Perhaps the most remarkable thing about the San is the fact of their survival. In Botswana, hundreds of Bushmen are hunting and gathering for a living with bows and poisoned arrows. Elsewhere in the country there are thousands more who have taken to agriculture and stock-raising only within the last generation.

Mr and Mrs Laurence K. Marshall initiated a renaissance in Bushman studies in 1951 when they began their researches among the 600 full-time hunting and gathering !Kung Bushmen around the Nyae Nyae area of South West Africa, or Namibia. At the same time, Professor Phillip V. Tobias and the Kalahari Research Committee of the Witwatersrand University were initiating a series of investigations into the physical anthropology of the Bushmen. Since 1953 new studies have been made by many of the authors contributing to this volume.

In recent years the style of Bushman research has been transformed from a salvage operation to the study of on-going social and economic systems. This new research has overthrown many of the traditional views of the Bushmen and has played a part in developing a more accurate picture of the hunting and gathering way of life in general – a way of life that was, until 10,000 years ago, the universal mode of human organisation.

Among the last of the hunting and gathering !Kung Bushmen are the 1600 scattered at waterholes in north-western Botswana between the Kavango swamps and the South West Africa (Namibia) border and around Lake Ngami. The largest and most isolated population in 1963-1965 was the 466 !Kung in the Dobe area, a line of permanent waterholes around the Aha mountains.

**The peoples of the Dobe area**

The Dobe area has retained its character as a hunting and gathering stronghold because of its geographic isolation and the unsuitability of its soils and rainfall for agriculture. The eight waterholes are surrounded by a belt of waterless, uninhabited country which varies in width from 30-50 km (20 to 30 miles) on the north and west to 100-160 km (60 to 100 miles) on the south and east. The area was unknown to outsiders until the 1880s, when White hunters and Tswana pastoralists began to make summer hunting trips to the interior. In 1925 a small colony of Herero cattle herders settled at !Kangwa, but it was not until nine years later that the British colonial administration made its first official tour of inspection. The Dobe area was relatively peaceful, and since it required no “pacification”, little attention was paid to it. In 1946, however, a !Kung Bushman murdered a Negro. This resulted in the appointment in 1948 of a Tswana headman, Mr Isak Utuhile, who administered justice at his tribal court at !Kangwa.

During 1954 the character of the country changed markedly as a large number of Hereros with several thousand head of cattle entered from the east, having been driven out of the Kavango swamp margin by an outbreak of tsetse fly. Until this date the Dobe area had been in close contact with the Nyae Nyae area 64 km (40 miles) to the west. Visiting and intermarriage between the two populations of Bushmen were common, and many of the Dobe area residents had originally emigrated from Nyae Nyae. Most of the incoming Herero pressed through the Dobe area and built their cattle posts throughout the Nyae Nyae area. The South African government put an end to this, and for the first time international politics became a reality to the Dobe !Kung. The border was surveyed and demarcated, and the Herero were forced to move all their cattle back behind the Botswana frontier. Today the Bushmen share their waterholes with some 340 Hereros and Tswanas, and several thousand head of cattle, goats, donkeys and horses.
The pastoralists live in small, permanent hamlets of three to ten well-built mud huts arranged in a semicircle around the central kraals, where the livestock are penned at night. To some of the hamlets are attached small camps of Bushmen who divide their time between the usual round of hunting and gathering activities and helping the Herero or Tswana cattle-owners with herding and milking, for which they receive a daily ration of soured milk, the basic staple of the pastoral diet. Agriculture plays only a minor role in the economy of the Herero. With a highly variable annual rainfall varying from 150 mm (6 inches) to over 1,000 mm (40 inches), cultivation is a risky proposition, and crops might be harvested only one year in three.

The majority of the Bushmen (72 per cent at the time of the 1964 census) live in independent camps, 0.5 to 1 km (roughly ½ to ¾ mile) from the nearest hamlet. The camps consist of a ring of grass huts around a central plaza and dancing ground. These are temporarily occupied for three to five months each winter, while the members carry out the complete round of subsistence activities. During the summer months the camps are abandoned as the population moves up-country to enjoy the resources of the rainy season water points. After the rains, when the group returns to the permanent waterholes, a new winter camp is built at a different site.

The relations between the Bushmen and their neighbours are friendly. The Hereros are generous, making a point of giving milk, meat or tobacco to the Bushmen when they come to pay a visit. The Blacks have a healthy respect for the fierce reputation of the Bushmen, and they remember the days when stock theft was a common occurrence. One of the older Tswana residents told me: “I always give tobacco to the !Kung. If you don’t, you never can tell when you’ll get a poisoned arrow shot at you.”

The principal economic relation is the oral contract in which a young Bushman enters the service of a Herero household as a cow-herd. During the one or two

7.4 A temporary Bushman camp in a nut grove in the Dobe area of Botswana.
years of his contract, the young man shares his meals with the family and is provided with clothing and the use of a donkey or a horse. At the end of the period, he receives in payment a donkey or a goat, or if he has done particularly well, a cow. Cash wages were introduced only in the late 1960s. After marriage, the young man usually returns to the camps and takes up hunting as a full-time occupation, leaving his cow or goat in the herd of his employer. Many of the younger men and women have experimented with agriculture at some point in the past, but because of the unpredictable rainfall, few have succeeded.

In addition, thirteen of the !Kung women have married Blacks and are raising their children as Hereros or Tswanas. A few of the women have adopted the characteristic Victorian dress of Herero women.

Although the Tswana are numerically few in the Dobe area, their cultural influence has been more profound than that of any other outside group. Their relationship with the Bushmen extends back almost eighty years. All matters concerning government, modern technology and migrant labour are dealt with in
the Setswana language. The major contribution of the Tswana to Bushman life from the point of view of Bushmen and Tswana alike is molao, the bringing of the law. Even since the founding of the tribal court at !Kangwa in 1948, the Bushmen have increasingly preferred to make use of the Tswana headman's arbitration to resolve conflicts.

Knowledge of the outside world has come slowly to the Dobe area. Few of the Bushmen were aware in 1964 that they were citizens of the then Bechuanaland Protectorate, and none of the people whom I asked had ever heard of “Africa”. In recent years, however, this picture has changed drastically.

**Population**

The breakdown of the population by age and sex is shown in a table on page 98. The first point to be noted is the high percentage of old people: 10 per cent of the population (46 individuals) is over 60 years of age. This should contradict the widely held notion that the hunter’s life is so rigorous that people rarely live beyond the age of 45. The data suggest that Bushmen who survive childhood may have at least as good a chance of surviving to old age as the average member of tribal and peasant societies.

Among the !Kung the aged hold a respected position; they are the leaders of the camps, the collective owners of the waterholes, and the repositories of traditional ritual-medical skills. Senilicide is rare, and we have observed old people being
supported by their descendants long after their productive years have passed. Similarly young people are not pressed into the food quest at an early age. Adolescents are expected to provide a share of the food only after they are married, and it is not uncommon to see healthy, active teenagers moving from camp to camp on visits while their older relatives provide food for them.

The Bushman population of Dobe by age and sex (November 1964)

<table>
<thead>
<tr>
<th>Age</th>
<th>Males</th>
<th>Females</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Old (60 years and over)</td>
<td>17 (7.5%)</td>
<td>29 (11.9%)</td>
<td>46 (9.9%)</td>
</tr>
<tr>
<td>Adult (15 to 59 years)</td>
<td>141 (63.5%)</td>
<td>138 (56.8%)</td>
<td>279 (59.9%)</td>
</tr>
<tr>
<td>Young (birth to 14 years)</td>
<td>65 (29.0%)</td>
<td>76 (31.3%)</td>
<td>141 (30.2%)</td>
</tr>
<tr>
<td>All ages</td>
<td>223 (100%)</td>
<td>243 (100%)</td>
<td>466 (100%)</td>
</tr>
</tbody>
</table>

Dependency ratio (the number of young and old per 100 adults) = 67
Child dependency ratio (the number of young per 100 adults) = 51

The factors that produce this favourable demographic picture are difficult to define. There is some indication that the average interval between successive births is four or five years. This long spacing limits the number of pregnancies a woman may undergo during her reproductive span. The nomadic life of the Bushmen requires that children under the age of five be carried by the mother while she is out gathering food and during group moves. A mother with two-year spacing of births will find at the end of four years that she has a four-year-old, a two-year-old and a newborn to carry. On the other hand, a woman whose births are spaced five years apart will have only one child to carry at a time. Contraception, infanticide, infant mortality and hormonal mechanisms affecting lactation and ovulation are some factors that may contribute to the spacing of births.

Habitat and climate

The Dobe area is part of a level, sandy plain stretching from the South West African escarpment in the west to the Kavango swamp in the east. The mean elevation is about 1000 m (3300 feet) above sea level. The main topographic feature is a series of fixed dunes running parallel to each other, 8 to 80 km (5 to 50 miles) in length and oriented roughly east-west. In the spaces between the dunes are parallel basins or molapos. This remarkably uniform pattern is interrupted by several rock outcrops and pans, and in places the landscape is incised by dry river courses that expose the bedrock.

At the lowest elevations, in the exposed beds of limestone, are eight permanent waterholes. With a highly variable annual rainfall, there are no permanent rivers through the area, but during exceptionally heavy rains the low-lying regions are subject to flooding. Later the flooded areas are reduced to scattered large pools or pans which may hold water for up to six months after the rains have stopped. All the rainfall is absorbed by the deep sand long before it reaches the Kavango drainage system.

The Dobe area supports a particularly rich vegetation characterised by broad-leaved trees and shrubs on the dunes and flanks, and acacias and other thorny species in the molapos and river courses. There are twenty species of excellent shade trees, some growing to over 15 m (50 feet) in height. Mature open woodlands with abundant deep shade are more common than are the sparsely wooded, open grassy plains that characterise most of the Kalahari Desert.

Apart from edible species, the habitat provides the Bushmen with an unlimited supply of shade and firewood and a wide variety of fine hardwoods for making weapons, tools and domestic articles.

The climate is characterised by hot summers with a four-month rainy season and by moderate winters without rainfall. The Bushmen divide the year into five seasons:

1. !huma (spring rains). The Bushman year begins in October or November with the onset of the first rains. These are light convectional thunderstorms which
have the effect of triggering growth in plants and reproduction in animals. Overnight the landscape is transformed from a parched, dry state to one of lush greenery. The Bushmen take advantage of the water that collects in the hollows of trees by leaving their winter camps around the permanent waterholes and establishing temporary camps in the mongongo nut forests.

2. bara (main summer rains). From December to March the heaviest rains fall, bringing with them a season of plenty. In years when flooding occurs, migratory ducks and geese flock to the pans in great numbers while elephants, buffaloes and other wet-country fauna migrate from the swamps into the Dobe area. This is also the period when the major summer plant foods (fruits, berries, melons and leafy greens) make their appearance. There is standing water at many points in the hinterland and the Bushmen abandon the permanent wells to live up-country.

3. obe (autumn). A brief autumn occurs in April or May, after the rains have ceased but before the onset of cold weather. As the seasonal water points dry out, the Bushmen converge on the main summer pans, which may continue to hold water right into the winter. There is plenty of food, for the nut harvest is mature and there is still an abundance of summer berries and melons.

4. !gum (winter). The cold, dry season extends from the end of May through to August. It is heralded by a sharp drop in nightly temperatures. The days are crisp and clear and the temperature warms up to 24-27°C (75-81°F). The Bushmen fall back on permanent waterholes or, in exceptionally rainy years, on the largest summer waters, where they build new camps, well stocked with firewood to burn through the nights. Mongongo nuts and a variety of roots and tubers comprise the staples. The fine weather and good tracking conditions encourage hunting and snaring. In time, plant foods become increasingly scarce in an ever-widening radius around the permanent waterholes.

7.5 The Dobe area supports good vegetation cover in which the permanent huts of a !Kung Bushman camp are well camouflaged. In this area conditions of life are far more attractive than they are to the south-east, where the terrain is much more desert-like.
From late August to the first rains in October is the most unattractive time of the year. Although the humidity remains low, the days are exceedingly hot, with highs ranging from 35–43 °C (95–109 °F) in the shade. Working is difficult and good foods are plentiful only at considerable distances from the camps. In this season the Bushmen use the widest variety of plant food species. Fibrous, unattractive roots are dug and eaten without enthusiasm. Hunting is hard work, but the men may go out often, out of boredom with the drab diet more than anything else. It is a time of waiting for the rains to come.

Health
Because of the relatively high altitude and dry climate, the Dobe area is free from many of the infectious diseases that are endemic in tropical Africa. There is no bilharzia or sleeping sickness, although both are found in the swamps 145 km (90 miles) to the east. The dry, sandy soils and five species of dung beetles solve many public health problems for the Bushmen. The incidence of parasitic infection appears to be low. Gonorrhoea, introduced by men returning from the mines, is the major epidemic disease among the adults. Tuberculosis, rheumatic fever, leprosy, malaria and trachoma are also present. Colds and chronic sniffles affect the children through the cold winter months.

Fauna
Because of the broken nature of the vegetation cover, the area does not support the large herds of migratory plains game that are found on the open stretches of the southern Kalahari. Wildebeest, for example, seen in herds of 5,000 to 10,000 in the Central Kalahari Game Reserve, are seen in herds of only 10 to 20 in the Dobe area. There has been a diminution of game in the north-western Kalahari over the past fifty years. Rhinoceros, hippopotamus and springbok have disappeared completely, while zebra are now rarely seen. Buffalo and elephant were formerly numerous, but now are only occasional summer visitors.

Of the forty species of resident larger mammals, the most prominent are kudu, wildebeest and gemsbok (oryx). Giraffe, eland, roan antelope and hartebeest are also present. Of particular importance to the Bushmen as game are warthog, antbear, porcupine, steenbok, duiker and spring-hare.

The major African predators are all represented in the area, including lion,
leopard, cheetah, wild dog and two species of hyena. The smaller carnivores include caracal, wildcat, genet, jackal and several species of mongoose.

Unprovoked attacks by wild animals on Bushmen are extremely rare. The people do not regard the bush as threatening or hostile. They sleep in the open without fires when necessary and make no provision to protect or fortify their living sites. The most common threat to Bushman homes, in fact, comes from Herero cattle which periodically blunder into camp to browse on the grass huts.

Bird life is remarkably abundant and varied. Some eighty species have been recorded. Ostriches are still common and continue to provide the !Kung with a supply of ostrich-egg shells as water containers and as material for making beads. Only eight species of birds are systematically hunted by the Dobe Bushmen for food: guinea-fowl, francolin (two species), korhaan (bustard), kori bustard, sand-grouse, Cape turtle dove and the red-billed teal.

Some twenty-four species of reptiles and amphibians are known and named by the Bushmen, including five poisonous snakes. Only two reptiles are of any importance as food: the rock python and the large leopard tortoise.

Fish are not present in the Dobe area, but aquatic species such as terrapins, leeches, clams and snails are found in isolated waterholes, indicating that at some time in the past the area was connected to a river system by flowing water.

Of invertebrates there is an abundance: scorpions, spiders, ticks, centipedes and millipedes, as well as at least seventy species of insects known to the Bushmen. The most important are the mantises (about which there is a body of myths), bees (highly prized for their honey), flying ants and click beetles (dietary delicacies) and poison beetles (the sources of Bushman arrow poison).

Almost 500 species of local plants and animals are known and named by the Bushmen. Of these, the Bushmen find some use for 150 species of plants and 100 species of animals. From their virtually exhaustive knowledge of the environment they are self-sufficient – with a single exception. The only item the Dobe area does not provide is iron.

Subsistence ecology
The “hunting and gathering way of life” has assumed a misleading connotation in the ethnographic literature. Especially in reference to the Bushmen, the term has come to imply a random, precarious existence, one of searching for food and eking out a living of odds and ends. Service, for example, writes of the !Kung Bushmen:

“In utter contrast to the Pygmies of the Ituri forest, the !Kung are a hungry people, their habits oriented around a constant struggle for food and water. Vegetable foods are rare most of the year, as is grass and water that would attract game. The most usual game hunted is a small antelope, birds, rodents, snakes, insects, lizards and the difficult ostrich. Foods gathered include mostly roots and seeds, and in the northern areas fruits and nuts.” (1966, pp. 100-101)

This description bears almost no resemblance to the condition of the !Kung Bushmen of the Dobe area. The hunting and gathering Dobe Bushmen have a reliable subsistence, based on a systematic exploitation of abundant food resources. Very little of their food-getting is left to chance. Their knowledge of the local environment, of the habits of game and of the growth phases of food plants is virtually exhaustive. The people know where the food is at each season of the year and how to get it. They do not allow themselves to get into difficult situations, and even during the time of scarcity at the end of the dry season gatherers never come home empty-handed.

What makes their security of life possible? First, they depend primarily on vegetable foods, and these are abundant, predictable and surprisingly nutritious. Game animals, by contrast, are scarce and unpredictable and the meat is only of secondary importance in the diet. A second factor is the intelligence and sophistication that informs their exploitation of the food resources. And a third factor is the principle of generalised reciprocity that pervades the social life of the Bushmen. Food is shared throughout the camp in such a way that everyone receives an equitable share. This principle extends as well to the relations between camps; local food shortages are always balanced out through the redistribution of population in the visiting network.
A mongongo nut grove provides an ideal setting for a temporary Bushman encampment.

The resource base

The foundation of Bushman subsistence is the over 100 species of edible plants of the Dobe area. These include 30 species of roots and bulbs, 30 species of berries and fruits, and an assortment of melons, nuts, leafy greens and edible gums. The most important of the food plants is /\xa/, the mongongo or mangetti nut (Ricinodendron rautanenii). This superabundant staple yields both an edible fruit and a kernel. The latter has a caloric content of 600 calories per 100 grams and a protein content of 27 per cent, a level of nutritional value that ranks it with the richest cultivated foods. Thousands of kilograms of these nuts are consumed each year by the Bushmen, yet thousands more rot on the ground for want of eating.

Another staple is \textit{m}, the baobab fruit (\textit{Adansonia digitata}). It yields a delectable and refreshing powdery fruit rich in vitamin C, calcium and magnesium, and a kernel which compares favourably in calories and proteins to domesticated nuts.

The sour plum, ||\textit{gwe} (\textit{Ximenia caffra}), is a delicious tart fruit that enjoys a two-month season in December and January, when thousands are harvested. The flesh of the fruit is high in thiamin and carotene.

The marula nut, \textit{gai} (\textit{Sclerocarya caffra}), less common than the mongongo nut, yields an inner kernel which is even more nutritious than the mongongo. The nut contains 31 per cent protein and extremely high concentrations of calcium, magnesium, phosphorus, sodium and potassium.

The mongongo and other nut species, the baobab and marula are particularly important, since they contain high levels of vegetable proteins of good quality and fats that substitute for meat when game is scarce. Not all Bushman foods are attractive, however. Some larger roots and melons have a decidedly bitter taste.
and a high proportion of roughage. These the Bushmen eat only when more desirable foods are depleted.

The vegetable foods are sufficiently plentiful for most of the year that the !Kung can afford to be selective. They tend to eat only the most attractive foods available at a given season and bypass the less desirable ones. Over the course of a year, only twenty-three species of plants make up about 90 per cent of the vegetable diet by weight, and one species, the mongongo nut, accounts for at least half of the total.

Game resources are less abundant and less predictable than plants. Meat provides from 20 to 50 per cent of the diet by weight, depending on the season and the number of men hunting in the camp. The general diminution of game in the northwestern Kalahari has not led to the collapse of the hunting way of life, however, for the hunters have developed their techniques for capturing smaller mammals, and the meat from these kills serves to supplement a diet based primarily on vegetable sources.

At some camps, for short periods, the amount of game brought in may be much higher. In December 1964, for example, a camp with four hunters killed twenty-nine animals over a seventeen-day period.

The big antelopes — kudu, wildebeest and gemsbok — are regularly hunted with poisoned arrows, but a hunter feels he has done well if he kills as many as six of these in a year. In addition, warthogs are stalked with hunting dogs. The owner of a well-trained pack of four or five dogs can count on twelve to fifteen of these animals a year. Duiker and steenbok, small antelopes weighing 9 to 18 kg (20 to 40 lbs), are next in importance. These are taken with dogs, trapped in rope snares, or, more rarely, shot with poisoned arrows. In the birth season (December to March), the young are often run down on foot or brought down with throwing clubs.

An unorthodox but highly effective hunting technique is the probing of underground burrows. Four important species are taken this way. The spring-hare is killed with a flexible pole of 4 m (14 feet) with a metal hook at the end. These nocturnal animals sleep in long, narrow burrows by day. The hunter finds an occupied burrow, probes it with the pole until he has hooked his prey, and then excavates the soft sand until he can retrieve the animal. The large African porcupine (18 kg, or 40 lbs) and the ant-bear (up to 63 kg, or 140 lbs) are also underground dwellers. When an occupied burrow is found, the hunters close off the exits and build a fire at the mouth until the half-asphyxiated animal tries to break out, whereupon they finish it off with spears and clubs. Warthogs also are killed in this way when they have run to ground. There are moments of high intensity.

7.8 A mother and her children crack and eat mongongo nuts in front of their hut. This is the most important of the one hundred species of food plants in the Dobe area.
excitement here, and when the prey bursts through the flames, dogs and occasionally men are injured in the fracas. The underground species are highly desired because they are very fat, and animal fat is one of the scarcest elements in the Bushman diet.

The game birds – guinea-fowl, francolin and bustard – are captured in ingenious snares when the opportunity arises, as are small mammals such as hares, bat-eared foxes, mongooses, genets and aard-wolves. Occasionally the dogs flush these animals out of the bush and are allowed to eat them. When there is no other meat in the camp, however, the people themselves eat these.

The big leopard tortoise, weighing up to 3.6 kg (almost 8 lbs), is a great favourite and is easily collected by men, women and children. It is baked in the shell and can feed a family of four. The non-poisonous rock python also makes a good meal. By and large, however, the snakes, insects and lizards that Service (1962) says are the staples of the Bushman diet are despised by the Dobe Bushmen.

In all, 220 species of animals are known and named by the Dobe Bushmen. Of these, 54 species are classified as edible, but only 17 species are systematically hunted. These, in order of importance, are:

1 warthog 7 spring-hare 12 francolin
1 kudu 8 guinea-fowl 13 francolin, two species
3 duiker 9 porcupine 14 korhaan
4 steenbok 10 leopard tortoise 15 hare
5 gemsbok 11 ant-bear 16 rock python
6 wildebeest 17 flying ants

These 17 species make up over 90 per cent of the animal diet by weight.

The organisation of subsistence

The camp, chu/o, is the basic residential unit and the focus of subsistence activities. It consists of a circle of grass structures with doors facing inwards around a central plaza 7 to 30 m (25 to 100 feet) in diameter. The constituent social units are nuclear families that exploit a common range and share in the products of individual subsistence efforts.

The organisation of work is simple. Members move out of camp each day individually or in small groups to work through the surrounding range, and return in the evening to pool the collected resources. The sexes are almost always segregated in food-getting activities. Women go out in groups of three to five with a well-defined objective of which species they want to collect. They move to the species area, fill their karosses, and return to the camp, gathering other species along the way to add variety to the evening meal. They are home by mid- or late afternoon and never stay out overnight.

Hunting is a more individualistic activity. Men prefer to hunt alone or in pairs. Game drives are not practised, and the men see no advantage in putting larger hunting parties into the field. The essence of successful hunting is to cover ground. The density of game is so low that it is necessary to cut a wide swath in a march of 13 to 24 km (8 to 15 miles) through the bush in order to come into contact with fresh spoor, or track. The day’s hunting is rather open-ended. A man starts with a good lead which determines the opening direction of the march. This may be a reported sighting of fresh kudu spoor or a plan to check up on recently occupied ant-bear burrows. Dreams and divination may also give a hunter his lead. But luck plays a major part. Men are willing and even delighted to give up the opening lead if a better opportunity presents itself. If nothing turns up, the hunter will usually fill his bag with roots or nuts in order to have something to bring home. In a typical run of days in July 1964, I found that men averaged one kill for every four man-days of hunting.

The men rarely stay out overnight. Even if they have shot an animal in the afternoon, they break off tracking and return to the main camp to sleep. Their arrow poison works effectively but slowly, and if the arrow has been well placed, the hunter is reasonably sure that his prey will die during the night. At dawn the next day the hunter makes up a carrying party of two to five men and women and
sets out to track the animal to the place where it has died. It is frequently necessary to drive off lions and hyenas that have gathered in the night before the meat can be butchered and brought home. Kills are sometimes lost to the carnivores in this way, but this is a risk the Bushmen accept. One hunter pointed out that even if he stayed with the prey all night, he would still have to leave it exposed to scavengers when he returned to camp to bring back the carrying party.

In the Dobe area the men consistently confined their hunting to within a day’s walk of their camps. Long hunting expeditions, such as the four-day giraffe hunt depicted in John Marshall’s film *The Hunters* (1956), were rarely observed in the Dobe area, where the men appear to get enough meat close to home.

Within the range men travel more widely than women. Each evening there is a thorough “debriefing” around the campfire, as the people relate in detail the latest news of rainfall, the ripening of fruit and food plants and the movements of game. Visitors arriving from other camps add to the discussion, relating what they have observed along the way. In this manner the members of the camp are kept fully informed about what their environment has to offer.

Records kept by us of the daily activities of individuals show that very little time is actually devoted to the food quest. In July 1964 the women of the Dobe camp put in only two or three days of work per week. The men tended to work more, but their schedule was uneven. A man might hunt three days in a row and then do no hunting for ten days or two weeks. Since hunting is an unpredictable business and subject to magical control, hunters may experience a run of bad luck and stop hunting for weeks or months at a stretch. Part of the explanation of this stop-and-go rhythm may be that, after a run of successful hunting, during which he has played host at several meat distributions, the hunter stops hunting in order to enjoy some reciprocal favours. For example, *ôoma*, the best hunter of the Dobe camp, stopped hunting for three months in 1963. He explained that his hunting power was “cold” and that the game “refused” him. He stayed in camp awaiting inspiration while his wife and kinsmen provided food for him. In 1964 his luck returned and he started killing warthogs at the rate of three per month.
The activity diary of the Dobe camp in July 1964 showed that of the eleven men of hunting age in residence, four did no hunting at all, while the other seven worked an average of three or four days per week. In 78 man-days of hunting, 18 kills were made yielding about 200 kg (450 lbs) of edible meat. Their efforts produced a daily share of about 250 g (8 oz) of meat for each man, woman and child in the camp.

Food distribution

The net result of individual food-getting is that there is always something to eat in the camp. Food is the property of the man or woman who gets it, yet somehow every member of a camp participates in the evening meal, even on days when only a few members have been out collecting. Every evening the Bushman camp is the scene of quiet activity: fires are built up, food is put on to cook, and small portions of foods, both cooked and raw, are passed from fire to fire. Children are called over to a neighbouring fire to have a bite of this or that, or to take a handful over to their parents. The men gather at one of the fires to discuss the day’s events and, as roasted roots are rolled out of the hot ashes, they stay on for supper.

The sharing of meat is more formally organised than the sharing of vegetable foods. The owner of the meat – usually, but not always, the hunter who killed the game – is responsible for butchering and distributing the meat.

The style of distribution varies according to the size of the kill. The smallest game, weighing less than 4.5 kg (10 lbs), such as spring-hare, hare, game birds, tortoises and young duikers and steenbok, is butchered, cooked and eaten by the hunter’s immediate family and by anyone who joins them at their fire.

Game of medium size, such as adult steenbok and duikers, porcupines and young warthogs weighing 9 to 18 kg (20 to 40 lbs), is usually butchered and cooked by the hunter’s family, and portions of the cooked food are distributed throughout the camp.

Larger game, weighing 45 to 180 kg (100 to 400 lbs), such as ant-bear, warthog, kudu, wildebeest and gemsbok, is butchered and divided into three portions: roughly one-fifth remains with the family, one-fifth is cut into strips for drying into biltong, and three-fifths are distributed to closely related households in the camp. This latter portion then undergoes a secondary distribution to more distantly related households and to visitors. Each family then cooks part of its allotment at the family fire. On subsequent days, when news of the kill reaches neighbouring camps, visitors arrive to join in and eat the fresh meat and to receive five or six dried strips to take home with them.

The primary division of meat is carried out with care. The hunter, especially if he is young, calls in older men to advise him, or he may even turn a whole carcass over to his father or father-in-law for division. Due attention is paid to the taboos of each of the recipients, to the size of the family of each recipient and to the number of other obligations they in turn may have to fulfill, and also to current alignments and divisions within the camp. This may involve subtle distinctions: for example, if the owner is currently bickering with a brother-in-law, he may tacitly express his disagreement by giving him a slightly less desirable cut or by calling over his spouse to accept the family’s portion.

By the end of the fourth day the animal is finished, having been consumed by as many as sixty different people. I never observed hunters set aside a “surplus” of meat for later consumption, although Mrs Lorna Marshall says that the Nyae Nyae hunters do. There are two good reasons for this seeming prodigality. The first is that meat spoils quickly in the desert, and even carefully dried biltong is often contaminated after 72 hours. The second and crucial reason is that withholding a portion of one’s meat would immediately draw the hostility of one’s neighbours. On the other hand, the total distribution of meat draws their good feelings, that later on will make one a favoured guest at the neighbours’ distributions. Mrs Marshall writes:

“The !Kung are quite conscious of the value of meat sharing and they talk about it, especially about the benefit of mutual obligations it entails ... To keep meat without sharing is one of the things that is just not done.” (1961, p. 241)
Group structure

The !Kung commonly live in camps that number from ten to thirty individuals, but the composition of these camps changes from month to month and from day to day.

Inter-camp visiting is the main source of this fluctuation, but each year about 15 per cent of the population makes a permanent residential shift from one camp to another. Another 35 per cent divide their time equally between periods of residence at two or three different camps, both in and out of the Dobe area.

The camps of the Dobe !Kung are not “bands” as understood by some anthropologists, for they do not consist of a core of males related through the male line. But neither is the camp a random assortment of unrelated individuals whom adverse circumstances have thrown together. What the !Kung camp is, in essence, is a group of kinsmen and affines, or relations by marriage, who have found that they can live and work together well. Under this flexible principle of organisation, brothers may be united or divided and fathers and sons may live together or apart. Furthermore, through the visiting network an individual may, during the course of his life, live for a time at many waterholes, since establishing residence at one camp does not require one to relinquish a claim to any other.

The constant circulation of population makes it appear at first that there is no stable basis of residential life and that the !Kung are a mobile people who can live anywhere and with anyone, but in no one place for very long.

The !Kung living arrangements do have a stable basis, however, although the underlying principles can be discerned only after lengthy field study. At the centre of each camp is a “core” of siblings – both brothers and sisters – and their offspring of both sexes, who share a claim to the ownership of their waterhole. These owners, or K’ausi, are generally recognised as the “hosts” whom one approaches when visiting a given waterhole.

The K’ausi are simply the people who have lived at the waterhole longer than any others. The camps associated with the waterhole are built up gradually by the addition of in-marrying spouses of the core siblings. These spouses in turn may bring in their siblings and their spouses, so that the basic genealogical structure of the camp assumes the form of a “chain” of spouses and siblings radiating from the core, as shown in Ill. 7.10. Other means by which the camp is built up are by the incorporation of whole families through primary marriages and of partial families through secondary marriages. At a given time the camp is composed largely of persons related by primary ties: almost every member has a parent, a child, a sibling or a spouse to link him to the core.

The core units of camps are composed of siblings of both sexes. An analysis of twelve camps showed that a brother and sister formed the core in four cases, two sisters and one brother in two cases, and two brothers and one sister in one case. In addition, four camps had a core composed of two sisters, and one was composed of two brothers. These combinations are to be expected in a strongly bilateral society such as the !Kung. Thus, it is futile to try to establish whether the !Kung have matrilocal or patrilocal residence arrangements.

7.10 A Bushman camp develops from a core of residents composed of siblings of both sexes. To this core there are added spouses, then siblings of spouses, and so on.
The causes of the high turnover may be found in demographic factors. Given the small family size and the likelihood of disparities of sex ratios, it is extremely improbable that a family would be able to maintain its numbers at a viable level if it had to depend solely on natural replacement. For example, if the rule of residence were strictly patrilocal, a waterhole group with all daughters would be quickly put out of business, while a waterhole group with a preponderance of male offspring would have far more hunters on hand than the limited game could support.

A far more adaptive way of maintaining group size and of distributing population with reference to resources is to allow many different avenues of group affiliation. The flexible group structure of Dobe is the result. The !Kung do not resort to elaborate fictions to bring living arrangements on the ground into line with an ideal model. They simply leave group and geographic boundaries open and allow the most effective subsistence units to emerge anew in each generation.

**Kinship and the name relation**

If the !Kung had to rely on genealogical reckoning alone, their kin universe would be severely circumscribed. Their genealogical knowledge is shallow; only one or two generations beyond the oldest ascendants are known, and they rapidly lose track of cousins beyond the second degree. This primary kinship system, however, is only the start for an elaborate development of imaginary kinship based on the common possession of personal names. There is a limited repertoire of personal names among the !Kung: only 35 men's names and 34 women's names were in use in the Dobe area in 1964. All names are sex-specific and there are no surnames. Personal names are transmitted from grandparent to grandchild according to strict rules of precedence. There are no "new" names, and the current repertoire appears to have been handed down over many generations. A first-born male is named after his father's father, and a first-born female after her father's mother. The second-born of each sex is named after the maternal grandparents. If further children are born, they are named after siblings of their parents or more distant relatives. A parent may never name a child after himself.

This is only a bare introduction to the complexities of !Kung naming rules. Readers desiring to go further into the matter should consult Lorna Marshall's classic paper "The Kin Terminology System of the !Kung Bushmen" (1957).

Their naming system enables the !Kung to extend primary kinship ties far beyond the boundaries of personal genealogical kindreds. In fact, the thousands of !Kung-language speakers are connected by name relations into a network of imaginary or fictive kinship that extends all the way from Angola in the north to Ghanzi 800 km (500 miles) to the south in central Botswana. The basic principle is that bearers of the same name have a special affectionate relation with one another. They use the kin terms "old name-young name" regardless of the actual biological connection, and even in cases where there is no traceable connection at all.

**Marriage**

The far-reaching ties made possible by the name relation are of particular importance in the arrangement of marriages. The !Kung Bushmen are unusual among hunter-gatherers in that they extend the incest taboo collaterally and forbid marriages between actual cousins. This prohibition sends a young man (or woman) far afield when seeking a spouse.

A young man has a wide range of potential spouses to choose from. In addition to his immediate female relatives as far as second cousins, a man may not marry a girl with the same name as his mother, his sister or, in the case of a second marriage, the same name as his daughter or his mother-in-law. Similarly, a girl may not marry a man whose name is the same as that of her father, her brother, her son or her father-in-law. All others not excluded by reason of blood or name-sharing kinship are potential spouses if they are of a suitable age.

Men marry between the ages of twenty and thirty, usually after they have served a period as cattle-herds for the Herero. Girls marry around the time of menarche, which tends to occur late, between the ages of fourteen and sixteen. Parents try to arrange a match while their children are still young, and one of the more pleasant
topics discussed during inter-camp visiting is *gau /xom*, or betrothal. Most of these arrangements go by the board, however, since the adolescents of both sexes often have ideas of their own. In current practice, there is a period of unstable marriage when young people may have several temporary liaisons before settling down with a lifelong partner.

The qualities a girl's parents look for in a son-in-law are hunting ability and a pleasant, non-aggressive personality. In order to prove himself, the young husband may serve a period of "bride service" in the camp of his wife’s parents. However, with the fluidity of group structure, the young couple may spend as much as half of their time living elsewhere.

In 1964, to take but one example, only 5 per cent of the marriages in the Dobe area were polygamous. There were six cases of polygyny (and only one man had three wives) and one polyandrous household. Several factors would seem to favour a higher incidence of polygyny. There is no lack of surplus women; in 1964 thirty-five divorcees and widows (16 per cent of all women over fifteen years) were living without husbands. Also, the economic burden of a second wife is not great, since the women provide over half of the food for the household. The major obstacle seems to be the attitude of the wives themselves. Many men say that they desire a second wife, but fail to take one for fear of incurring the wrath of their present wife. Married women threaten to leave their husbands if they bring a second wife into the household; and if a man does, in spite of his wife’s objections, she may make life miserable for the junior wife and the husband alike. A marriage to two sisters has the best chance of success, since the girls have grown up in a close co-operative relation: three of the six polygynous unions were of this form.

Divorce is common in the early years of adult life. Arranged marriages often fail to prove durable, although the young couple may eventually reunite after a period of travelling around in temporary liaisons. Divorce in both young and older adults is initiated as frequently by the women as by the men. A wife may pack up and go if
the husband is adulterous, if he beats her, or if he insists upon taking a second wife. Divorce is a simple matter, since there is no community of property and no bride wealth to dispute. Children always remain in the “custody” of their mother. In general, divorce does not leave the same quality of bitterness among the !Kung that it often does in Western society. Ex-spouses usually maintain extremely cordial relations and may even continue to live in the same camp after one or both have re-married.

After the age of thirty almost all San settle down to a stable union which lasts until the death of one of the spouses. These unions survive the frequent temporary separations of husband and wife in the visiting network and even such trying circumstances as adultery by either partner, and long periods of hunting inactivity by the husbands. For those who seek it, the Bushman social system offers ample opportunity for sexual experimentation in early adulthood, and this latitude undoubtedly contributes to the stability of marriage in later years.

The management of conflict
Verbal disputes are the common currency of camp life. The !Kung must surely be among the most talkative people in the world. The buzz of conversation is a constant background to the camp’s activities: there is an endless flow of talk about gathering, hunting, the weather, food distribution, gift-giving and scandal. And there is story-telling, as among this group of males in a permanent camp.
the arguments are about specific individuals. The most frequent accusations heard are of pride, arrogance, laziness and selfishness. As tempers mount the language and the charges become more and more extravagant.

These disputes are puzzling for their apparent lack of clear-cut outcomes. They flare up and die down without either party giving ground. The bubble of tension is often burst by a joke, which reduces the entire camp, including the disputants, to helpless laughter. One is astonished to see two men chatting amicably together who only a few minutes before had been shouting abuse at each other. To a certain extent verbal battles appear to be a game played principally for the fun of laughing about it afterwards.

Not all conflicts are dissipated so rapidly. More rancorous disputes may require the intervention of peacemakers to restore good relations, but several days later one party – or both – packs up and leaves the camp. Much of the coming and going observed in Bushman camps can be traced to a recent history of strained relations. When an argument is too serious to be dissipated by rough good humour, it is far simpler to split the camp than to stay together and fight it out. One old man explained it this way: “In the case of arguments in the camp, we sit down and talk it out, and bring in others who know more to listen. But with people like myself who don’t want trouble, we will just pack up and go away.”

The Bushmen recognise three levels of conflict: talking (n!wa), fighting (nh!aie) and killing (n!waakwe). They appear to delight in the first level and engage in it at every opportunity. But their dread of the second and third levels is extreme. The word “n!waakwe” means literally to “kill one another”. Fighting as well is to be feared, since the act of homicide is well within the means of all adult men, whose poisoned arrows are always close at hand.

The Bushmen are perhaps unusual among human societies in that they attach no value to fighting. They have no ideal of honour or of brave, aggressive masculinity. There are no culturally accepted outlets for physical violence, no wrestling matches, no games of strength, and no ordeals or duels in which a man can “prove” himself.

The extreme fear of violence among the !Kung by and large appears entirely justified: there have been some nasty “punch-ups” in the past and the !Kung have a reputation among their neighbours as fierce fighters. At least twenty-two homicides occurred among the !Kung during the period 1920-1955. The recent introduction of Tswana legal institutions has undoubtedly played an important part in controlling fighting. Today serious disputes are usually brought to the attention of the Tswana headman. In one recent case of adultery the aggrieved husband asked a neighbouring Herero: “Are you going to take this matter over, or shall I do what is in my heart to do?” The Herero man, of course, interceded and brought the principals to court. My impression is that the Tswana court has proved very successful because the Bushmen have been relieved to have an outside agent take the heavy responsibility of resolving conflicts out of their hands.

The economic basis of !Kung society

Until the mid-1960s, the !Kung Bushmen of Dobe continued to live as hunters and gatherers without cash, trading posts, wage labour or markets. One valuable result for the anthropologist was the opportunity to observe how ecological adaptation, social structure and ideology articulate in a dynamic, ongoing system.

In the first place our study has shown that, at least in the Dobe area, the hunting and gathering way of life is not as rigorous and demanding as it is often made out to be. If we are to understand these societies, we have to go beyond the overly simple argument that hunters are poor because the harsh environment and the crude technology does not allow anything better.

A number of features appear to set the Bushmen and other hunter-gatherers apart from tribal and centralised societies. An important one is their radically different conception of the relation between man and his environment. Among agricultural and pastoral peoples, wealth is amassed from nature by careful husbandry and improvement of land, livestock, homesteads and durable goods. The Bushmen, by contrast, make no sharp division between the resources of the natural environment and social wealth. The unimproved land itself is the means of
production. Since it is owned by no one exclusively, it is available to everyone who can make use of it. The Bushmen do not amass a surplus, because they conceive of the environment itself as their storehouse. The necessities of the hunter’s life are in the bush, no less surely than those of the agriculturalists are in the cultivated ground. The Bushmen know everything there is to know about what their environment has to offer. This knowledge is, in effect, a form of control over nature: it has been developed over many generations in response to every conceivable variation in climatic conditions. The Bushmen are not experimenters introducing new crops or domesticated animal species into an unknown habitat. Their adaptation is a conservative one, based on naturally occurring plant and animal species that have been genetically adapted to desert conditions.

Because they know what to expect from the environment, they see little point in bringing food and raw materials to camp before they are actually needed. The food collected by the members of a camp is distributed and consumed without delay within the boundaries of the camp, or by the camp’s immediate neighbours. There is no “setting aside” of part of the production for consumption at a later date, or for distribution to more distant points. This lack of “surplus” requires a constant level of work to be maintained throughout the year. Such uniformity of effort stands in sharp contrast to agricultural societies, in which intense periods of work (planting and harvesting) are followed by periods of relative inactivity. The actual amount of time devoted by Bushmen to the food quest is modest, amounting to about twelve to nineteen hours of subsistence effort per adult per week, or about 600-1000 hours a year, a lower level of work than has been observed in some agricultural societies.

The Bushmen make a relatively small investment in what may be called the capital sector of their economy. Every adult manufactures and maintains a basic set of utensils considered essential to the tasks of daily life. Lorna Marshall compiled an exhaustive catalogue of the material culture in use among the Nyae Nyae !Kung, a list that comprises only ninety-four items in all. With the exception of iron, beads and pots obtained from the Blacks, all the items of material culture, necessities and luxuries alike, are easily manufactured from locally available materials. Building a house for a rainy-season camp is a day’s work; shelters for the dry-season camps are thrown up in a morning. The all-important digging stick can be whittled in an hour, and will last the user for several months. A complete set of bow, arrows and quiver takes somewhat longer to make: a man assembles the materials over a period of weeks in the course of normal activities, and then spends three or four days manufacturing the kit. These weapons will then have a useful lifetime of several years.

Because of the ease with which articles can be made during the abundant leisure time, there is no lack of duplicate items. These are put into circulation through the gift-giving network, called *hxaro*. If an individual receives a valued item such as a necklace of ostrich-egg shell beads, a thumb piano or a finely carved pipe, he keeps it for several months and then passes it on to a trading partner. Months or even years later his trading partner reciprocates with a similar item. The net effect is to maintain a constant circulation of goods and an equal distribution of wealth among the members of the society. Particularly active participants in the *hxaro* network are not richer than others in the sense of possessing a greater share of the world’s goods. Rather, they are those who have a greater than average number of trading partners and thus a more rapid turnover of goods. Nobody keeps *hxaro* goods for very long.

This lack of wealth accumulation, even though the means for it – free time and raw materials – are at hand, arises from the requirements of the nomadic life. For people who move around a lot and do not keep pack animals, it would be sheer folly to amass more goods than can be carried when the group moves. Portability is the major design feature of the items themselves. The total weight of an individual’s personal property is less than 11 kg (25 lbs) and it can easily be carried from place to place. When a family is packing, it is remarkable to see all of their worldly possessions – weapons, cooking utensils, water containers, medicines, cosmetics, pipes, musical instruments, children’s toys and beads – disappear into a pair of leather sacks the size of overnight bags.

The immediacy of food consumption, the modest investment in capital goods,
and the lack of wealth disparities all contribute to the distinctive style of Bushman social relations. With personal property so easily portable, it is no problem for people to move as often as they do. There is a similar lack of investment in fixed facilities such as village sites, storage places and fenced enclosures. When parties come into conflict it is simpler to part company rather than remain together and resolve differences through adjudication or fighting.

It has become a commonplace in the anthropological and popular literature to regard the hunters and gatherers as living a life of constant struggle against a harsh environment. The nomadic round, the paucity of material goods, and the lack of food surpluses of these people are taken as *prima facie* evidence of the dreadful conditions endured by man in the state of nature. That the hunter's life is difficult is self-evident, the argument runs, for if it were not, surely the hunters would be able to settle down, lay in food reserves, and generally have the leisure time to "build culture".

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7.13 Some Bushmen live in very genial conditions, such as these River Bushmen who live near the Okavango swampland in northern Botswana: so it would be wrong to think of all Bushmen as living under desert conditions of life.

7.14 The lush Okavango territory, home of River Bushmen and others. This represents one extreme in the range of habitats peopled by the Bushmen. The heart of the Kalahari Desert in central Botswana represents the other extreme.
Data on the !Kung Bushmen of Dobe contradict this view. The people of the Dobe area are full-time hunters and gatherers in an unattractive semi-desert environment, yet they appear to work less and live longer than do some peoples with more advanced economic systems. Their subsistence requirements are satisfied by a modest input of labour, of the order of two or three days of work per adult per week. This level of effort is sufficient to support a large proportion of non-productive young and old people. There is plenty of time to develop the public life of the community. Ritual curing dances with their elaborate trance performances are frequently held, bringing together fifty or more participants from kilometres around. At some waterholes these all-night dances occur as often as two or three times a week.

The Bushmen do not have to struggle amongst themselves over food resources. Their attitudes toward ownership are flexible and their living groups open, offering a wide latitude for individuals to choose congenial surroundings. Because the members of the society are not divided into close-knit territorial groupings defending what they have against outsiders, a major source of conflicts is removed. It is possible to keep conflicts, both within and between groups, to a minimum by fission. This feature alone sets the !Kung apart from more technologically developed societies whose very survival depends on their ability to maintain internal order and to control real estate – at the family, tribal and national levels.

It is precisely this feature that has been and is the fatal flaw in the hunting and gathering way of life, and not its nomadic style and low productivity. In encounters with more aggressive societies, the hunting peoples have always come out second best and have tended to give up their land base and move away to avoid or end conflicts with agricultural, pastoral or industrial peoples. The fact that the hunters of today are largely confined to unattractive marginal areas or to rural slums should not blind us to the fact that the hunting and gathering way of life was a remarkably stable and successful one.