

FROM SUBSISTENCE TO COMMERCIAL HUNTING: CHANGES OF HUNTING ACTIVITIES AMONG THE SAN IN BOTSWANA

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ABSTRACT This study aims at exploring the current state of hunting techniques, hunting activities and their transformation process, taking the San society in the Central Kalahari Game Reserve in Botswana. Main focus shall be placed upon how the hunters have been acquiring and maintaining trapping and equestrian hunting techniques and knowledge. Through this consideration, we will discuss the change in roles of hunting in the San society. With the spread of commercialism in the Xade area of Botswana, hunting among the San has changed over the years from a means of food supply to sustain subsistence living to hunting for commercial transactions in dried meat and skins. Each hunter finds his own optimal combination of trapping and equestrian hunting etc. Dried meat and skins from the animals, although still used for the traditional custom of gift-giving and for consumption among the San themselves according to their principle of “equal distribution”, are being increasingly used for commercial transactions of dried meat and products made from the skins.

Key Words: Trapping; Equestrian hunting; Commercial hunting; Dried meat; Skin; San.

1. INTRODUCTION

It is said that the meaning of hunting for hunter-gatherer societies has been changing recently. Hunting once signified for them a foundation of their daily lives, but now it is valued by them as getting money or something that reveals their cultural identities (Hart, 1978, Anderson & Ikeya eds., 2001). In the case of the San, among other hunting skills, dog hunting for animal skin has been the base of the San's economy and bow-and-arrows hunting has been the representative of the San's culture (Ikeya, 1994, 2002).

In existing paper on the hunting activities and the techniques of the San (Basarwa), case studies on G!ui and G!ana in central Botswana are the most accumulated documents except on !Kung in northeastern Botswana during the 1960s (Lee, 1979). These series of studies include; Silberbauer's (1981: 204–217) on bow-and-arrow hunting during the 1950s, Tanaka (1980: 30–35, 2014: 20–26) on bow-and-arrow hunting and trap hunting in 1967 and 1972, Valiente-Noailis (1993: 62–71) on bow-and-arrow and snare hunting in about 1980, Osaki (1984) and Tanaka (2014: 141–143) on equestrian hunting in 1982, and Ikeya (1994) on the ecological anthropology of hunting with dogs in 1987⁽¹⁾.

However, it should be pointed out that when reviewing these studies, the research fields were mainly concentrated in the Xade area within the Central Kalahari Game Reserve (CKGR); no generalization has been made based on the diversity of the hunting techniques in seven settlements within the CKGR. Furthermore, no recent study deals with trap hunting; very few studies have been

reported on equestrian hunting through participatory observations among the San studies.

This study, therefore, aims at exploring the current state of hunting techniques, hunting activities and their transformation process, taking the San society in CKGR as a target group. In the course of the study, main focus shall be placed upon how the hunters have been acquiring and maintaining hunting techniques and knowledge. Through this consideration, we will discuss the change in roles of hunting in the San society.

The San people are known to have a variety of hunting techniques, such as the bow-and-arrows, trapping, springhare hunting, hunting with dogs, and equestrian hunting (Ikeya, 1998, 1999, 2002; Tanaka, 1987, 1991, 2014). It is also known that each of the hunters acquires new hunting skills while they are engaged in various hunting activities at the same time. The Xade area of CKGR in Ghanzi District, Botswana are selected for the research field (Fig. 1).

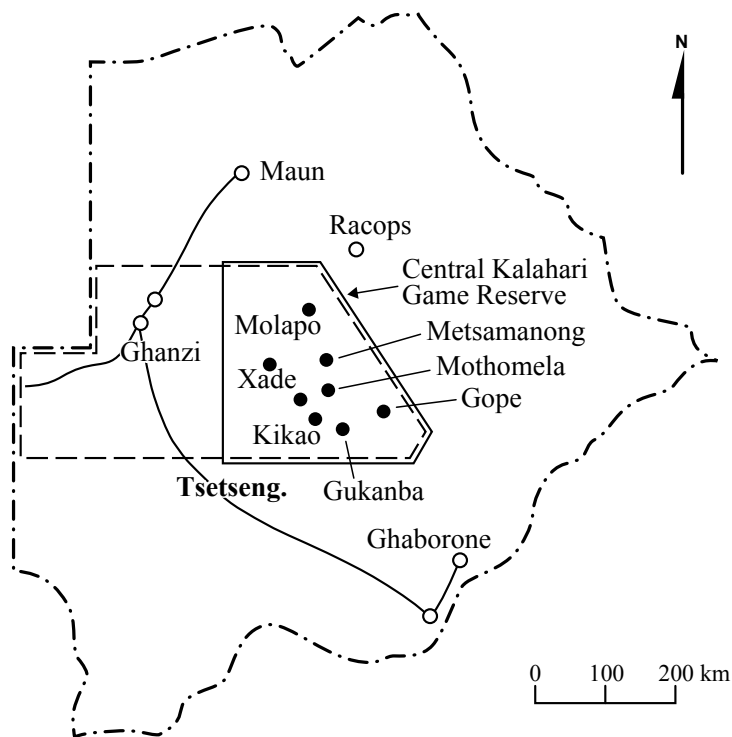


Fig. 1. The Xade area, the study area

I lived at K-Camp in the Xade area of the Ghanzi District to study the San for 5 and a half months from August 1987 to mid-January 1988, for 5 months from August 1989 to December 1989, and 10 days in 1991 and 3 months and 2 weeks in 1993, one month again later in 1993. I participated more than 10 times in one-day trapping, and several times in several-day equestrian hunting trips, and observed the behavior of their hunting. When I did not participate in hunting

trips, I collected detailed information such as the names of the participants and the hunting grounds, the meat sharing method and the species and number of hunted animals etc. in the Xade area.

Well, hunting is traditionally among the most important activities among the San in the Kalahari Desert, but it is generally prohibited from the perspective of wild animal conservation, except for subsistence hunting. For instance, the San living at Xade settlement hunted various animals except giraffes, ostriches, lions, etc. inside the Central Kalahari Game Reserve before 1997. After relocation of the people to areas outside of the reserve under the Botswana government policy in 1997, it became extremely difficult to hunt animals in New Xade established by the government because its settlement includes more than 1500 people (Ikeya, 2001). At the moment, no one can do fieldwork that includes hunting among the contemporary San. Consequently, it is extremely valuable to describe and analyze the hunting practices of the Xade in about 1990 for the recording and reconstruction of changes that have occurred in hunting activities.

2. RESEARCH AREA

The Xade area, my study area, is located in the middle western part of the CKGR and is about 180km southeast of Ghanzi town, the center of the district (Fig. 1). The population of the area in October 1987 was 774, and 200 of them were seasonal residents who lived there only during the dry season (Ikeya, 1994: 120). K-Camp, the main focus of my survey is located about 1.5km to the east of the primary school or the clinic consisted of twelve males and six females. The camp comprised of a mixture of Glana and Glui residents. At present, they received maize powder distributed by the government as a stable food source, and engage in diverse activities such as hunting, gathering, agriculture, and goat raising, and obtain much cash by working in road construction projects and producing folk crafts (Tanaka, 1987; Osaki, 1990; Sugawara, 1991; Ikeya, 1993, 1996a; 1996b, 2002; Imamura, 1996).

3. RESULTS

The San selected their hunting methods according to the ecology and behavior of the various animals hunted (Table 1).

The hunting methods were classified into 5 types⁽²⁾ hunting on horseback and hunting with dogs, both of which involve the use of spears, and bow-and-arrow hunting, trapping and springhare (*Pedetes capensis*) hunting. Bow-and-arrows hunting were popular for catching gemsbok, eland, kudu, wildbeast, giraffe, hartebeest and springbok (Table 1). But, the method was already replaced by other hunting in 1987. Trapping are limited a small-medium size animals like steenbok and quicker etc. Spears were used most frequently to hunt them. Their methods were used singly or in combination, depending on the situation.

Table 1. Types of hunting methods by the animals hunted (Source: Ikeya's field survey)

Animal	Hunting Methods	
Gemsbok	A or B or D	
Eland	A or D	
Kudu	A or D	
Wildebeest	A or D	
Giraffe	A or D	
Hartebeest	A	
Jackal	B	
Cape Fox	B	A : Bow and arrows hunting
Wild cat	B	B : Hunting with dogs
Genet	B	C : Trap hunting
Steenbok	B or C	D : Equestrian hunting
Duiker	B or C	E : A long stick hunting
Springbok	A or C	
Ostrich	C	
Lion	C	
Cheeta	C	
Springhare	E	

3-1. Trapping Techniques and Hunting Activities

The San chose trap hunting as the best method to fulfill the increased demand for animal skins and meat accompanying the wave of commercialization. There are three important considerations involved in trap hunting by the San, technical considerations, which have been refined by hunters' knowledge of the ecology of the common duiker (*Sylvicapra grimmia*) and steenbok (*Raphicerus campestris*), economic considerations of securing a stable supply of skins to be used in hand-craft production (Ikeya, 1996b), and social considerations of how to distribute a limited supply of animal meat and skins among people in the settlement.

Even in the 1950's and the 1960's, when the San were nomadic hunters and gatherers, traps were used to hunt small types of antelopes such as the duiker and steenbok (Silberbauer, 1981; Tanaka, 1980). The author also learned from interviews with San elders that steenbok skins and rugs made from the skins were bartered for goats by the Kgalagadi agro-pastoral people at the village of Tset-seng outside the CKGR.

3-1-1. Number of Trap Hunters, the Main Prey of Trapping

At the time of the author's study (1987), there were 1–3 trap hunters in each camp, and a total of 17 trap hunters in the Xade area. This number had increased to 27 in 1989. The author's survey also showed that there were more G!ui than G!ana trap hunters, and only one Kgalagadi trap hunter. The reason for this sudden increase in the number of trap hunters is thought to be due to the high prices paid for skins from animals caught in traps.



Fig. 2. Trap hunting in the Xade area

The main prey of trap hunting is the steenbok, followed by the duiker, although springboks (*Andidorcas marsupialis*) and African wild cats (*Felis libyca*) and large birds are sometimes caught in the traps (Fig. 2) ⁽³⁾. The best hunting season is in winter (June–August) when the fur is the best quality. Hunting is also popular in the summer months (September - November), although it is sometimes suspended in September due to rain. When the rain soaks into the sand in which traps are set, animals can walk over the ground in which the trap is set without triggering it ⁽⁴⁾.

3-1-2. Trapping Activities

Trap hunting involves both setting the traps and then checking on them at regular intervals. Each trap hunter sets from 4 to 20 traps in one area. Twelve of the trap hunters also take hunting dogs with them on their rounds to check the traps (Ikeya, 1994).

Traps are set in an area at a perimeter of 5–12 km from the Xade settlement (Fig. 3). The land up to a perimeter of 5 km from the settlement is barren land used for goat grazing and collecting firewood. However, all traps are set within a one day walking distance from the settlement.

As Fig. 3 shows, a survey conducted in September 1989 showed that the distance from the settlement to the places where traps were set had increased compared to September 1987. This is evidence of the continuous need to change the hunting ground due to depletion of animal numbers after concentrated trapping in one area. Also, as in the case of hunters A and D in Fig. 3, the hunting ground of each hunter is determined, therefore, there is no overlapping. However, sometimes hunters from the same camp set traps in almost the same area and 2–3 hunters work in turns to check the traps. In this case, any animals caught belong to the owner of the trap.

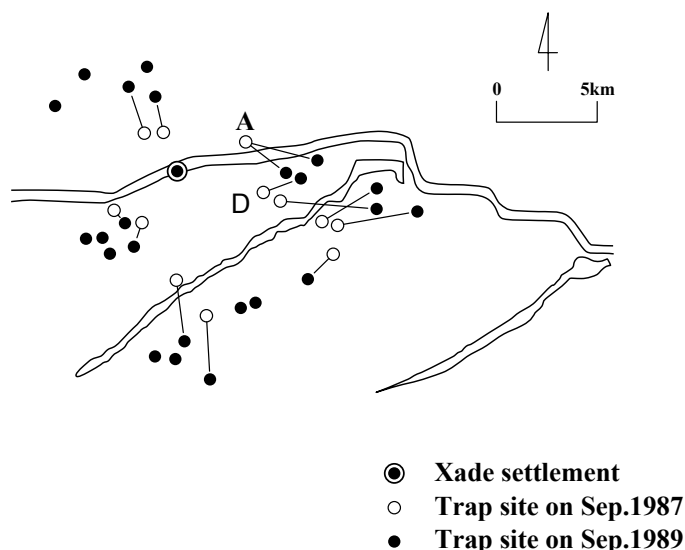


Fig. 3. The distribution of trap site near Xade settlement

Trap hunters are always on the lookout for new footprints from duikers or steenboks, traps are set along the path the animals have taken, as the San trap hunters know that these animals usually return by the same path. Traps are also set near acacia trees in the season when the fruit and flowers from the tree drop to the ground, duikers and steenboks are very fond of these.

The shortest possible route is always taken to the hunting ground. Traps are set in sparse woods, shrubbery, or grasslands, and often on the gentle slope of a hill. Shrubs are cut down and laid between naturally growing shrubs, making a straight or bow-shaped fence of 40–100 meters in length. This fence restricts the path of animals, directing them towards the place where traps are set.

Trap hunting can fail in three different ways, the trap mechanism may not work even though the animal passes over the trap, the animal's leg may not get caught in the rope, or the animal may escape before the hunter comes to check the trap. Such failures are considered to be the will of "God" by the San hunt-

ers. If the hunter makes it to the trap before the animal can escape, the trap is reset to another tree. If the traps fail to catch any animals for a long time, it is said some of the hunters rub a special medicine over their shoulders and pray for a blessing from God.

An animal caught in a trap is killed by a few blows to the head with a stick, after skinning the animal, some hunters shake the skin in the air and offer a prayer of thanks to God, crying out “many animals are caught in the traps every day and are crying”. Interestingly, this type of action cannot be seen in other forms of hunting. A fire is made on the way back to the camp from the hunting ground, where the skinned carcass is roasted whole in the hot ashes and then carried back to the camp.

This behavior occurs because of the lack of firewood in the vicinity of camps due to formation of permanent settlements near the camps (Ikeya, 2005). The meat is divided equally among everyone in the camp, although the men and women eat different portions of the meat.

3-1-3. Case Studies: Mr. D and Mr. K

Let's look at Mr. D's hunting operations in 1989 in more detail. Mr. D set his traps in an area about 5 km east of the settlement (Fig. 3), which took about 1.5 hours to reach on foot. He sets out from the settlement (Fig. 3) every second day with some dogs to check the traps, leaving the settlement (Fig. 3) at 8 o'clock in the morning with a digging stick in his right hand, an axe in his left hand and cigarettes and matches in his pocket. The dogs, excited about the hunting expedition, soon gather around him and follow him on his journey out of the camp.

After leaving the camp, he crosses over a fossilized riverbed and walks along the north side of the riverbed past a wooded area, finally, he arrives at his trapping ground. His traps are distributed over a gentle slope on the south side of a hill. D's traps are set in an area where animals cross from grassland into a wooded area, a 43-meter fence has been made by filling gaps between naturally growing shrubs with shrubs cut down in the vicinity. Traps have been set at three locations in gaps along the fence of shrubs. The height of the fence is 1–2 meters, and is made up of 5 different varieties of shrubs. Traps were also set along a track of new animal footprints discovered on August 30 on a flat wooded area at the top of the hill. Two abandoned traps were also found nearby.

Traps are made in the following way. A slender tree, about 1 cm in diameter and about 230 cm in length, is used as the spring mechanism. A hand-made rope is tied to the middle of the tree, with the other end of the rope tied in a loop of about 30 cm in diameter. This loop is placed on the path of old animal footprints. When an animal passes over the loop, a catch is released and the rope tightens over the leg of the animal, trapping it.

Mr. D walks around checking his traps from a distance. On September 1, he noticed the rope at one of his trap sites had been released from the catch; there were footprints of a duiker which had managed to escape. When he finds a struggling animal caught in one of his traps, he kills it by one or two blows to the head with a stick. If there are no carcasses to carry, he chooses various routes back to camp, picking up firewood or hunting for jackals or wildcats with his

dogs on the way back.

Fig. 4 depicts monitoring of the traps carried out at 2–3-day intervals during a rainy period for the whole month of October 1989 when trap hunting was suspended. Mr. K checked his traps eight times and found a total of eight animals caught in his traps on five occasions. Mr. K was successful because he had just moved his traps to a new area. On the hand, Mr. D checked his traps six times but found no animals at all, he did manage to catch three animals using his dogs. If nothing has been caught in their traps for a long time, trap hunters like Mr. K often exchange trapping areas with other hunters, or look for a new hunting area further away from the settlement, in this way, they are able to maintain a stable subsistence livelihood from hunting. On the other hand, other hunters like Mr. D may try to make up for their losses by using their dogs to catch animals.

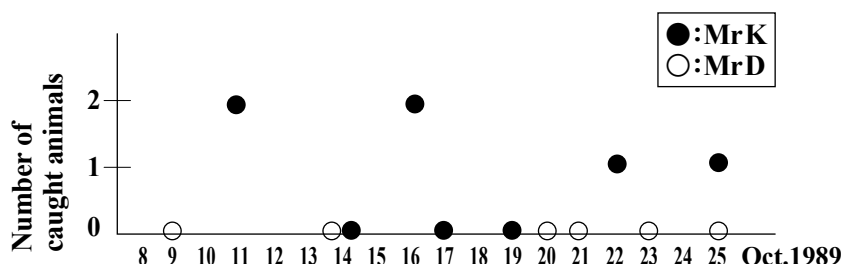


Fig. 4. Checking the traps and number of caught animals (Source: Ikeya's field survey)

3-1-4. *Changes of Trapping between 1960's and 1987–1989*

Thus, there are several features of trap hunting now which did not exist in the 1960's, such as the technical aspect of constructing a 40–100 long meter fence from bushes, the economic aspect of combining trap hunting with dog hunting to ensure a stable subsistence livelihood ⁽⁵⁾, and the social aspect, which was not discussed in detail in this paper, of deciding the distribution of hunting grounds.

4. EQUESTRIAN TECHNIQUES AND HUNTING ACTIVITIES

Due to the ban on the use of guns in the CKGR, which is still in effect, spears are used in equestrian hunting by the San. Animals killed by equestrian hunting are used to produce cash products such as dried meat and rope made from the skin. The author was able to obtain new information concerning techniques used in equestrian hunting and the relationship between the San and wild animals, through participatory observations in 1987 and 1989.

4-1. A Short History: Introduction of the Techniques and Changes of Horse's Number

The San first learned the techniques of equestrian hunting in the 1960's from Kgalagadi hunters who came to CKGR to hunt from Tsetseng in the south outside

the CKGR. In the 1960's the San bartered goats to acquire their first few horses from Mr. J, who lived in Tsetseng. The San began to use these horses, or horses borrowed from Kgalagadi in Tsetseng, for equestrian hunting.

Knowledge of equestrian hunting was spread through two different routes, two different Glana were taught by Mr. K and Mr. B, who were both Kgalagadi. Mr. G learned the techniques of equestrian hunting from Mr. K in Molapo, which is about 120 km to the east of Xade. Mr. G then borrowed his brother's horse and went hunting in this area. Later, Mr. S, who married the brother's daughter, learned the techniques of equestrian hunting from Mr. G and Mr. I learned the techniques of equestrian hunting from Mr. B, who visited this area from Tsetseng. Thus, in this way, Glana did not go outside the Central Kalahari Game Reserve to learn the techniques of equestrian hunting, but learned from hunters who visited the reserve.

Although there were only 1–3 horses in the game reserve in the 1960's, the number of horses increased to around 20 by 1982, and by 1989, there were around 40–50 in the reserve. These horses were bought with money earned from employment in road construction and the sale of handicrafts following the formation of permanent settlement in the reserve (Ikeya, 1996b). Thus, the introduction of equestrian hunting to the CKGR can be traced back to the 1960's, the number of horses increased dramatically after 1980, popularizing this form of hunting among the residents of the reserve.

4-2. Equestrian Hunting Activities

Equestrian hunting is either carried out as a one-day hunting expedition from Xade settlement, or as a hunting-camping expedition over several days. An average of five people makes up one hunting party, with most of the hunters riding on horses or donkeys. Dogs are also often taken along on equestrian hunting expeditions. One advantage of taking dogs is that the dogs bark loudly when a gemsbok is spotted, causing the alarmed gemsbok to stand still, thus making it an easy target to spear. Dogs are also good at catching smaller prey such as black-backed jackals (*Canis mesomelas*) and wildcats they are also useful to help guard the hunter's camp-site against roaming lions.

Although the gemsbok (*Oryx gazella*) and eland (*Taurotragus oryx*), which are the main prey of equestrian hunting, are both antelopes, their behavior is very different, therefore, different hunting techniques, such as "spear throwing" or "spear thrusting" are required. Osaki (1984: 53) already reported that in equestrian hunting gemsboks were hunted with a throwing spear and elands with a thrusting spear. According to my observation, blue wildebeests (*Connochaetes taurinus*) were also hunted with a throwing spear and greater kudu (*Tragelaphus strepsiceros*) were hunted with a thrusting spear.

Let's look at an example of a hunting-camp expedition. The hunting camp was located about 30 km from Xade settlement and the hunting ground was about 50 km from Xade settlement. The choice of hunting ground depends not only on the numbers of gemsbok and elands in the area, but also on the availability of wild watermelons, which are an important supply of water for the horses. There

have been cases of horses dying from dehydration during a hunting expedition due to a shortage of wild watermelons.

The following is an example of going the equestrian hunting from the hunting camp.

4-2-1. Case 1 November 2nd, 1987

In the morning Mr G went to Teu from the hunting camp, and found out one gemsbok. He who rode a horse, and drove its animal (Fig. 5).



Fig. 5. The equestrian hunter

10:35 a.m. One gemsbok was coming to the camp slowly because its animal was very tired of running. After that, Mr. G rode a horse to drive it.

10:41 a.m. Some dogs were staying near the camp, and started to bark against the gemsbok.

10:42 a.m. Mr. N who was staying at the camp, throw his spear to the tired animal (Fig. 6).



Fig. 6. The hunter throws the spear for a stopped gemsbok after he drove it and kept the horse

From Case 1, I can't count the hunter's time of driving animal, but I can point out the behavior of dogs is important for the hunting, and the hunter can easily throw a spear for the support of dogs.

4-2-2. *Case 2 January 3rd, 1988*

Mr. G and his friend left for hunting with a horse. Two persons separated at the southeast direction of the settlement. After that, Mr. G went to south direction and found out one eland. After the eland escaped it, its animal was very tired. It takes about 10 km on running. Mr. G on the back of the horse, thrust his spear for three times and killed the eland (Fig. 7).



Fig. 7. Slaughtering of eland's meat (January 4th, 1988)

From Case 2, I point out the behavior of dogs is not important for the hunting, and the hunter can thrust a spear on the back of the horse.

Gemsboks have long (about 80–100 cm) sharp horns which pose a great danger to both the horse and hunter. The gemsboks are tracked from footprints, which are usually found around 15–20 km from the camp. When the animal is spotted, the hunters circle around behind the animal and drive animal in the direction of the camp, like the technique cowboys use to round up cows. The pace is fast at first, but the animal soon begins to tire, and sometimes stands still or may even lie down in the grass to rest. At this point, the hunter gets off his horse, after tying the horse to a tree, he quietly stalks the animal until it is in range of his spear, and then throws the spear, aiming for the heart. The animal, by now an easy, usually has no energy left to run away. Thus, in equestrian hunting, the technique of driving the animal in the direction of the hunting camp and tiring it is more important than the techniques of spearing.

On the other hand, the eland, which is a powerful about 300 kg beast, does not tire so easily, also, it is difficult to control the direction of the animal. Thus, in the case of the eland, the hunter tires the animal by charging on horseback and jabbing the thighs with his spear. However, the hunter may sometimes kill the eland if he jabs too deeply with his spear. In this case, the carcass may some-

times have to be abandoned if the distance back to hunting camp is too far and there are not enough wild watermelons in the area for the horses.

Thus, for both gemsboks and elands, the important technique in equestrian hunting is to tire the animal and drive it in the direction of the hunting camp.

4-3. The Number of Animals Killed and the Number of Hunting Days

Fig. 8 shows the relationship between the number of animals killed in one hunting expedition and the number of days taken for 37 equestrian hunting expeditions. No animals were captured in only five of the hunting expeditions (Case 5, 16, 18, 23 and 29), while 1–6 animals were killed in all the other 32 hunting expeditions. This success may be due to the hunters' policy of not abandoning their hunting expedition until at least one animal has been killed. Except for cases 8 and 29, more animals were killed the longer the hunting expedition was. Thus, although there is the danger of over-killing leading to depletion of animal populations, equestrian hunting does help to provide a stable subsistence livelihood for the people in Xade.

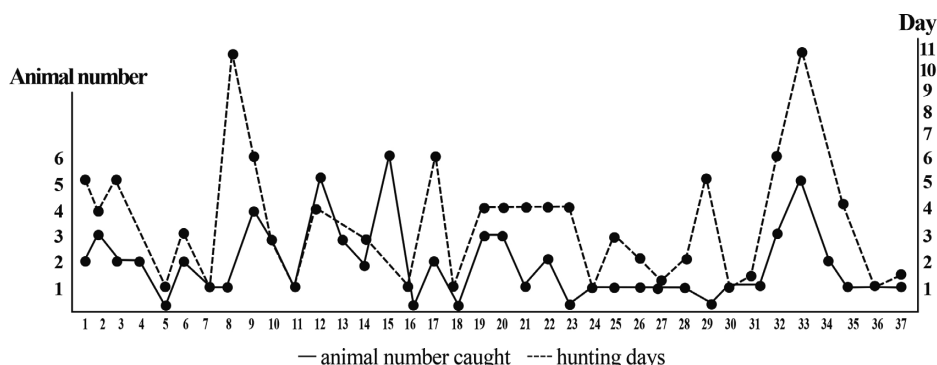


Fig. 8 Changes of the animal number caught and hunting days in equestrian hunting in 1987 and 1988 (Source: Ikeya's field survey)

4-4. The Composition of Hunting Teams and Labor Relations

In the days when the bow-arrow-hunting was the most popular form of hunting, hunters from different camps sometimes joined forces to hunt large animals (Tanaka, 1980). Also, in the early 1980's, equestrian hunting teams were often made up of people from various camps. Hunters from other camps were often asked to join equestrian hunting teams as the problem of a shortage of hunters arose due to the increase in the number of horses. Later however, as the number of horses increased to the stage where most camps had their own horses, equestrian hunting teams were usually made up from people in one camp. Dog hunters also combined with equestrian hunters to form large hunting teams.

Bow-and-arrow hunting was usually an individual form of hunting, therefore there was no problem concerning the composition of hunting teams. However,

equestrian hunting is carried out by a team of five or six hunters. Members are usually selected on the basis of blood-ties or family-ties to the team leaders. However, people in the same camp may sometimes choose not to join in their own camp's equestrian hunting team if their reward of meat from the horse owner in another camp is better. Also, outsiders who join an equestrian team are sometimes given extra tasks such as tending goats (Ikeya, 1993) or cutting and carrying grass used to construct huts. Laborers who assist with goat raising, hut construction and crop farming as well as taking part in equestrian hunting are usually under the employ of the horse owner. However, in Xade, laborers employed by the horse owner for equestrian hunting are usually employed by different people for other tasks, therefore, a clear class structure consisting of one powerful employer cannot be seen in Xade.

5. DISCUSSION

5-1. Combined Methods of Hunting and Flexibility in the Choice of Hunting Methods

The methods of hunting employed in the Xade area have changed over time and can basically be divided into 4 periods, solitary hunting using a bow-and-arrows, which was the main method used in the 1950's and 1960's (Tanaka, 1980; Silberbauer, 1981), equestrian group hunting, which was the main method around 1982 (Osaki, 1884; Tanaka, 1987, 2014), hunting with the aid of dogs, which was popular from around 1984 to 1987 (Ikeya, 1994), and trap hunting, which was the main method employed for hunting in the Xade area from 1989. This paper focuses on the method of trap hunting and equestrian hunting.

An examination of the methods of hunting used individually by each of the 16 hunters (as of 1989) in the Xade area gives a clearer picture (Table 2). While all of the Glui are adopt at using the bow and arrows as well as traps for hunting, most of the Glana use a combination of dogs and traps as their method of hunting. Also, people between about 30 and 40-years-old only hunt using horses, which indicates that the transition from bow and arrows hunting to equestrian hunting was limited only to the younger generation. Also, some Glana who did not acquire bow and arrows hunting skills adhered to the traditional method of hunting using dogs, even in the period when the bow and arrow was the main method used for hunting.

As an example, Mr. D, who had been using the bow and arrows, traps and dogs for hunting up until the 1970's, was forced to stop these methods of hunting around 1982 due to a bad hunting season, he instead joined in the equestrian hunting group and assisted with meat processing. However, the hunting of gemsboks using dogs proved successful again in 1984 and continued to be so until 1987. However, many dogs died in the winter of 1988, dog hunting stopped in 1989, but resumed along with trap hunting after replacement dogs were bought in 1990.

As another example, Mr. F, who had used a combination of dogs and traps for

hunting up until the 1970's, assisted with meat processing in the equestrian hunting group in 1982 and 1987, he again returned to dog hunting and trapping in 1991. However, in 1993, his dog's hunting performance deteriorated, so he was again forced to join the equestrian hunting group.

Table 2. Hunting methods per each hunter in the Xade area in 1989

Hunter's name Hunting methods	/Gui						//Gana						/Gui		//Gana	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Bow and arrow	●	●	●	●	●	●		●								
Gun hunting								●	●		●					
Hunting with dogs					●	●	●	●	●	●		●				
Trap	●	●	●	●	●	●	●	●		●		●				
Equestrian Hunting													●	●	●	●
Owner of horse		●		●	●			●		●			●		●	●

It has been said that the changes in hunting methods from the 1960's to 1990 were basically a transition from bow and arrows hunting to equestrian hunting⁽⁶⁾. However, a more detailed analysis of the changes in hunting methods, including trapping and dog hunting, shows that while the proportion of bow and arrows hunters dramatically decreased, the proportion of equestrian and trap hunters dramatically increased, in 1987, dog hunting was very popular. Thus, the method of hunting from the 1960's to the present day was not limited to just the bow and arrow, but also included dog, equestrian and trap hunting; the change in hunting methods over the past 30 years was not a change involving the introduction of a new method of hunting, but rather just a shift in the ratios of these four hunting methods.

The San have a very flexible approach to selecting the method of hunting. Their choice of hunting method is not a simple change suddenly from one method to another, but is governed by such factors such as the performance of their dogs. When the performance of the hunting dog is not satisfactory, the hunter switches to more trapping or equestrian hunting. Thus, in this way, the San choose the optimal combination of hunting methods according to the circumstances. This flexibility in the selection of hunting methods is a reflection of their flexible approach to maintaining their own subsistence livelihood.

5-2. The Maintenance of Egalitarianism Despite the Spread of Commercialism

What changes in the conditions of life for the San people led to the development of hunting techniques in the Xade area? To answer this question, the relationship between the spread of commercialism and developments in hunting are examined, based on data concerning the use of skins from the animals hunted by the San.

As an example, Mr. D acquired more than 100 springbok and duiker skins

between the winter and summer of 1991, shifting from dog hunting to more emphasis on trapping. Due to the abundance of wild watermelons called Inann (*Citrullus lanatus*) that year, Mr. D moved around seven different areas about 35 km away from the Xade settlement looking for both wild watermelons and prey at the same time, which was the reason for his large catch (104 skins) that year. Approximately 90% of the animals were caught by traps and 10% by hunting with dogs. Fig. 9 shows the different ways in which D's skins were used.

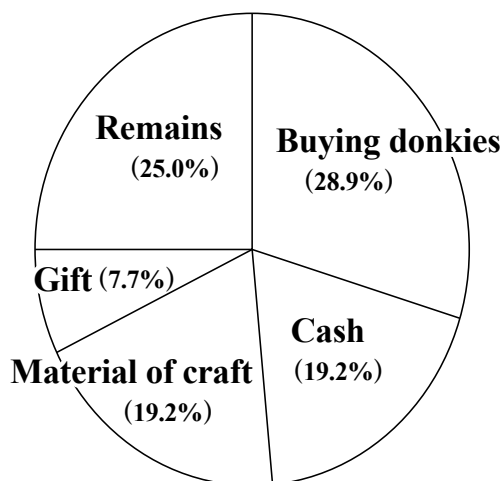


Fig. 9. Multiple skin's use of one hunter in 1991 (Source: Ikeya's field survey)

Mr. D's skins were used in the following ways; 28.9% of the skins were used to purchase donkeys, 19.2% were sold for cash to Kgalagadi, 19.2% were used for making handicrafts, 7.7% were given as presents to friends, and 25% were stored in huts. Thus, 67.3% of the skins were used to acquire goods or cash. Crafts made from the skins included bags made from duiker or springbok skins used for hunting sets, as well as rugs and aprons for women. These crafts were sold to the Ghanzi Craft Company, which buys all crafts made in this area (Ikeya, 1996b).

The reason for using traps more for hunting is thought to be due to the easy exchange for cash following the spread of commercialism throughout the area, which established set prices for animal skins. Increased demand for animal skins to be used in craft production and meat for consumption led to an increase in the number of people engaged in hunting from 1987 to 1989. Depending on the circumstances, some of the tanned skins were sold directly to Kgalagadi for cash to purchase such items as tea and sugar, while others were used to make crafts that could bring an added value to the skins.

As trap hunting does not require any large investment as do dog and equestrian hunting, many people simply drifted into trap hunting after giving up their road construction jobs. Trap hunting became popular mainly to supply skins for making crafts, which is the highest cash-earning activity in the area, rather than for the supply of meat, which is always distributed evenly among the people.

On the other hand, equestrian hunting is used mainly for the supply of dried meat (Fig. 10).



Fig. 10. The San are making the dried meat at the hunting camp (October 4th, 1987)

Following the ban imposed on hunting elands in 1990, gemsboks became the main prey in equestrian hunting. Although ropes made from eland skin were sold before 1989, sales of dried gemsbok meat are popular in 1987 and 1989. In equestrian hunting, the game killed is the property of the horse owner, but some of the meat is customarily given to the hunter and people helping in the meat processing. The dried gemsbok meat is used for food, gifts and cash sales in a ratio of 9:14:77, respectively.

Gemsboks killed by dog hunting were used for food, gifts, and cash sales in a ratio of 14:23:63, respectively (Table 3).

One gemsbok could be sold for 50–60 pula (=USD 4.5–5.5). Thus, the main purposes of dog hunting are also thought to be for making commercial dried gemsbok meat, as well as the traditional purposes of gifts and meat consumption among the San.

Thus, trap hunting, the products of which are used in crafts to be sold as souvenirs to foreign tourists, is the most popular method of hunting in the Xade area; also, equestrian hunting, the products of which are used to make dried meat, is popular both within and outside the Xade area. The skins of small animals killed by dog hunting are used for craft production and the larger animals are used to make dried meat. Although dog hunting may sometimes be temporarily terminated due to the sudden death of a dog, it is soon resumed after the purchase of a new dog from outside the Xade area.

Table 3. Weight of biltong and methods of biltong used

No. of biltong	Weight of biltong (kg)	Methods of biltong used	Owner
1	3.0	gift	A
2	1.2	5 Pula	
3	5.0	20	
4	6.0	25	
5	4.5	gift	
6	3.7	food	
7	4.4	gift	B
8	5.0	20	
9	5.5	20	
10	5.8	20	
11	3.5	3 beers	
12	3.3	food	

The idea that hunting among the San comprises basically only the two methods of equestrian hunting (for cash earnings) and dog hunting (for more traditional purposes) is incorrect. Rather, a similarity can be seen in all three methods of hunting, equestrian, dog and trap hunting. That is, both the meat and skins from the animals killed become the property of the owner of the horses, dogs or traps, it is then used for food, gifts and cash sales. Thus, the author considers that the way the animal skins and meat are used, including the traditional uses as food and gifts, is of more interest than which method of hunting is employed.

With the spread of commercialism in the Xade area, hunting among the San has changed over the years from a means of food supply to sustain subsistence living to hunting for commercial transactions in meat and skins. Each hunter finds his own optimal combination of dog and equestrian or dog and trap hunting. Meat and skins from the animals, although still used for the traditional custom of gift-giving and for consumption among the San themselves according to their principle of “equal distribution”, are being increasingly used for commercial transactions of dried meat and products made from the skins.

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NOTES

- (1) If he owns a dog, the San may hunt with a spear with the help of the dog (Tanaka, 1980: 31). Hunting with dogs is popular for the !Kung San. Well-trained hunting dogs bring small game to bay, and the hunter finishes it off with a spear (Lee, 1979).
- (2) The !Kung have four types of hunting techniques. bow and poisoned arrows, hunting with dogs, springhare hunting, and snaring (Lee, 1979).
- (3) The snare that are most utilizes are designed for catching small antelope and large birds such as ostriches and kori buzzards in about 1980 at Metsamanong inside the Central Kalahari Game Reserve (Valiente-Noailles, 1993: 67).
- (4) Lee pointed out that trapping was rare during the rainy season because the rain ruined the delicate trigger mechanism (Lee, 1979: 208). Snaring does not produce a large quantity of meat. In July 1964 at Dobe, it provided only 20 percent of the meat of the camp (Lee, 1979).
- (5) There are minor trade-offs between collective spear hunting and snare hunting. Snare hunting does not require intensive labor after the initial installation of snares. Hunters inspect the snares only every 3 days. (Yasuoka, 2014: 130)
- (6) Though the study area is different from the Xade area, hunting methods were changed from bow and arrow to hunting with dogs and spears on horseback (Valiente-Noailles, 1993).

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