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HUNTING IN SEMI-ARID AREAS - THE KALAHARI BUSHMEN TODAY

Miss Megan Bieselee*

One of the big questions to which this conference addresses itself is whether agriculture and pastoralism may be intensified in the Kalahari without endangering the ecological balance that is found there. In discussing this question it is worth our while to consider a form of human ecological adaptation which fitted harmoniously with that of the Kalahari for centuries. Mr. Fosbrooke has given us a brief glance at the several peoples who live in Botswana, on Kalahari sand. The group I am going to discuss in more detail is the Bushmen, with especial reference to the few who are still producing, from this semi-arid land, a living as hunters and gatherers.

Information about the way of life of these people is of obvious relevance to this conference when we consider that hunting and gathering was, up to 10,000 years ago, the universal form of human organisation. All subsequent economies have arisen from the hunting way of life.

It is true that the early hunter-gatherers probably had much more favourable environments to exploit. For example, one can imagine them thousands of years ago, scattered comfortably over the richest lands of Africa. But the fact that this mode of existence has been flexible enough to extend itself successfully into the Kalahari testifies to its suitedness both to human needs and to the demands of a harsh environment. Today there are several thousand Bushmen in Botswana still living as hunters-gatherers. Some are experiencing enormous ecological changes due to reductions in the numbers of game. And yet many of these people refuse to leave the bush to join farms and ranches unless they absolutely must. Difficult though it is, the hunting way of life is yet that appealing. This fact, too, is important for us to consider when we think of the future.

In the 1964 Census the number of Bushmen in Botswana was found to be 24,652. (This figure is estimated to have been 20 per cent inaccurate due to the difficulty of enumerating nomads¹.) For the purposes of the Census Bushmen were divided into three types according to their present ways of life. Those who had little or no contact with Bantu or Europeans were only estimated. Those who spent most of the year on Bantu or European boreholes and only hunted in the wet season were partially enumerated. Those who worked or lived permanently on farms or in African villages were all enumerated. It is estimated that perhaps 6,000 Bushmen still live in Botswana as hunters and gatherers².

On the Ghanzi farms about 4,000 Bushmen were enumerated; these Bushmen are mostly permanent residents of farms although some hunt in the bush during the rainy season. The fourteen thousand that are left live permanently or semi-permanently at Bantu villages or cattleposts and are

* Graduate Research (Anthropology), Harvard University (currently in Botswana).

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employed in various ways by Bantu people. The map attached as Appendix 1 gives a rough idea of the geographical distribution of the enumerated and estimated Bushmen in Botswana.

According to Dr. Philip Tobias of the University of Witwatersrand the numbers of Bushmen in other parts of Southern Africa can be estimated as follows:

Basutoland	extinct
South Africa	isolated individuals
Rhodesia	100-200
Angola	4,000
South West Africa	20,311 ³

Thus there are probably more than 50,000 Bushmen alive today in Africa. This figure is much larger than anyone had expected. Tobias feels that it is large enough to convince us that Bushmen must once have lived all over sub-Saharan Africa.

Before discussing the new economic arrangements Bushmen have had to make with the stronger groups they must now necessarily deal with, I will first give a sketch of the economic life of those few thousand who are living in the old way as hunters. Mr. Alec Campbell, Chief Game Warden of Botswana, has emphasised to me (and I agree) that the local character of hunting and gathering economies must not be overlooked. In other words Bushmen hunters have adapted themselves quite differently to the different ecological areas of the Kalahari. What is true of the !Kung studied by Richard Lee in Ngamiland may bear no relationship to the /Gwi population of the Central Kalahari Reserve. For instance, the !Kung of the Aha Hills area have as staple food the Mangetti or Mongongo nut. In the central reserve there is no such year-round staple, and 13 different main foods are made use in the course of a year⁴.

The point to be stressed is that Bushmen ecological adaptation is a finely-honed instrument utilising a great fund of specialised knowledge about a given area. It is the antithesis of a dull bludgeoning economy which tries to be the same everywhere. One thing both the !Kung and /Gwi do have in common is a distrust of unknown territory 'We don't know how to find food in this country' they say when they are away from the area with which they are familiar.

But within known areas the boundaries of allied bands' territories are not precise. Mrs. Marshall found among the !Kung of South West Africa that a hunting territory is a vague area extending south and west, say, of a certain line of hills or a pan. But animals within these territories belong to no-one until they are shot, and they may be shot even by visiting bands⁵. George Silberbauer in discussing band alliances, stressed the importance of this flexibility in alleviating local food shortages in times of drought. Because the rains of the central desert are uneven, one band may experience famine while another is finding plenty of food. In the case of allied bands an extended visit to the favoured region will probably occur⁶. Dr. H.J. Heinz has written of the 'band nexus' among the !Xo Bushmen, a low intensity system of co-operation among up to seven bands in adjacent territories. The Nharo Bushmen of the Ghanzi area are said to have also employed such a system in earlier times.

But in years of severe drought the food scarcity is universal, so that there is no point in visiting an allied band's territory. Silberbauer found that in the Central Reserve this fact kept explosive situations of conflict over scarce resources from occurring. The flexible use of territories belonging to allied bands is an example of the controlled opportunism with which Bushmen hunters successfully exploit the Kalahari. Alliances with other bands are used when they are profitable; isolation within separate territories occurs when moving to another region is useless and potentially detrimental.

Mrs. Marshall reports that the !Kung of South West Africa that 15-18 large mammals per year is usual for a single Bushman band (averaging 25 people per band)⁷. When the animal is killed, its owner has the right to distribute the meat. Meat is practically without fail shared with all members of the local groups along rather definite lines of sharing. John Marshall suggests that this rigorous sharing of meat may have evolved in response to the universality of protein needs. Even those who might never have primary access to meat with which to reciprocate at a later date - women, cripples, even improvident men - are given their shares. Certainly the distribution of meat is a point of high tension in Bushmen culture, and if anyone is left out enormous bad feeling ensues.

Vegetable foods are not shared as rigorously as meat though they far outweigh meat in importance in the total diet, veldkos are shared by the woman who gathers them, within her nuclear family, and the sharing is done much more casually than is the case with meat. What is not casual about the veld foods among the !Kung though, is their ownership on the ground by the different bands. The rigorous ownership facilitates the numerical adaptation of the band to the vegetable foods and the band stays small.

Thus nuclear families are the units within which gathered foods are shared, but since one nuclear family alone is not enough to sustain the arduous life, families are organised into bands. Bands provide enough men for hunting and women enough to guarantee companionship on gathering trips. Bands in turn may form loose alliances with neighbouring bands, whose territories may be exploited in time of need. The great equaliser is the generalised reciprocity which is the norm within local groups, ensuring that if there is any food within the band, it will more or less be shared out equally by its owner. This person can then feel assured that he will be repaid in kind at a future date, sure to survive, when he himself comes home empty-handed. Ownership boils down to, then, almost the ownership of the ability to share. The resource of sharing itself is an invaluable asset in a chancy environment like the Kalahari.

Contrary to popular belief the hunting-gathering way of life is not a highly precarious unremittingly strenuous form of existence. Specialised knowledge and social co-operation mitigate against chance and continuous strain. Richard Lee has done a thorough input-output analysis of !Kung Bushmen foodstuffs and labour, and has been able to show that the subsistence of these hunters is a reliable one found solidly on known resources⁹. What is more he found that adult !Kung were able to make a living for the whole band by working on an average of 2-3 days a week. In contrast to primate societies in which all adults devote part of each day to subsistence in a truly hand-to-mouth existence, Lee found that human hunter-gatherers have a much more flexible way of life. Some individuals work

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more than others; some days people may work hard and other days do nothing. Lee's data shows that 65 per cent of the !Kung work 36 per cent of the time and that 35 per cent do no work at all (in farming tribal and peasant societies subsistence work is generally much more demanding in terms of time.) These findings challenge our preconception that advanced economies are the only ones able to support substantial amounts of leisure.

The Dobe area studied by Lee, receives only 16-18 inches of rain per year, but it nevertheless supports a secure subsistence base for hunter-gatherers¹⁰. 85 plant and 54 animal species are edible. The mongongo nut (*ridinodendron nauta nenii*) forms 2/3 of the vegetable diet. This and another staple, the tsi bean, are some of the most protein-rich foods in the world, even rivalling cultivated crops. Mongongo has five times the calories and ten times the protein of most cereal crops. Supplementary staples are baobab fruit and nuts, sour plums and marula. The vegetable foods, which may form as much as 80 per cent of the total diet are reliable and nutritious. Of the edible animal species, only 17 comprise over 90 per cent of the animal diet by weight¹¹.

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|-------------|----------------------|-----------------|-----------------|
| 1. Warthog | 6. Wildebeeste | 11. Ant Bear | 16. Rock Python |
| 2. Kudu | 7. Springhare | 12. Francolin) | 17. Flying ants |
| 3. Duiker | 8. Guinea fowl | 13. Francolin) | two species |
| 4. Steenbok | 9. Porcupine | 14. Korhaan | |
| 5. Gemsbok | 10. Leopard tortoise | 15. Hare | |

The /Gwi Bushmen, for their part, also do well in their even less hospitable environment. Jiro Tanaka, who is at present doing research on /Gwi ecology in the Central Reserve, reports an abundance of vegetable foods, even with a mean annual rainfall of only 11 inches. Tanaka has identified over 70 species of edible plants. Animals are of minor importance in the diet, comprising only 10 per cent of the total intake. The big problem for /Gwi is drinking water. There is no surface water in much of the Central Reserve from April until October, and the Bushmen must get all the water necessary to sustain life from juicy plants like the tsama melon and from the rumen of animals.

Of the 70 species of edible plants identified by Tanaka, only thirteen comprise the major part of the /Gwi diet. These thirteen overlap sequentially through the seasons of the year. Animal foods, coming mainly from the 21 species of edible mammals, are unpredictable compared to vegetable foods. Though meat is the prized food, it cannot be relied upon for subsistence. Tanaka finds that the number of large mammals killed is about 12 per band per year¹³.

In this paper there is no space for me to discuss in detail the seasonal migrations of nomadic Bushmen. It is important to emphasise, however, that for both the !Kung and the /Gwi migrations are determined mainly by the availability of water and food plants, and not by the distribution of animals. In the Central Reserve the diameter of the /Gwi nomadic range is at most 110 kms. and its area about 10,000 kms². But only a small fraction of this area is utilised intensively¹⁵. Thus the romantic notion of Bushmen ranging untrammelled, concerned only with the movements of exotic large game must be replaced with the picture of a smaller seasonal migration governed by the availability of plant foods and water.

But this is only the situation today. In his 1965 study of the Central Reserve Bushmen, Silberbauer found that meat sometimes comprised as much as 40 per cent of the diet. Tanaka's figure of 10 per cent was arrived at among the same people only four years later. According to Mr. Campbell there was a drop of up to 90 per cent in the population of certain large game animals such as Wildebeeste and Hartebeeste in the reserve during this interval. The great flexibility of a hunting-gathering economy is evident there.

But this flexibility has not been enough to prevent the majority of living Bushmen from having to leave the hunting life. Some 4,000 work or squat on Ghanzi farms. The 10 per cent of these who are permanently employed receive an average wage of R3.00 per month plus rations amounting to perhaps R5.00¹⁶. Having come so recently from an egalitarian form of social organisation, these lucky few are mercilessly pressed by their relatives to share with the unemployed or partly employed 90 per cent. Egalitarianism of course is breaking down quickly in these circumstances, but with no resources to replace the bush and the old sharing, stock theft and alcoholism and other evils have become large problems at Ghanzi.

The majority of Bushmen in Botswana, some 14,000, work or squat on the farms and cattleposts of the Bantu. Their positions there vary enormously with individual situations and with the temperaments of the Bantu, but the most usual form of relationship is that of clientage and patronage. Under this system the client Bushmen renders to his patron services such as cattle tending, labouring in the fields, collecting firewood, working skins and hunting. The patrons' end of the bargain varies from bare subsistence upkeep to something more substantial. Patrons' attitudes toward Bushmen working for them vary from profound contempt to paternal amicability. Those who are merely squatting near Bantu boreholes and using the water are generally tolerated and even occasionally employed to hunt, work skins or make implements such as hoes or axes. No input-output analysis has been done for Bushmen squatting on Bantu boreholes. Some subsistence is still gleaned from the bush, some by begging. The problem of motivation is very great among Bushmen who were taken very young by Bantu and have never known the hunting life. And here, as in all Botswana, the underuse of potential labour is one of the over-riding shames. In considering plans for the future development of the Kalahari this substantial labour force should not be neglected, especially as these people are already very anxious to better their lot by work.

Botswana is a poor country in many ways, but it is rich in that it has a wide range of human economic possibility to observe at first hand. At one extreme there is the egalitarianism that characterises hunting bands. At the other extreme lies the individual isolation and competitiveness of Western Enterprise. Being in close contact with both economies, the people of Botswana have a unique opportunity for making comparisons between them. Not that the people of Botswana will have a substantial choice in the matter of development, because it is obvious where the money and expertise for development come from. Nor does the hunting life provide answers to the question of how to feed a rising population on limited land. Hunting and gathering is an anachronism from the days of sparse population and endless territory.

But attention to what has been for so long successful in the Kalahari may help to temper the inevitable mistakes there of the incoming technologic culture. At very least attention to the achievements of hunting and gathering culture should pave the way to mutual respect among the peoples who have got to live together in newly independent Botswana.

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