

THE WORLD OF ANIMALS VIEWED BY THE SAN HUNTER-GATHERERS IN KALAHARI

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ABSTRACT This paper aims to clarify a part of the African hunter-gatherer perception of nature, by describing the San's perception, classification, utilization of and attitudes toward animals, based on field studies, and an analysis of the relationship between humans and animals as embodied in song, dance, drawings, and stories.

The San recognize at least three categories of animals. The San regard animals primarily as food, 'kx'ooxo.' Aside from becoming game, the animals are of interest to the San if they harm humans. Thus, the harmful animals comprise the second category in the San animal classification, 'paaxo.' Third, if an animal is both inedible and harmless, it is of no interest to the San. The third category is then the useless, 'goōwahaxozi.'

However, the San seem to have a distinctly different recognition of nature from ours that is markedly more differentiating and flexible. The San animal categorization may be said to have a multilevel structure: an animal that is deemed 'kx'ooxo' according to the first level categorization, can become 'paaxo,' even 'goōwahaxo.' In turn, a 'paaxo' can become 'kx'ooxo' or 'goōwahaxo.'

Many kinds of animals appear as motifs in the song, dance, rock paintings, and folk tales of the San. The hunter-gatherer familiarity with the animals is well reflected in their art as well as in their everyday life.

Key Words: San; Kalahari Desert; Hunting; Animal classification; Art; Folk tale.

LIFE IN THE KALAHARI DESERT: HUNTING AND GATHERING

Hunting and gathering, the subsistence that every human group once led on earth, is now found only among a few groups of minority cultures in a few nations. Recently, even that number is rapidly dwindling due to the onrushing waves of modern civilization that have reached the remotest regions of the earth. Among the few peoples still living as hunter-gatherers are the San (Bushmen) of the Kalahari Desert in southern Africa. Here, I will describe their life in nature with an emphasis on the relationship with the ecology of the animals they interact with.

It has been made clear that the great majority of the hunter-gatherers still living and heretofore known, obtain their food by gathering plant foods, with the few exceptions of the Inuit (Eskimos) and Yukaghir who live in the Tundras where the climate is too harsh for plants to grow. Especially among the people who live in the middle-low latitude zone between latitudes 40 degrees north and south of the equator, there is a high dependency on plant foods whereas it is said that hunted animal meat accounts for 20-30% at the most of the entire food consumed (Lee, 1968).

Contrary to this fact, these hunter-gatherers regard animals primarily as "food." It is a phenomenon found universally from peoples in developing to industrial countries to prefer animal foods, and the hunter-gatherers who actually rely on a stable diet of wild roots, tubers, legumes, and fruit, are no exception. While they usually live on collected plant foods, they highly value meat that is hard to obtain exactly for the reason that meat is hard to come by.

The Central Kalahari San that I have studied, also often insist that "meat is the food." Even when abundant wild watermelon (*Citrullus lanatus*), legume (*Bauhinia petersiana*) and melon tubers (*Cucumis kalahariensis*) provide enough daily food, one too many a day on solely plant foods and people will actually feel deprived and crave for meat.

The main theme of this paper is the interrelation between the African hunter-gatherers and animals. First, I will describe the characteristics of the hunting by professional hunter-gatherers by comparing them to hunting by agriculturalists and pastoralists. Second, I will describe the hunter-gatherer perception, classification, utilization of and attitude toward animals, based on my field studies, and analyze the relationship between humans and the animals as embodied in song, dance, drawings, and stories.

The international aid against famine, and the modernization policies of the governments of late, have rapidly changed the hunter-gatherer societies of Africa. Their lifestyles have greatly changed in the last fifteen years which has led to a rather different relationship between humans and animals. However, this paper will regard the 1960's, when traditional hunting was still practiced, as the "ethnographic present."

I. Hunting by Agriculturalists and Pastoralists

Hunting is not unique to the hunter-gatherers, even if we exclude all but those conducted for subsistence to count out hunting as a modern sport. There are many agriculturalists and pastoralists who obtain a part of their diet through hunting.

With the exception of the Rendille and Gabra of the extremely arid areas of northern Kenya who specialize in the pasture of camels, it has been pointed out that the African agriculturalists and pastoralists depend heavily on undisturbed nature, and invariably incorporate hunting, gathering, and fishing into their livelihood (Sato, 1983). One of the main reasons is nutritional. Tse tse flies are vectors for the "sleeping sickness" in tropical rainforests and woodlands, where many peoples practice cultivation, which makes raising livestock difficult. Also, these peoples practice slash-and-burn agriculture, with plantain and cassava as major crops, where insufficient protein intake is a perpetual problem. Maximum efforts have been made to devise hunting and fishing methods to secure protein sources in these areas.

The pastoralists of the savanna and the semi-desert areas lead the simplest dietary life. They live in close association with the surrounding agriculturalists, from whom they can obtain a supply of crops. They also engage in small-scale agriculture to raise grain for themselves. Thus, they eat grain, milk, and meat, among which milk from the livestock is the staple food. Because meat is

acquired only through butchering livestock, the original investment of pastoralism, and because maintaining or increasing the livestock are the greatest goals of the pastoralists (Evans-Pritchard, 1940), there are not many occasions when livestock meat is eaten, unless a weakling is offered or sacrificed in preparation for a festive or ritual occasion. Livestock milk, the interest gained from keeping livestock, is consumed as the daily food.

According to E. Kurimoto (1984), the Pali of the southern Sudan, known as an agrico-pastoral people, actually actively engage in hunting, gathering, and fishing, to utilize the environment in every possible way. The Pali are the typical example of people who practice multiple subsistence. In Africa, the traditional peoples generally engage in more than one subsistence activity to varying degrees.

Other than to supplement scarce protein, another reason why both fauna and flora are sought after is the harsh reality pertinent to this continent, that is, the necessity to expand the food repertoire and the stabilize food supply as a whole. In the African continent, droughts, locust damage, disease, and other disasters inevitably strike once every few years and greatly damage the livestock and crops. The people must increase their dependency on the wild food resources upon such emergencies. The Tswana of the Kalahari are reported to have joined the San, their neighbors, in hunting and gathering to supplement their devastated food supply of livestock and crops to survive the severe droughts of the 1960's and 1980's in southern Africa.

II. Hunting by Hunter-Gatherers

In comparison, the pastoralist diet is simpler and more exclusive than that of the agriculturalists, consisting heavily of milk, meat, and blood as staples. This is probably mainly because their society is closely adapted to the pastoral life, with the need to consume a large amount of energy arising from the hard labor of maintaining large herds of livestock, and their satisfaction with milk as their nutritionally perfect staple. The Rendille only utilize three species of antelope among the wild fauna (Sato, 1980), and other pastoralists generally are very conservative toward their food repertoire, never actively engaging in hunting, and only eating game obtained by chance. There have been reports that some pastoralists refuse eating poultry and eggs raised by neighboring agriculturalists.

In contrast, the agriculturalists actively engage in hunting and fishing in order to expand their food repertoire. Hunting, gathering, and fishing not only are a necessary means to obtain complementary sources of nutritional, but are ways to defend their fields, their basis of livelihood, from pests.

Since agriculturalists are not specialists at hunting, they hunt mainly by trapping animals. The main trapping methods include pitfall, rope-snare, box trap, and squeeze trap, steel trap, according to the size of the target game. A detailed classification of the traps may count several tens of trap types if one considered the size, location, shape, and combination of trap devices (Itani, 1977).

While hunting by the agriculturalists tends to rely on non-aggressive patience of trapping or ambush, the hunting by the hunter-gatherers is active and aggressive. Although the Kalahari San utilize traps and the Pygmies of the Ituri Forest

ambush animals, the basic hunting method consists of tracking and attacking the game with spears or bows-and-arrows. At times they track the game for days, sometimes running after them as fast as they can for several kilometers before killing the game with spears and sticks. Perhaps through such all-engaging hunting, the inner aggressive urge is ignited and released. Such aggressiveness among the pastoralists may have been expressed as occasional raiding and feuds among tribe, while that among the agriculturalists may have led to the development of a complicated web of sorcery and rituals. The Maasai men, although they are a pastoralist, are individually required to confront a lion, with a spear as the sole weapon, and return with the lion's nails to prove themselves fit to become warriors. The Gabra, another pastoralist people in northernmost Kenya, until recently wore the severed penises of the men of feuding tribes as spoils of war. In contrast, the Pygmy hunter-gatherers of the Zairian forest, proudly set out on a hunt where elephants and buffaloes are hunted with hand-held spears, while the San of the Kalahari derive great satisfaction from hunts with bows-and-arrows of giraffes and large antelope. It is quite telling that a hunter-gatherer society seldom experiences a murder or the tensions ripe for committing murder, be it real or ritual.

III. Domesticated Animals

San base 100% of their economic foundation on hunting and gathering. From ancient times, the San have domesticated dogs, and only recently, some have started to keep goats and donkeys. Needless to say, the San's interaction with animals have mostly been in the wild, but before going into more detail, I will describe the San's relationship with the domesticated animals.

It is not known when the San started to keep dogs, but it had been already noted by the first Europeans who came to South Africa. The dogs among the San must have had a long history because they are seen on the ancient rock-paintings as well as quite often told in the stories. Domestication must have taken place in the mesolithic age. The San have utilized dogs in their hunting. Goats and donkeys were introduced from the neighboring Bantu who practice both agriculture and pastoralism. The number of households with goats and donkeys are still few. Goats are kept for milk and meat. Donkeys are beasts of burden. The few goats in San society have not affected the diet of the San as a whole. The donkeys, despite their small number of 2-3 animal per group of several tens of San, has had a great impact as a means of transportation. Goats require herding and care that is not suited to the hunter-gatherer economy inherently requiring frequent migration. In contrast, donkeys are a powerful means of transport. Although San possessions are minimized to not inconvenience frequent moving, donkeys have become a necessity for long distance moves. The donkeys have also become an efficient means to transport game and bulky harvests.

In San life, food resources are basically consumed the day they are acquired, in a hand-to-mouth kind of existence. The concept of saving for planned or unplanned future needs is alien to them. It is natural, for the San, that keeping

livestock never became a passion, since animals were seen as food rather than something to be cared for and bred as future food resources or property. We may say that the Kalahari Desert supports such a way of life by providing abundant flora and fauna as food resources. There are abundant wild foods everywhere that require no constant human tending. Even the domestic animals are maintained without much feed. Both goats and donkeys roam freely by day to graze and are brought back to the camp at night. Donkeys are even left to roam at night, to be brought back when they are needed for transportation, and often fall prey to lions and hyenas.

CLASSIFICATION OF SAN HUNTING

1. Gemsbok Hunting

The typical San hunts are those by bow-and-arrow. Their arrows are 70-80 cm long, and may reach only 30 m. The arrow tips are poisoned with a substance from the larvae of beetles (*Diamphidia simplex*), that may fell an animal within several to 20 hours. However, the process of successful hunting is far from easy. In the grassy and low-bush landscape without much cover, the hunter-gatherers must take pains to approach game unnoticed to within 10 m to shoot the arrows. The San arrows lack feathers to steady its aim so that accuracy is quite low. Even when the arrow strikes the animal, it may take a day and night for the poison to take effect on a large animal, which has to be followed by the hunters. Hunting with bow and arrow is hard labor with inefficient return.

Animals that are hunted with bow and arrow are mainly gemsbok, eland, kudu, wildebeest (gnu) and hartebeest. Because gemsbok is sought after the most, hunting with bow and arrow are sometimes synonymous with gemsbok hunting. Since the main method of hunting of the San is bow and arrow, we may say that San hunts are gemsbok hunts. Gemsbok accounts for 38% of the total game weight. Also, the festive dance in the biggest social event of the San is the gemsbok dance. This indicates the paramount importance of the gemsbok and its hunting with bow and arrow.

2. Steenbok Hunting

Steenbok, bush duiker, and other small antelope, are hunted with snares made of ropes. These animals are nocturnal, and travel between their nests and feeding ground along a set path. The San very well know such behavior and set traps accordingly. Sometimes, black-backed jackals, bat-eared foxes, and other small predators are captured in the traps. For birds, such as ostrich, kori bustard, and guineafowl, specific traps are prepared, using the same method as traps set for steenboks. These traps yield 1-2 game a week, once set. Game from the traps account for a large part of the total game weight, and yield is less dependent on chance, as in the case of gemsbok hunting. Thus these traps provide a stable supply of animal meat and are quite indispensable.

3. Springhare Hunting

Springhares stay in holes in the ground during the day and come out during the night to feed. San use a 4 meter rod with a hooked end to capture the sleeping springhares in the ground. The springhare's nest is a maize with multiple openings to the ground so that the hunter pokes his rod into all visible openings. Once the hare is hooked by the rod, the hunter digs a large hole about 1 m diameter, captures the animal, and beats it to death. The springhare weighs only about 1 kg, and this hunt is not particularly efficient. However, the game is easily located and cornered so that it provides a stable meat supply. Thus, it is a constant and important supplemental hunting method.

4. Hunting by Chasing

Hunters take advantage of chance encounters with the game in various ways. They may chase animals when the opportunity arises. This is a secondary hunting method, and cannot be categorized into clear types as in the case of the above three hunting methods. The game animals include several species dispersed at low density, such as warthogs and porcupine, juvenile animals that can hardly stand or walk, and injured or weak animals that the hunter can easily catch up with. Because humans can endure long distance running, hunters can catch up with even a large antelope after a 1-2 km chase, and fell it with a spear. There was one case where a cheetah was chased and beaten to death with a club.

SAN CLASSIFICATION OF THE ANIMALS

I. Classification Standard

For the San, animals are first and foremost game, that is, food. Animals frequently inhabit the San tales, transforming themselves into a god or a trickster. Long long time ago, when god created animals, the animals looked and acted like the humans. Probably due to this, the animals in present San stories still are anthropomorphized. The motif of the hunter and his game recurs the most in the stories.

Aside from becoming game, the animals are of interest to the San if they harm the humans. In the San value system of nature, good is synonymous with good food, and bad with something poisonous or harmful. If something cannot be eaten but is also harmless, it becomes of no interest to the people. Such an entity is nonsignificant and often even nameless.

Despite the annual rainfall of only 400 mm, the arid Kalahari bestows a rich fauna and flora. Here, people eat more than 80 species of plants and 40 species of animals.

The San hunting and gathering way of life is supported by such fauna and flora. Studied in detail, plant foods occupy more than 80% of the San diet. (Tanaka, 1980). The reason for this is that plants are easily obtained and provide

a stable supply. Animals roam about, making them technically difficult to capture, while changing environmental factors alter their abundance and distribution. Thus, animals are not suited as a staple food. In spite of this, the San value the animals and their hunting because animals are satisfying as food, and, also, hard-to-get foods are given a certain value. Because of this value, hunting is important and San have a strong interest in game animals.

How the San revere the animals can be understood from the San recognition and classification of animals. The primary classification standard is edible/nonedible. Like hunter-gatherers in general, the San lack a nomenclature for the high-order taxonomic units, such as “plants” or “animals.” For them, it is more important to name the specific organisms, and their utility, ecological characteristics, and behavioral traits. No particular abstract concept is needed. Plants and organisms that are nonsignificant in San life go without names while entities important to them are assigned detailed information. All fauna and flora that are edible, of course, are given names, and the parts of favored game animals are finely classified and named.

II. Kx’ooxo, Goōwahaxo, Paaxo

The San word for food is ‘≠?oōxozi.’ ‘≠?oō’ is the verb “eat,” placing the suffix ‘xo’ at the end makes the word gerund, the suffix ‘zi’ creates a plural form referring to food in general. ‘≠?oō’ is the general word, “to eat,” but there are many specific verbs to express the difference in shape, quality and ways of eating and cooking food. One such verb is ‘kx’oo’, used when eating meat. Therefore, all animals that provide meat are called ‘kx’ooxo’, and game animals in general are called ‘kx’ooxozi.’

In contrast, non-edible flora and fauna are ‘goōwahaxo (goōwahaxozi).’ ‘Goowaha’ denotes “useless” and anything and anybody that is useless, be it man, animal, plant, or tool, is called ‘goōwahaxo.’

There is another system of classification by the San related to the edible/nonedible distinction of fauna and flora, but from yet another perspective, called ‘paaxo.’ ‘Paa’ is to bite. Therefore, ‘paaxo’ are things and beings that bite, are dangerous, or poisonous. Since the fox, jackal, and python are ‘paaxo’ but generally edible, they belong to an overlapping area of the categories ‘paaxo’ and ‘kx’ooxo.’

III. Food Taboos

Hunter-gatherers, in general, have few food taboos and the San are no exception. They eat most of the mammals, birds, and reptiles in their habitat. The hunter-gatherers in the forests also usually eat most of the insects, not to mention fish. For the San living in the dry semi-desert, inedible mammals are found only among the mice and bats. The lion, a typical ‘paaxo’ animal, is avoided and feared because it eats humans. However, on the rare occasion that lion meat is obtained, and if meat happened to be scarce, lion meat is eaten by the elderly. The hyenas are despised because they scavenge dead animals, and are not

usually included among San food. But even these are known to be eaten among a few San in times of meat shortage. Among birds, the predators are regarded as 'paaxo' and the vulture is the most despised for the same reasons the hyenas. However, its meat has also been eaten, when a vulture was found trapped in a steenbok trap, according to one informant.

Given these cases, it is apt to regard San society as free of food taboos in a strict sense. The hunters of the Kalahari Desert, known for their realistic and pragmatic view of the world, also lack witchcraft and sorcery, in stark contrast to the neighboring Bantu agriculturalists. With those facts in mind, that the San lack strict taboos, and have minimal laws and institutions, we must conclude that they are situation-oriented opportunists.

There is one more fact to be noted on the topic of food taboo. There are a few food restrictions applied to the two sexes and developmental stages, marital status, or pregnancy. It is these temporary food restrictions, called '!nanaha' that constitute the sole food taboos for the San. Land tortoise, springhare, steenbok, and other small members of the 'kx'ooxo' category can be treated as '!nanaha.' It is significant that plant foods and large animals hunted by bow and arrow that are pertinent to the San food economy do not become '!nanaha.' Also, '!nanaha' is mostly set aside for men and women between older childhood and youth, although there are minor variations for each restricted animal. These young men and women at their most able-bodied stage set aside, through the institution of '!nanaha,' the most easily obtained, yet not too important game meat, to the infants and the elderly, the weakest members of their society.

IV. Multi-Level Structure of Categorization

There are no real food taboos for the San. Even animals considered 'paaxo' may eventually be eligible to be 'kx'ooxo.' 'Kx'ooxo' animals in turn are potentially capable of turning into 'paaxo,' as in the case of a cornered gemsbok with its long, pointed horns, which is a deadly weapon, not to mention lions and poisonous snakes. Also, old and skinny gemsbok have a radically reduced value as food, and are more in the 'goōwahaxo' category.

What are the animal categories to the San? It is clear that the San have at least three categorizations of creatures. Indeed, the San identify a gemsbok as 'kx'ooxo,' a lion, jackal, or a poisonous snake as 'paaxo' and butterflies or ground insects as 'goōwahaxo.' However, it also seems clear that the San have a distinctly different recognition of nature from ours that is markedly more differentiating. The San animal categorization may be said to have a multilevel structure. An animal that is deemed 'kx'ooxo' according to the first level categorization, can become 'paaxo,' even 'goōwahaxo'. In turn, a 'paaxo' can become 'kx'ooxo.' The fox and jackal are, by the first level categorization, 'kx'ooxo' as well as 'paaxo.'

A person never becomes 'kx'ooxo' in reality for the San, so it is not appropriate to use the same categorization for humans. However, a ne'er-do-well or a violent person is sometimes called 'paaxo,' and feared because of his violent behavior. Yet when the same man proves himself to be an excellent hunter, he

becomes “a valuable man.” By the same token, a humble man obedient to social norms is nevertheless truly a ‘goōwahaxo’ if he is a poor hunter. The opportunistic world view of the San who live in the harsh semi-desert environment is evident in each of the examples that depict their animal recognition as precious resources to be effectively developed and utilized from the tip of the tail to the bone marrow.

‘PAA XO’ ANIMALS

We have so far focused on the hunted animals, ‘kx’ooxo’, the animals most closely related to San survival. Here, we shall briefly discuss ‘paaxo,’ the harmful animals.

1. Lions, Leopards, Cheetahs

‘Paaxo’ animals are the predatory animals, such as the lion, leopard, and cheetah. Among these, the lion is the most feared because of its size, menacing features, and above all, the strong destructive foreleg that can strike the opponent dead. In reality, the wild animals fear and rarely attack humans. But anybody who has heard the lion’s earth-rumbling roar that can be heard 10 km away, finds himself trembling as if over-taken by the devil. Anything and anybody that can harm humans are, for the San, “no good” and ‘paaxo’ to be avoided, be it animal, human, or object.

The scorching sun in the dry season that burns the desert earth, kills the grass and bushes, and leaves humans and animals hungry, is one of the champion evils for the San. In contrast, rain revives the earth and creatures and is the source of life. The San expression for the ostrich hatching the egg in the nest hole dug in the desert is literally “cooling the egg by shielding it from the scorching sun.” In the Kalahari where the direct sun will heat the ground to 70 degrees C, this is an apt expression. The San will say, “the sun is burning me to death,” and curse the sun as well as long for the rain clouds. Throughout the dry season that takes up most of the year, the people are grilled by the intense heat of the sun and endure thirst in the drought. The San word for “thirsty” is ‘lkamaha,’ a word derived from the noun, ‘lkam (sun),’ turned into an adjective by inflection. The sun is truly an evil for all things living in the Kalahari.

I have come to suspect that the reason ‘paaxo’ animals are unwelcome as well as hated by the San is not because they are a hazard but more because these animals are also hunters of the grassland who occupy the same niche as the San and take away from them the precious ‘kx’ooxo’ game. The lion, the champion ‘paaxo,’ rivals the sun in its usage as a synonym for evil.

2. Poisonous Snakes

Many poisonous snakes inhabit the Kalahari, such as the green mamba, Cape cobra, puff adder, boomslang and the black mamba, the most poisonous snake

in the world. Although the lion is synonymous with evils as is the sun, in reality, more San are harmed by the poisonous snakes they step on unawares. The most dangerous snakes are thick but short, slow-moving, and do not hide themselves from the humans, such as the puff adder. When the San go out to hunt and gather, they most keenly watch out for the snakes.

Even the San with their observation of nature and detailed knowledge on fauna and flora, do not seem to know which of the several tens of species of snakes are poisonless. This must be due to the fact that it is difficult to learn and relearn the poisonous snakes by experience. The poisonless snakes are nevertheless categorized as 'paaxo' and considered dangerous. This is the most conservative risk management strategy against snakes.

Children all over the world love to play. The San children with no man-made toys are no exception. They roll about on the sandy earth, playing ingeniously with grass roots, bits of wood, beetles and lizards. Even the holes bored by the mice and lizards are mysterious toys to the curious children. However, the adults are acutely wary of such a hole and strictly admonish the child who is about to poke his finger into the hole: "No, no, there is a 'paaxo' in there!" Children, thus, from early on, learn that there may be a dangerous snake lurking in the holes.

3. Hyena and Vulture

The hyena and vulture are scavengers called the janitors of the savannah. The brown hyena, an endangered species, inhabits the Kalahari. These animals are strict scavengers in contrast to the spotted hyena that widely inhabit Africa, and frequently hunt by themselves. The brown hyena ecology and social life have recently been reported by the Owens & Owens (1984). Although the brown hyena may hunt small animals, such as mice during severe food shortage in the dry season, generally, they closely monitor lion activity, and feed on remaining meat, skin, and eventually the bones.

Neither hyena nor vulture harm humans, and the San do not fear these animals. The sole reason that these animals are despised and avoided is that they feed on not only rotting meat, but human corpses. The San, whenever possible, bury the dead 2 meters deep in the earth, to keep these animals from feeding on the corpse.

The hyenas have strong jaws and molars that can crush giraffe femora. They sometimes bite into aluminum pots and enamel tableware, which only fuels San contempt and hatred for the animals and brings about a brutal death by beating whenever a hyena is found in traps.

4. Poisonous Insects

The most poisonous insect of the Kalahari is the scorpion. People rarely die from a poisonous insect bite, but anybody bitten by a scorpion or the centipede would suffer severe pain for 2-3 days. Although very rare, there are poisonous spiders as well. Fleas and lice, and mosquitoes in the rainy season, although

infrequently, cause itchiness and a nuisance. Very infrequently, one may encounter horse flies and honey bees. Because the Kalahari is so dry, malaria is rare, and tse-tse flies, the carriers of sleeping sickness, are unheard of. There are a great variety of insects and other arthropods other than poisonous ones, but the majority are 'goōwahaxo' to the San, not 'paaxo'. The main 'paaxo' insects are the ubiquitous and most harmful scorpions. Scorpions are nocturnal hunters that come out from under dead bark to eat small animals. Scorpions frequently crawl out from the firewood that women gather during the day, when a fire is made. The San do not hesitate to step upon and throw the scorpion into the fire.

Some 'paaxo' insects have a role in mediating human relationships in rather special cases, such as the lice. When the women relax in the camp, they often pick each other's lice. According to a detailed observation made by Kazuyoshi Sugawara, the closer the social distance, the more mutual lice picking occurs (Sugawara, 1986). The lice are a curious case in which a 'paaxo' insect helps to support human networks.

IMAGINARY ANIMALS

I. Animals in Song and Dance

The San are fond of song and dance. Without other pastime, their favorite diversions are song, dance and conversation. Men and women both break into singing, even while lying down or in the midst of conversation. When people gather and relax around a fire, there is sure to be a person playing the finger piano (a small string instrument played with both thumbs, found throughout Africa). A woman would start singing with occasional high notes in falsetto, and the other women would join in. Then, the men get up, and a dance will ensue. Most songs do not have words. The majority is a refrain of simple combinations of rhythms. The recurring motifs of songs and dance deal with the animals, such as the hunts, and vultures awkwardly eating carcasses. Among the songs and dances, no other indicates the symbolism of animals more than the dances of womanhood and hunting.

For the San who are naturalists as well as pragmatists, there are few rituals, and these are usually a simple progression of dances. The San girls experience the onset of menstruation around 12-13 years of age. These girls will be laid gently on the hut floor. Her grandmother will bury the sand soiled with the menstrual blood near the camping ground, after which all the women will gather, then dance single file around the hut where the girl is lying down. The women will strip off their fur mantle and wrap skirts, down to only small beaded aprons that barely hide their genitals, strutting the firm buttocks characteristic of Khoisan people. The young women will shake their firm round breasts. The older women will shake theirs, sagging for breast feeding one too many a child. All the women will celebrate the new womanhood. This women's' dance is called the "eland dance." Of the animals that surround the San in the Kalahari, the

mature and curvaceous eland body exemplifies the ideal woman's figure. Its large rump is symbolic of fecundity and easy birth.

The hunting dance is called the "gemsbok dance."⁽¹⁾ After a successful gemsbok hunt, or when a large number of people gather during the bountiful season, the San hold the "gemsbok dance," usually at night. The women would sit around the small fire in a circle, and clapping hands, start to sing. The songs have a simple melody refrain, and high tone. Often, falsetto is used. Simple, sad-tuned songs are sung over and over.

The men would dance around the circle of women. They stamp one foot to a steady beat or jump forward, generally in a simple repetition of ground stomping, one-direction stomps. These dancers may hang their arms forward, agitate both arms out to their sides, and sometimes keep to the beat in up and down motion with sticks and gemsbok tails in their hands. The stomping dance steps continue with a bent posture, so it requires much energy (and quite tiring). The songs and dances stop every few minutes. The men sometimes accompany the high-toned and sometimes shrill chorus with their low-toned humming. This humming is said to simulate the gemsbok groaning. The women's shrill voice will harmonize with the men's low humming voices, and the air will be filled with the dancer's excitement. Everybody is enthralled in the song and dance. This must be the moment when people leave behind the worldly order and are liberated into the world of ancient ancestors. As the dance gathers momentum, the people forget their fatigue and become absorbed in the dance, not even noticing the gradual night chill. It is not unusual for the San to dance away the night to the next day until high noon.

The gemsbok dance is one of the few religious rituals of the San, having the significance of relief in this society. Because the San live as hunter-gatherers, face to face with nature, and as a part of nature themselves, they have adapted a generally realistic and pragmatic outlook on life. Therefore, they do not have any systematic ideas on the supernatural. Seen above, they do not even exhibit interest in things that have no bearing on their living. However, they, too, in order to understand the incomprehensible facts of life - creation, illness, drought, and death - have an imaginary world inhabited by gods. According to the San, a god called 'llgama,' or 'piisiloagu' in the story-telling, was responsible for the creation of this world. This god created everything good, game animals, and food plants, as well as rain to grow plants and to save the people from hunger and thirst. Yet the same god created 'paaxo' animals, and the sun that burns the last breath out of every living creature. It is this god that also brings about illness and disasters and eventually brings on death. As symbolic of the whole range of human emotions, this god is fickle.

Through the "gemsbok dance" the people confront this mysterious evil. Some male dancers are endowed with the power to overcome this evil.⁽²⁾ As the dance is about to reach a climax, these men gradually absorb into their own bodies the evil spirit lurking in the bodies of the sick and weak that was brought on to them by the god 'llgama.' When the male dancer's body is saturated with the evil spirit, he faints and falls amidst the dancing circle. His body will become paralyzed, and almost in a coma, he will not even feel the heat of the fire if he falls into it. His

friends will pull him out to a safer place and rub his body, and eventually, he will come to his senses and may join in the dance again. Experienced mediums will go through a series of trances in a night, and through him, the evil spirits that had slowly multiplied in this world will be ridden.

Gemsbok, a champion 'kx'ooxo' animal, and the power inherent in hunting it, are the sole prescription of the San against the fickleness of the god, '||gama.'

II. Animals in Rock Paintings

Presently, the Kalahari Desert that the San inhabit is a vast wasteland of red sand covered with little grass and bush. There is no natural canvas for the San to engage in painting, and this tradition has been completely lost. However, before being persecuted by the Bantu agriculturalists of the Nguni and white colonialists, the San ancestors, in the hilly areas of Drakensburg, South Africa, and Brandberg and Twyfelfontein, Namibia, have drawn numerous rock paintings and engravings. The motifs of the paintings include the San as well as the Bantu. However, the most remarkable are the depiction's of the animals, most of which are realistic figures of antelope species and the lively activity of the San aiming at the game with bow and arrow. These drawings indicate the San interest in the 'kx'ooxo' animals from the ancient times.

There, a mysterious lion with a paw at the tip of the tail and other, no doubt, imaginary animals in the drawings that are still found in the San mythology today.

One of the paintings clearly depicts the "eland dance." These paintings have been drawn over several thousand years, and without exception are found in the foothills of steep mountains where a huge rock overhang forms an opening of 30 to 50 m² under a natural rooftop. The people, usually living in the plains below, must have climbed the steep rock mountain to celebrate a sacred ritual for a friend's coming of age. Depending on the time period, there have depicted not only realistic images but also abstract renditions of animals, and line drawings of spirals and lines, pontillation, and abstract deformé figures. The artistic inspiration that is unimaginable from the daily life of the San today, cornered into the inner-most Kalahari Desert, is overflowing in the ancient rock paintings. It seems even possible that religious activities once existed among the ancient hunter-gatherers, which today one cannot find the slightest evidence of.

III. Animals in the Story-Telling

Compared to the !Kung San in the northwestern Kalahari, the Central Kalahari San do not have as many stories to tell. I have, over the last 20 years, collected about 40 of them. The majority deal with fairy tales of tricksters, and about five are creation myths. There are three stories obviously introduced by the Bantu, with domestic animals, such as the chickens and cattle. The common thread among these stories is that most of the characters are animals. What is more, these characters retain their animal characteristics while always showing up as a human being. In the ancient times, the animals and humans were inter-

changeable, and animals would behave as humans and humans would turn into animals. The gods would also emerge as humans.

The ubiquitous animals in the stories of various areas of Africa, are the hares, spiders, and hyenas as tricksters (Yamaguchi, 1971). These animals also are found in the San tales, and above all, the hare is the most frequent trickster. The favorite among the San is the story in which an ingenious trickster, the hare, defeats the champion 'paaxo' animal, the lion.

One day, the hare (zoobalkoagu)⁽³⁾ was making a grass hut with a simple structure of a dome. He felled some trees for wooden poles, and bore some holes in the ground to erect the poles. He was thus constructing a frame, when a lion (xamkoagu) happened to pass by. The hare said to the lion, "You are taller and stronger than I am. Will you lend me a hand? The top of the frame is too high for me to reach. Will you tie the top twigs into one?" The lion was vain, so that he climbed up the frame, was handed some twine, and started to knot the top of the hut. While the lion was working away, the rain clouds suddenly gathered. The hare pulled out a thin strip of hide, tied one end to the testicles of the lion straining upward busily binding the top, and the other end to a supporting pole. The rain started to pour, and as is always the case with the rain in the Kalahari Desert, poured cats and dogs. Rain was accompanied by thunder. The darkened earth was filled with the smell of wet dirt, and chilly air crept in. Lightning criss-crossed the sky, and ear-piercing thunderbolts shattered the air. A springhare (≠goolkoagu) was struck and bounced away. It is for this that the springhare's forelegs are small and it has to jump around with its hindlegs like a kangaroo. The lion, finally alerted to the sudden change in the weather, tried to take shelter and jumped down from where he was, but alas! His testicles, tied to the pole, tore off! The lion fell to the ground in great pain and died a miserable death. The other lions tried to avenge their friend, but the hare got wind of their intentions and got away to the genet (tsamba|koagu) who lived in the hollow of a tree. A lion in pursuit came as far as the hollow and found the hare in genet's fur. "Did you see the trickster hare come this way?" the lion asked, mistaking the hare for a genet. "Oh, I did. He did pass by and he ran away atop the boughs not to leave any foot prints!" Thus, the hare fended off the pursuit by the lions.

The story of the ingenious hare defeating the fiendish lion, a feat impossible for the San, is told quite entertainingly. The words for the genitals of both sexes feature prominently in these stories, and the stories themselves take on an erotic tone. The open sexual relationship of the San can be reflected in the story telling (Tanaka, 1989). The story tellers use abundant gestures that deftly captures the characteristics of the animals in the story. San click sound is quite effective in simulating animal behavior and cries. These sounds are extremely difficult to write down.

The short episode of the springhare and its forelegs inserted in the story of the lion and the hare may sound quite out of place to a casual listener. However, the episode explaining the present characteristic of the springhare that takes place in a thunderstorm, a rarity throughout the year in the dry Kalahari, is a kind of a creation myth, and not at all out of place.

The spider that is featured prominently in the African folktales only has one

story among the San.⁽⁴⁾ In it, the spider (||qhamlkoagu) invites the hare, the notorious trickster, to a sumptuous meal among the clouds, yet has the meal all to himself, cuts the spider web, and leaves the hare stranded. The hare in this story is no match for the spider.

There is also only one story that features a hyena (Inuutshalkoagu). In it the hyena along with a jackal (lgebilkoagu) intrudes on the white man's farm surrounded by chicken wire, and eats a goat. The hyena is tricked into satiating himself (with the goat) by the jackal, cannot slip back out of the chicken wire, and gets caught by white farmer. The story is an extension of the people's disdain for the hyena's awkwardness and may probably be a recent creation. Nevertheless, the story is quite indicative of the hyena's place among the San.

One characteristic of the San tales is the numerous animals that are featured. The San tricksters range greatly from the clever dorongo (≠nhau≠nharilkoagu) through the land tortoise (lgoelkoagu) who competes with a licaon (hunting dog, lgarulkoagu), just like the hare and the tortoise in the Japanese folk tale, and the small bird (konkonlkoagu), smaller than a sparrow, who defeats an elephant (≠xoalkoagu) by cunning, to the korhaan (lkaalkoagu) who tricks the guinea fowl (lxanelkoagu) and eats him. Every conceivable animal is given the role of the trickster. The hunter-gatherer familiarity with the animals, be it behavior or cry, is reflected in the folktales.

IV. The Animals That Were First Created

The fickle god piisilkoagu is also allotted the status of the trickster in the San tales. Evidently, the stories with piisilkoagu are always a kind of creation myth. For example, a story explains the origin of the fossilized riverbed that crosses the Central Kalahari San settlement from west to east as follows:

The gigantic piisilkoagu went hunting where he was bitten in the testicles by the terribly poisonous puff adder (lgaelkoagu). Piisilkoagu, in much pain, dragged himself to Lake Xau 300 km east to drink some water. On his way he would diverge from the path in excruciating pain, yet always coming back, and this track became the riverbed today, with occasional large indented areas (pans) and tributaries (molapos).

The San do not know nor inquire about a period several ten thousand years ago when it rained much in the Kalahari, and that the river was flowing. The riverbed as the piisilkoagu's doing is the only explanation plausible to them. Piisilkoagu finally reached the lake, jumped into the lake with a large splash, and became a crocodile, who still makes the lake his home.

One day, piisilkoagu came across a warthog (llxoulkoagu). He wanted to share the warthog with his wives and talked the boar into coming with him. "I have a feast waiting for us at home." Piisilkoagu carried the warthog toward the camp where his wives were. Approaching his hut, he yelled, "Yo, wives, make a big fire for the feast.": The warthog heard this and figured out that piisilkoagu was carrying him home to eat him. He said to piisilkoagu, "You've carried me on your back for quite some time. Now we take turns." He flung piisilkoagu onto his back and started running toward the hut like mad. Piisilkoagu, sensing finally

that the warthog had smelled foul, yelled frantically to his wives, "The warthog will throw me into the fire! Put out the fire quick by relieving yourselves on it." But the warthog was quick to run to the fire and threw piisilkoagu into the fire. Piisilkoagu was burnt and became a large rock. Then, the rock started to rotate, and the warthog, fearing for his life, started to run away. Piisilkoagu shuddered, turned into a hartebeest, caught up with the warthog and cast a spell: "You are and shall become a beast!" That is how the warthog became what he looks like today. In the ancient times when warthog had been llxoulkoagu, even the warthog had a human figure.

How the dog came to live with humans is explained in one San tale as follows: A dog (?abalkoagu) and a jackal (lgebilkoagu) lived together in the plains in the old days. One day, they agreed to visit the humans as they had plenty of fruits and various cooked meats in the village. They went to the village and were treated to lots of food. The dog became familiar with the people and fond of the food, but the jackal after several days missed the wild game meat and returned to the bush. Since then, the jackal has remained a hunter in the wild and the dog, a human companion.

I will introduce the last and yet another creation myth here. It concerns how the humans came to use fire.

Piisilkoagu used to eat grass roots and fresh watermelons. One day he came across the ostrich (lgerolkoagu) who was eating roasted root and cooked watermelon that smelled good. It used to be that only the ostrich had fire. The ostrich usually kept the fire at his side under the wings to hide it from plain view. Piisilkoagu talked the ostrich into picking the kx'om (*Grewia flava*) fruit together. The kx'om fruit just had ripened and the ripe, delicious looking fruit was found all over the lower as well as the higher trees. The two picked away, helping themselves to the fruit occasionally, and soon their bags were full and no fruit left in the lower trees. Piisilkoagu said, "Look, that big tree still has lots of fruit. You reach out and pick them!" The ostrich held out his wings as he was told and picked at the fruits. But it was just as piisilkoagu had intended, and he snatched the fire from under the ostrich's wing, and started to run fast. "You, piisilkoagu, took my fire!" Ostrich came in hot pursuit. Piisilkoagu had gathered some thorny seeds called "devil's claws" (the seed of a plant of the sesame family found only in the Kalahari, about 15 cm in diameter) with pointed thorns coming out at all directions) and started throwing them at the ostrich with such speed as he ran away with the fire in his arms. The ostrich tried to dodge the thorns, running zig zag and spreading both his wings to keep balance, but eventually stepped on the thorns, which tore apart the ligaments of his toenails. Since then, ostrich only has two fingers to a foot, although he used to have five. Piisilkoagu thus obtained fire and shared it with the people.

V. Sharing the True Wisdom of Nature

As I have repeatedly stated, the primary interest of the San and other hunter-gatherers are food stuffs. Yet, as we have studied the San in detail, we have also learned that these people live closely related to all living animals, whether they

are dangerous or not even edible. They do not distinguish the animal world as cut off from their human world. It may be said that such an attitude is granted for the people who live enmeshed in the wilderness and are naturalists in the sense that they are an integral part of nature. However, we also know that most members of the human race have kept altering their recognition of nature ever since ten-thousand years ago when agricultural and pastoral ways of living started. Only in present civilization have we come full circle, longing to be a part of the pristine nature that we no longer have. Although it is impossible to intermesh all of our life processes into nature once again, we must at least give up such ignominious thoughts as to objectify nature to the extent of even treating it as an enemy to be conquered. If we allow the wildlife of our earth to be destroyed any more than it is now, in the arrogant name of civilization, we will surely be incapable of surviving, since the human race cannot live outside of the natural ecosystem. We need to try to have the San share with us the hunter-gatherer's great long-cherished wisdom of naturalism.

NOTES

- (1) Until the 1950's the dance seems to have been called the "Wildebeest Dance." The song to it, like that for "gemsbok dance" consists of simple refrains of a melody, but the similarity ends there. The elder people remember the wildebeest dance from the old days and say the gemsbok dance came into the society from Namibia through the Nharo San to the northwest. The waning of the wildebeest dance seems closely related to the recent decrease in the wildebeest population. Also, during the 1980's, the giraffe dance originated among some !Kung San in Namibia, and as of 1989, the giraffe dance prevails among all hunting dances. The giraffe dance has already become the rage among the Nharo San of the Ghanzi area and is said to have reached the Xade area. San music thus seems to have the tendency to spread from west to east.
- (2) The author, too, has experienced the trance-like state of being melted away into the other-world as he emulated the game animal by voicing deep grunts and delved into the dance with rapid arm movements and stomps. In order to be ascertained as a healer via trances, one is required many years of training. Richard Katz (1982) have reported that healers possess a set of certain personality traits.
- (3) Animals appearing in stories have the suffix '!koagu' attached to their name. '!koagu' probably derives from '!koa' (child), and refers to a mythical original state of the animal. For example, when '!kogau' is attached to 'zooba' (hare) to become 'zooba!koagu,' it refers to a promordial proto-hare.
- (4) According to Megan Beaslie who has studied the !Kung San folktales for nineteen years, the !Kung do not have any story that features the spider. In contrast, among the neighboring Tswana people, spider stories are frequently told. The spider stories of the Central Kalahari San are probably borrowed from the Tswana people (Bieseles, M., Personal communication).

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