
ECONOMIC LIFE OF THE NUER: CATTLE

Author(s): E. E. Evans Pritchard

Source: *Sudan Notes and Records*, 1937, Vol. 20, No. 2 (1937), pp. 209-245

Published by: University of Khartoum

Stable URL: <https://www.jstor.org/stable/41716262>

JSTOR is a not-for-profit service that helps scholars, researchers, and students discover, use, and build upon a wide range of content in a trusted digital archive. We use information technology and tools to increase productivity and facilitate new forms of scholarship. For more information about JSTOR, please contact support@jstor.org.

Your use of the JSTOR archive indicates your acceptance of the Terms & Conditions of Use, available at <https://about.jstor.org/terms>



JSTOR

is collaborating with JSTOR to digitize, preserve and extend access to *Sudan Notes and Records*

ECONOMIC LIFE OF THE NUER: CATTLE.

By E. E. Evans Pritchard.

(PLATES V—VII.)

I.

A PEOPLE whose material culture is as simple as that of the Nuer must be dependent on nature and its seasons, and an account which sets out to describe how they live must start by a sketch of their country and food supply. Nuer are herdsmen as well as gardeners, and their deep interest in cattle makes them more dependent on nature than if they were gardeners alone, for a gardener has only to consider how changes in vegetation directly affect himself, whereas, if he is a herdsman besides, he has to consider also how they affect his cattle. As a gardener, for several months in the year he is largely independent of nature, but as a herdsman he has at all times to adjust the needs of his beasts to changing vegetation.

Nuer are pre-eminently pastoral, though they grow more millet and maize than is commonly supposed and, like all the cattle-owning Nilotes, give keen attention to their gardens in the rainy season. Some Nuer tribes cultivate more and some less, since conditions of soil and surface water vary in different parts of their country, and since some have fewer cattle than others; for Nuer regard cultivation of the soil as toil forced on them by poverty of stock. They cultivate in order to live, but at heart they are herdsmen, and the only labour in which they delight is care of cattle. They not only depend on cattle for many of life's necessities, but they have the herdsman's outlook on the world. Cattle are their dearest possession, and they gladly risk their lives to defend their herds or to pillage those of their neighbours. Also their social activities concern cattle and *cherchez la vache* is the best advice that can be given to those whose duty is to understand a Nuer's behaviour.

The attitude of Nuer towards, and their relations with, neighbouring peoples is influenced by their love of cattle and their desire to acquire them. They have profound contempt for peoples with few or no cattle, like the Anuak, while their wars against the Dinka tribes have been directed to seizure of cattle and control of pastures.

Each Nuer tribe is an economic unit with its own pastures and water supplies, and each section of a tribe has its well-defined areas of

pastoral exploitation. Political fission and cohesion of segments are closely bound up with the life of the herds in relation to natural resources. What has been said of the tribe may be said also of the clan, for ownership of natural resources by tribes and tribal segments are expressed generally in terms of clans and lineages. When a kinship group ceases to live a co-operative pastoral life, it tends to split into segments and to become more an abstraction and less a community. The lineage, with its accretions from other clans, is the group which receives a man's allegiance, because it is a local and a cattle group, a community which protects his herds and ensures their welfare. Most clan traditions relate stories about cattle and many of their honorific titles are derived from names of cows and kraals.

Not only are the normal relations between members of a tribe determined largely by pastoral interests, but their disputes are generally about cattle, and cattle are the compensation for loss of life and limb that is so often their outcome. Nuer law is almost entirely concerned with cattle, and authority in all its forms is partly derived from ownership of cattle and is exercised with reference to cattle. Leopard-skin chiefs and prophets are mainly legal arbiters in questions in which cattle are the issue, or ritual agents in situations demanding sacrifice of ox or ram. Another hereditary leader is the *wut ghok*, Man of the Cattle.

Leadership is partly based on age, which is institutionalized in stratified sets. In treating of these age sets we find ourselves speaking once again of the relations of men to their cattle for the change from boyhood to manhood is most clearly marked in the character of those relations before and after initiation into an age set. Before initiation a boy is a servant in the kraal: he milks the cows and ewes, cleans the kraal and byre, and herds the calves and sheep and goats. After initiation he is a man, and performs no more the menial tasks of the kraal. He is forbidden to milk the cows. He is now owner and guardian of the adult herd, supervises it in village and camp, and protects it at pasture. The ritual of initiation is an expression of this changing relationship of an individual to cattle.

The small local group which a Nuer regards as the people of his home is a cattle group. Its members are his kinsmen. They herd their cattle in common and defend jointly their home and herds. They assist one another to marry and to pay compensation for homicide. If one of them is killed, the

others avenge his death. The interests of one are the interests of all. Their solidarity is most evident in the dry season when they live in a circle of windscreens around a common kraal, but it is also to be seen in the exclusiveness of their wet season life, when they live in isolated villages perched on islands in a vast swamp. Their social life is the life of their herds and Nuer understand kinship as economic interdependence in relation to cattle. Cattle and their kin-owners are symbiotic. The cattle cannot live without the men nor the men without the cattle. It is group symbiosis for a single family cannot look after their cattle alone. Only a group of kinsmen can herd the cattle and from this necessity springs the solidarity of the kinship group.

The structure of local groups is a network of kinship ties which are brought about by marriage and the birth of children. The laws of exogamy forbid the exclusiveness of local groups of agnatic kinsmen and compel the extension of kinship ties, so that they cover wide areas and provide a framework for large political units. The Nuer express these laws of exogamy in terms of cattle, for where cattle may pass from one lineage to another in virtue of kinship women may not pass in marriage. You may not marry a woman if you belong to a group of kinsmen that receive a portion of her bride-wealth. Every phase of marriage and every regulation concerning it are thus expressed in terms of cattle and marked by their transference or slaughter. Cattle are important in courtship not only because a man with many cattle is a man of wealth and can therefore afford to marry, but also because they are the means by which youths display themselves before girls, even when marriage is not contemplated, and the medium in which they can show manly competence. The display of adolescence is made through cattle and pastoral pursuits.

The two most important uses of cattles are their economic exploitation and their rôle in marriage. The union of marriage is brought about by the payment of from twenty to forty head of cattle by the bridegroom and his kinsmen to the kinsmen of the bride, and by the performance of ceremonies in which cattle are invoked and slaughtered. The end of every herd is its disposal on the occasion of marriage. Cattle leave the herd when the young men of the kraal marry, and cattle come into the herd when their kinswomen are married. When a youth marries, cattle leave his kraal to join the kraals of his wife's kindred, but they do not remain

long in their new abodes. Soon they will move to other kraals as further marriages are contracted. They move from kraal to kraal and each time they change masters they bring about a new union. A cow is a living document which can be cited to prove the validity of a number of marriage unions. In Nuerland when one speaks of marriage one speaks of cattle, and when one speaks of cattle one speaks of marriage. Cattle also play a prominent part in the ceremonial of marriage, each stage in the negotiations and ritual that brings the union nearer to completion being marked by payment of cattle, by invocation of cattle, by sacrifice of oxen, and by other rites in which pastoral activities are expressed.

There are a number of bio-domestic groups other than the family that springs from simple legal marriage. These are based on unions of different types: ghost-marriage, leviritic marriage, widow-concubinage, and concubinage of unmarried women. In such unions the legal status of the partners and of the children to each partner is defined in terms of cattle-rights and obligations, and cattle are the magnet that draw children from their natural parents, who have brought them up, to the homes of their legal kinsmen, and are often also a bone of contention between youths and the men who stand in the place of their legal fathers and have begotten them.

Cattle are owned by families, that is to say by a man and his wives and the children born to his wives in the union of marriage. While the head of the household is alive he has full rights of disposal over the herd, but his wives have rights of use in the cows and his sons own some of the oxen. As each son, in order of seniority, reaches the age of marriage, he is allowed to marry with the herd. The next son will have to wait till the herd has reached its earlier strength before he can also marry. When the head of the household dies the herd still remains the nucleus of family life. The wives of the married sons milk the cows and the unmarried sons wait till there are enough cattle for them to take wives in their turn. The herd is a living pivot of the family system and Nuer strongly deprecate the breaking up of it on the death of its owner, for it is a common herd in which all have equal rights. When all the brothers are married, they and their wives and children generally live in adjacent homesteads, often forming together a hamlet or village. In the early part of the dry season one sees these small groups of agnatic kinsmen living in a circle of wind-

screens around a joint kraal in which their cattle are tethered in common, and in the big camps formed later in the year one finds them occupying a distinct section in the lines of windscreens.

The bond of cattle between brothers is continued long after each has a home and children of his own, for when a daughter of any one of them is married, the others receive a large portion of her bride-wealth. Likewise her grandparents, maternal uncles, paternal and maternal aunts, and even more distant relatives, receive also a portion of her bride-wealth. Kinship is legally defined and idiomatically indicated by reference to these payments. Those who receive cattle as a legal right on the marriage of a girl are under a moral obligation to assist her brother to marry by gifts of cattle. Kinship is most clearly expressed at marriage, and movements of cattle from kraal to kraal on these occasions are like a man drawing lines from one person to another on a genealogical chart.

The importance of cattle in Nuer life and thought is shown in personal names. A frequent mode of address is to call a man by a name that refers to the form and colour of his favourite ox. Women take names from oxen and from the cows they milk, though these names are less used than ox-names of men. Even small boys call one another by ox-names when playing together in the pastures, a child usually taking his name from the bull-calf of the cow he and his mother milk. Sometimes a man receives an ox-name as a birth-name. Sometimes the name of a man that is handed down to posterity is his ox-name and not his birth-name. Hence a Nuer genealogy may sound like an inventory of a kraal. The linguistic identification of a man with his favourite ox cannot fail to affect his attitude to the beast, and to Europeans the custom is the most striking evidence of the pastoral mentality of the Nuer.

Since cattle are a Nuer's most cherished possession, being an essential food supply and also the most important social asset, and since they possess little else, it is easy to understand why they play a foremost part in ritual. A man establishes contact with the ghosts and spirits through his cattle. If one is able to obtain the history of each cow in a kraal, one obtains at the same time not only an account of all the kinship links and affinities of the owners, but also an account of all their mystical connections. Cows are dedicated to the spirits of the lineages of the owner and his wife and to any personal spirit that has at some time possessed them. These are

animal totems and spirits of the air. Other beasts are dedicated to the dead or belong to dead persons who, in a sense, still own them. By rubbing ashes along the back of a cow or ox one may get into touch with the spirit or ghost associated with it and ask for assistance. Some cows are even totems of lineages. Another way of communicating with the dead and with spirits is by sacrifice, and no Nuer ceremony is complete without the sacrifice of a beast which, before being slaughtered, has ashes rubbed along its back (*buk*) and is invoked (*lam*). In minor ceremonies, or in major ones if the owner of the kraal is poor, a ram or he-goat is sacrificed, but on important occasions they sacrifice an ox or steer. A barren cow sometimes takes the place of an ox, but a fertile cow would only be sacrificed in the mortuary ceremonies of an important man. Cattle thus form a ritual link between men and the mystical agents who can cause them injury if not placated.

We have seen in a short sketch of the principal Nuer institutions and customs that most of their social behaviour directly concerns their cattle. They are always talking about their beasts. I used sometimes to despair that I never discussed anything with the young men but cattle and girls, and even the subject of girls led inevitably to that of cattle. Start on whatever subject I would, and approach it from whatever angle, we would soon be speaking of cows and oxen, heifers and steers, rams and sheep, he-goats and she-goats, calves and lambs and kids. I have already indicated that this obsession—for such it seems to an outsider—is due to the great economic value of cattle and to the fact that they are links in numerous social inter-relations. Nuer tend to define all social processes and relationships in terms of cattle. Their social idiom is a bovine idiom.

Consequently he who lives among Nuer and wishes to understand their social life must first master a vocabulary referring to cattle and to the life of the herds. In fact I would say that when a stranger has learnt the words that refer to different kinsmen (kinship nomenclature) and the words which refer to different cows and oxen (cattle nomenclature) and knows exactly how these words should be used he may say that he thoroughly understands the Nuer. Such complicated discussions as those which take place in negotiations of marriage, in ritual situations and in legal disputes, can only be followed when one understands the difficult cattle-terminology of colours, ages, sexes, and so forth. Even that, also,

is not enough, for though I understood cattle terms well I still found that I could not follow complicated discussions without explanations being given because one must also know the individual owners and the individual beasts and the history of their lives, and to know all that one must be a Nuer, a man born and bred in the village.

In giving priority to pastoral pursuits in my account of Nuer economic life I do not wish to belittle the very important part played by horticultural and piscatorial pursuits. Nor do I wish to suggest that their social life is entirely a function of their productive relations. Nevertheless it is certainly to a large extent determined by economic considerations, particularly by their dependence on their herds. In describing the life of simple peoples we have to pay constant attention firstly to their ecological relations, their economic dependence on nature, and secondly to their social relations, their moral dependence on the community. Among a pastoral people like the Nuer cattle belong to both orders, for they are part of man's environment through which he is indirectly influenced by inanimate nature and also, in a very real sense, they are part of the human community, dwelling in the closest intimacy with their masters between whom also they are social links.

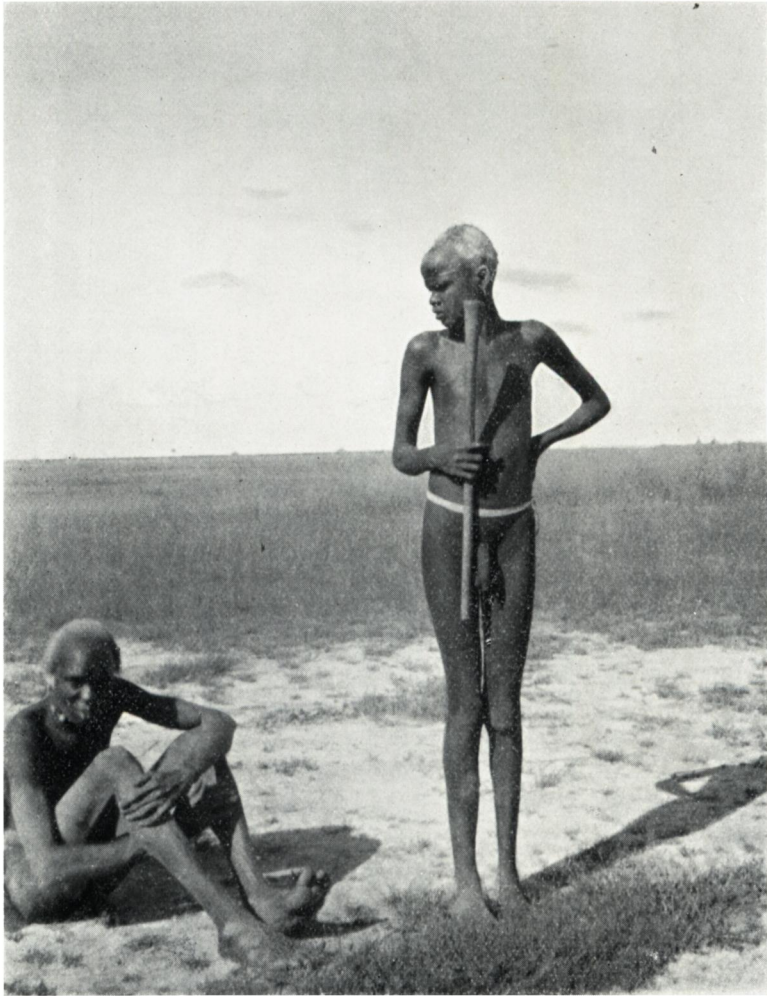
II.

In describing any Nuer institution we have, therefore, always to consider it in relation to their pastoral pursuits. We must not forget, however, that although cattle have many rôles in Nuerland their continuous everyday, rôle is an economic one, for outside special situations Nuer regard their herds primarily as a food-supply, though we must distinguish between their attitudes towards cows and towards oxen in this respect. Nuer regard their cows as nutritive capital. Therefore a good milch cow is highly prized and its calves are more valued than the calves of a cow that gives little milk. A rich man in Nuerland is a man who possesses several cows in a lactation period, for his children will be well-nourished and happy and he will be able to assist less fortunate kinsmen and to offer hospitality to guests. These are praiseworthy acts.

Milk and millet are the staple foods of the Nuer. In some parts of their country, especially among the Lou Nuer, the millet harvest seldom lasts the whole year round and, when it is exhausted, people are dependent on milk, supplemented by fish, for existence. At such times a family often have the milk of a single cow to sustain them. In all parts of

Nuerland the millet crop is uncertain and famines are frequent, though they vary in intensity. In bad years people rely on fish, wild roots and fruits and seeds, but chiefly on the milk of their herds. Even when millet is plentiful it is seldom eaten alone, for without milk, whey, or liquid cheese, it is stodgy and unpalatable. Also Nuer regard milk as essential food for children and consider that they cannot be well and happy without it. Moreover children cannot easily digest millet by itself. If there is a limited supply of milk the children receive first share of it. In times of privation adults have to go without milk and in times of great privation even children may have to go without it till a cow calves and there is once more milk in the kraal.

Nuer value their cows according to the amount of milk they give, and they know exactly the relative merits of each cow in this respect. A cow is never to them just a cow, but is always a good cow or a bad cow. Consequently a Nuer who is owed a cow will not accept in payment of his debt a cow that does not meet with his approval. How carefully a Nuer selects one among many cows as the best may be judged by anyone who offers to buy a cow for a Nuer from a Government herd, as I have sometimes done. Only by the great goodwill of Political Officers have I been able to make this experiment, because they know that the Nuer is certain to select their best milch cow. If you ask a Nuer in a cattle-camp which are the best and worst cows in the herd, he can at once tell you. In judging the points of a cow a Nuer pays little attention to those æsthetic qualities which please him in an ox, especially colour and shape of horns, but he pays chief attention to points which indicate a good milch cow. A good milch cow (*yang lar*, *ruak yang lar*, *yang pini*) must have a broad loose back (*koc ponyde*), prominent haunch bones (*pom wuthde te cunga*), large milk-veins (*ral juak*), and a many-wrinkled milk-bag (*dep juakde*). A poor milch cow (*pie*) has the opposite characters: it is narrow-backed and of compact build (*pony ma bumbum*), has no prominent haunch bones (*pie*, *thile pom*), small milk-veins, and only one or two wrinkles in its milk-bag (*pie dep juakde kël*). A good cow must also be young. One tells the age of a cow by (1) the depth of the trenches (*koah liel yang*) which run on either side of its rump towards the tail; (2) by its teeth, which, in a young animal are complete and sharp, while in an old animal some of them are missing, and the rest are blunted (*cike pwal*). Thus I have heard a Nuer say, "It is a good cow; come and look, it has all its teeth, it lacks none." (3) By



SANDY RIDGE WITH HOMESTEADS IN THE BACKGROUND (DUK COUNTRY).

its gait. A young cow walks with a firm step ; an old one staggers a little and is inclined to be knock-kneed (*matke muölkien kä jal*). (4) By the number of rings on the horns.

In Nuerland men may not milk cows. This is done by women, girls, and uninitiated boys who are old enough to be trusted with the task. Men are only allowed to milk cows when there are no women or boys present. This sometimes happens on journeys or during war expeditions. Then a man gets another to milk his cows and hand him the milk to drink. Even on such occasions a man may not milk his own cow and drink the milk. It is strictly forbidden for men to milk in the kraal. A Nuer boy, Tot, was a member of my household in 1931. When I returned to Nuerland in 1935 I learned that he was sick with a swollen belly, and in 1936 that he had died in Malakal hospital. The reason given for his death was that after initiation he had milked a cow secretly at night in a byre and drunk its milk.

The milker, generally a woman or girl, squats by the cow and milks it into a gourd, usually a bottle-necked gourd, or into a pot. She balances the gourd on her knees and milks a single teat at a time into its narrow mouth. She milks with thumb and first finger but, the other fingers being closed, the teat is to some extent pressed against the whole hand. It is both a squeezing and a pulling motion. The gourd is kept in position by the downward stroke of the hands, which press it against the knees. When a pot, or a gourd with a wider mouth, is used, it is held between the knees and the milker squeezes two teats at a time into its wide mouth. Occasionally one sees two girls milking a cow at either side. If a cow is restless, a man may hold it still by putting his hand in its mouth and gripping its muzzle, and if it kicks a noose is placed round its hind legs and they are pulled together. Though I have not seen it I was told that sometimes they ring the nose of a cow that is habitually restless during milking. Nuer say that very rarely a cow may suckle its own teats. I have never seen such a cow.

The process of milking is as follows. The calf is loosened and, with its tethering cord round its neck, runs at once to its dam and begins violently butting her udder. This starts the flow of milk and Nuer say that if the calf were not first to suckle, the cow would hold up its milk. They do not pat the udder with the hand unless the calf is dead, for this is considered bad for the cow. When the calf has suckled a little while,

it is dragged by its tethering cord and tethered to its dam's peg. It resists stubbornly and just as it is being tethered, one often sees it give a last determined pull which almost jerks the girl off her feet. Tethered to its dam's peg it rubs against her forelegs and she licks it. The girl now milks the first milking, known as *wicde*. When the teats become again soft and empty the calf is again loosened and butts the udder and suckles. It is then a second time tethered to its dam's peg and the girl milks a second time. The second milking is called *tip indit*, the greater *tip*. As a rule there are only two milkings, but a very good milch cow at the height of her lactation period will let her calf suckle once more, and the girl take a third milking, which is called *tip intot*, the lesser *tip*. When the girl has finished milking she wipes her thighs and the milk-gourd with the cow's tail and loosens the calf to finish off what milk is left. The first milking takes longer time and produces more milk than the second, and the second more than the third. Nuer say that milk comes from all over the body to the udder, but especially from the pelvic region. "The pelvic region is the place where the milk begins. It runs along the milk-canal (under the belly) to the udder."

A cow often urinates during milking and men take the opportunity to wash face and hands in the urine, or they may use a puddle of urine beneath a cow for this purpose. They also catch the urine in gourds and pots for use later in certain technological processes. They use only ox's urine for dairy work.

In the co-operative life of Nuer a family can generally obtain milk for the little children because a kinsman will lend them a lactating cow or give them part of its milk if they do not themselves possess a cow in a lactation period. This is one of the most important obligations of kinship and is carried out generously for the needs of children are the concern of the whole kinship group and not of their parents alone. At certain times, however, there is little or no milk in an entire hamlet, and a whole village may experience scarcity. This may happen after an outbreak of rinderpest or, in a lesser degree, after two or three youths of the group have lately married. Sometimes, also, all the cows in a kraal end their lactation periods in the same season.

I would guess—and it is only a guess—that on an average throughout the year the cows of a byre give about 12 pints of milk a day, and if we reckon that there are some eight persons attached to a byre, this means

1½ pints per head. Much of the milk, however, is used for making a kind of cheese. It was found impossible to make accurate and prolonged observations to confirm this guess about the average milk yield of a kraal. In 1935 I used a measuring-glass during the rainy season in order to discover approximately the normal yield of milk from a cow in the middle of a lactation period. A series of measurements showed a daily yield of from 4 to 5½ pints. In every case the morning yield was from ½ pint to 1 pint more than the evening yield. Capt. A. H. A. Alban kept a record of the yield from the cows of the Government herd at Abwong in Ngok country which forms an enclave among the Eastern Nuer. Though Nuer say that Ngok grazing is not so good as Nuer grazing, there can be no very great difference between their pastures and the conditions of life of the cattle are approximately the same. An examination of the records of 16 Nuer cows at all seasons of the year showed an average yield of over 4 pints a day and, in my opinion, 4 to 5 pints may be regarded as a general average for Nuer herds. The lactation period differed considerably for different animals, but about seven months was found to be an average period for a Nuer cow.

It must be remembered that when 4 pints a day is reckoned an average yield this means an average yield for human consumption. In order to make an approximate estimate of the amount of milk a calf receives, I timed women milking on a few occasions, and as these timings illustrate also the mode of milking, I give them here. The calf was in all cases medium to large in size. M=morning milking. E=evening milking.

Cow and Calf	Time.	Calf Suckles	Woman Milks	Calf Suckles	Woman Milks	Calf suckles.
<i>Ma yan</i> cow with its <i>ma yan</i> calf.	M.	m. s. - 30	m. s. 6 0*	m. s. 2 0	m. s. 1 0	Till milk finished.
	M.	- 35	4 50	1 5	- 40	Till milk finished.
<i>Ma ding</i> cow with its <i>ma kul</i> calf.	M.	1 0	4 30	1 30	1 15	Till milk finished.
	E.	not observed	3 10	2 10	- 35	Till milk finished.
	M.	1 5	4 5	1 10	- 30	10 secs.
<i>Ma dwei</i> cow with its <i>ma bor</i> calf.	M.	- 30	4 10	- 55	2 5	Till milk finished
	M.	- 50	4 30	1 10	2 10	Boy and calf share remainder.
	E.	- 30	1 25	- 55	1 10	Boy and calf share remainder.
<i>Ma bor</i> cow with its <i>ma bor</i> calf.	M.	- 50	4 5	1 -	1 40	Boy finishes milk.
	E.	1 10	2 55	1 30	- 20	Boy finishes milk.
	M.	- 40	4 20	1 5	- 40	Boy finishes milk.
	E.	- 30	3 10	- 30	- 15	Boy and calf share remainder.

* Cow very restless.

It will be seen from these figures that the calf gets its fair share of the milk during the process of milking and at the end of it. One cannot say how much milk it receives, but a calf suckles at a rapid pace. It is also possible that some cows hold up part of their milk for their calves for one often sees calves suckling for several minutes at the end of the milking before their dams refuse them by kicking them or moving so that they cannot reach their udders. Occasionally a small boy drags the calf away and milks the udders himself, licking the milk off his hands. Sometimes boy and calf share the teats. Very small boys suck the teats with their mouths. However, as a rule the calf gets all the milk after the woman has finished milking and is only tethered when its dam refuses it.

The total yield of milk is therefore higher than that procured for human consumption, and may be as high as 7 to 9 pints a day. I think that it cannot be less than 6 to 7 pints a day. I have received the impression from drinking the milk that it is far richer than milk given by English cows, and when we remember that Nuer cows receive no artificial feeding, that succulent pasturage is often difficult to obtain, that they have to endure great hardship, and, above all, that the first consideration is the welfare of the calves, we may commend their performance. English dairy farmers require only milk, but Nuer herdsmen require milk and also wish to preserve every calf.

Milk is consumed in various ways. Some is drunk fresh, especially by children, soon after milking. Fresh milk is more drunk in the dry season than in the wet season, for in the wet season it is cool and, moreover, people are replete with porridge. Some is put aside till midday, by which time it has gone sour and has to some extent coagulated. It very soon sours in the dry season. Nuer like to have a gourd of sour milk (*wai*) always at hand in case visitors come. When I visited neighbouring villages and camps I was offered a swig at a gourd. I found the milk pleasant and refreshing, though difficult to imbibe from bottle-necked gourds because the coagulated portions stuck in the neck. Fresh milk is drunk from gourds by children, but adults usually consume it with millet-porridge. Adults prefer to drink milk from gourds when it has soured (*cike ngwat*). Some of the milk is kept for making a kind of cheese and if there are several cows in lactation, one may be ear-marked for this purpose. Even when there is only one cow in milk, part of its milk is generally reserved for cheese,

perhaps the *wicde* while the two *tip* are drunk. Some people use all the milk for churning.

After milking into a bottle-gourd (*diar*) they empty the milk reserved for cheese into another bottle-gourd with a wider neck. This is the churning gourd (*gwei*). The morning milk stands till the early afternoon and the evening milk stands over-night. As churning gourds are not cleaned, unless they smell bad, the acids which remain from the previous churning curdle the milk. After standing some hours it is then churned by being shaken in the gourd, which has a stopper. The woman, or girl, sits on the ground with her legs stretched in front of her and raises the gourd and brings it down with a jerk on her thighs and rocks it there a few times before repeating her actions. This simple method of churning takes a long time. During churning, a small quantity of water is poured into the gourd when the curds are beginning to form to make them set well and to increase the quantity of whey. A little ox's urine may be poured into the milk from a small gourd kept for this purpose or this may be done at the next stage. The urine gives the curds consistency. Except in process of manufacture, urine is never poured into the milking vessels. People drink from these. When curds have formed, they pour the milk into a cup-shaped gourd called *twök*. Urine is now sometimes added. It is said that a man ought never to watch milk being poured out of the churning vessel or it will not curdle properly. They then scoop out the curds with a small gourd-ladle, called *lier*, or with a mussel shell, and place them in another gourd, which is hung up in a hut. The whey (*nakde*) is mixed with fresh milk (*ca*k* ti ghoi*) and drunk by men and women, though it is considered especially a drink of women and boys.

Every day they add to the supply of curds (*lieth in bor* or *yat*) which form a kind of cheese. Now and again they add a little cow's urine to the cheese and stir it to prevent it from going bad. They may add to the supply for several weeks before the final boiling, which rids the cheese of what watery milk (*ca*k**) still remains in it. It is put in a pot over a quick fire. After boiling for a time, it is poured into a gourd and the oil on top is removed. This oil (*ngil*) is highly thought of as a flavouring for millet-porridge. The solid remnant of deep yellow cheese, called *lieth in car* or *lii*, is stored in a round gourd called *ghuk lieth*. A round piece is cut out of the top of the gourd and this piece acts as a lid which, being perforated,

can be drawn through cords to open or shut the gourd. The gourd is suspended in a net from the roof of a hut. After boiling the cheese will keep for any length of time. It is eaten with porridge and is also used for anointing the body. Milk food in all its forms is relished, and among the traditionally pastoral Nuer, it has great social value.

Sheep and goats are also milked, but little importance is attached to the milk they provide. They are milked only in the morning. The woman first milks and then the kids and lambs are allowed to finish what is left in the udders. As the kids and lambs run with the flock at pasture it would be useless to attempt an evening milking. Herdboys often milk the ewes and she-goats in the grazing grounds and lick the milk off their hands if they feel hungry. The morning milk is drunk by small children and is not used for dairy work.

Nuer are also interested in their cattle as a supply of meat. It is true that they do not raise cattle for slaughter as an English stockbreeder does, but oxen and sheep and goats are frequently slaughtered at ceremonies, and their flesh is no less welcomed because they have been killed in sacrifice. Normally, females are only killed if they are barren or if there is no male. Fertile cows are only slaughtered at mortuary ceremonies. On ceremonial occasions most people are interested more in the eating part of the sacrifice than in any of its ritual acts. Often, as at marriage ceremonies, the people who perform the ritual are members of one kinship group, and the people who eat the meat are members of a different kinship group. In some ceremonies there is a general scramble for the meat and men are sometimes injured, even killed, as a result. The desire for meat is shown without reserve at all sacrifices. Nuer recognize that some men show themselves too eager to sacrifice an ox or a sheep on the slightest excuse. As a rule the meat of a sacrificial beast belongs to the kinsmen of its owner, and each kinsman has a right to a particular part of the animal's body in virtue of a particular relationship. Apart from sacrificial meat, Nuer eat the flesh of any animal which dies a natural death. They also kill oxen for food in years of severe famine. In 1931, a year of hunger, the people of Lou country were killing oxen and, during famine in western Nuerland about 1935, a great number of beasts were slaughtered. The Lou, who are rich in cattle, have a reputation for killing oxen when hungry. They are rather ashamed of this reputation, but they kill oxen all the same.

It is customary in some years throughout Nuerland for the young men to make camps away from the villages at the commencement of the dry season and to feast upon large numbers of oxen. They gorge themselves with meat.

Nevertheless, though Nuer regard their cattle as a meat supply, they do not wantonly slaughter oxen for food. In fact, except in time of famine, in young men's camps, and on ceremonial occasions, it is probably true to say that they never slaughter them, and it is the festal character of ceremonial occasions that gives them much of their significance in the life of the people. When an ox dies, and even more when a cow dies, its owner is sad, though the people who may receive some of its flesh do not show sorrow. When a youth's favourite ox dies, he sits silent and apart and must be persuaded to eat of its flesh. Nuer have a strong desire for meat, and even when a favourite ox dies they say "The eye and the heart are sad but the teeth and the stomach are glad."

Sheep and goats are also eaten when killed in sacrifice or when they die. On ritual occasions of minor importance a man prefers to sacrifice a sheep or a goat than an ox because it is of less value. They have not such social importance as cattle and their owner feels less their loss. Nevertheless a man would never kill a sheep or a goat merely because he desires meat, for they are valued possessions.

Cows are estimated by the milk they give. Oxen are estimated by colour, size, and fatness. Some colours are preferred to others—it is generally an individual preference—and the bigger and fatter the better. No bones should show through the skin and especially there should be no sign of the haunch-bones (*pom*), for they are only seen in a bad ox (*biau thak*) or in a very old ox. They like a large hump, which wobbles as the animal walks, and often they pull out the hump shortly after birth. This enlarges it. If your favourite ox has a small hump, your age-mates make fun of you.

Like most pastoral peoples in East Africa, the Nuer extract blood from the necks of their cattle, and this is a supplementary article of diet in the dry season. I have not seen the operation performed in the rainy season. In a dry season cattle camp one may generally see at least one cow bled after the cattle have returned from pasturage in the evening. The operation is called *bar* and consists of tying a cord tightly round a

cow's neck so that the veins stand out. A vein is then stabbed, on the head side of the cord, with a small knife bound with cord or grass so that only half an inch of blade is exposed. This prevents stabbing too deeply. The blood spurts out and is caught in a large gourd. When the gourd is full they loosen the cord round the cow's neck and release it, for it is held during bleeding. The cow appears to be a little giddy after the operation and may totter slightly. When the cord is loosened, however, the blood ceases to flow and the beast seems none the worse for its experience. Indeed, it may well be, as Nuer assert, that they are the better for it, for they lead a sluggish life.

If one examines the neck of a cow one observes a row of small cicatrices where the veins have been punctured. The blood is boiled by the women-folk till it is fairly consistent and is then used as a meat flavouring with porridge ; or the men may prepare it by letting it stand till it coagulates into a solid block and then placing it in the embers of a fire where it is roasted and may, after the ashes have been washed from it, be cut up with a spear and treated like meat.

Nuer do not regard the blood of cows as a staple article of diet, and it cannot be said to play an important part in their cuisine. Indeed, they say that they do not perform the operation to acquire food but for the benefit of the cows. Bleeding is designed to cure a cow of any unfitness (*jok*) by letting out the bad blood of the sickness. Also it makes the cow fat, for next day it will be more lively and graze avidly. Bleeding, moreover, decreases the desire of a cow to be served. Nuer say that if a cow is served too frequently, it may eventually become barren (*but*), whereas, if it is bled now and again, it will only require to be served once and will be in calf. Nevertheless, they admit that roasted blood is delicious. However, it is probably true that food is not the only, or even the main, consideration, for Nuer tell me that cattle are treated in this way when everyone is so replete with millet and fish that the blood is given to the boys of the kraal and to the dogs. Sometimes they make incisions (*dhang*) in the noses of calves and let the blood flow to the ground. This is said to make them fat.

Cows are bled more frequently than oxen and I am under the impression that oxen are generally bled for veterinary purposes only and cows for culinary purposes as well. They do not attempt to bleed bulls because it



CATTLE GRAZING ON RIDGE (KARLUAL COUNTRY).



KRAAL (LOU COUNTRY).

would be very difficult to hold the beasts during the operation. I was told that they do not bleed the cattle in the rainy season because the wound might become inflamed from a chill and because nasty sores might result from the beasts rubbing their necks against the high grasses which everywhere cover the plains at that season.

Apart from milk and meat and blood, cattle provide the Nuer with numerous household necessities, and when we consider how few are their possessions and how dependent they are on these possessions, we can easily understand the importance of cattle as raw material. The bodies or bodily processes of cattle have the following uses :—

- A. (1) Their dung is used for fuel in byres and windscreens.
- (2) Their dung is used for plastering walls and floors of huts and the space round pounding-holes. Among the Western Nuer it is also used for plastering the outsides of dry-season straw huts in cattle-camps.
- (3) The ashes of their dung are used for rubbing over men's bodies, as a treatment for dyeing and straightening the hair, and as a mouth wash and tooth powder.
- (4) The ashes of their dung are used in the preparation of sleeping-skins and leather bags.
- (5) The ashes of their dung are used for various ritual purposes.
- B. (1) Their urine is used as an acid for coagulating milk in churning and as a preservative of cheese.
- (2) Their urine is used to prepare gourds as dairy utensils.
- (3) Their urine is used to prepare strips of leather for a number of technological purposes.
- (4) Their urine is used for washing hands and face.
- C. (1) Their skins are used as sleeping skins and as trays for carrying fuel.
- (2) Their skins are used for making tethering-ropes and for making cord to be used in a number of technological processes.
- (3) Their skins are used for making leather collars and as bell-collars of oxen.
- (4) Their skins are used for making flails.
- (5) Their skins are used to make the diaphragm of drums.

- (6) Their skins are used as binding material in the manufacture of rectangular baskets.
- (7) Their skins are used as leather sheaths in the manufacture of pipes, spears, ambatch shields, snuff-containers, etc.
- (8) The scrota of bulls are made into bags to contain tobacco, spoons and other small objects.
- D. (1) Their tails are used as tassels for the arms and wrists of girls when dancing.
- (2) Their tails are used as tassels to decorate the horns of favourite oxen.
- (3) The tails of live cows are used to wipe milk-gourds and the limbs of the milker.
- E. (1) Their bones are used for making armlets (scapula), as beaters and pounders (femur, patella and tibia), and for scraping the floors of byres (ribs).
- F. (1) The horns are made into spoons.
- (2) The horns are used in the manufacture of harpoons.
- G. (1) The skins of sheep and goats provide the material for the different loin garments worn by married women and may also be used as rugs to sit on.
- (2) The skins of sheep and goats are made into bags (*googh deal*) for storing tobacco, and sometimes millet.

III.

Since cattle are so important as a food supply and as raw material and since they play so outstanding a *rôle* in social life, it is not surprising that Nuer give them every attention which their knowledge allows. We shall see later how they adapt their mode of residence and life to the rhythm of the seasons so that at all times their cattle may enjoy the best that nature can afford them. Conditions of water and pastures are their primary concern. We shall see also how they protect their beasts from mosquitoes and other biting insects and how they treat their ailments and avoid epidemics.

There are three points on which Nuer management of cattle is open to criticism. Since the cows are not brought back to the kraal at midday but are milked only in the mornings and evenings, the smaller calves must go

without their nourishment for many hours each day. While this is not a hardship for calves over two months old, the development of younger ones may be arrested by insufficient nourishment. However, whether in fact their development is arrested is questionable, for Captain H. B. Williams tells me that Nuer oxen have a reputation as being as good as any in the Sudan, which shows that they have not been seriously under-nourished as calves. In the rainy season the cows are seldom milked before 9 to 10 a.m., and are again milked at about 5 p.m., so that their calves only lack nourishment for seven or eight hours during the daytime. In the dry season the cattle may be taken to pasture as early as 8 a.m., and do not return to the kraal till about 5.30 p.m., so that the calves go without nourishment for about ten hours. But in Lou country, where I have lived in the dry season, this long absence from kraals cannot easily be avoided because the grazing grounds are often distant.

The second point of criticism is on the same lines. If the Nuer took their cattle out to pasture at dawn and brought them home for a rest at midday, as many East African peoples do, they would not only be able to suckle their calves, but would also have a rest during which they could chew the cud. But Nuer say, no doubt correctly, that when the cattle come out of their hot and smoky byres at dawn in the wet season, they like to rest a while in the kraal before going to pasture. The behaviour of the cattle seems to justify this statement for, when taken out of the byres, they lie down in the kraals and sleep with their heads tucked against their barrels. Even when loosened, they stand as though bemused and have to be driven to pasture. Their behaviour contrasts with their eagerness to go to pasture after a night in the open in dry season cattle camps. Also, by waiting till the dew has evaporated, Nuer consider they lessen the risk of digestive troubles. A further reason for keeping the cattle late in the kraals is that if they are let out early they will graze till, after three or four hours, they are replete and may then begin to wander in all directions. Since the cattle graze in the vicinity of the villages during the rainy season, they are not usually herded throughout the day. Consequently Nuer think it is better not to give them too long for grazing lest they commence to wander. They have time to eat their fill and are willing to return to their kraals when boys are sent out to retrieve them in the late afternoon. I noticed at Yakwac, in the rainy season of 1935, that the cattle came home of their

own accord when they were replete, and that sometimes they came home so early that they were driven back to pasture. In the dry season cattle have to go to graze too far from the camps to encourage the herdsmen to bring them to the kraal at midday. Also, owing to paucity of good pasturage, they require much longer to feed than in the rainy season. When they are replete, they rest and chew the cud and then graze again before returning to camp in the evening. In the dry season the cattle are herded by adult men throughout the day. They are only brought back to camp at midday in places where they have to be watered from wells.

A third point of criticism concerns the condition of the drinking water of the cattle. In the wet season most of the country is inundated, and there is plenty of fresh water in puddles and shallow water-courses for cattle to drink, but when water is scarce at certain periods of the dry season they drink from pools which have almost dried up, have long ago been fouled by the cattle themselves, and must swarm with bacteria and other parasites, being slimy and stagnant. I have often had to drink this water, so that I have had opportunity of judging it to be filthy and evil-smelling. It is very doubtful, however, whether Nuer may fairly be accused of slackness in this respect. I have sometimes thought that they might move sooner from the small pools around which they camp in the early part of the dry season to the lakes, swamps, and rivers, near which they camp in the later part of the dry season. Yet I have no doubt that their judgment is better than mine, for they have to take into account conditions of pasturage, the proximity of *heglig* forest, the harvesting of the second millet crop, political conditions, and other matters besides the purity of drinking water. They are certainly aware that dirty water is neither palatable to, nor good for, the cattle. The cattle of Nyueny were taken to camp very early in 1936 because the water near the village had been fouled. The goats and sheep remained behind, for they do not refuse dirty water. As will be described later, the utmost care is taken to protect well water in troughs from pollution. The cattle are always adequately watered. At the commencement of the dry season, in November, I noted that they were taken to their drinking pool as soon as they left the village kraals and were again taken there on their return to the kraals in the evening. There are generally a number of pools nearby their grazing grounds at this time of the year, so they may also drink at any other time of the day

they please. In the middle of the dry season the Nuer camp near a permanent water-supply which is accessible to the cattle. They generally drink there before going to their grazing grounds where they again drink at midday and probably have a final drink before returning to the camp. The procedure when there is no surface water is described later.

Many East African peoples keep far too many entire animals in their herds. Nuer do not make this mistake. If they err at all, it is in keeping too few bulls. In a group of four nearby villages of the Karlual tribe in Western Nuer country, I found that there were three adult bulls : none at Nyueny, one Köl, two at Nyang, and none at Tutgar. In this area there cannot be more than one bull to thirty adult cows at the lowest estimate. It is likely that one bull to forty or fifty cows would be an estimate more in accordance with the facts. This may be exceptional, but I was similarly impressed by the paucity of entire animals in Lou country, though here, unhappily, I rarely counted the number and sex of the animals. In the Yakwac cattle camp in 1931 there were two bulls to a herd of over a hundred head of cattle, which probably meant one bull to about thirty cows.

Nuer always select as stud bulls the calves of their best milch cows so that they may breed good milch cows from them. Bulls run with the herd, but if a cow is on heat and there is no bull in the village or camp, they take it to a neighbouring village or camp and it is there served in the presence of its owner in the kraal, and afterwards goes out to graze with the herd to which the bull belongs, and is served again in the bush. There are no stud fees.

Bulls are not castrated till late, probably not till they are 18 to 24 months old. Nuer say "When its dam has had another calf and a third is in its womb it will be castrated." Hence one sees large bull calves about to be sacrificed at ceremonies. They have to be castrated before they can be sacrificed because one does not sacrifice an entire animal. They are thrown, the scrotum is cut with a spear and the testicles having been drawn out, are severed from the body. There is very little loss of blood and the animals soon recover. A bull calf may be castrated for sacrificial purposes at any time, but I think that Nuer otherwise prefer to castrate (*kwiit*) an animal in the dry season, for there is less chance of inflammation and mortality than in the rainy season. Nuer say that if they do not castrate most of the bull calves the cows will get no peace and there would be continual

fighting in the kraals and commotion in the byres. When a bull is old and can no longer stand up against a younger bull, he grazes by himself and not with the herd. Nuer do not discourage bulls from fighting, though they may separate them if they belong to the same herd. They scrape their horns with the shell of a giant land snail so that they will be sharp for fighting, for it is "manly" for a bull to fight. Bull fights are often cited in traditions as the cause of fission in a kinship group and of the migration that resulted from it.

The horns of steers are frequently cut so that they will grow in the shape desired by their owners. They never train the horns of cows or bulls in this way. The operation is performed before the animal has been castrated and it takes place in the dry season, as it is said that a steer may die if its horns are cut in the rains or even in the windy season that follows them. If it is performed at the end of the dry season, when the rains are just commencing, the bull calf will, if possible, be taken into shelter during a shower. It is probably very rare for it to be performed so late in the season. The horns must be cut while the calf is young, and it is probably done towards the end of the first year. The verb *ngat* signifies the operation. I have sometimes heard Nuer compare the ordeal the bull calves undergo to the ordeal boys undergo when marks of manhood are cut on their foreheads. They have said that it is the *gar*, initiation, of the young bulls. The animal is thrown in the usual Nuer manner by tying a rope around three legs and drawing them together. It is then held on the ground, one man gripping the muzzle, another pulling tightly the rope which binds its legs, and a third keeping the body steady, while the horns are cut with a spear at the chosen angle. The horns will grow against the cut. Nuer are very particular about obtaining the exact angle and will cut thin slices off the horn till they are satisfied that it has been obtained. It is an unpleasant operation to watch. Blood squirts in a thin stream into the air and the animal appears to suffer much pain.

I cannot say the exact age heifers are served, but it is not till the third year. Nuer know when a heifer is on heat by observing its behaviour in the kraal. It is restless, bellows, swings its tail energetically, sniffs at the vaginas of other cows and mounts them. If a cow has mated in the bush Nuer know that it is pregnant by vaginal changes. The vagina hangs down and is soft and wobbly. Nuer say that there is little difference

between the gestation periods of a cow and of a woman, and when you ask them when a cow which has been served at a certain time will calve, they can at once tell you. Thus a cow which was served in any early dry season camp will calve after the first millet harvest ; a cow served at the time of the first millet harvest will calve in the month of *gwaagh*, just before the large dry season camps break up ; and a cow served in the early rains will calve in the month of *duong*, when people are in their big dry season camps.

In my experience there is very slight mortality among calves. Nuer give them every attention. When a cow is going to calve for the first time a man of the kraal sits up with it all night, or, if it is going to calve in the daytime, accompanies it to pasture. The front legs of the calf are the first part to appear and the man grips them and slowly draws it out. An experienced cow is left to drop its calf itself, but a man is usually present to assist if it is in trouble. A man must be present if a cow calves in the bush, because the calf is too weak to follow its dam which will stay with it, and they may become separated from the herd and fall a prey to wild beasts. Sometimes a calf has to be turned in the womb. A man puts his left hand up the vagina and turns the calf. He does not wash his hand before the operation. If a calf dies in the womb the dam's moans and its excreta indicate what has happened. Nuer try to remove the dead calf because, otherwise, the cow will not conceive again. If they fail they do not, however, expect it to die, and they assert that dead cows, when cut up, have been known to contain in their wombs the bones of calves which have died a long time before. If the afterbirth does not fall a man, preferably a left-handed man, places a grass ring over the cow's left horn, and they may give it medicines to drink, but they do not regard the situation as serious because they believe that the afterbirth will eventually be excreted. Afterbirths are eaten by dogs. The umbilical cord of a newly born calf is cut with a spear or a sliver of millet stalk. If the cow then licks the wound it may cause its calf injury, so they rub dung over the umbilicus. As soon as a calf is born a man blows up its nostrils and into its ears. It is rare for a cow not to lick its new-born calf. If this happens they blow *githlual* up the cow's nostrils. When the cow has licked its calf it is watered.

If a calf dies Nuer resort to various devices to persuade its dam to give milk. They stuff the head with straw and rub some of the dam's

urine on it and place it before the cow while the milker pats its udder and a boy blows up its vagina. They may also resort to blowing up the vagina in the case of a cow which has calved for the first time and is troublesome. A stuffed calf's head is known as *gea doa*.

Sometimes, especially when a cow aborts, they cut open the calf and stuff it with grass and insert stumps of wood to act as legs. This disembowelled calf (*gea me luöt* or *gea me caa lut*) is placed in front of the cow during milking and they move it most realistically from the front legs of its dam to the udder and push its head against the teats. Then they gently squeeze and pull the teats while a boy blows up the vagina. The word *duor* is sometimes used to denote a cow whose calf has died.

Nuer say that if a calf is only a day or two old and its dam dies, it will also die, but once it knows the *cak tin bor*, "the white milk" (the milk which follows the colostrum), which the dam gives about four days after calving, it can be saved. It is fed by hand from a small gourd (*lier*) with a funnel mouth, and efforts are made to get another cow in lactation to suckle it, but a foster-dam is inclined to be troublesome if both calves suck at the same time, and if it begins kicking they let each calf suckle in turn. They do not milk this cow. Nuer say that if a foster-dam is to be successfully employed, the orphan must closely resemble its own calf in colour. It will then accept either calf without ruses having to be resorted to.

Nuer believe, erroneously it seems, that it is dangerous for a calf to drink the discoloured milk which appears at the top of the colostrum (*tith*) for the first three or four days after birth, and they always milk this off before allowing the calf to suckle. If the calf, through carelessness, suckles the top milk of the colostrum and its action is observed, an infusion is made from the powdered leaves of two plants, *yiau* and *wany*, and is poured down the calf's throat. This acts as a purgative and loosens the blockage caused by the calf drinking the top milk of the colostrum. There seems to be some misunderstanding here on the part of the Nuer, if it is not I who have misunderstood them, because the colostrum itself acts as a purgative. The top of the colostrum is boiled and drunk by children. Nuer say that it is more serious if there is any blood in the milk and it is drunk by the calf. They say this sometimes happens when a cow has its first calf, but only if the cow has been bewitched by a witch (*peth*) or magic has been made against it by a magician (*gwan wal*). If the top of the milk contains blood, it is drawn to the ground.



KRAAL (LOU COUNTRY).



SECTION OF CATTLE-CAMP WITH DRINKING-POOL IN FOREGROUND (LOU COUNTRY).

For the first three or four days a calf suckles all its dam's milk except the part drawn off. Then a ceremonial meal is held, to which close kinsmen who live nearby are summoned. They eat porridge over which is poured the first milk taken for human consumption from the cow, and they cut the tip off the calf's tail (*ba juale tem*). The owner spits on it and waves it over the back of the cow. If this is not done and people drink the milk, the calf will sicken. However, after this ceremony people say "*ngwota ka doude na buth*" ("We do not yet share with its calf"), because they take very little milk for the first fortnight in order to give the calf a chance to get strong and to give time for its teeth to harden. During these days they take only part of the first milking (*wichde* or *jok lare*) and the calf gets the remainder. When the calf is stronger (*me ce böthde thuk*) they take more milk, and they then say that the calf shares the milk with men (*ce buth*). As the calf gets stronger they take a second milking and then, perhaps, a third milking, as has already been explained.

Occasionally, when a calf is grazing, it refuses its mother, and has to be driven to the udders, but this is rare, and normally it continues to suckle till its dam is again in calf and refuses it (*ce doude kwet*). Weaning devices are not as a rule employed, but if the dam allows its calf to suckle when it is pregnant, the milk may flow, and since this is bad for the unborn calf, they place a muzzle of *heglig* thorns round the nozzle of the sucking calf (*baa dou moc bör kwe*). This muzzle permits the calf to graze but if it tries to suckle its dam the thorns prick the udders and she kicks it aside. This is necessary when it is found impracticable to keep calf and dam apart in the pastures. When a cow is well advanced in pregnancy it generally allows itself to be milked once a day but not twice. Then its milk stops altogether.

Small calves, after the adult herd has gone to the grazing grounds, are housed till the late afternoon in byres in wet season villages and in the shade of a tree, or sometimes, among the Western Nuer, in a grass hut, in dry season camps. They are watered during the afternoon and sometimes in the morning also, a man holding the calf between his legs and forcing it to drink. They begin to go to pasture with the older calves in their third month and herd boys look after them while grazing. They are only allowed to graze when they are judged to be old enough to eat and strong enough to keep up with the older calves, for if they are still weak

they would, before the bush is burnt, be lost in the high grasses, and in the dry season would tire and lie down and become separated from the older calves. Boys often gather plants and grasses, especially *poon* (*Oryza Barthii* A. Cheval), which is very fattening, and bring it to the tethered calves. Calves are always kept apart from their dams at grazing time, and the adult herd are a long way from camp or village before the calves are loosened. The herd is driven in one direction and the calves in the opposite direction. It sometimes happens, however, that the calves and the adult cattle meet and there is then much confusion and the herdboys are beaten, because there will be little milk that night. When a calf is about a year old, it runs with the herd. Of such calves they say “*Caa ka gur*,” “they are followed” by other calves in the wombs of their dams. Nuer say that if a cow has had no serious illness it will bear about eight calves during its lifetime.

Calves have their age-grades, though any young calf of either sex may be referred to as a *dou* (calf). However, *dou* is often used to imply a cow calf in contrast to *rwath*, a bull calf. *Rwath* is used for any young bull calf, whether castrated or not. Hence, when the sex of the calf is unknown, one says *yang kene doude* (a cow and its calf), but if the calf is known to be a bull calf, one says *yang kene rwathde*. The age-grades are :—

- | | | | |
|---------------|-----|-----|--|
| <i>köl</i> | ... | ... | A calf of either sex which has not begun to graze. Its dung is like the dung of sheep. To three or four months old. In the early part of this stage the calf is tied up during the day. |
| <i>yömröl</i> | ... | ... | A calf of either sex which grazes but still suckles. Its dung is now like cattle dung. From three or four months to about nine to twelve months old. The word <i>nyanggec</i> is also used to describe a calf of this age. |
| <i>kwet</i> | ... | ... | A calf of either sex which has ceased to suckle its dam and which grazes with the adult herd (<i>ce wa rei ghok</i>). From about the commencement of its second year to the commencement of its third year, when it is old enough to mate. |

- nac* A cow calf from the time it is old enough to mate till after it has had its second calf. Up to the time it is first served it is called *nac in lip tut*, and when pregnant it is called *nac in liac*.
- pwath* The corresponding age to *nac* for bull calves (steers). A steer is known as *pwath* for about two years after castration.
- yang* A cow from about the time it has had its second calf.
- dhur* (or *labdhur*) An ox in the prime of life.
- tut* An entire bull.

One also refers to all steers as *thak* when one wishes merely to indicate that the animal has been castrated. When sex is not being indicated, one may refer to any beast, male or female, as *yang* in the same way as one speaks loosely of "cow" in English. Likewise, *ghok*, cattle, has the same wide reference as "cows" in English. In ritual situations the word *yang* may even refer to a sheep or a goat.

In speaking about a calf it is usual to denote its size not only by using the appropriate age-name but also by showing its height with the outstretched hand, facing sideways, as in shaking hands. When I used to illustrate the height of children in this way Nuer were always overcome with merriment, for one indicates the height of a person with the fingers of the hand pointing upwards. The height of a wild animal, especially of a hippopotamus, is shown with the palm of the hand facing the earth, and the hand is shaken, in imitation of waving grass, in the same position, when one desires to show the height of grass.

IV.

Before describing other aspects of cattle husbandry, I will ask the reader to consider for a few moments the intimate contact that Nuer have with their cattle, for without their cattle all their modes of life and thought would be different. A Nuer wakes before dawn in the midst of his cattle and he sits contentedly watching them till they are milked. He then

either takes them to pasture or spends the day watching them graze, driving them to water, composing songs about them, and bringing them back to camp, or he remains in the kraal where he drinks their milk, makes tethering cords and ornaments for them, waters and in other ways cares for the calves, cleans the kraal, and dries their dung for his fire. A Nuer washes his face and hands in the urine of his cattle, drinks their milk and blood, and sleeps on their hides by the side of their smouldering dung. He covers his body, dresses his hair, and cleans his teeth, with the ashes of their dung. He even eats his food with their horns. When the cattle return in the evening he tethers each beast to its peg with cords made from the skins of their dead companions, and sits in his windscreen to contemplate them and to watch them being milked. He knows each animal, its colour, the shape of its horns, its peculiarities, the number of its teats, the amount of milk it gives, its history, its ancestry and its progeny. He knows the habits of all his oxen, how one bellows in the evenings, how another likes to lead the herd on its return to camp, and how another tosses its head more than the rest are wont to do. He knows which cows are restless during milking, which are troublesome with their calves, and which like to drink on the way to pasture. He and his ox bear the same name. If he is a young man he will get a boy to lead his favourite ox round the camp in the morning and will leap and sing behind it. When an ox comes home in the evening he pets it, rubs ashes on to its back, removes ticks from its belly and scrotum, and picks adherent dung from its anus. If he is a young man he will sometimes walk up and down among the cattle at night ringing an ox-bell and singing the praises of his kinsmen, his sweethearts, and his oxen. He sleeps in his windscreen with the herd in front of him and his favourite ox tethered so that he can see it if he wakes, for no sight gives a Nuer greater pleasure than his oxen. They fill him with contentment and pride. The more oxen he can display the happier he is, and to make them more attractive he decorates their horns with long tassels, for he likes to see them coming home in the evening tossing their heads in the air and shaking the long tassels from their horns. He places bells round their necks so that he may listen to their tinkling in the pastures. Even the bull calves have strings of wooden beads, made from the *keac* tree, or strings of wooden bells, made from the fruit of the *doleib* palm, strung round their necks by their boy owners.

When a Nuer mentions an ox his habitual moroseness leaves him and he speaks of it with enthusiasm, throwing up his arms to show you how its horns are trained. "I have a fine ox," he says, "a brindled ox with a large white splash on its back (*thak ma bil nyanga*) and with one horn trained over its muzzle"—and up go his hands, one above his head and the other bent at the elbow across his face. Even in dancing and singing they call out the names of their oxen and hold their arms in imitation of their horns. Cattle are a Nuer's immediate interest and the goal of his furthest ambitions.

Cattle mean so much economically and socially to a Nuer that it is not surprising that he regards them highly. It would be surprising were he not to do so. He shares his life with his beasts. However, we must not romanticize Nuer and pretend that they idealize cows and oxen or attribute to them feelings like those we have towards favourite horses and dogs. Cows are to them no more than useful and valuable beasts. Nuer consider them stupid. Their death means the loss of essential food, of opportunities for marriage, of prestige in the community, and, in general, of a sense of security and well-being. A youth and his favourite ox are, perhaps, more closely linked because the ox is part of his social personality. He takes his name from it and it is the medium through which he expresses his status and makes public display. But if he wishes to marry he parts easily from his ox when he hands it over to the brother of his bride, for a wife gives him a higher status and more pride than many oxen. If his ox dies he is sad, but it is sadness at the loss of a cherished possession rather than sorrow at the death of a friend.

A Nuer's attitude to his cattle varies with varying situations in social life and with changes in his own social development. A cow is to him a producer of food or may be a means of obtaining a wife. An ox is sometimes an object of display, sometimes an object of ritual interest, sometimes a means of obtaining a wife, but generally it is no more than a beast of the herd which must be tethered and driven to pasture. A cow dedicated to a spirit is only a cow and treated like the rest of the herd save in rare ritual situations. Many times have I seen a man slap such a cow heavily on the haunches when it is troublesome or slow. One has only to see Nuer cutting the horns of their bull calves or castrating them to know that they have no feelings for their cattle of the kind we call humane feelings. They

have no illusions about their beasts. They are not sentimental about them. They are practical herdsmen.

A Nuer's attitude towards cattle, like his attitude towards other things, changes as he grows up, and the attitude of a man is different from the attitude of a woman. As soon as children can crawl they are brought into close intimacy with the flocks and herds. The kraal is their playground and they roll and tumble in dung and throw lumps of it at one another. Small children are generally smeared with it. The calves and sheep and goats are their companions in play and they pull them about and sprawl in the midst of them. Their feelings about the animals are probably dominated by desire for food, for the cows, ewes, and she-goats directly satisfy their hunger. Often children suckle the animals. They and the calves may share the milk at the udder together. As soon as a baby can drink animals' milk its mother carries it to the sheep and goats and gives it warm milk to drink straight from the udders.

When they are a little older children play games. Most of these centre round cattle. They build byres of sand at the edge of rivers and pools in dry season camps and of wet ashes or mud in wet season villages. They make fine mud cows and oxen, and on the Pibor I have seen excellent drawings of cattle and wild animals on the inner walls of byres, though the drawings are probably inspired by Anuak art, for I have not seen them elsewhere in Nuerland. With their clay oxen they play many games, taking them to pasture and putting them into byres, marrying with them, and so on. Boys and girls both play these games and probably their feelings about the cattle are the same at this early age.

The first tasks of childhood are connected with the cattle. Very small children hold the sheep and goats while their mothers milk them. When their mothers milk the cows they bring them their milk gourds and they pull the calves away from the udders and tether them in front of their dams. They collect urine in gourds and wash themselves in it. When they are a little older and stronger they have to clean the byres and kraals, assist in the milking, and herd the small calves and the sheep and goats at pasture. This is a time of increasing labour for children, and they are usually covered in dung, which they do not trouble to wipe off. Food and play contacts with the cattle have changed to labour contacts. The cattle have become a duty and it is a duty that is enforced by admonition

and mild correction. At this age the interests of the sexes in cattle begin to diverge and the divergence becomes more apparent as they grow up. The labour of girls and women is restricted to the byres and the kraals and is concerned mostly with the cows, while boys herd the calves at pasture, as well as assisting in the kraal, and after initiation they herd the adult cattle and in the kraal give their attentions mainly to the oxen. The women are dairy-maids. The men are herdsmen. Moreover, to a girl the cows are essentially providers of milk and butter, and they remain such when she grows up and is married and milks and churns for her husband's people, whereas to a boy they are part of the family herd in which he has property rights. They have entered the herd on the marriage of his kinswomen and one day he will marry with them. The girl is separated from the herd on marriage, the boy remains as the owner. His oxen are the envy of his age-mates and his pride in the cattle-camps. When a boy becomes a youth and is initiated into manhood, the cattle become something more than food and the cause of labour. They are also a means of display and marriage. It is only when a man marries and has children and an independent household and herd—when he has become an elder and man of position—that he often uses cattle as sacrifices on ceremonial occasions and invests them with a sacred significance and employs them in ritual. In talking to girls and women about cattle, it is generally the milk of the cows about which they speak, though they do not directly praise a good milch cow for this might bring ill-luck to it (*yöþ*). In talking to youths about cattle, it is generally the splendour of their oxen and the value of cows and oxen alike as bride-wealth which they stress. Usually, it is only older men, who are householders, who speak much of the religious associations of their beasts.

V.

Cattle are the main cause of strife in Nuerland. Nuer have persistently raided the neighbouring Dinka tribes, slowly depriving them of their herds and occupying their grazing lands. Several Dinka tribes have disappeared as a result, and all those in contact with the Nuer were being systematically plundered when the Anglo-Egyptian administration took control of their country. Desire for cattle was the main incentive to warfare against neighbouring peoples. It is also the cause of strife among the Nuer them-

selves. Indeed, after a successful raid on Dinka stock Nuer expected that there would be further fighting over the booty among themselves. Moreover, the Nuer tribes raided one another from time to time. Thus the Karlual tribe in western Nuerland raided the Jikany, Rengyan, and other tribes in the same area. Similar occasions of warfare were of common occurrence along tribal boundaries elsewhere in Nuerland. To "steal" (*kwal*) cattle from another tribe is regarded as laudable. Even within a tribe fighting frequently results from disputes about cattle between its sections. Moreover, individuals of the same section, even of the same village community, sometimes even of the same homestead, often fight one another about ownership of cows. Nuer fight on the slightest provocation and they fight most willingly and frequently when a cow is at stake. On such an issue brother fights brother and son quarrels with father. To gain or retain a cow, a man fights even his wife's brother. Caution is thrown to the winds. Correct behaviour is forgotten. In defence of cattle and kin Nuer will face man or beast, careless of odds and contemptuous of danger.

Nuer say that it is cattle that destroy people, for it is about cattle that they fight and are slain. They have a story which tells how Cow took her revenge on Man who mastered her. Once upon a time Man lived in one village while Cow lived with Buffalo in another village. Fox visited Man and gave him a spear-shaft and told him to throw it, but Man could only throw it a short distance, so Fox taught him the art and each day Man threw the spear-shaft with greater force and surer aim. In those days all the animals lived in the same community (*wec*), and after Fox had taught Man how to throw a spear he sowed dissension among the animals, so that every beast went his own way. How Fox accomplished his ends belongs to another story.

When the animals broke up their community, Man slew with his spear the mother of Cow and Buffalo. "Buffalo said, 'I will avenge my mother in the bush' (by tossing men with her horns). Cow said, 'As for me, I will remain in the village. I will avenge my mother in the habitations of Man. A Man will have a debt and I will settle the debt with my calf. My calf will grow up. When my calf is grown up another man whose possession had previously been lost will say, "I want the calf which you lately received." They will quarrel. They will fight. A man will die.'"

(X lends an ox to Y who one day repays him with a cow calf. When Z hears that X has received a calf he thinks of the calf which X owes him in return for a loan or in compensation for a loss, and he goes to him and asks him for the calf. X does not want to part with his new possession, so they fight and one of them is killed.)

“ Cow continued, ‘ I will marry a wife (be the bride-wealth of a marriage). The wife will be divorced. They (the husband’s people) will send to bring back the cattle. The father of the bride will tell them ‘ Not at all ! I have no cattle ’ (he has dispersed the cattle of the bride-wealth). The owner of the cattle will say to him, ‘ Not at all ! My cattle must be returned.’ The people will fight. A man will die.’ ”

“ Cow said also : ‘ I will marry a wife (be the bridewealth of a marriage). The wife will commit adultery. The people will fight. A man will die.’ ”

So the feud between Cow and Man has gone on from time immemorial and day by day Cow avenges the death of her mother by occasioning the death of men. Hence Nuer say of their cattle “ *Bike thuk kene ran kel* ” (“ They will be finished together with mankind ”) for men will all kill one another on account of cattle and men and cattle will cease together.

Unfortunately cattle have been the main cause of strife between the Nuer and the Government of the Anglo-Egyptian Sudan. It must be confessed that for about twenty years after the reoccupation of the Sudan the Nuer were little administered and that the main attentions the Government paid to them were annual tax-gathering expeditions, which were little more than pillaging parties sent to seize cattle indiscriminately from whatever unfortunate community could be surprised and to shoot any herdsman who resisted their aggression. It is not surprising, therefore, that Nuer failed to distinguish between this new form of intervention and the older raids that used to occur under Egyptian administration. Large fines of cattle have also, from time to time, been imposed, and in Western Gaajak country a British expedition burnt thousands of cattle byres and bombed the herds. I recount these facts because they enable us to understand the deep hostility in Nuer hearts towards the Administration, a hostility which still persists in spite of the fairness, even lenience, with which a paternal government has treated them in the last decade. Even now, light though taxation may be, it is still a tax to be paid in

cattle and Nuer, in paying their annual quota of oxen, are paying something which is much more than mere wealth to them, as I have endeavoured to show in this paper, for they feel the loss more directly and personally than most peoples feel the impositions of the State, especially as they fail to see that they derive any advantage in return.

I presume that from the Government point of view the main advantage conferred upon Nuer by European administration is peace, but the Nuer, far from regarding this as privilege, consider it the greatest of their humiliations and the most serious infringement of their rights. In the very beginning of time, from the creation of men, Nuer say that they have plundered the Dinka and other pastoral peoples whenever they desired more cattle. It was this persistent plundering that finally compelled the Government to assume more systematic control over Nuerland since the plundered peoples had accepted the Administration and had a claim on its protection. Even to-day Nuer raiding expeditions are by no means a thing of the past. Here again it was on the issue of cattle, as Nuer understood it, that the Government came into hostile relations with them.

One of the reasons why Nuer are intensely suspicious of a European going among their cattle, if they do not know him well, is that Europeans have only shown an interest in cattle in taking them as taxes or fines. But there is another, less obvious reason, for Nuer, even among themselves, do not talk about their own cattle outside the family circle, except when some routine or transaction is in hand, and they do not draw attention to them in the kraal. Serious injury may be caused to a cow by alluding to its abundance of milk. The European's habit of walking round a Nuer kraal and studying each beast in turn, drawing attention to its points and remarking on its qualities, makes the herdsmen apprehensive. Until the European visitor is very well known in the village, he should disguise his interest in the cattle. On no account should the cattle be photographed till friendly relations are established. My own experiences in this matter will illustrate the need for caution. In 1930, in Lek country, I was involved in a situation that might easily have produced serious consequences by the actions of a European traveller in the local kraals. For the remainder of that expedition I abstained from photographing a single cow. On my second expedition, in 1931, I was unable to visit the cattle camps on the Nyading River while the cattle were tethered in the

kraals, though my tent was pitched some fifty yards from the nearest camp. Nuer always ran out to stop me when they saw me approaching and made their apprehension so obvious that I would have been very ill-mannered not to have been deflected from my purpose. When, later, I visited Yakwac I was a month in the cattle camp there before I was welcome in the kraal and asked to sit down in the windscreens and offered milk. It was only when I acquired a few cattle of my own and had a stake in the kraal that I was able to establish real contact with the people and became, in their eyes, an intelligible and intelligent person, for Nuer cannot understand anyone who is not cattle-minded like themselves. Perhaps all the Nuer, certainly the Lou tribe, are far less hostile towards Europeans than they were a few years ago, but a White Man must still move about the kraal with circumspection if he does not wish his interest in the cattle to be met with silent distrust.

VI.

Before the present century Nuer were far richer in cattle than they are at the present time, and it is probable that thirty years ago they cultivated millet less than they do to-day. The main loss to their stock has been occasioned by repeated outbreaks of rinderpest, which still decimate their herds. It was probably more destructive in the past than it is now, yet the attacks I have witnessed in Nuerland in recent times have been very severe. But in the past the warlike Nuer could always restore his losses by raiding the Dinka tribes—a happy expedient they can no longer use with impunity. At the present time I would say, on a general impression gained from observation and from conversations with natives of different localities, that the Nuer are far richer in cattle than the Shilluk but are not so rich as the more favoured of the Dinka tribes.

All Nuer agree that in the last generation their herds were more considerable than they are to-day, and their statements are confirmed by the traditional payments of bride-wealth and blood-wealth. In the past at least forty head of cattle—sometimes even as many as fifty to sixty—were handed over to the kin of a bride, and similar payment was made for homicide, whereas to-day the kinsmen of a bride do not expect to receive more than twenty to thirty head of cattle, and it is a great strain on the resources of a family to collect as many as that, though

5A

they are always assisted by their kinsmen. One receives the same impression of recent poverty from Nuer accounts of happenings of thirty years ago and from their traditions.

It is difficult to make a census of cattle, even in a small area, and Nuer would certainly regard such an attempt with repugnance. Moreover, I missed several opportunities which occurred for counting the number of animals in cattle camps. However, in 1936 I counted the cattle of the twelve byres of the village of Nyueny, a day's march to the south of the Bahr-el-Ghazal. They amounted to 165 head of cattle. Three byres had fallen down and the cattle were being housed in the byres of neighbours till they could be rebuilt so that there were 11 head of cattle to each byre or household. On a rough estimate I would say that each household possessed half-a-dozen sheep and goats, though I did not count these. In the village of Konye, perched on a knoll at the edge of the Pibor River, there were, in 1935, 11 byres which housed 76 adult cattle, 20 calves, and 33 sheep and goats, giving an average of 8.7 cattle and 3 sheep and goats to each byre. At the cattle camp at Yakwac on the Sobat River, in 1930, there were on a rough estimate some 100 cattle to 18 windscreens (housing 55 men and boys), an average of about 2 head of cattle per male Nuer. On various occasions I counted elsewhere the cattle tethered in individual kraals in different parts of Nuerland, and I would be inclined to estimate 10 head of cattle and 5 goats and sheep to the byre as a general average. It may be pointed out also that Nuer byres will not hold many more beasts than these. On an average there are, perhaps, some eight persons, including women and children, to a byre. At the present day, therefore, the cattle population of Nuerland probably does not greatly exceed the human population. More accurate observations on a larger scale are desirable to confirm my approximations.

Some tribes are said to be richer in cattle than others. Lou country is considered especially suitable for raising stock, and the Lou have a reputation for possessing larger herds than other Nuer tribes. It is said that the Eastern Jikany were once very rich in cattle, but that their herds suffered so much from epidemics that the people were compelled to cultivate more millet. They are now recovering from this period of poverty. The cattle are everywhere very evenly divided among the people. Hardly anyone is entirely without cattle and no one is very rich in herds. As

befits a democratic people, social equality is, in the main, economic equality also. A man never possesses many more cattle than his byre will hold because as soon as his herd is large enough he, or one of his sons or brothers, will marry. The herd will then be reduced to two or three beasts and the next few years will be spent in repairing its losses. Every household goes through alternating periods of poverty and comparative wealth, the cycles being caused by marriage alone if rinderpest or some other epidemic does not interfere with the course of events.

I cannot, with confidence, say what proportion of the cattle are male and what proportion are female, but the cows certainly predominate, and I would guess from general observations that they form about two-thirds of the herds.

(To be continued.)
