting societies to restore taboos against eating apes by exposing them to the human-like characteristics of gorillas, chimpanzees, and bonobos. It is those similarities that led to establishment of taboos against eating primates throughout history (Cartmill, 1993 ; Kaplan & Rogers, 1996 ; Mordi, 1991). It appears that 75% of participants in our Ekona Lelu programs believe gorillas should not be hunted. The recital and discussion of stories and myths which evoke humane concern for apes can make a difference. But for every three people who argue that gorillas should be spared pain and suffering, there is one person who will ask why should we humans suffer, but not the apes?

There is only one answer to that challenge which is both ethical and practical. We must work to reduce the suffering of African people and Africa apes, simultaneously. Apes and people must be valued equally in our eyes and in our programs. We don't want to teach rural Africans about apes so that they can hunt them more effectively. Neither do we want to preach conservation of wildlife to deaf ears. To prevent these outcomes we must structure our conservation education interventions so that humane concerns influence social and ecological changes for the good of all life, not just for the apes and other threatened species. Rural societies must be informed, inspired, and enabled to provide health, sustenance, and fit livelihoods for their people, while at the same time they protect threatened species, sustain biodiversity, and restore healthy ecosystems.

In the end, our conservation programs will fail if we continue to focus only on saving nature. Biophilia (Wilson, 1983) -- the human fascination and love of wildlife and nature -- is a necessary, but not sufficient motivation to effect biodiversity conservation in rural Africa, or worldwide for that matter. Only the pursuit of biosynergy (Rose, 2001c) -- the collaborative and mutually beneficial interaction of humanity and nature -- can restore health, harmony, and integrity to African ecosystems and societies. With commitment to mutual benefit for all stakeholders, human and non-human, we stand on the highest ground of global ethics and practical strategy.

We must change people in order to save gorillas. Change people in rural Africa to enable them to live in harmony with their environment. Change people in the conservation movement to include professionals whose lives are dedicated to human welfare and social development, as well as to the saving of biodiversity. Change the worldview of people everywhere so that humane values will one day prevail over the utilitarian. If we can make these changes, then perhaps all the hominoids remaining on earth have a chance -- ourselves included.

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In order to create your account we need you to provide your email address. You can check out our Privacy Policy to see how we safeguard and use the information you provide us with. If your Facebook account does not have an attached e-mail address, you'll need to add that before you can sign up.Â People who want to learn about and take action on the world's biggest challenges. Extreme poverty ends with you. Learn more.Â Worryingly, education has thus far been a very low priority in humanitarian aid to countries in conflict " and less than 3% of global humanitarian assistance was allocated to education in 2016. Without support, conflict-affected children lose out on the chance to reach their full potential and rebuild their communities. The people living in villages in the Amazon region are among Peru's poorest social classes. The NCFP therefore generally has two objectives: on the one hand to protect the forest and on the other to combat poverty. "This is probably the reason why those responsible turned a blind eye when the environmental goal was not achieved," explains Giudice. The scientists propose that the program be redesigned to increase its effectiveness in a socially responsible way. Corresponding recommendations for action were also made to those responsible for the program in the course of the study A lack of education can be defined as a state where people have a below-average level of common knowledge about basic things that they would urgently need in their daily life. For instance, this could include basic knowledge in math, writing, spelling, etc. Especially in poor developing countries, educational inequality is quite prevalent.Â This is especially true for rural areas. People who live in these regions often have to bring their children to the next school.Â It is also crucial that we change the mind of people in a way that they regard education as a valuable thing. In some cultures, education is not regarded as important at all and some parents even do not want their kids to become educated since they fear that their kids will leave them if they give them too many options in life. Technical and vocational education (TVE) can influence development and economic progress for post-colonial societies. Some newly independent sub-Saharan African countries attempted curricular transformation that might produce a skilled workforce through widespread access to versions of TVE. In Cameroon, no such post-colonial curricular revolution was enacted. This article qualitatively analyzes fourteen Cameroonian secondary mathematics teachers' spontaneous discussions about the possibilities and perceived necessity for increased TVE avenues in Cameroon. Relationships between TVE, the pr