

## THE NOMADS OF TIBET

[Die Nomaden von Tibet], Vienna

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[Pages 1-7]

### A. A-MDO -- THE LAND AND THE PEOPLE

#### 1. Native Designation and Territorial Divisions

The Tibetan calls his homeland Bod-yul, "the land Bod." The origin and importance of this word will be explained below. The poetic name is Kha-ba-can (kha ba can), the "snowland." Another name is Pur-gyal (spur rgyal). Since ancient times the Tibetan has divided his homeland into the following areas.

1. Tod-nga-ri-khor-sum (stod mna ris skhor gsum), "the Upper Ngari," including the three areas of Pu-rang (spu ran), Zhang-zhung (zhan zhun) or Gu-ge (gu ge) and Mang-yul (man yul). This is the area of the sources of the Tsang-po River (gtsan po chu), the Sutlej and the Indus and their upper courses. The areas of Bal-ti, La-dag, and Ru-dog are also included.

2. Bus-tsang-ru-bzhi (dbus gtsan ru bzhi); the two central provinces of Bus with Lha-sa, the surrounding area of Bus-ru-kyid-cod (dbus ru skyid cod), and the Lho-kha district of Ya-ru-nam-cod (gyas ru nam cod), and Tsang with Kra-shi-lun-po (bkra shis lhun po), the old areas of Ru-lag-cang-gyed (ru lag can agyed) and Yo-ru-nyang-chu-zhung (gyo ru nyan chu gzhun).

3. mDo-kham-gang-sum (mdo khams sgan gsum), the two provinces of Kham in the southeast (Chinese Sikang) and A-mdo in the northeast (Chinese Tsinghai). Gang-sum means "three mountain ranges" and is therefore not the proper name of a province as Gruenwedel and others believe (A. Gruenwedel, 1906, Page 139; DL. 141; JL. 39 writes it even sgon). Kham is subdivided in turn into several large areas: Mar-kham (mar khams), De-rge (sde rge), Cha-mdo (acham mdo), Nya-rong (nya ron), Dza-rong (rdza ron), Gya-rong (rgya ron). An erroneous designation for Kham is mDo-tod (mdo stod), "the Upper mDo" (DL. 878). This confusion has led to wrong designations not only on atlases. Jaeschke, under No 6 in the phonetic table of his dictionary, lists the

Kham dialect. This should be A-mdo, since it is the A-mdo dialect that is rendered here. The Kham pronunciation is quite different (JL. XVI ff.).

A-mdo is subdivided into mdo (mdo) and mdo smad (mdo smad), the "upper" and "lower mdo." The "Upper mdo" includes the headwaters of the rMa-chu (rma chu = Huang Ho, Yellow River) with its upper course and the area above and to the north of it. It extends to the great bend of the rMa-chu, where it turns sharply toward the north. The area east of the river as far as the Tao Ho is the "Lower mdo."

The name A-mdo has the following explanation: along the main feeder of the rMa-chu, which originates on the northern slopes of the Ba-yan-ka-la, there is a high rock wall with a natural formation resembling a capital Tibetan letter A. Below this point, the river enters into a wider valley. The exit to the valley is called mdo in Tibetan. A combination of the two words A-mdo gave rise to the name of the area traversed by the river. The Tibetan name of the river is rMa-chu, the rMa River. rMa is the famous ancestor of the rMa tribe, who was deified. He is known as rMa-gyal-chen-po (rma rgyal chen po), "the great king rMa," or A-mni-rma-chen (a myi rma chen), "the great grandfather rMa." His glacier palace on the highest point of the country is called rMa-chen-pom-ra (rma chen spom ra), "the tremendously great rMa," or A-mni-rma-chen, like the spirit itself. The highest summit is flanked right and left by two peaks. The right peak is the residence of his wife, and the left peak that of the eldest son of the guardian spirit, for the royal rMa-chen is the highest guardian spirit (gzhi bdag) of the Tibetans. Thus the river that flows around the residence of this spirit is known as rMa-chu, "the river rMa." rMa can therefore not be related to the word for peacock, which is rma-bya. And consequently, rMa-chen-pom-ra cannot be translated as "Ruler of the peacocks, who resides on the snow mountain Bom-ra" (DL. 985), or as "Master of the Yellow River" (JL. 424); or "River of the good and happy grazing lands" (A. Tafel, 1914, Vol. II, Page 110, Note 1). The names of the river, the mountain and the tribe are all based on that of the famous tribal ancestor and great guardian spirit rMa.

The large lake in the province is the mThzo-ngon-po (mthzo snon po), "the blue lake." The Mongolian translation is Kuku Nor, a name introduced into the West by Russian explorers. The Chinese call it Tsing Hai and in 1928 applied this name to the newly created province.

A-mdo is the homeland of the A-mdo-pa. Here in a tent was born Tsong-kha-pa (1357-1419), the great reformer and founder of the Yellow Sect (properly the Virtuous Sect, dge lugs). Tsong-kha (tson kha or btson kha) means "onion valley." According to the European literature, the reformer was born in the "onion valley" where the famous lamasery Ku-bum (sku abum) has its spacious halls (cf. W. Filchner, 1933, Page 175). Actually this little valley near the village of Lu-sar is not called "onion valley." Tsong-kha is rather the large valley traversed by the main branch of the Sining River (Tibetan tsong chu, Onion River) below Hwangyuan. This valley, which is also used by the great caravan route to Inner Tibet, gave its name to the entire region. A man from that region is called Tsong-kha-pa, "Man from the Onion Valley." Therefore the great reformer, who was born there, was given that name. The designation subsequently became his proper name. Otherwise, the general designation for the inhabitants of the region is A-mdo-pa (a

mdo pa), "Man from A-mdo." (Sources: A-mdo-cho-byung (a mdo chos abyun), Vol II, which contains in Tibetan an exact description of the monasteries of A-mdo; Deb-ther-ngon-po (deb ther snon po), with sections on geography; Bod-cho-byung (bod chos abyun). (See bibliography.)

We shall now describe in brief the geographic milieu in which the A-mdo-pa live.

## 2. Geographic and Climatic Conditions

The geographic and climatic conditions in Tibet provide the key to many phenomena in the cultural life of the people. Nature, after all, provides the living space that man himself can change only by artificial means. High plateau or low-lying plain, forest or open steppe, rain zone or arid belt, all of these environments provide specific living conditions and raise certain obstacles to which man must adjust himself. When rainfall is insufficient and irrigation impossible or when the area lies at too high an altitude, crops cannot be raised. Forest and desert, on the other hand, are adverse to stock-raising nomads. All these factors must be taken into account in Tibet, since they determine the varying conditions found there.

Tibet is the southernmost high plateau of Central Asia and constitutes with its rounded mountain ranges, which rise to between 4,000 and 8,000 meters, the highest and greatest mountain massif of the world. It was formed toward the end of the Tertiary period together with the Himalayas. It extends in a north-south direction between 25 degrees and 39 degrees North latitude; in an east-west direction it extends between 81 degrees and 111 degrees East longitude; its area is 2 million square kilometers, including border areas annexed by China. In the south, Tibet is separated from India by the tremendous Himalaya ranges and their eastern and western outliers. The west is closed off by the Karakorum and the Pamir. In the northwest, the mountains are ranged closely together and then fan out toward the east and southeast in increasing numbers. In the north lies the Kunlun system, whose northernmost chain, the Altyn-tag, forms the boundary with Chinese Turkestan. This is continued in the east by the Ch'i-lien Shan, which forms the border with the Chinese province of Kansu. In the southeast, the Indochinese folded mountains adjoin the Himalayas.

Although the "Roof of the World" is generally speaking a high plateau, it is broken up by a number of mighty mountain ranges. The Kunlun splits up eastward into an increasing number of chains, such as Arka-tag, Marco Polo, Koko-chili, Dung-bure, Ba-yan-ka-la, A-mni-rma-chen, South Kuku Nor Mountains, to name only the most important ones. In the south, the Karakorum, Tang-la, and Transhimalaya ranges also split up further. The ranges are separated by high plateau basins that are nowhere less than 4,000 meters high. The entire region north of the trans-Himalaya is a closed basin containing a number of lakes. These extend from the area of the Indus sources eastward to the source of the Nag-chu (nag chu, Black River) and the Bri-chu (abri chu, Yak Cow River, Yangtze). The soil is saturated with water, and often muddy and swampy. The average altitude is 5,000 meters. The peaks of the slightly ramified mountain ranges rise to between 6,000 and 7,000 meters. During the summer, nomads and their herds visit the more favorable parts of this region where sufficient grass vegetation can be found. The plateau rises toward the north, where the cold is more severe and the vegetation more sparse. This is the infamous Byang-thang (byan than, Northern Plain), which

is continued in the east by the Tsai-dam. This mountain and salt marsh desert is uninhabitable. It is surrounded by the high steppes, which provide Tibet's best grazing lands, especially in the east along the upper Yangtze, the Yellow River, and around the Kuku Nor. The high altitude makes the raising of crops impossible. In the east the upper limit for crop raising is 3,000 meters, and in the southeast and south 4,000 meters in protected areas. The steppe is adjoined by a zone of scattered tree growth and cultivated land. This is followed in the southeast by forest with birch, pine, juniper, aspen, and poplar stands and scattered cultivated land. This type of area is absent in the east and west. The area is adjoined by continuous cultivated land from which the Chinese have dislodged the Tibetans. The Chinese pushed cultivation steadily westward, so that the Tibetans lost their grazing lands, were assimilated, or withdrew.

The climate is severely continental. Winter temperatures drop to minus 40 degrees centigrade and summer temperatures rise to 35 degrees. Since summer nights are quite cool, the diurnal range may reach 40 degrees. Summer monsoon rains affect only the southeast and east. Elsewhere a dry mountain climate predominates, with annual precipitation less than 200 millimeters. The winter monsoon brings virtually no precipitation from Central Asia, and snowfall is therefore scant. The snowline is found at 6,300 meters in central Tibet and at 5,200 meters in eastern Tibet.

Tibet can be divided into four zones on the basis of geological and climatic factors.

1. The northern high plateau desert, which is continued in the east by the Tsai-dam and is largely uninhabitable.

2. Southern Tibet with its steppe and cultivated area. In the west lies the upper course of the Indus and the Sutlej and their tributaries, which traverse La-dag, an area now largely part of Kashmir. This is generally hostile mountain country with widely scattered oasis villages where farmland and water are found. Crops include spelt, and in lower areas, wheat, beans, and millet. At elevations between 2,700 and 3,700 meters, apricots and apple trees are found; poplars and willows grow at altitudes ranging as high as 3,700 to 4,300 meters along irrigation ditches. One-third of the population of Kashmir is still Tibetan. The Tibetans are considerably intermixed with Aryan Dards in the area of Bal-ti but less so in La-dag. The Dards emigrated from Gilgit and have introduced crop raising. The Cham-pa nomads in the high valleys of the Himalayas are purely Tibetan. The Newar in Nepal are also strongly influenced by the Tibetans. The Lepcha in Sikkim and the Limbu and Bhutiya in Bhutan are quite close to the Tibetans. The Tsang-po basin, with the districts of Tsang (gtsan) and Bus (dbus) forming the core area, is the most densely settled part of central Tibet and contains the small cities of Lha-sa (lha sa), Shi-ga-tse (shi ga rtse) and Gyang-tse (rgyan rtse).

The Indus -- Brahmaputra furrow connects Pamir and southeast Tibet. This is the meeting place of trade routes from Mongolia, Central Asia, and western China along a northerly and a southerly route, from southern China through Ba-thang and Cha-mdo, from India through Sikkim, and from Turkestan via Nga-ri. Although the area lies at an

elevation of 3,600 to 4,600 meters, spelt, wheat, and beans can be grown here; in warm places even rice and apricots can be grown. The mountains of the eastern Himalaya, from the border of Bhutan to the source of the Irrawaddy, are inhabited by tribes that are very hostile toward the Tibetans. These are the northern Assam tribes called Aka, Dafla, Miri, Abor, and Mishmi.

3. Next comes the transition from the central to the eastern Asian landscape type. The mountain ranges trending east-west turn into a north-south direction in the Sinic system. Deep-cut, closely ranged valleys contain the Irrawaddy, Nag-chu (Salween), Tsa-chu or Nam-chu (gnam chu, Mekong), Bri-chu (Yangtse River) and Dza-chu (rdza chu, Rocky River, or Nya-chu, Ya-lung). The Ba-yan-ka-la Mountains, with their continuation in the Min Shan and the Tsin-ling Shan, are the divide between the Yangtse River and the Yellow River. The entire region makes up the province of Kham, Chinese Sikang.

These border areas of steep valleys and forests contain a great variety of tribal groups. These tribes have not been sufficiently studied from the ethnological point of view to permit classification into larger groups. The Chinese call them Wu-man, lumping together the Lolo, Moso, Lisu, and Nu. They are in part closely related culturally to the Tibetans. The northern tribes have even adopted nomadic animal husbandry. Although the mountain ranges rise to 7,000 meters, valley bottoms are as low as 3,000 meters. Wherever possible, crops are being grown and livestock is being raised on the high plateaus. The forest plays a major role here. Where crop-raising is especially favored, the Chinese effect their advance, as in the Ba-thang area.

4. In the northeast lies A-mdo, the Chinese province of Tsinghai. It extends beyond the natural mountain borders and includes the upper course of the Yangtse and Mekong. The Yellow River and its tributaries traverse the area. Here are the best grazing lands in Tibet, which include the entire Kuku Nor basin. Only part of the Tsai-dam and the eastern outlier of the Byang-thang are uninhabited. Further details on this province may be found below.

Tibet is thus enclosed on all sides by mountains and deserts barring easy access. Everywhere tall, snowy peaks tower above narrow, inhabitable strips. Icy storms, extreme cold, and abrupt temperature changes render the country extremely inhospitable. It has therefore no attraction for a would-be conqueror. Only weather-hardened nomads can exist in the high steppes with their stock. And crops in the narrow, inaccessible gorges are being raised only by those who have been driven out elsewhere by stronger enemies.

This large region, divided by natural features into several areas, consequently lacks a homogeneous population. The anthropology will be discussed below. (Cf. S. Hedin, 1903, Vol 2; id. 1909; id. 1917-1922; A. Tafel, 1914; K. Fütterer, 1900 and 1903; N. Przheval'skiy, 1881 and 1884.)



Since the original population of the country is nomad, we shall now describe the nomadic economy.

### 1. The Tent

The nomadic way of life determines the form of the economy. Since the search for suitable grazing lands requires frequent migration with the herds, no stationary dwellings are used. A few exceptions will be mentioned below. The nomads live in tents that can be quickly dismantled, easily transported, and set up again. The Tibetan tent has a characteristic form. In the middle is a ridgepole that is supported at both ends. The supports have a device to prevent the pole from slipping. This may be either a natural wooden fork, or the articular cavity of a calf or the sacral vertebra of a yak. Leather loops are also used. The ridgepole is tied to this fork by means of yak's hair twine or leather strips. The supports are driven only lightly into the ground. The length of the ridgepole varies with the size of the tent and may be 2 meters, 3 meters, or more. It is about 2 meters above the ground. For very large tents, center supports are used. The tent covering that is pulled over the ridgepole widens outward considerably both in front and in the rear. This gives the two sides a trapezoidal shape, with both front and rear walls triangular. In the shorter front section of the tent the covering is lifted by a series of props forming a sort of flat saddle roof with the covering dropping along the sides. Roof and walls being thus differentiated, the A-mdo-pa actually has a tent house.

How is the tent rigged into this form? The roof edges have a series of bone or wood devices to which ropes are tied. These ropes are then tightened, drawn over 2 to 2.5-meter high poles, secured, and anchored in the ground with wood or horn pegs. The pegs are weighted with stones to prevent them from slipping out. For small tents, four side poles and one rear pole are sufficient to stretch the tent covering. In the case of larger tents, additional poles are used in front and on the sides. The tent covering is tied together along the ridgepole. Along the center, a strip about 30 to 40 centimeters wide and 2 meters long is left open to provide an outlet for the smoke. This hole can be closed with a flap in case of rain. The outer edge of the tent covering does not reach to the ground but remains at a height of 20 to 30 centimeters to avoid absorption of ground moisture. Other ropes sewn into the tent covering lead from the ridge to the ground on the inside; they end in loops and are also anchored in the ground by means of pegs. Sometimes poles are passed through the loops and are then weighted with stones to keep the walls taut and prevent the wind from swelling the tent walls. Other ropes on the inside lead along the roof fold. In large tents the corners of the roof edges must be supported on the inside with poles to prevent sagging as a result of the heavy load. In small tents the outside tension is sufficient to keep the tent in an upright position. The front side is divided in the middle and can be opened by means of a narrow piece of tent covering, thus forming a door. In case of storm and rain, this flap is closed.

Small tents have a square base, large tents have a hexagonal base.

In the latter case the middle of the front and rear walls is pulled out. The tents vary greatly in size, depending on the number of persons and the wealth of the owner. Since the tent can be divided in the middle into two halves, each half must not be too large and heavy to be carried by a strong pack animal. Powerful and rich tribal chieftains have roomy tents that can easily accommodate 50 persons. In the tent monastery of A-rig-gon-chen on the upper Ta-tung, the large prayer hall is a gigantic tent in which 500 monks can gather. Since the lamasery always remains in the same place, the tent need not be transported.

Small tents used on pilgrimages and trading trips have sides that slope directly from the ridge and do not form a saddle roof. This is a tent hut. The tents of nobles, lamas, and monks are made of white or yellow cloth with blue decorations. The tent poles are made of hard wood, such as birch or beech.

The tent covering is sewn together out of strips 25 to 30 centimeters in width. The strips run horizontally from front to rear. It is customary to add a fresh strip each year on the upper right and left, since the lowermost becomes worn and ragged. How are these strips made? The yak's hair, which is mixed with some sheep's wool or goat's hair if goats are kept, is spun into thread. The spindle is very simple; the whorl is usually an anklebone and the stick a sheep's tibia. The spinning is usually done by girls and women in the course of stock herding. However, boys and old men also participate. The balls of thread are stored and the weaving is done by old women.

The weaving device is very simple. Two sticks serve as warp beams, which are held by a peg frame. The warp is wound on these sticks. The reed stands somewhat high to allow free movement for the warp. The two shafts are secured very simply. Thread wound on a stick is the shuttle with which the filling is passed through the warp. The filling thread is attached to the shuttle with a wooden leaf. The warp is constantly under tension. The weaver slides along the ground until the strip is completed. Rich Tibetans leave the spinning and weaving to Chinese workers who visit the tents in the summer and fall with their spinning wheel and loom and handle this type of work. The cutting and sewing of the tent coverings with yak's hair is done by the Tibetan women themselves.

The Tibetan tent is an uncomfortable dwelling. The tent material is rather wide-meshed and water from heavy rainfall rapidly penetrates through the covering. In stormy weather the wind blows through the openings. During the hot summer the inside is oppressively stifling, while during the winter there is little protection against the cold. The name for this type of tent is bra (sbra), bra-nag (sbra nag), bra-gur (sbra gur), re-gur (re gur). Ra-gur (ras gur) is the word for cloth tent. Bra means tent and nag means black. The Tibetans thus call themselves the Bra-nag-pa, "black tent people." Thus far this name has been falsely interpreted in European literature. Rockhill translates Pa-na-ka or Pa-na-ka-sum as "the eight Na families or the three (branches) of the eight families." (1894, Page 112f.) Unkrig on the other hand relates bra to brang (bran), "house, dwelling, belts" and translates it as "black dwelling." (W. Filchner, 1933, Page 379 f.) This derivation is incorrect. Bra-nag-kha-sum (sbra nag kha gsum) means "the three branches (tribes) of the black tent

people" and is a general designation for nomads. In connection with these names, Rockhill calls the area south of the Yellow River Ma-h'are Panaka and adds: "The Yellow River is called Ma-ch'u in Tibetan" (1894, Page 113). Tafel lists a similar designation: Mah'ah'kami (Mah'ari), i.e., "those living on the other side of the rMa-chu." (1914, Vol I, Page 177, Note 1.) However this name is a corruption. The word for "on the other side" in the A-mdo dialect is ha-ra or ha-re or ha-re-kha-nas. "On the other side of the rMa-chu" would then be rma-chu-ha-re or rma-chu-ha-rekha-nas. Hence Rockhill's Ma-h'are and Tafel's Mah'-ah'-hami. However, this is no tribal designation but merely a local designation corresponding to an expression such as "the people on the other side of the river." Many such confusions are caused by Chinese gibberish.

The tent of the A-mdo-pa has a characteristic form differing sharply from the tent of the Mongols and the Turks. It is rather related to the black tents common in the west, in Afghanistan, Baluchistan, Iran, and so forth. Feilberg in his detailed study La Tente Noire /The Black Tent/ demonstrates the relationships and common origin of the tent in Asia (Copenhagen, 1944). The three main types of black tents originated in the same place in Asia (1944, Page 152). They all go back to an original form that was later differentiated into an eastern or Tibetan form and a western or Iranian Arabic form (1944, Page 157). The original form of this tent developed from the hut. "The result of the evolution shows that reasons can be found to prove that the black tent developed both from arch huts and pole huts. In view of the fact that these two dwelling types existed in the region where the black tent appeared, it is reasonable to assume that the tent borrowed elements from both hut types and replaced the huts themselves. Consequently, if it represents a mixed form the tent must be more recent than the huts." (1944, Page 178.) But Feilberg believes, as does Sirelius, Hatt, and Birket-Smith, "that at an earlier epoch a simple tent with a saddle-type roof, in which the ridgepole was supported by a crossed or pyramided poles, was common in central and northern Asia. Some of the tents that have been described have a separation into roof and sides, others do not. We can assume that the latter types are the older ones... It is thus possible that a simple ridgepole tent has been common since ancient times throughout a large part of Asia and is thus the original form of the black tent." (1944, Page 178.) Accordingly, a ridgepole hut gave rise to the primitive ridgepole tent, which in turn developed into the black tent in western Central Asia in the chief sheep, goat and cattle herding regions. A special form of this development is to be found in the Tibetan tent, which may thus be related to the Karakorum area and Afghanistan. This tent type of course had to await the development of weaving (1944, Page 225). The contradictions that appear in the descriptions of a number of explorers -- whether the original base of the tent was square or hexagonal, whether or not it had a saddle-type-roof -- were eliminated by my analysis in which I differentiate between a tent house and a tent hut. Superficial travelers only saw either one or the other form (Feilberg, 1944, Page 103).

The twine used in setting up the tent is twisted out of yak's hair; the tension rope is sometimes made out of yak's leather. The tent is sometimes surrounded by a low sod or stone wall to keep out the ground wind. Any wall of this type, also if intended for livestock, is called ra-ba (ra ba). But this name is never applied to the tent itself. *not to*

*even if it is used in some cases for  
tent in the southern part  
M.A. area*



## 2. The Inside of the Tent

As one enters the tent, the fireplace is immediately in the front and center. It consists of a narrow, box-like loess mud wall, hollow in the center; the cooking pot rests on supports on the front edge and the two sides. Holes driven into the two side walls permit the circulation of air and the removal of ashes. The rear cavity serves for the storage of dung, which is inserted into the fireplace. The fire is made on a cast-iron grate that is fastened in the wall. Cups and pots stand on the fireplace wall. Behind the fireplace there are often covered boxes for the storage of cups, dishes, and butter jars. This sort of fireplace is typical of the A-mdo nomads. Mongols, Uighurs, and other nomadic tribes use an iron stand to hold the pot and allow air circulation, or merely three stones. *As do Tibetans if pot*

The fireplace divides the tent into two parts. Near the entrance on the right is the guests' and men's side. The seat of honor is next to the fireplace facing the entrance to the tent. The other seats follow in order of importance. On the left is the women's side. The fireplace is the center of the tent; it is a holy place that is protected by the spirit of the hearth, called thab-lha. The fire therefore may not be polluted. No spitting into the ashes is allowed, no dirt may be thrown into the fire, and nothing may boil over. If any of this should happen, the nomads may atone for the sin by throwing some butter into the fire. Before each meal, the nomad's wife makes an offering to the spirit of the hearth, which she places in a cavity of the fireplace. We shall refer to this spirit below.

Another holy place is behind the fireplace at the support pole of the ridgepiece. Here hang bunches of horse, yak's, and sheep's hair that are pulled out of the animals' mane or tail before their slaughter or sale. These bunches and the place where they hang are called dar-bang (dar dban). Dar-ba means "to multiply, magnify, expand, grow," when referring, for example, to influence, respect, power, wealth, luck, life span, fertility of man and livestock, and so forth. Bang means "power, strength, ability." Dar-bang therefore means "power or strength to multiply, expand, and grow." This is not an abstract power but a spirit that has the strength and power to grant luck and wealth. This is in the final analysis the Lha-chen-po (lha chen po), "the Great Spirit," heaven itself. Dar-bang, the pole with the bunches of hair, is a so-called holy pole. This place may not be defiled by pregnant, menstruating, unclean persons. Those who have become unclean through illness or contact with corpses must pass through fire and smoke to clean themselves before entering the tent. Only then may they enter the tent. Immediately behind the holy pole, Buddhist pictures are hung on the rear wall. In front of these pictures burn butter lamps and tea, milk, and water offerings are made. Much of the formerly greater worship of the Dar-bang has thus passed to the Buddhist guardian spirits.

The Dar-bang is set up by the A-mchod (a mchod). A is an honorific and is used in the names of close relatives, as in a-pha, "father," a-ma, "mother," a-khu, "uncle" on the father's side, and so forth. mChod means "to honor, adore, sacrifice." A-mchod thus means "the sacrificer." He is the original bearer of the native cult of pre-Buddhist and pre-Bon times. In this form he still exists today. In

the great religious mixture in Tibet, the Bon-po and the dPon (members of the Red Sect) have assumed the functions of the A-mchod, including the setting up of the Dar-bang. They prepare the bunches of hair in the course of prayer and invocations and attach them to the tent pole. This is accompanied by water and tea offerings, both beverages being mixed with milk. In no case are bloody offerings made and blood may not be daubed on the holy pole.

The Dar-bang is closely related to the Thze-dar (thze dar). Thze means "life;" dar is once again "to magnify, multiply." Thze-dar therefore means "to magnify, prolong life." In serious illness, the A-mdo-pa offers a sheep, a yak or a horse as a substitute for his life. This must be a first-grade animal, not a female, but rather a circumcised male. A little bunch of cloth strips in five colors -- red, yellow, blue, white, black -- is tied to the mane of the animal. It is thus offered to the heavenly god and may no longer be used for riding or pack purposes. It may not be sold or slaughtered and remains free until death. In the case of the Dar-bang, only the animal's hair is hung on the holy pole as a substitute offering; in the case of the Thze-dar, the entire animal is consecrated. We will refer below to a prayer pole that stands near the tent or, in the case of Tibetan farmers, on the roof. It has the same significance as the holy pole.

The tent of the A-mdo-pa is thus protected and guarded at the entrance by the hearth and fire spirit and in the rear by the Dar-bang. These customs had their origin in the most ancient herding culture. The holy fire either is a gift of the heavenly god or is brought and protected by a spirit of fire. Among the Soyots, the holy pole is the center pole of the conic tent hut. Among the herders who have adopted the round tent, which requires no inside supports, a tree or twig is planted to fulfill the role of holy pole before which offerings are made.

This custom of the Central Asian stock herders has been preserved in northwest China. In the Chinese house, the column to the right of the entrance is the "column of heaven," t'ien-chu-tzu. In the courtyard from the 1st to the 15th of the first month, in other words at the new year, offerings are made to t'ien'lao-ya, the "heavenly god". After the offering is completed, the incense stick is attached to this column, where it continues to smoulder. A red paper glued to the column bears the legend T'ien ti san cha wan ling she fang chen t'sa, "Real Master of Heaven, Earth, Man, all Things, and Areas." These customs also occur among African herders, the Galla and others, who still preserve the center pole to support the roof. From the herders, this custom can be traced back to even older human strata, to the Arctic and North American primitive cultures. Other tribes that no longer use a center pole have lost this custom; still others have retained it anyway and transferred it to a substitute. The custom can be found even in the old Saxon house in the "Hausbaum" [house tree] and in the Swiss house. (W. Schmidt, A. 1940-41, Vol XXXV-VI, 966 ff.; id. 1942-45, Vol XXXVII-XL, 309 ff.)

The tent also has its own guardian spirit, Gur-gyi-gon-po (gur gyi dgon po), "Guardian of the Tent." He is usually represented armed with a tremendous club. The nomads make offerings to him in burning flour and butter on cypress twigs.

The inside of the tent is quickly described, since it is very primitive. Along the tent walls are skin sacks filled with spelt, the grain reserves, and sheep's stomachs filled with butter. There are yak skins and sheepskins, bales of wool, riding and pack saddles, rope, harnesses, and other utensils of nomadic life. On the women's side are milk and water barrels, cans, pots, grinding mill, tea rammer, and so forth. Along the rear wall are a number of crude wooden boxes in which clothes, material, ornaments, and other objects are stored. Occasionally there is a sleeping place in the rear, made of dry twigs covered with a felt mat, where old or sick persons sleep. Ordinarily, the nomads sleep on the ground of the tent, from which the sod cover has been removed. The skins of sheep, musk deer, deer or antelope serve as bedding. Meat reserves hang from the front support pole, where lances and other weapons are also kept.

Usually the tents are set up in small groups of three to six, since large herds make it difficult for many families to keep together. The grazing lands would otherwise be rapidly exhausted and the tents would have to be moved too frequently. On very rich grazing lands, larger groups of tents can be found. The tent is usually set up near a source of good water to ease the women's work of hauling water. It must also be in a protected location to avoid being too exposed to storms. The rear wall faces windward to keep the storm from blowing directly into the tent entrance. Relatives and good friends usually settle together to maintain a peaceful relationship and provide assistance to one another. During the life of the father, the grown sons remain together. If the relatives are too numerous to be accommodated in a single tent -- the main tent must also have room for guests -- smaller tents are set up near by for young couples or grown daughters who are "married to heaven." (Regarding this custom, refer for more detail to the section on marriage in the volume on sociology).

In front of the largest tent there is usually a large pole, Dar-poché or Dar-lcog, from which printed cloth prayer strips flutter in the wind. Other prayer pennants are tied to strings that lead from the pole to the tent. This name contains once again the same Dar, "to multiply," that we found in the name of the holy pole inside the tent. This pole also bears the iron pan used for fire offerings. The pole is actually a parallel to the holy pole inside the tent. A similar function is performed by the poles with pennants and strings that are stuck on mountain peaks into stone heaps, the Lab-tse (lab tse, Mongolian Obo). This sacrificial place is devoted mainly to the guardian spirit of the region, the Zhi-bdag (gzhi bdag). Here the pole is linked to the world tree, which reaches from earth to heaven and on which the spirits descend to earth. The holy pole and the world tree concept are often intermingled. The tree is also used by the heavenly birds when they descend to the tents of man to bring a message from the god, as reported in the Ge-sar legend. Among the Tibetan farmers, such a prayer pole usually stands in the courtyard or on the roof. Next to it is the fireplace on which in the morning and sometimes in the evening offerings of cypress twigs, flour, and butter are made. The pole itself is not a spirit, as some believe, but rather the "residence" of the spirit.

### 3. Clothing

The clothing worn by the A-mdo-pa corresponds to their economic stage of development and consists of skins and wool.

The ordinary man's garment is a long coat made of sheepskins. It is tucked in high and reaches just below the knee, covering the upper edge of the boots. It is worn with a belt so that the upper part forms a bulging blouse. This is used to carry a number of things while traveling, such as a cup, flour bag, rope, and so forth. The clothing of well-to-do nomads has decorations along the seams. Narrow strips of otter or leopard skin are used for trimmings. Red or blue cloth also serves for this purpose. The collar of this coat is quite high. The sleeves are very long, reaching 30 to 40 centimeters beyond the hands. This coat is usually worn with the wool on the inside and directly over the body. The more prosperous individuals wear a short shirt, following Chinese custom. The nomads avoid exposing this coat to rain to prevent it from cracking. If they have no raincoat and cannot avoid the rain, they wear the coat with the wool on the outside. In that case the rain simply runs off and does not wet the leather. (This may be the reason why the inhabitants of Tierra del Fuego, a rainy region, wear their coats with the woolen side out.) (Figures 12, 13, 14.)

Nowadays men usually wear blue cotton trousers but these were not known until recently. Even today they are still unknown among many Go-log, who instead wear a type of sheepskin leggings. Even those who wear trousers sometimes add these leggings. This custom is also practiced among the Chinese of the border areas. The ancient Chinese did not know about trousers. According to the chronicles, the long, loose-fitting garment of the Chou was replaced by the clothing of the Hsiung-nu, consisting of a short belted jacket, riding breeches and high boots. In the course of centuries, this type of clothing became widespread throughout China. (Chan-kuei-tsu, Chapter 9, Page 6 ff.) This happened about 600 A. D. It follows that the Turkic horsemen introduced the trousers to eastern Asia, the oldest form being that of separate leggings.

The belt is usually of leather but it may also be woven out of sheep's wool, white, or red. The most elegant belts are made of red, blue or yellow silk imported from China. They are 15 to 20 centimeters wide and 2.5 to 3.5 meters long and are also used to keep silver money.

There is a great variety of caps. In the Kuku Nor area, the cylindrical summer felt hats have a wide brim. Other hats are conical or pointed. More common are felt caps that are worn winter and summer; they are made of thick foxskins lined with red, green, or yellow silk. A foxtail hanging from the top of the cap is a mark of distinction. Lambskin caps are found in a variety of forms, some without brims, others with broad brims. Certain regions and tribes are usually associated with specific types of headgear. (Figure 25, 27, 28, 29.)

The feet are clad in half-boots, some made entirely of leather, other with cloth shafts. Chinese-made boots have a straight toe point,

with the sole slightly pulled back and level under the foot. The toe section of native boots is curved up, with no level sole, but rather a mocassin-type sole topped by the upper leather and the boot shaft. When the sole is worn through, the mocassin is cut off and replaced. Ribbons attached to the boot shaft are used to tie the boot. There are no right or left boots; both are the same and may be interchanged at will. Ordinarily no socks are worn, sick persons being the exception. Socks are short and made of felt or wool. Small children for whom sufficiently small boots cannot be made usually wear such socks.

The men's equipment also includes fire steel with flint and tinder and a horn-handled knife with sheath, sometimes also short chopsticks. These implements are worn on the left side tied to the belt. They also include a pair of pincers for plucking the beard.

Women wear the same long coat as the men but, since they tuck it in less at the hips, it reaches farther down to the ankles. The blouse is consequently less bulging, though still roomy enough to hold small children. Women do not wear trousers. Only a number of Go-mi tribes on the rMa-chu use a short skirt of brown cloth. Women also wear their sheepskin directly over the body. Some have a short shirt, especially when they drop the upper part of the outer garment to free their arms for work. Women's caps do not differ essentially from those worn by the men. The women also wear the same type of boots.

Ceremonial garments are always more expensively made and richer in colors. The well-to-do wear fine lambskins, lined with a fine material, usually silk. Instead of the skins simple cloth garments are also in use, especially among Tibetan farmers who carry on only a limited amount of stock herding and own fewer skins. Moreover, they live in a milder climate. The cloth is usually acquired out of the proceeds from surplus grain.

#### 4. The Hairdo

The men shave their heads. Some leave a short lock of hair on the top. Members of the Bon and Pon (dpon), however, retain long braids that are sometimes lengthened by means of false hair and are wound around the head like a turban. This is often covered with red cloth. Some Go-log tribes and other tribes in the south wear their hair long and cut it in the form of a wig.

The women braid their hair into many small plaits that drop over the shoulders down to the hips, where they are held together by wide ribbons. The type and form of these ribbons, and their arrangement and ornamentation are of tremendous variety, each combination being characteristic of a certain tribal group or region. The ribbons are decorated with all sorts of shells, little kauri shells, larger snail shells, or mother-of-pearl disks. Such shells are also used in the hair, for example, by the old Pra-te (pra ste) tribe. This type of shell ornament is the oldest such decoration. Other nomads use silver buckles up to 20 centimeters in diameter, with the largest buckles attached to the center ribbon and the smaller buckles to the side ribbons. Still others use small copper plates with engraved writing. Of great value

are the pendants, which are decorated with precious stones, turquoises, nephrite, opal, amber, and others. To help support this heavy ornament, a leather strap leads from the back around the neck to the breast. In spite of the great variety in hairdo and ornamentation, the plaits of Tibetan women never drop down in front over the breast and no ribbons are worn there. The women of the Mongols, T'u-jen, and Uighurs, on the other hand, wear both ornaments and plaits in front. This characteristic may be used to determine ethnic origin. (Cf., for example, W. Filchner, 1933, Page 384, Figure 199, captioned "Tibetan Woman from Central Tibet." The plaits dropping down in front show that this is a Mongol woman. Mongol tribes were settled in this area by Guchri Khan who sought to rule Central Tibet. Although these tribes have been Tibetanized, the hairdo still reflects their origin. Greater mixture of hairdo and ornament is found in the areas where Tibetans and Mongols have mixed. Cf. Figure 17, 27, 28, 30, 33, 40, 41, 51.)

The hairdo of married and unmarried women differs in the parting. Married women part their hair in the middle. Unmarried women do not have this parting. The ornaments of married women are far more expensive and varied.

Tibetan farm women frequently wear only a few plaits or one thick braid, which is then extended by means of black hair and ribbons.

## 5. Ornaments

Many other ornaments are in use. Necklaces made of coral, amber, jade, and other pearls are often worn in several rows around the neck and hang down to the breast. One magnificent ornament is the amulet holder, which is worn on the breast. Simple holders are made of brass or copper; better ones are made of silver and the most expensive ones are made of gold. They may be round, square or oval in shape, and vary also in size. There are pendants that cover the entire breast. They contain Buddha pictures, magic incantations, little bags with magic substances that have been prepared by noted shamans, and other objects designed to fend off evil. Armbands are made of gold, silver, jade, and soapstone. Beautiful strands of pearl are wound around the wrists. Such strands are also worn around the neck. Great variety is also found in the earrings which women wear on both ears. There are small rings with beautiful decorations and stones. Another type, made of massive gold and silver, is very heavy. Little leather strips or chains lead around the ear to prevent these heavy ornaments from tearing the ear lobe. Brilliant and scintillant are also the many types of finger rings. Except for the thumb, nearly all other fingers are often clad in rings (cf. Figures 18, 25, 27, 28, 30.)

Men do not wear such rich ornamentation. They often have a heavy ring suspended from the left ear, sometimes a pearl on the right ear lobe. An amulet box, usually quite simple, is worn over the breast. Some have rings on their arms and fingers.

Suspended from the woman's belt on the left side is a copper or silver hook used for the milk pail during milking. On holidays, a plate suspended from this hook is balanced on the right by a beautiful plaque (Figure 25).



A number of other objects complete the equipment. Men usually carry a snuff box in their blouse. Simple boxes are made of yak's horn; the finer types, carved out of a soapstone, jade, and other materials, are imported from China. The nomads love to snuff tobacco. Their tobacco is very pungent. A pipe and a bag filled with tobacco are also carried in their sheepskin. Very plain pipes are carved out of a sheep's tibia or a cattle horn (Figure 43).

## 6. Weapons

The true nomad cannot get along without his sword. He carries it stuck under the belt in front. A beautiful sword with a finely carved horn or silver handle, set in stones, and a sheath with inlaid work, is the pride of the A-mdo-pa. To grab his sword away from him is the gravest insult. One type of sword has a straight blade ending in a long point. This is the original native form and resembles a Norman blade. The other type has a short point in imitation of the Chinese sword. It is interesting to note that blood grooves are found on the blades. The best work is done by the De-rge (sde-dge) in Kham, who even make Damascus blades. The nomad is likely to pay large sums for such good work. The sword is his constant companion. Even when he briefly leaves the tent to check on the grazing area, he reaches for his weapon and sticks it in his belt. While riding he places the sword across his knees. At night, he keeps it under his head (Figure 21).

The old popular bow has been completely replaced by the firearm. The bow is of the well-known double-reflex type of the Central Asian nomads. The arrow has a triple radial feather. These bows were not made by the nomads themselves but imported from China. Native bows are much simpler. A strip is cut out of a birch twig or blackthorn. The inner side is then smoothed. Notches are cut into both ends. The strip of wood is then arched, with the smooth side on the inside and kept in this shape for some time. These bows are used in forested areas in setting traps for game.

The nomad is quite keen on owning a good rifle. Judging from the type of thread on the screw of the gun fork, the Tibetans must have received their first firearms from India; it is a left-handed thread. Rifles seem to have been used in Tibet earlier than in China. The barrel is very long, 100 to 115 centimeters or more. The longer the barrel, the greater the range of the rifle is supposed to be. A thick iron strip is rolled, hammered, and soldered, causing a sort of rifling on the inside. The caliber is 12 to 13 millimeters. In front is the small jutting front sight. The rear sight is an aperture in a small iron peep plate attached to the rear of the barrel. To the right of the peep plate is the touchpan from which the touchhole leads to the bore of the gun. The bullet does not rest directly on the charge but at a distance of a few centimeters to permit complete combustion of the charge. The barrel is tied by means of tendons and straps to a wooden stock, which may be up to 2 meters long. It is also fastened with iron rings. The wooden parts are covered with wild yak's leather or decorated with silver, coral, and turquoise. When shooting, the nomad presses the stock under his arm instead of holding it against his cheek. That is why the stock is so long. A fork is attached to the front of the barrel to keep this long, heavy rifle steady during aiming. This fork is pulled down, stuck into the ground, and the gun

is then ready for aiming. For firing, the gunner lights a fuse. Flint locks were formerly unknown. Nowadays, many old European military rifles can be found among the Bro;-pa, having been acquired via China, Mongolia, and India.

The A-mdo-pa is a good marksman and has a keen eye. but to insure a surer aim he dips the muzzle of barrel into the blood of freshly killed game. This custom leaves a crust of dried blood and hairs around the fork attachment. When the gun is not in use, the nomad stuffs a wad of wool into the barrel, covers the touch pan with a cap, and puts the stock into a cloth cover (Figure 7).

The powder is kept in a cattle, sheep, antelope, or other type of horn. The A-mdo-pa buys his bullets and gunpowder from the Chinese.

One weapon that is kept inside the tent is the lance. This is a 2 to 3 meter long wooden shaft with an iron point. There are simple, short three or four-edged points, as well as long points that top an iron shaft, which in turn is placed on the wooden shaft. A bunch of yak's hair is attached below the lance point.

Used chiefly for stock herding, and less so as a weapon, is the sling. It is usually twisted out of sheep's wool. Two strings are fastened to the sling strap. One of these ends in a loop through which the thumb is placed. The nomads are excellent shots with the sling. Both boys and girls begin to practice their aim early. Formerly they also practiced with small bows and arrows.

[Pages 84-111]

## 9. Animal Husbandry

### (a) Sheep Raising

#### 1. The Sheep as an Economic Animal

The A-mdo-pa have very large herds of sheep. One chieftain of the Wang-thag, west of the Kuku Nor, had more than 30,000 sheep divided into three herds that grazed within a day's journey from one another. Impoverished individuals who lost their stock through epidemics or other calamities and have retained only a few yak have at least a small herd of sheep. Only these paupers milk their sheep to obtain some milk and butter. Ordinarily the A-mdo-pa do not milk their sheep since they have enough cows. For the same reason sheep are usually not used as pack animals. In western Tibet, where cattle is less common, sheep are used both for milking and for pack purposes. The stronger animals carry as much as 15 kilograms and, under good terrain conditions, can travel about 15 kilometers a day, with the rest of the time devoted to grazing. They usually carry salt and wool to the settlements and come back with grain.

The sheep is the main all-purpose animal of the nomads of Tibet. It supplies wool. Shearing takes place in the middle of the summer when nights are not too cold. The dirty fleece is cut off with long knives, with the wool intended for sale twisted into long, thick strands that are later tied into bales. The wool intended for

domestic use is washed and bleached and then spun. The balls of wool yarn are suspended in the tent. Originally, shearing with knives was unknown. The wool used to be plucked, as is still done sometimes, or it dropped off.

Mutton is the most common and the most favored meat. The sheep are slaughtered in the late fall, after they have been well fed, to supply meat reserves for the winter, spring, and summer. Because of the high elevation and the cold, dry air, the meat is easily preserved. Since the animals must always find their own food and hay is not provided in most cases, they lose much weight in the later winter and spring. Such animals are of course not slaughtered. Sheep are slaughtered at all ages; this applies to young male lambs and one-year-olds, with only a few rams kept for mating purposes, and old rams and old females. It is customary to slaughter old females just before lambing to obtain the skins of the unborn lambs, which are highly prized for the delicate, fine texture. Lamb is of course the most tasty meat. Late in the fall many herds of sheep are driven to the Chinese border towns of Hwangyuan, Sining, Lanchow, and others for sale to the slaughterhouses. Before the war a sheep ready for slaughter was worth 2 to 3 Chinese silver dollars in the steppe and twice as much in the cities. Prices are much higher now because of the war taxes and a good sheep is worth 15 silver dollars or more in the city.

Sheep supply skins for the nomads' clothing. The ordinary sheepskin is sewn together out of the skins of old animals. Its wool is long and coarse. Ceremonial clothes are made out of lambskins. The skins of unborn lambs are sold to Chinese merchants and are made into gloves and other fine leatherware. All other skins that are not used for domestic purposes are also sold. Formerly a good skin was worth one silver dollar. The black skins are the more valuable and are accordingly worth more. In short, the sheep is the Tibetan's most valuable animal, whether for the supply of meat, clothing, or trade. Even if the nomad were to lose his cattle and horses, he could still get along with his herd of sheep. A nomad family that has also lost its sheep can take over a number of sheep and yak cows from a rich neighbor and keep them near its tent. These animals are loaned by the original owners. The lambs, however, are divided equally between the two parties. In the fall, the owner usually makes a payment of a number of old sheep to the herder's family and these are used to supply meat and clothing. In this manner, a nomad who was impoverished because of epidemics or other calamities is able to regain a herd. After a while, he may even acquire some cattle. Because of this opportunity, the nomads actually have no proletariat.

## 2. The Sheep in Etymology

The nomad usually calls the sheep Lug (lug). Some synonyms are lTo-phyang (lto aphyan), "hanging food," which refers to its role as a source of meat; Bal-ldan (bal ldan), "owner of wool"; Yang-kar (gyan dkar); Yang means: 1. "magnificence abundance," as in dPal, and "destiny, fate, luck," as in Phywa; 2. "luck, wealth, good fortune." Kar means "white" or "good." Yang-kar thus means "good luck, wealth, abundance" and Yang-kar-lug (gyan dkar lug), "sheep of wealth or of good fortune" refers to the heavenly sheep, the original sheep in heaven. This plays a key role in marriage ceremonies. Yang-lug (gyan lug) is a

sheep made of butter and flour that is used in the ceremony to Yang-grub (gyan sgrub), "bring luck". The shoulder blade (sog pa) of a sheep is used in an old oracular form known as Sog-mo-deb-pa (sog mo adebs pa). The shoulder blade is heated in a fire and the oracle is read out of the cracks thus produced. The sheep thus plays a major role in the world of ideas, the mythology, and the economy of the A-mdo-pa. It is also the most common sacrificial offering. At the time of the fall offering, for example, it is called Nam-gyi-lug (gnam gyi lug), "heavenly sheep," because it is offered to the heavenly god. The sheep also plays a major role in mythology, where the ewe Gro-mo (gro mo) is one of the animals of original creation.

### 3. The Sheep in History and Prehistory

As we said before, the Tibetans are called Ch'iang in the bone inscriptions of Anyang. The Chinese character represents a man walking behind a sheep. The Tibetans have thus been regarded as typical shepherders since ancient times. This is also borne out by later sources (for example Feng-su-'ung in T'a-p'ing-yu-lan, Page 794, 4a). The Tibetans own many sheep (Hou-han-shu, Page 117, 11 b), wear sheepskins, eat mutton, drink ewe's milk, make offerings of sheep and sheep bones, and use sheepskins as seat mats and tent coverings. (S. T'ang-shu, c. 216a; Ch. T'ang-shu, 196; Suei-shu, 67 f., 11c.) Chinese sources indicate that sheep raising is the characteristic form of economy among the Tibetans.

A large number of sheep bones were found in the Neolithic site of Lo-han-t'ang in the Kweiteh hsien north of the Yellow River (in Tsinghai), similarly in the Ch'i-cha'p'ing site on the Tao Ho near Titao (in Kansu) (J. A. Anderson, 1943, Page 43; M. Bylin-Althin, 1946, Page 457. These finds demonstrate that sheep raising was practiced in this area since the oldest Neolithic times.

### 4. Types of Sheep

(a) The A-mdo Sheep. There are five types of sheep in the A-mdo region. The A-mdo sheep is high-legged, with a broad and solid build, and long, coarse, thick hair instead of wool. Face and legs are covered with short hairs. The horns are twisted clockwise in a wide corkscrew shape and stand out horizontally on both sides. The ewes have smaller horns of simple design. The tail is thin and short with no fat deposits. The animals have a straight profile. This type of sheep loves cold weather, is most at home at high elevations, and rarely descends below 3,000 meters. It is a typical high mountain animal. The nomadic tribe called De-shu once moved from its territory south of the Yellow River northwest into the Do-thang (rdo than) high plateau south of the Kuku Nor. This area is very dry; its vegetation is different from the former area. The A-mdo sheep were unable to adjust themselves. The tribe had to acquire a different type of sheep. The sheep are usually white. Black sheep are rare. The black skins are much sought after because they are more woolly and more valuable. There are also black-and-white skins. The head is often black. Rust brown is very rare. The sheep bring forth one lamb, more rarely two, in May or June. The fur of the young lamb is woolly at first, but straightens soon thereafter.

The horn of the A-mdo sheep is unlike that of any other living sheep in Asia. A sheep with a similar type of horn occurs in the Tisza plain of Hungary as a cross of the similarly upright-horned Racska and a simple-horned sheep (heath sheep or Walachian) (Private communication from J. W. Amschler, who was kind enough to show me the skulls of these animals; cf. L. Adametz, 1926, Figure 56, page 57). The horn of the Hungarian Racska sheep is turned too far upward, while that of the Dinka sheep of the Hausa areas of Africa is turned too far downward. (Cf. Brehm, 1920, Vol XIV, Page 260, Plate XV, 1 and 2). The spiral of the horn of an ordinary Walachian is too wide and twisted too far down. The horn of the A-mdo sheep of course is subject to a number of variations, not all of which have the same regularities. There are also pure Walachian forms, such as the one just described. This would indicate that a number of Walachian forms are crossed in the A-mdo sheep. The pure forms always show up again. Argali sheep inbreeding may also be indicated by the horn type. It resembles most closely the old Egyptian sheep, now extinct. (Brehm, 1920, Vol XIV, Page 258; L. Adametz, 1920, Plate XIX; cf. Figure 10 in the Appendix.) Prehistoric occurrence of this type of sheep is indicated on seals at Mohenjo-Daro and the bronzes of the northern Caucasian Kuban and the western Siberian Minusinsk cultures. These sheep also are represented on a vase at Abydos and a slate plate in the museum at Giza. Neolithic sheep skulls found at Toukh near Abydos also have this type of horn. "Otto Keller and others place their origin in Egypt's prehistory (in the Nagadah times = Campignian and Litorina -- older shell heaps), while Capart, basing himself on the writing on the second side of the tablet (hieroglyphs combined with pictographs), ascribes them to the start of the Pharaoh period in spite of other indications of antiquity. At any rate, we are dealing here with a very ancient and highly important product of Egyptian animal husbandry ... These and other representations are important to us because they are in good agreement and are thus able to give us reliable data on the appearance of the old Egyptian sheep breed. They represent the old Egyptian sheep as a high-legged animal with a long, thin tail, a rather straight profile, and those peculiar screw-shaped horns standing out almost horizontally from the forehead." (L. Adametz, 1920, Page 60 f.) Moreover, it is a hair sheep, not a wool sheep. The ears are still set horizontally (L. Adametz, 1920, Page 60).

Gaillard and Duerst called this type of sheep *Ovis aries palaeoaegypticus*. It is in all respects like the A-mdo sheep, except that the latter has a thin, short tail instead of a thin, long tail. A similar sheep of ancient Babylon is represented on a votive stone tablet dating from the times of King Ur-Nina (about 2550 B.C.) (B. Meissner, 1915, Page 11). "This sheep not only has the same unusual horn, but also the same straight profile and ordinary tail as the old Egyptian breed. The only difference is the indication of a shaggy fleece." (L. Adametz, 1920, Page 66.) Ancient Babylon also had a sheep with wide horn spirals similar to the urial sheep (*Ovis vignei cycloceros*) and another animal whose corkscrew-shaped horns are twisted vertically upward (L. Adametz, 1920, Page 67). Thus we find an ancient Babylonian sheep similar to the ancient Egyptian breed as early as the third millenium B. C. This has also been confirmed by Hilzheimer. (M. Hilzheimer, 1926, Page 189.) Seals of the proto-Indian Mohenjo-Daro culture also represent an animal with a corkscrew-shaped horn. It has the representation of a heart on its body. Its tail is short, in con-

trast to the old Egyptian long tail. As a result this sheep resembles in all respects the A-mdo sheep. (Cf. J. Marshall, 1931, Plate 118, 3; H. Mackay, 1937-1938, Plate 11.) Friederichs confuses a domestic Falconeri goat with a Walachian sheep. (H. F. Friederichs, 1933, Plate 2, Figure 8; cf. discussion by J. W. Amschler, A. 1934, 874.) According to Amschler, there are two sheep types: a heavily-horned hair sheep and a long-tailed, unhorned, fine-fleeced sheep (J. W. Amschler, A. 1934, Page 874), as was the case in Susa and Ur. Bronze objects from the Kuban and Minusinsk also include this corkscrew-shaped horn (Private communication from J. W. Amschler). This type of sheep is thus found prehistorically in Egypt, Mesopotamia, Mohenjo-Daro, the Northern Caucasus and Western Siberia. Nowadays it is found in the highlands of Tibet, Hungary (the Tisza plain), and Africa (in the Hausa areas). The possibility of still other occurrences remains. A type of Walachian sheep is found in northern Arabia, Afghanistan, and India. (H. F. Friederichs, 1933, Page 16; according to the new chronology, all figures for Babylonia and the Middle East are reduced by 300 years; cf. A. Ungrad, WPZ, 1943, Page 109 ff.)

From which wild type are these sheep descended? "Since it is precisely the subspecies *Ovis vignei cycloceros*, Hutt., the urial sheep, that according to Blanford has strong divergent horns with an open spiral clearly differentiating it from other forms, this form can be assumed as the probable original form of the Sumerian-Hamitic domestic sheep with its peculiarly shaped horns... The present habitat of this wild sheep, which is an extremely important aspect of our problem, is described as follows in the zoological literature: the trans-Indus district, the Salt Range of the Punjab, Sind, as well as Afghanistan and Baluchistan." (L. Adametz, 1920, Page 68.) Tibet must also be added to this list. Sandberg lists an *Ovis vignei*, Sha-po (sha po, which usually means "male deer") and an *Ovis aries* (var.), Byang-lug (byân lug, "sheep of the north"). (G. Sandberg, 1906, Page 297.) *Ovis vignei* Blyth. occurs in Sind, Punjab, Afghanistan, Baluchistan, La-dag, Tibet, Russian Turkestan, Transcaspia, and Iran. (Brehms Tierleben, [Brehm's Animal Life], 1920, Vol XIV, Page 249.) These sheep have as a rule normal horns with thick scrags (Brehms Tierleben, 1920, Vol XIV, Page 249).

The second wild type *Ovis aries* (var.) is probably related to another group, the *orientalis*. However, the urial sheep rather than these two wild forms is regarded as the ancestor of the corkscrew-shaped horn forms. The present urial sheep is in part no longer a high mountain sheep. "It even descends to sea level." (Brehms Tierleben, 1920, Vol. XIV, Page 250.) This may very well be later acclimatized types, since the wild form still occurs in the highlands of Afghanistan, Iran, Baluchistan, and northwestern India.

We thus have a form suitable for steppe and lowland, from which the Indus, Egyptian, and Babylonian breeds could be derived, and a variety suitable for high mountains that lives in Afghanistan and so forth. The present A-mdo sheep must be related to a wild high mountain form, since it rarely descends below 3,000 meters. One is therefore much tempted to relate the Tibetan sheep with the not-too-distant urial sheep of Afghanistan, assuming that the area of distribution of this wild form has not changed substantially. This area of Iran, which is also regarded as the origin of the ancient Sumerian-Hamitic domestic



sheep, "is therefore of major importance as the original residence of the people that first domesticated the urial sheep," as will be discussed below. (L. Adametz, 1920, Page 78.) According to Robert Mueller, thin-tailed and long-tailed hair sheep still occur in Afghanistan and western India. "These must evidently be regarded as vestiges of the sheep domesticated from the urial sheep that have remained in the original area to the present day while others moved westward and were brought to Mesopotamia where they gave rise to the peculiar ancient Babylonian domestic breed." (L. Adametz, 1920, Page 69.)

The Tibetan sheep with its thin, short tail provides a minor correction for this hypothesis. Since the wild form is thin-short-tailed, it is closer to the Tibetan sheep, which moreover has remained a high-altitude animal. The Mohenjo-Daro sheep is also short-tailed. The sheep with the thin, long tail must be a further mutation that has been domesticated in lower and warmer areas, such as the lowlands of the Near East. Both the Tibetan sheep, which migrated eastward, and the ancient Babylonian-Egyptian sheep, which moved westward, probably have a common ancestor that was domesticated in western Central Asia, perhaps Afghanistan, from the urial sheep. Since the western variety can be identified as early as the fourth millenium B. C. in ancient Sumer and perhaps even before 4,000 B.C. in ancient Egypt, where it was the oldest prehistoric domestic sheep, the first domestication in Central Asia must have occurred even earlier. (Cf. M. Hilzheimer, 1926, Page 189.) This would bring us back to the beginning of Neolithic times (L. Adametz, 1920, Page 67) and to Mesolithic times.

Let us now review once again the distribution of the sheep with the screw-shaped horn from east to west. In northeastern Tibet it is the typical high mountain sheep. In western Tibet, its fur is woolier and not so straight-haired, probably as a result of crossbreeding with the small native woolly sheep that yields the high-grade P'u-lo woolens. (Cf. S. Hedin, 1910, Vol II, B. 249, 124, B. 266, 170, B. 258, 370.) The same is true for La-dag, which was formerly part of Tibet. Farther west, this sheep is widespread in Afghanistan, India, and as far as northern Arabia. (M. Hilzheimer, 1926, Page 189.) Ancient Babylonia had the woolly sheep and, in addition, a hairy sheep in southern Babylonia with horizontal horns, medium long tail and hanging ears, dating from the third millenium B.C. (M. Hilzheimer, 1926, Page 189.) The ancient Egyptian sheep became widespread in Africa. "The same ancient Egyptian sheep breed with horizontal horns occurred during the V Dynasty (about 2500 B.C.) in parts of Libya adjoining Egypt." (L. Adametz, 1920, Page 60.) The descendants of this sheep are still found "in the upper Nile area, for example in the breeds raised by the Shilluk and especially the Dinka along the White Nile." (L. Adametz, 1920, Page 61.) It is thus distributed through the Hausa areas and as far as Ethiopia, as well as in the zone between the Sahara and the Congo forests and even in the Senega region and Guinea (L. Adametz, 1920, 61 f.), as well as in North Africa (M. Hilzheimer, 1930, No 4, Page 420). In southeastern Europe it is represented by the Walachian breed, which is distributed from Crete through the Balkan Peninsula to Hungary (Brehms Tierleben, 1920, Vol XIV, Page 260). A type of sheep with corkscrew-shaped horns is found in the Tisza lowland. However, the typical Walachian sheep is even better represented in the A-mdo Walachian type.

Let us now compare the distribution of the screw-horn sheep with that of the black tent. The black tent is found in the following areas: in Tibet, La-dag (C. G. Feilberg, 1944, Page 100 ff., Page 130 f.), Afghanistan, northwestern India, Baluchistan (Page 97 ff., Page 128 ff.), Iran, Kurdistan, Armenia, Anatolia (Page 79 ff., Page 127 f.); Arabia and peripheral areas (Page 65 ff., 126), Egypt and Libya (Page 58 ff., Page 125), the northern coast of Africa as far as Morocco and Mauretania (Page 36 ff., Page 117 ff.), the Sahara and the Sudan (Page 44, 124 f.), Greece, Macedonia, Albania, and the rest of the Balkans (Page 106 ff.) We thus have the surprising fact that the distribution areas of the screw-horn sheep and the black tent coincide. Only along the upper Nile do we find the sheep without the corresponding tent type, while in Mauretania and Morocco the tent is found without the sheep. These areas may be regarded as outliers in which one or the other form has been lost.

(b) The Soft-Wool Sheep. In the lower parts of A-mdo, at elevations of about 3,000 to 1,800 meters, we find another type of sheep. It is smaller, its hair is shaggier and resembles wool. Its horn has a simple curve, as in the case of the heath sheep. The females have even smaller horns, lacking them sometimes altogether. They usually lamb at the end of December and in January. The young lambs have at first a rather woolly fur, which disappears subsequently. The tail of this sheep is thin and short. This breed may have resulted from a cross between the screw-horn Walachian type and the fat-rump type. Since the Chinese call it Mien-yang, "soft-wool sheep," we have adopted this designation. Others call it "valley sheep" in contrast to the Tibetan "grassland sheep."

(c) The Fat-Rump Sheep. The fat-rump sheep is found at elevations below 1,800 meters and differs sharply from the previous two types. Although its wool is coarse, it is of better quality. Its horns are twisted snail-like, forming somewhat more than a spiral, and are so large at the base as to touch each other. The tail is of medium length, reaching below the hock. At the root of the tail is a fatty deposit that decreases downward. The tail is much longer than, for example, that of the fat-rump sheep of Simferopol, Crimea (cf. Figure 11, Brehms Tierleben, 1920, Vol XIV, Page 227) and of the Mongolian sheep of this type. Przhival'skiy in his diary notes mentions the fat-tail and long-tail sheep in the Kuku Nor region. "...While the presence of the fat-tail sheep can be accounted for, there is no basis for the presence of the long-tail sheep," says Amschler (L.c. Page 2.) By the long-tail sheep he probably meant the fat-rump sheep, since the latter's tail is relatively long; it is not thin but quite fat. The fat deposit in the rump, to which this type owes its name, is by far not as heavy as in other types, for example, those of western Turkestan and Mongolia. Often no fat whatsoever is evident. The female has simpler horns. These animals are well built and tall-limbed. Lambing takes place in December and January. The fat-rump sheep lives in the lower mountains, for example the Nan Shan in Kansu, where it is raised by Tibetan tribes.

The fat-rump sheep is widely distributed throughout northern China, Tibet, Mongolia, Manchuria, Korea, Japan, and Central Asia and is found as far west as the southeastern border of Europe. It also occurs toward the west in Africa as far as Somaliland. (Brehms Tierleben, L. c. Page 267.) The horn of this sheep is quite like that of

the Argali, *Ovis ammon* L. This, the largest of all wild sheep, occurs in many subspecies throughout the highlands of Central Asia in Nepal, Tibet, Bukhara, Altai, and Mongolia as far as Kamchatka (Brehms Tierleben, 1. c. Page 250). Tibet has two species, the Argali proper or Kocha (*Ovis ammon*) and *Ovis hodgsoni*, Nyan (gnyan). (G. Sandberg, 1906, Page 296 f.)

Is it possible to determine a specific people that may have domesticated the fat-rump sheep? In view of the wide distribution of the *Ovis ammon*, the original domestication of that species could have taken place in many areas. "The domestic sheep of the Turko-Tatars and Mongols was the fat-rump sheep, as will be demonstrated, and this breed displaced throughout the western Asian steppe zone a previous type...", which had been a weaker one (L. Adametz, *ZfZ*, Vol VIII, Page 52). The Turko-Mongols brought this sheep along in their migrations. This gave rise to the following distributions. "The rough boundary nowadays between the fat-tail sheep and the fat-rump sheep areas is the Caucasus, the southern shore of the Caspian Sea, and the Iranian -- Trans-caspian border ranges. To the south of this boundary are the fat-tail sheep and to the north the fat-rump sheep." (L.c. Page 53.) This line, of course, is crossed in places. In Afghanistan, for example, the fat-rump sheep has displaced the fat-tail sheep, except in the high mountains along the Bukhara frontier. "As has been shown, Central Asia can justly be regarded as the original source of the fat-rump sheep, with the Mongols and related Turkic peoples being the carriers of this branch of animal husbandry." (L.c. Page 54) Adametz tries to restrict the original domestication area to the region of the upper Selenga and the southeastern tributaries of Lake Baykal. This is supposed to be the cradle of the Turko-Tatars and the Mongols where the originally Tungusic hunters became nomad herders. (L.c. Page 54 ff.) This is confirmed by the prehistoric domestic animal finds made there by Talko-Hryniewicz. The excavated sheep bones match the domestic sheep of the "present-day Mongols of that area and adjoining northern Mongolia." (L.c. Page 57.) The wild type that was domesticated could have been *Ovis ammon koslovi*. (L.c. Page 54.)

Actually it is doubtful that the Turks owe their origin to Tungusic hunters who adopted stock raising, since Tungus and Turks are far too different. Whether this people first domesticated the fat-rump sheep in its original area cannot be determined, since Talko-Hryniewicz generalizes in speaking of "people of the Mongolian race," a collective designation that includes all sorts of peoples. We must therefore restrict ourselves to the following evidence: the fat-rump sheep was domesticated in Central Asia by the Turko-Mongols. Whether the Turks knew previous types of sheep or whether the fat-rump sheep was their first domesticated breed cannot be determined. Adametz himself so indicates when he says insofar as the existing wild types were not previously domesticated by these ancestors of the Aryan steppe herdsmen." (L.c. Page 56.) Since the fat-rump sheep, because of its great size and weight, is an excellent mutton sheep, it gradually displaced its predecessor, the fat-tail sheep, for the nomads require above all the use of meat and not that of fine wool. Since the A-mdo sheep is just as large, sometimes even larger, the highland Tibetans did not adopt the fat-rump sheep except in lower altitudes where the A-mdo sheep does not flourish. The fat-rump type was probably introduced by the Turko-Mongols.

(d) The Fat-Tail Sheep. This is the fourth type found in the A-mdo region. However, it is not raised by the Tibetans, but by the Mongols of the Tsai-dam area and the Little Gobi, which extends from the Nan Shan to the Ala Shan. There the fat-tail sheep is also raised by Chinese in the area extending from Tumen and Tatsing to Chungwei and Ningsia, with the Mongols taking over in the Ala Shab. The horn is insignificant. The female usually lacks horns. The fur is quite woolly, especially in the case of unborn lambs and very young lambs. The tail, which has a heavy fat deposit, is very long, reaching almost to the ground and being bent at the end. The sheep is thus suited for low-lying, dry steppes. It is smaller than the previously described types. Fat-tail sheep are also found in the Chinese provinces of Hopei, Shantung, and Honan. (The California Wool Grower, San Francisco, 15-16 November, 1940.)

"According to Robert Mueller, the fat-tail sheep is distributed throughout Africa, insofar as sheep are at all being raised, and in western Asia as far as Bukhara, Khiva, and Turkestan. From here it passes across the Caspian steppes into European Russia..." (Brehms Tierleben, l.c. Page 263.) It was already known in antiquity. "In Egypt it occurred during the XII Dynasty (about 2,000 to 1,788 B.C.) and displaced the screw-horn sheep until it dominated the field by the time of the XVIII Dynasty (1580 to 1,380 B.C.). It has maintained itself in the Nile Valley until today... It reached Egypt via Syria and Palestine, where it existed at the time of the patriarchs. It also was an early arrival in Mesopotamia, where it entirely displaced the old Sumerian sheep breed." (L. Adametz, l.c. Page 69 ff.) Starting with the second millenium B.C., Mesopotamian finds show a woolly fat-tail sheep, but with a medium-long tail. (M. Hilzheimer, l.c. Page 190.) Adametz believes that Hittite elements spread the fat-tail sheep together with a short-horned cattle breed (l.c. Page 70); but these were not the only breeds.

The appearance of the horse is also related to these peoples. A Hittite people introduced new cattle, sheep, and goat breeds, as well as the horse. (L. Adametz, l.c. Page 78 f.) The fat-tail sheep is closely connected with the Indo-European peoples.

Where is the likely area of the original domestication of the fat-tail sheep? Was it derived from a wild type? "If we seek to determine the origin of the long-tail wool sheep, we must work largely in the dark for lack of osteological material. Nehring already pointed out that Asia had in the steppe sheep or Arkar an animal that was more easily domesticated than other types of sheep precisely because it was not a highland sheep. Moreover it has a longer tail than the other wild types." (Brehms Tierleben, l.c. Page 264.)

Others -- for example, Adametz -- are more confident in their opinion. "According to the unanimous opinion of zoologists who have studied the origin of the sheep (for example, Conrad Keller and M. Hilzheimer), the fat-tail sheep also originated in *Ovis vignei*, though in another subspecies. Keller assumes the common steppe sheep variety *Ovis vignei* arkar. Both this variety and *Ovis vignei* typica could be regarded as the original form of the fat-tail sheep." (L.c. Page 73.) He even believes he can determine the people that domesticated this steppe sheep. "They were Hittitic peoples, perhaps even the Caspians

themselves." (L.c. Page 73.) If, as mentioned above, such people brought the fat-tail sheep to Mesopotamia and Egypt, this does not necessarily mean that they were the original domesticators. The typical steppe sheep is after all the Arkar, which lives in the trans-Caspian steppes, in the Kopet Dagh Mountains on the Iranian border, and in the Ust-Urt Plateau and descends as far as the Caspian Sea.

But Trans-Caspia and western Turkestan are an old live-stock center, as shown by the finds of Anau I and Shah-Tepe. (O. Menghin, 1931, Page 303 ff.; W. Amschler, 1939; "The domestic sheep may have originated in the Arkar type." (121)). It would be quite possible that the fat-tail sheep was domesticated in that area as a new breed and was then further diffused. Hittitic peoples brought it to Mesopotamia and Egypt. It must have been brought from western Turkestan to eastern Turkestan and farther east by the Indo-European Wu-sun, Sakas, and Tokharians, since it is still found in the old Tokharian area in Kansu. These are the rest of the once widespread breed, which was gradually displaced by the much larger fat-rump sheep.

Its influence is still evident in Mongolia in the fat-tail sheep with medium-long tail and in the area of Tungchow in Shensi in a similar sheep that was introduced by Moslems in Tang times. (Wool Grower, 1943.)

(e) The Small Fat-tail Sheep. The fifth sheep type has a short, fat tail. It is probably a cross between the fat-tail sheep and the fat-rump sheep. I found this type only in the mountains behind Tatsing, Kansu, as far as Sung Shan. The tail reaches almost to the hock and has a wide sweep. The horns of the bucks are almost as small as in the fat-tail sheep. The females usually lack horns. This sheep favors mountains that adjoin the steppe. Its wool is like that of the fat-tail sheep. Its build is somewhat heavier.

A similar sheep type is common among the Hasak (l.c. under Hasa breed). Thus far the Neolithic sheep bones and horns of Tsinghai and China have not been sufficiently studied and we do not know the precise prehistoric breed.

## 5. The Culture of the Shepherders

Sheep raising is of great economic importance. It yields food through mutton, milk, butter, and curd, as well as clothing through its wool and skins. When the nomads migrate from one range to another, the sheep serve as pack animals. Since they must have water at least every other day, they are unable to cross vast arid areas except in the winter when snow supplies the necessary water. The animals then eat the snow and the nomads melt the snow for cooking purposes. In their original stage of development the Tibetans may have been exclusively shepherders before they domesticated cattle. Even nowadays we can find pure sheep and goatherders who have no cattle, for example the Bedouins in Arabia, who because of lack of water are now limited to the border areas. (J. Henninger, 1943, Page 4; A. Musil, 1908, Page 22 ff.) Elsewhere we also find typical sheep and goatherders, for example, the Kurds of Armenia and the shepherders in the mountains of Iran. (G. Buschan,

1923, Vol II, Part 1, Page 401 ff.) The Canary Islands originally had only sheep and goats. In Europe and Africa these animals were raised by the so-called "Ziehbaurnern" [migrating peasants], about whom we shall hear more later. "Originally the Ziehbauern seem to have raised sheep and goats only, and nowadays these animals are almost the only ones that participate in the great migrations." (D. J. Woelfel, 1941, Page 120.) Among the Serbo-Croat herders are pure nomads who raise no crops whatsoever; then there are the Ziehbauern who raise predominantly sheep. In the Sator Planina, for example, the herds include 30,000 sheep, a small number of oxen, and a few horses. (A. Mais, 1947, Page 14 ff., 13 ff., Page 29.) Haberlandt noted the special status of sheep raising as early as 1917. "We are justified in differentiating between an essentially sheepherding culture with primitive living quarters and sheepfolds and a more recent culture of forest-clearing settled peasants with a higher standard of stock raising, a different type of settlement, and domestic woodworking crafts." (A. Haberlandt, 1917, Page 39.)

Even today we can differentiate three main centers of domestication of the domestic sheep: Central Asia, western adjoining parts of Iran, Trans-Caspia and southern Europe (O. Antonius, l.c. Page 226), and perhaps also Africa. The black tent is associated everywhere with these sheep and goatherders. "We have seen that the horizontal frame of the nomads with a long stretched chain is spread in a continuous zone through western Asia, Central Asia, and as far as Tibet. The way of life generally associated with the black tent is the extensive raising of sheep in the steppes." (C. G. Feilberg, l.c., Page 225.)

Sheep raising was practiced throughout the world as early as Neolithic times in Lo-han-t'ang, Ch'i-cha-p'ing (China), Anau I (western Turkestan), on the Selenga in Trans-Baykalia, in Afanas'yev near Minusinsk, Shah Tepe, Iran, at Ur in southern and Tell Halaf in northern Mesopotamia, at Maykop in the northern Caucasus, at El Obeif in Arabia, in Badari, Amrah, Merimde, at Tasa in Egypt, in Syria, in the cave culture of Asia Minor, in the band ceramics, the peat sheep of the pile-dwelling culture, in the younger Koekkenmoeding, the beginning of the northern Neolithic (O. Menghin, 1929, Pages 221, 340, 345, 356, 393, 413), and in Mohenjo-Daro. We thus find the sheep in the early strata of the Neolithic extending from the Far East through Central and western Asia, eastern and western Europe as far as the northern parts. These are domesticated animals. The finds of Mohenjo-Daro, Ur, and Susa indicate an advanced stage of development and a fine grade and good quality of the wool, which in turn presupposes a long previous evolution. A number of sheep breeds were known at that time. For these reasons the beginning of sheep raising must be dated from Mesolithic times.

The ancient origin of sheep raising is also demonstrated by comparative linguistics. The Indo-European collective name for "livestock" is: Sanscrit pasu-, Avestan pasu-, Latin pecu, etc. In view of the fact that "an older meaning for 'sheep' has been preserved in Latin territory (pecora and pecudes, especially for sheep) and Iranian territory (Kurdish pez, Afghan psa, Ossetian fus, 'sheep'), the possibility arises that sheep raising occupied a more important place in ancient times on Indo-European ground than livestock raising in general and that therefore the sheep was the first and oldest domesti-



cated animal of the Indo-Europeans." (O. Schrader, Reallexikon, [Encyclopedia], l.c. Page 286a). Others appear to think likewise. Nehring admits: "On the other hand it seems clear that, on the basis of the development of the meaning of pek'u, the sheep must be regarded as the oldest domesticated animal of the Indo-Europeans." (A. Nehring, 1936, Page 64.) Similar situations are also found among other peoples. "Related words for 'sheep' are found among the Indo-Europeans, as well as among the Semites and the Turko-Tatars, while the situation is not quite clear in the case of the Finns." (O. Schrader, l.c. Page 287b.)

The Tibetan word for sheep is lug. The word for livestock is phyugs. The latter includes all domesticated animals, just as the Indo-European pasu. But it means above all sheep, both words having a common root. Phyug means "wealth" and "rich." The wealth of the nomads lies precisely in their herds. The basic unit for measuring the value of one-year old rams is called lug-tang or lug-tong (lug tan or lug ton). The same word means "sheep price." We shall discuss below a similar example in which "nor" means "wealth" and "cattle." Among the Kirgiz and the Kazakhs, the one-year old sheep, tokto, is also a value unit and the common means of payment. On that basis, Schakir-zade stresses the great importance of sheep raising in the nomad economy. (Tahir Schakir-zade, 1931, Page 109 f.)

<sup>4</sup> Among the A-mdo-pa, as among sheepherding nomad peoples in general, the sheep is an important, often the most important, sacrificial animal. "It is also significant that among the Indo-Europeans the sheep is often called sacrificial animal, kat'exochen." (O. Schrader, l.c. Page 286b.) The same is true of the Indochinese, Altaic, and Hamito-Semitic peoples.

The changes that were brought about by the domestication of the sheep also indicate a long period of domestic breeding. Aside from histological, physiological, and other physical changes, it is the character that has been completely altered. "The sheep shows much more than other domestic animals, with the possible exception of the reindeer, to what extent slavery alters characteristics. The domesticated sheep is but a shadow of the wild sheep, whose mental characteristics it has lost. Wild sheep are second to no other animal with respect to their spirit, watchfulness, courage, and agility. The domesticated sheep, on the other hand, is the most stupid, dull-witted beast imaginable. It is terrified by the weakest opponent and flees head over heels at the most insignificant cause; it is then that it exposes itself to danger. As a result the sheep has become the symbol of stupidity." (Brehms Tierleben, l.c. Page 245.) Such is the symbolization of the sheep. It is not true, however, that this "lamblike and stupid" nature "was inculcated into the domestic sheep by man for utility reasons," as Hilzheimer thinks (l.c. Page 255). The nomads of Tibet, for example, are not familiar with this type of selection. Still, the Tibetan sheep is not different in its "stupidity" from its cousins in Europe, which were bred by selection methods. The degeneration of the superior instincts of the original wild type must therefore be regarded simply as a result of long domestication. The parallel with the reindeer is not quite accurate because the wild reindeer is by far not as shy and fearful as other game and associates easily with man.

There is thus much evidence for the assumption that the sheep is the oldest domesticated animal and that there was originally a specific shepherding culture. Everything seems to indicate that the original domestication took place in western Turkestan. We shall discuss this later in more detail when we compare Asian and European sheep raising.

#### (b) Goat Raising

The goat plays a subordinate role among the nomads of A-mdo. Most of them do not keep any goats, which are usually raised by impoverished nomads. The goats are more numerous in farming areas and among Chinese and Moslems. There are economic reasons for this. Goat meat is not valued. The hair of live goats is not of much use and is processed only into sacks. Goatskins are not used for clothing. The goat is offered in sacrifice only to certain spirits, for example, Dam-can, who rides on a goat buck. The goat is called ra-ma, or ag-thzar; ag-thzom-can, meaning "bearded one"; dri-dzin (dri adzin), "stinking one," kya-kra-can (skyas skra can), "voice of the newborn," wa-phyang (wa aphyan), "hanging crop." The synonyms alone show that the Tibetans do not hold the goat in high esteem. The goat is mentioned among the original animals and is called thze-thze-ngang-mar (thze thze nan dmar), "red-brown goat." Otherwise it plays no substantial role.

A-mdo Tibetans who have adopted farming as a result of the loss of their grazing lands keep a larger number of goats because these animals can be raised on limited grazing space.

Various goat species are greatly intermixed. On of the larger herds may include the following types of horns: saber-like horns such as those of the *Capra aegagrus*, and frequently horns that are completely upright and cross over each other; a complete spiral twisting outward, similar to the *Capra prisca*; also, a variety of screw-like and corkscrew-like horns, recalling *Capra falconeri*. The main characteristic of the *Prisca* goat lies in the fact that the left horn has the shape of a clockwise spiral, while the horn of the *falconeri* has a counter-clockwise spiral. Unfortunately I did not pay attention to this difference. (W. Amschler, 1930, Page 309.) The fur also is of great variety; some goats are very shaggy and have a strong mane, others are less shaggy and do not have a mane, and so forth. There are goats with short, dense, closely-curved hair and others with long hair. They may be white, black, white-and-black, gray, and more rarely reddish brown.

There are a large number of wild goats in Tibet: *Capra kashmirensis*, ra--cu (ra-bcu); *Capra megaceros*, ra-pho-che; *Capra heurdi*, ra-che; *Capra sakeen*, kyin (skyin); *Capra sibirica*, Ogaltsa (G. Sandberg, l.c. 297).

Prehistorically, the goat, together with sheep and cattle, dates from early Neolithic times in A-mdo. It was then domesticated, not wild. (G. Andersson, 1943, Page 43.) In Mesopotamia it occurs at a very early time, just like the sheep. The finds include upright horns, twisted screw-like around an axis, similarly to the *Capra falconeri jerdoni* Hume, which nowadays occurs in the wild state in the Sulaiman

area of Punjab. In addition, there is a type of widely-wound, corkscrew-like horn, similar to that of the *Capra falconeri* Wagn. This horn is very distinct on the magnificent bronze head of Fara (about 2,700 BC). Goats with wide horn windings of the Prisca type also occurred in ancient times and predominated later. Also represented is the saber-like horn, similar to the *Aegagrus* type (M. Hilzheimer, l.c. 197 f.; O. Antonius, 1922, 227 f.). All three goat types were bred in Ur. The Sumerians had an advanced goat raising culture. The form of the "goat buck made of gold, lapis lazuli, and white shells" from the tomb of Queen Schub-ad [Shub-ad] occurs later on in Egypt and nowadays as the *Capra girgentana* in Sicily. (W. Amschler, 1934, Page 874 f.) This indicates its permanence. These three types of domestic goats are also known at Mohenjo-Daro. In this respect, the Indus and Susa cultures are alike. "According to the texts, both sheep and goat wool were made into the finest and most valuable fabrics." (W. Amschler, l.c. Page 874.) They constituted a valuable trading article. Neolithic and prehistoric Egypt knew the screw-horn goat with upright, widely-wound horns and a dwarf goat with short saber-like horns. (L. Adametz, l.c. Page 80 ff.) Adametz derives the Egyptian screw-horn goat from the *falconeri* type, as in the case of the sheep with twisted horizontal horns, assuming the area of domestication to have been Iran and Afghanistan, "the home of the ordinary form of the *Capra falconeri*." (L.c. Page 85.) "Both the sheep and the goat, the two oldest domesticated animals, thus, through the Egyptian and Sumerian breeds, point to an original domestication area in Afghanistan, Baluchistan, and northwest India." (L.c. Page 93.) Just like the A-mdo sheep, the Tibetan screw-horn goat also points to western Central Asia as the area of origin.

The sheep species found in A-mdo, and to a lesser extent the goat species because of their great intermixture, indicate the following peoples to have been the original domesticators.

The Tibetan nomads are the original domesticators of the sheep with horizontal, corkscrew-like horns. Since the original domestication center was in western Central Asia, Afghanistan, and border areas, the A-mdo-pa must have obtained the sheep there.

The fat-tail sheep was probably introduced by the Indo-European Tokharians from Trans-Caspia and western Turkestan.

The domesticators of the fat-rump sheep, the Turko-Mongols, frequently penetrated into the A-mdo region.

The two intermediate stages must be local crossbreeds. Which species in Brehms Tierleben (l.c. Page 268) is designated as the Hunia sheep, whether the corkscrew-like or the smaller type, is not quite clear.

### (c) Yak Raising

#### 1. The Position of the Yak

The yak is the typical cattle of the A-mdo-pa. The ordinary word for cattle is "nor"; beef is nor'sha; cattle herder is nor-

rdzi; nor phyug (nor phugs) is a cattle herd. "Nor" also means: 1. "wealth, property"; 2. "money"; 3. "inheritance." Since the same word is used for "cattle" and "property," it follows that the A-mdo-pa regarded cattle as a measure of wealth and property, as in the case of the sheep. Therefore, nor-phyug means, in addition to cattle herd, property of all types; nor-dag (nor bdag) is a "herd owner," "man of wealth," "heir," "money-changer," "god of wealth." Nor-dpon (nor dpon) has a similar meaning, "master of herds," "rich one." Cattle plays a key role as dowry and wedding gift, also in mythology. The prototype of all cattle is the heavenly cattle, nam-gyi-nor (gnam gyi nor) or yang-kar-nor (gyan-dkar-nor), as in the case of the heavenly sheep. One of the original animals is the Brong-byung-rog-po (abron byun rog po), the "descendant of the wild yak." The cow, which grants all wishes in heaven, is called dod-joi-ba (adod ajo ba). Cattle are the oldest and noblest sacrificial animals.

Synonyms for "cow" are: jo-ma (ajo ma), "the one that can be milked"; o-phel (o aphel), "the milk multiplier"; o-ma-ching (o ma achin), "the milk holder"; zho srung byed (zho srun byed), "the milk keeper"; bab-byed (abab byed), "the one that makes [milk] flow"; yong-jom (yons ajom), "the completely plundered one" (because everything she supplies is used); zhon-ma (bzhon ma), "riding animal"; also in general "milk animal"; nu-gya-ma (nu rgyas ma), "the large-uddered one." The domestic yak is derived from the wild yak.

## 2. The Wild Yak

The wild yak bull is called brong (abron); the cow is brong-bri (abron abri) or rgod-bri (rgod abri); the calf is brong-phrug (abron phrug). The yak is known as *Poephagus grunniens mutus*, because it is said not to have the grunting tone of the domestic yak. However, the yak grunts when it feels good -- this cannot be observed in the wild yak -- or when it is excited, for example, in heat. This grunting is then quite loud and can be heard by man. (N. Przheval'skiy, 1881, Page 409.) The wild yak has thus been incorrectly called *mutus*, the silent one.

Old steers reach a length of 4 meters and a height of 2 meters. The broad, bushy tail hangs down deep. The horn is up to one meter in length. Young animals are deep black, old ones have a brownish shading on the sides. Long black hair hangs down from the underside of the body like a fringe. The cows are much smaller than the bulls; they are 2.5 meters in length and 1.5 meters in height. Their horns are shorter.

The wild yak is found chiefly in the Tibetan highland. In the highest areas, such as the Byang-thang, the animal has an undisturbed El Dorado. Its favored grazing grounds are in the high mountains adjoining south and east, the Koko-chili, Tang-la, Marco Polo, Arka-tag, Burkhan Boda, A-mni-rma-chen, Ba-yan-ka-la, and the intervening high steppes. It also occurs in the Altyn-tag and farther west in the Kun-lun, in the source areas of the Indus and the Brahmaputra and in the Gur-la Mang-da-ta. Farther west it is found in the eastern and southern ranges of the Karakorum. It has also been confirmed by Hedin in the Pamir. It seems to be missing in the Hindu Kush. Northeast of Pamir

it is said to occur occasionally in the Alay and the Tien Shan. (E. Hermens, 1923, Page 18 ff.; A. Rohrer, 1940, Page 17 ff.) At the time when the high mountains were frequented to a lesser extent by the nomads, the wild yak was still more widespread. It was displaced by man and sought refuge in more isolated areas. It was still found 30 years ago along the upper Tatung River and in the A-mni-rma-chen but disappeared after the nomads had occupied its grazing grounds.

### 3. The Domestic Yak

The domestic animal has the following names: pha-yag (pha gyag) or yag-god (gyag rgod), the steer; bri-mo (abri mo), the cow; yag (gyag), the castrated bull. The male cross between an ordinary domestic animal and the yak cow is called dzo (mdzo), and the cow dzo-mo (mdzo mo). The nomads practice only this type of crossbreeding, and keep an ordinary cattle steer for this purpose. Among settled Tibetans and Chinese, ordinary cows are mated only rarely with yak. The resulting crosses, called ga-ru, are poor animals; only the dzo cross is valuable. Amschler says: "The yak bull is said not to mate with ordinary cattle and is not found in cattle herds. This could not be verified, but if true would contradict the observations made by Luss in Kazakhstan." (W. Amschler, 1932, Page 18.) Luss was correct. I saw a number of crosses of yak bulls and domestic cows, as well as crossed cows that had been fertile and had calved. Since many travelers do not differentiate exactly between types of crossbreeding, there are many contradictions with regard to crossbreeding possibilities and identification of the type of cross. Forsyth reports that the cross between the yak and the ordinary cow is "a very valuable animal" among the Kirgiz. (T. D. Forsyth, 1877, Page 66.) According to Radde, the cross is called "khayluk" among the Uryankhay and the Darkhats and "khoynok" farther west. (G. Radde, 1862, Page 270 ff.) The cross between a yak cow and an ordinary steer is called Toymok in the eastern Saya (l.c.). According to Przheval'skiy, the Tanguts call these animals "khaynyk," a name that agrees with "khayluk" and "khoynok." These animals are supposed to be stronger, full of endurance, and more valuable (N. Przheval'skiy, 1877, Page 343). Huc reports that among the Hsi-fan these crossed calves are called Gar-ba, but this is undoubtedly a reference to the Ga-ru, which are soon slaughtered and do not mature. (Huc and Gabet, 1867, Page 225.) Leimbach says it is not quite clear whether calves of the crossed yak cow do at all mature. (W. Leimbach, 1936, Page 70.) According to Hermans they are slaughtered at an early age. (E. Hermens, 1923, Page 15.) These contradictions arose because of inexact observation and insufficient background knowledge. The designations of the A-mdo-pa do not appear to agree with those used in western Tibet. Jaeschke calls the bri-dzo "bastard of bull and yak" (l.c. Page 401), the dzo "mongrel-breed of the yak-bull and common cow" (l.c. Page 463), and he terms "both valued as domestic cattle." (L.c.) Das uses the same designation. (L.c. Page 1051.) Cows of both crosses, both the Dzo-mo and the Ga-ru, are fertile and yield more milk, though poorer in fat content, than the Bri. The calves of these crossed cows, however, are rather poor and are not worth much. For that reason they are slaughtered at the age of one or one and a half. As a result there is no crossbreeding of high degrees. I cannot say whether the Dzo and Ga-ru steers are fertile since the young steers are

always castrated, not being used for further breeding. I was assured that they are as fertile as the cows but that the offspring is not worth much. Amschler was told the contrary by herders in the Siberian Altay, who told him that the yak mongrels were completely sterile (l.c. Page 28). In view of the fact that all these crosses are either slaughtered or castrated and the calves of the female crosses are slaughtered in any case, we cannot check whether these mongrels are actually sterile, while the cows are all fertile. I encountered only one case where the mongrel calves were not slaughtered. The children of a family had all died. The lama asked the oracle and decided: "Your children die because you kill the mongrel calves. If you will stop killing those animals, your children will remain alive." As a result these people had to keep the useless animals alive and complained to me about this. I advised them to kill the calves. Antonius wrote: "The mongrels of cattle and zebu seem to be raised occasionally, but the male bastards are all sterile; the females on the other hand seem to be fertile as a rule but are not used for further breeding." (L.c. Page 154.)

Crosses between the yak cow and the domestic bull are virtually the only ones undertaken in A-mdo. All the resulting cows are fertile, valuable animals. The mongrel oxen make better pack animals than the yak. Since the calves of these mongrels are not used for further breeding, the breeding of the yak remains pure and is not bastardized.

#### 4. The Yak as an Economic Animal

The yak is extremely useful to the A-mdo nomads. It serves as a pack and riding animal. Since the nomads are not familiar with the wheeled cart, the yak is not harnessed. The settled Tibetans and the Chinese are likely to use the Dzo for pulling carts and plowing because it is stronger, more pliable and willing. It can moreover endure the warmer temperatures of lower areas where crops are raised, which the yak cannot. The cows yield good milk with high fat content. Its fat globules are much larger than in any other cow milk. Since the nomads are not able to increase the milk yield, being entirely unfamiliar with selection procedures, the animals are left largely to their own resources and do not produce much milk. The best cows yield about 8 liters, the Dzo cows more, and the Bri cows less. The average daily yield is about 5 liters. Milk production starts at calving time, which is during May and June among the nomads of the high steppes and March-April in the crop raising areas, and continues for about 9 months. Since the yak cows are very fertile, they yield milk up to the age of 15. Yak cows with 17 calves are not uncommon. (In the Tibetan names for yak the letter g is used as final consonant for proper transcription; otherwise the conventional spelling has been retained.)

The udder of the large animals is small and has four short and thin teats. The milking takes place twice a day, in the morning before the animals are driven out to pasture and in the evening after their return. The suckling calves do not accompany their mothers to the pasture and are kept near the tents. The calves are usually tied to pegs near the tents at regular intervals. Upon her return the cow usually runs toward her calf. However, the cow is tied up nearby so that the



calf cannot reach her. The calf is freed for a short time so that it can suckle. It is then tied up once again and milking starts. Without prior suckling the cow holds the milk back. She is not milked dry and the rest of the milk is again suckled by the calf. The calves cannot be raised if they are not permitted to suckle.

If a calf dies and the poorer nomads still want to continue milking the cow, they stuff the skin of the calf and place it near the cow, which will then lick the skin as if the calf were alive. Before milking the skin is then pushed a number of times against the udder. The cow thus deceived no longer holds back the milk and can be milked.

The milk maid always approaches the right side of the cow with her left side, facing the head of the animal and keeping her left hand on the thigh of the cow. The wooden milk pail is attached to the hook that hangs down along the left thigh of the maid. This method of milking the cow on her right side is common throughout Eurasia, including Central, eastern and northern Asia, India, and Europe. In the Middle East and in Africa cows are milked on the left side and from behind. This type has been introduced by the Kirgiz into Central Asia. (Private communication from W. Amschler.)

The hair of the yak must not be cut; it is plucked. This is done once a year, as in the case of sheep shearing. The hair is spun into yarn and is then worked into tent coverings, sacks and rope. The calves of mongrels are the only ones slaughtered. Otherwise, the nomad slaughterers only old animals that have served their purpose. All the meat is consumed. The skins are also processed, with the best parts made into shoe leather, and the others cut into strips to serve as rope. The skins are also used to make sacks, boats, or rafts. Skins that are not used domestically are sold. The horns are also utilized. The bushy tail is sold as a dust broom. Formerly it was regarded among some peoples as a special mark of distinction. This will be discussed below. It is known as nga-yab (rna yab), literally "father of tails." A yak tail is attached to the holy pole in the tent together with the dar-bang (dar ban). Surplus animals are sold for slaughter or, especially in the case of the Dzo, for other purposes. They usually cost twice or three times as much as ordinary cattle.

## 5. The Yak-Raising Problem

### (a) Differences Between the Wild Yak and the Domestic Yak.

The domestic yak differs in some respects from the wild yak. Its body is smaller; so are the horns, which however still maintain their regular curve. They begin on the forehead, curving first sideways and backward and then up and forward. Externally the domestic yak looks as follows. Its size varies regionally, depending on its nourishment. I am unable to provide detailed data as the measurements taken by me are not at hand. One can find mighty yak bulls standing 150 to 170 centimeters or more in height at the withers.

In its build, the yak appears very powerful and heavy-set. Yet

it is very agile and quick. It can race down steep slopes. It enjoys climbing steep ridges. The withers form a pronounced hump from which the back arches downward and runs almost level to the croup, which is short and drops abruptly. The neck has a wide base and becomes narrow toward the head. Characteristic head features are the short-broad forehead and the long-pointed face. The regularly curved horn is like that of the wild yak. Only mongrels have altered horn forms. There are also quite a few yak without horns. The short, strong legs are regular with straight pasterns. The rear legs are not bent inward and do not sway as much as in the case of cattle.

The hair coat is like that of the wild yak. The steers have a dense, heavy shock of hair on their forehead. Cows have it only occasionally. The lower jaw has a beard-like tuft of hair. The most remarkable is the hairy, bulky coat that envelops the body. The long hair covers the breast starting at the breastbone, the front legs up to the shoulders, dropping down deep around the legs and covering them like a hairy dress. The hind legs are similarly covered. Behind the elbows the body hair starts somewhat lower, rising to the knee and reaching on the hind thighs as far as the root of the tail. The chief ornament is the long bushy tail, which often reaches to the ground. A short, thick mane often extends from the withers to the head.

The rest of the body is covered with thick, short hair. The underside of the body is not very hairy. In spite of its thickness, the hair is soft and silken and has a metallic gloss.

The color varies from steely black to velvet black to blackish brown. White yak are found especially near the Tatung River. Silver-gray is a more unusual color. I saw virtually no pale yellow, reddish, or brown. Piebalds occur in many forms, including booted legs, white tail, white spot on forehead, light-colored, or entirely white head. The mouth is usually dark slate-gray. Greater variety exists of course among the mongrels. The Dzo can usually be recognized by the form of the horns, which are no longer curved regularly, and by the tail, which is not as bushy in its upper part.

The skull of the domestic yak also differs from that of the wild yak. It is quite short, especially in the face section. Although occasionally yak cows are still mated with wild bulls -- this was much more common in the past when the wild type was more widespread -- these changes in the physical appearance of the domestic yak show that the animals must have been domesticated a long time ago. (Cf. O. Antonius, l.c. Page 522 f.; W. Amschler, 1932, Page 18 ff.) Amschler is also of the opinion that yak raising is an ancient and primitive form of animal husbandry. (Private communication.)

Though the animal looks heavy and sluggish, it is an agile mountain climber with its large cleft hooves, climbs the steepest slopes, wanders with assurance over narrow ridges, and races down steep slopes. It can carry 100 to 150 kilograms without difficulty along the narrowest mountain paths.

### (b) The Yak, a Highland Animal of the Temperate Zone

The yak is a characteristic highland animal. It seeks the cold and avoids warmth. It feels most at home in A-mdoat elevations of 2,500 meters and higher. The more southerly and the warmer it gets, the higher the yak climbs to find its favored conditions; the more northerly and the cooler it gets, the lower it can descend. But even in the most northerly areas, for example, Tuva, it does not descend below 1,000 meters. Under unfavorable climatic conditions, the animal degenerates rapidly. In the experimental yak raising station of the northern Altay, for example, the effect of the climate (elevation 600 meters, moist ground, and watery food) is to render the hair shorter and feltlike. (W. Amschler, l.c., Figures 2, 3, 5.) The greatest altitudes, stormy winds, snow drifts, and biting cold are of no consequence. The animal avoids warmth, seeking cool gorges and shady slopes, and stands for hours in ice-cold mountain torrents and snow banks. The oblique nostrils, the windpipe, and the lungs of the yak are adapted to the thin highland air. For these reasons it does not feel at home at lower elevations, even when the climate is cool due to northerly location.

Then there is the problem of nourishment. The highlands have specific weeds and grasses to which the animal is accustomed. We noted the same situation with regard to the Tibetan sheep. Once this type of nourishment is missing, the animal no longer thrives. (Cf. the picture of the yak in the Schoenbrunn Zoo, O. Antonius, l.c., Page 152, for a degenerated form caused by an unsuitable environment.) The yak is a typical highland animal of the temperate zone. This is also indicated by its distribution.

### (c) The Distribution of the Domestic Yak

The domestic yak is distributed throughout Tibet, within the area's old geographic meaning. In the east it extends beyond the Chinese province of Kansu to the Ala Shan of Inner Mongolia north of Ningsia, capital of the province of the same name, and even farther east. (N. Przheval'skiy, 1884, Page 252.) This mountain range and the eastern outlier of the Nan Shan, the Sung Shan, are separated by the sandy desert of Chungwei. The yak can pass through this area in the winter only. Except for the Ala Shan, the Ch'i-lien Shan and Nan Shan make up the northeastern limit of distribution.

In the east the limit follows the lower and middle course of the Tao Ho, from Minchow south to Siku and Wen, then to the southwest, south of Sungpan, to Mao, Wu, Lifan, Mopin, and into the Tatsienlu area. (A. Tafel, 1914, Vol II, Page 139 ff., Page 212 ff.)

In the south, the animal is found throughout Sikang Province, the old Tibetan Kham, even among non-Tibetans, such as the Lolo and the Miao. (W. Eberhard, 1942, a. 86, 89, 90, 92, 103, 129, 146.) The animal is also raised in the southwestern and western neighboring states, such as the Himalayan mountain states of Bhutan, Sikkim, Nepal, Kanawar, Kulu, Lahul, Spiti, Rupshu, and La-dag. In these areas, the yak makes up most of the livestock holdings and most of the property

of the population. (G. Sandberg, l.c. Page 303.) The yak is raised by the Hunias along the upper course of the Sotlej, in the area south of Gar-tog, and by the Sho-kha, the southern neighbors of the Hunias, who live in settlements on the southern slopes of the Himalayas. (A. S. Landor, 1898, Page 93 ff.) The situation is similar in the other countries. In the border area of Sikkim... [original interrupted at this point].

[Pages 119-122]

## 6. The Yak Tail Banner

Chinese sources picture the Tibetans as typical yak herders. (Hou Han-shu [Annals of the Late Han Dynasty], c. 117; Hsueh-shu, c. 83; Chu t'ang-shu, c. 196.) The ancient Chinese mention a military banner and rank designation "mao," which consisted of a yak tail and was much used by the Chinese military (Shu-ching, mu-che; she-ching, pei-feng). This type of banner also played a special role in a yak tail dance (Chou-li, ch'un-kuan, Biot, 1851, II. 41). The yak tail was an imperial cart banner as late as the Han period. It was attached to the head of the left imperial cart horse. (H. H. Dubs, 1938, Vol I, Page 85, Note 1.) In this context, however, it is called "t'u" rather than "mao." This is regarded as a Turkic word, since the old Turks called their yak-tail flag "tug." The Chinese are said to have adopted this word and designated the Turkic yak banner as "t'u." (Hou Wei-shu in T'a-p'ing-yu-lan [Emperor's Record], 909, 2b; T'u-tuan in T'a-P'ing-yu-lan, 681, 1b.) The Chinese t'u and the Turkic tug are thus alike. The Mongols also had a yak tail banner, which they called tugh. (Yuan-ch'ou-pi-she, c. 170.)

Subsequently the yak tail banner was replaced by cloth in China, but the Turks retained the original form. The Osmanli Turks substituted a horse tail for the yak tail of the Central Asian Turks. This standard served as a designation of military rank. One to nine tug were used in accordance with the rank. The Osmanli Turks retained the old term used by the old Turkic tribes, the Chinese, and the Mongols. However, both the banner and the designation originated in Tibet.

The Tibetans have a ba-dan. This expression refers to the yak hair attached to the lance point. A lance thus decorated assumed the significance of a banner and ba-dan-dzin-pa (ba dan adzin pa) means banner bearer. Such lances are found next to guardian spirits in lama temples. A similar yak-hair ornament is attached to the handle of the magic dagger phur-bu. The latter is usually wooden and three-edged. It is the weapon used to defeat demons, the "sign of victory" over demonic powers. For that reason, the term ba-dan is also used to designate an "upright dagger," which accompanies the appearance of spirits.

When media are obsessed by spirits, they hold in their hands a 2-meter long arrow or a lance, both of which are decorated with yak hair. There is still another word for victory banner, namely gyal-mthzan (rgyal mthzan); gyal = victory; thzan = sign; in other words, sign of victory. In the old Bon cult, a yak tail or a bunch of yak

hair is attached to a rod or pole. The Lamaists also make much use of these victory signs. However, they replace the hair with fabrics in five colors. These victory banners stand in front of the palaces of incarnations, in front of administrative buildings of the lamasery and in front of temples, as well as on the roofs of temples. A number of deities hold this type of banner in their right hand, for example, the guardian of wealth Nam-sra (rnam sras). This banner may not stand in front of the dwellings of ordinary monks, no matter how well-to-do or rich they may be. This sign is not to be confused with the pole placed in front of tents and also decorated with yak hair, which is related to the holy pole.

A third name is "dug" (gdugs). This is a canopy of honor that precedes the incarnations in a procession. It is now being made of yellow silk. Formerly it was also a yak hair banner. In the expression dug-dang-gyal-thzan-dang-ba-dang-greng (gdugs dan rygal mthzan dan ba dan bsgren), "to raise the banner of honor, the banner of victory, and the standards" (DL, 660), all three words are used almost as synonyms. In any case, they had the same meaning originally and were differentiated subsequently.

The Tibetan dug is thus identical with the Turkic tug, the Mongolian tugh and the Chinese t'u with regard to word root, original meaning, and the designated article. All forms mean "banner of honor made of yak hair." Even the form of the Turkish horsetail with the rounded point resembles the Tibetan yak tail sign of victory. (Cf. Der Grosse Brockhaus [The Great Brockhaus], 1934, Vol XIX, Page 167, figure.)

In ancient India the yak tail also functioned as a royal banner of honor. This shows how far the custom spread.

We have still another parallel. A yak tail alone or together with strips of cloth is attached to a pole and set up on the roof of dwellings of settled Tibetans or lamaseries. This sign is called thug-nga (thug rna). We thus have another "thug." It literally means "yak tail." Originally "thug" had the meaning "virile, manly," in other words, it did not refer to the castrated animal. In this case, "thug" means yak and "nga" means tail.

Yak tails are also attached to the poles of the Lab-tse (Mongolian Obo). These large stone heaps are found on mountain passes and peaks and hold poles decorated with yak tails, sheep wool, and prayer flags. These places are used for offerings to the guardian spirits zhi-bdag (gzhi bdag), which protect persons and livestock against illness, accidents, and other calamities. On the great pass (elevation: 5,400 meters) near the snow-capped mountain A-mni-rm-chen, I saw that instead of the pole the skull of a wild yak had been placed on the stone heap. This Obo cult is very common in Mongolia. It reaches from Asia as far as Africa *and even in Japan in Mt. Fuji*

It is interesting to note that the Kara-Kirgiz, who are now Moslems, erect such stone heaps with yak tail poles on the graves of dead notables. (Cf. G. Buschan, 1923, Vol II, Part I, Page 360, Figure 224.) In Tibet such a pile would be taken for a Lab-tse set up by Tibetans.

Even when the Kara-Kirgiz set up a grave according to Moslem custom, they select a high point for that purpose. "Next to the grave a long pole with a white or red flag or even with a yak or horse tail is stuck into the ground as a sign of distinction." (F. Schwarz, 1900, Page 120.) The Turkic people of Turfan and Khotan also attach yak and horse tails to holy tombs (E. Krohn, 1931, 299 f.). Among the Turks, the horsetail frequently replaces the yak tail. It should be noted that these customs refer to the Kirgiz-Kaysaks and the Sarts of eastern and western Turkestan, who no longer have any contact with the Tibetans.

Among the Tibetans, the yak tail was used as a banner and a designation of rank. The Turko-Mongols and the Chinese adopted this custom from the Tibetans, as shown by the common words "dug," "tug," "t'u," and "tugh." We said before that the yak tail is called "father of tails." All this shows the great significance and respect attached to this article.

The oldest known representation of the yak in the Near East is probably the one on the black obelisk of Salmanassar III (859-824). Aelian reports that this animal was hunted in India because the women there liked to braid the tail hair into their own hair. The same custom is still found in Tibet. But the yak hair is usually used by the shamans, who must have long braids.

In order to obtain the proper understanding of the yak raising culture of the A-mdo-pa, we shall now compare it to the cattle raising of neighboring areas.

[Pages 161-171]

### (g) Horse Raising among the A-mdo-pa

#### 1. Names of the Horse

The general word for horse is rta or rta-po. The stallion is called rta-seb (rta gseb), the gelding rta-po, the mare rgod-ma, the colt rteu, rta-phrug, rte-thur, thu-ru, rta-sar (rta gsar) is a young animal, less than 4 years old, that has not been broken in. There are the following synonyms: rnga-yab-jug-ma-can (rna yab mjug ma can), "yak tail owner" (because of the similarity of yak and horse tails); rlung-gi-shing-rta (rlun gi shin rta), "wind vehicle" (because of its speed); rlung-las-kyes (rlun las skyes), "wind-born" (because it is fast like the wind); mgyog-gro (mgyogs agro), "racer"; myur-gro (myur agro), "charger"; dren-byen (adren byen), "leader"; blo-sal (blo gsal), "the generous one"; pal-gyi-bu (dpal gyi bu), "child of fortune"; mchod-byin-phyug (mchod spyin phyugs), "sacrificial animal." All these designations show the high regard in which the horse is held among the A-mdo-pa. It is their noblest animal, to which they are especially devoted.

## 2. Equus Kyang

A kind of wild horse is called kyang (rkyan) by the A-mdo-pa. This is not a wild ass, as is frequently stated, but belongs to the equines and is a close relative of the true wild horse. It is called *Equus kyang* and resembles a mule. Its body is light brown, its stomach and legs are white. The upright mane is blackish. A black stripe extends along the back to the tail. Its head is large and has a domed forehead. Its neck is moderately long and thick. The animals are quick, rather curious, and follow travelers at a measured distance. They live in packs of varying size. Their neigh, jerky and dull, has somewhat of a snoring sound. It is not the cry of an ass, but true neighing. The animal greatly resembles the wild horse. The Tibetans regard it as such, since they are not familiar with any other type. The Chinese also call it ya-ma, "wild horse." The animals are found in the mountains and on high ridges, but do not descend into the lower steppes of the eastern Turkestan basin.

Their relative in the lower steppes north, west, and southwest of Tibet is the Kulang (*Equus hemionus* Pall.). This animal is smaller than its Tibetan cousin and has a less glossy coat. During Quaternary times, this breed was distributed as far as western Europe, where its bones have been found in association with other ice-age animals. In a Swiss drawing near Schaffhausen, ice-age hunters have represented the image of this animal. (O. Antonius, l.c., Page 8, figure 17.) Hunters of the Ordos and Gobi steppes pursued it during the Upper Pleistocene. (P. Teilhard, 1944, Page 34.) The onager of the Near East is part of the same group.

Present-day Tibetans are not familiar with the true wild horse. However, the Mongols of the Tsai-dam do know it as it occurs in the western Tsai-dam, having migrated from the Lop-nor. The Mongols call them dserlik adu, "wild herd" (*Equus ferus* Pall. or *Equus przewalskii* Polj.). This animal is common in eastern Turkestan, but is rarely seen because of its shyness.

The Tibetans call the first horses of creation kyang-byung-khakar (rkyan byun kha dkar), "kyang offspring white mouth." The mythical horse of the hero Ge-sar is called kyang-byung-yer-pa (rkyan byun yer pa), "pure kyang offspring." This designation implies that the domesticated horse is a descendant of the wild horse. The Tibetans believe it originated in the kyang because they regard this animal as the true wild horse (Figure 4).

## 3. The Quality of the Horse

The Tibetans are great lovers of horses. The quality of the animals is based on color, pace, and speed. The following color scale is in use: black, blackish brown, brown, chestnut, bay, gray, skewbald, and so forth. The color scale is quite varied, with each color having its proper designation. The gray is not regarded very highly and the skewbald is at the bottom of the scale. Except in the black and the gray, both mane and tail are usually of another color. Some animals are mouse gray and iron gray. Some have a black stripe

down the back to the tail as well as shoulder and leg stripes. The mane and tail are dark. The feet must be of the same color. Four white feet are just about acceptable. Otherwise, the animals are less valued.

Only gaited horses are regarded very highly. The preferred gait is a soft springy amble produced when the animal has springy fetlock joints and an arched back. In pacing, the animals move first the right legs then the left legs in lateral pairs. In the other gait, the right front leg and the left rear leg are moved at the same time. The gait is smooth, does not jolt, and is not tiring on long trips. Some animals pace by nature, others must be broken in. Some never learn how to pace. There is a long and a short amble. In the long amble the legs are set very wide. This gait is used in the popular races, but the racer may not change from amble to gallopp. If this happens, the rider is disqualified. In the short amble the step is shorter. This gait is used for long distances.

#### 4. The Status of the Horse

Originally the horse was not offered in sacrifice. According to legend the Bon came to Tibet to undertake pompous burial ceremonies for dead notables and offered bay horses in sacrifice. Such offerings were not known previously. Nowadays a horse is offered merely by being set free for ever, being marked by means of multicolored cloth strips attached to mane and tail. It may no longer be used for riding and is called thze-dar, "life prolonger".

The horse is used both for riding and for carrying packs. Carts are not used in the mountain areas. These nomads do not need any carts. Nor are carts used in many areas inhabited by sedentary Tibetans, though the Chinese use them.

The Tibetans are not permitted to kill a horse, not even a very old horse. It must die a natural death. They eat no horse meat and shudder with disgust when told that such meat is consumed by the Mongols and the Chinese. The mares are not milked. Skins of dead animals may not be utilized. In this respect the Tibetans are in sharp contrast to the Turko-Mongols, who use every part of the horse. The reply to my frequent questions as to why they made no use of the horse was: "The horse is our best friend. We ride it as long as it lives and it accompanies us like a faithful servant. How can we make use of our friend after death and abuse this friendship?" Consequently the horse enjoys a certain taboo status. Horses are no longer sacrificed during burials; instead through the influence of Lamaism, the riding horse of the deceased is given to the lama, who is asked to pray for the master. The horse must be withdrawn from profane use and serve only for a "holy" purpose, i.e., rebirth. I was told that in ancient times upon the death of a chieftain, his horse was saddled and hitched to a post so that it would die for lack of food and drink and follow its master to the other world.



## 5. Horse Breeds

### (a) The A-mdo Pony

The horses of the A-mdo-pa are noted throughout Tibet and China and are traded throughout a wide area. Each year horse merchants arrive from central Tibet, the southeastern areas, and China to purchase animals. The best horses are raised by the Sem-nyid tribe along the lower Tatung River and south of the Yellow River. These horses can be recognized in their more delicate head and longer ears. The A-mdo horses are valued especially for their endurance in mountain climbing. They are excellent climbers and attempt the steepest rocky slopes. They are made for the mountain areas. This is indicated by their long domestication. In contrast, the horses of the Tsai-dam Mongols are actually despised. They are entirely adjusted to the steppe and swampy terrain and have no endurance. The horses of the eastern Mongols are somewhat better. The Tibetan pony can endure the cold and suffers from the warmth of lower areas.

The high mountains of Pamir and the bordering areas have a small mountain horse identical with the Tibetan pony. It is raised almost entirely by the Kara-Kirgiz, a typical mountain people, settled on the northern slopes of the Kunlun, the western and eastern slopes of the Pamir system, in the Alay, and in the Tien Shan. Their horses, "small in stature, of very low-set build, and with strong feet, have great endurance at high altitudes where ordinary horses are handicapped by the rarefied air and are unbelievably trained and sure in mountain climbing." (F. Schwarz, l.c. Page 69.) This mountain horse of the Kara-Kirgiz recalls the characteristics of the yak. The tribes of this people, which live at high elevations, "prefer oxen and yak" as riding and pack animals (l.c. Page 127). This type of horse, as well as the yak, are also found in the eastern part of Afghanistan (G. Buschan, 1922-26, Vol II, Part I, Page 413.) It follows that the Tibetan pony is a typical highland horse occurring wherever the yak is found. Schwarz believes that this breed "developed from the Kirgiz horse in view of its constant life in the mountains." (L.c. Page 69.)

In view of the wide distribution of the pony from Pamir through Tibet and into China, it could not have resulted from the adaptation of the Kirgiz horse to mountain conditions. Antonius believes that it derives from a cross with the tarpan. The tarpan was most probably introduced into Central Asia by the eastern Indo-Europeans, including Tibet, where the Yuo-che were settled, especially after the ouster of the Hsiung-nu. However, since we know from Chinese sources that the small Tibetan horse is a very old breed that has been adjusted to the highlands for thousands of years, we must regard the pony as a local breed that developed in the highlands of Central Asia (Pamir, Hindu Kush, Tibet). The present Tibetan pony is no longer a pure-bred and occurs in many varieties. Although there are a number of crosses, specific types can be recognized.

Three main types can be recognized in the shape of the skull.

## 1. The Przheval'skiy Type

This type is well-built, thick-set, and rather low because of its short legs. It has a coarse-boned head with a long jaw section. The cheekbones are rounded rather than sharp-edged. While running, the animal always keeps its head hanging low. The ears are short. Chestnuts are often found on all four legs. In its pure form, this animal represents the true Tibetan pony and is very closely related to the Asian wild horse *Equus ferus* Pall or *przewalskii*. The latter "is a small animal, about 1.30 meters high at the shoulders, strongly built, rather low-set, with a large head of medium width and a long mouth section that usually hangs low while the animal moves, a short upright or half-hanging mane without a forelock and with a long tail that is hair-covered almost up to its root; chestnuts are found on all four legs." (O. Antonius, 1922, Page 252.) These wild horses have been pushed into marginal areas and have been greatly decimated. They occur in three color types that are otherwise identical. Inbreeding has probably resulted in this type and it can be assumed that under former more favorable conditions these animals were far more dignified. "Perhaps we should regard these animals as the degenerated descendants of larger ancestors; this would be indicated by the disproportionate size of the jaws." (O. Antonius, l.c. Page 254.) The identity of the two horse types thus consists of the coarse head with long jaws and rounded cheekbones, the four chestnuts, and the short legs (Figures 6 and 7).

## 2. The Turko-Mongolian Type

The second type resembles the first one in many respects and differs only in its shorter jaws and the absence of chestnuts on its hind legs. As a result it resembles the Kirgiz and Mongolian horses in eastern Turkestan and Mongolia. However, the Turkestan horses, in particular, are larger, heavier, and higher. Amschler relates these Kirgiz and Kalmuck horses to the tarpan type. (W. Amschler, 1933, Page 387.) Similarly the horses that have been identified prehistorically in the Altay and the Sayans from 2,000 to 500 B. C. "also belong to the same type." (L.c. Page 386.) Tarpan blood is thus said to have been brought into the Central Asian highlands and farther east into A-mdo through this short-jawed Turko-Mongolian horse.

The similarity between the tarpan and the Turko-Mongolian domestic horse is also demonstrated by the Russian Rumyantsev (2--3, 427) and the Swede Lundholm (1947, 161). Both types have the same lower jaw, broad forehead, short jaws, and chestnuts on the forelegs. But Rumyantsev finds much agreement between the Turko-Mongolian and the Przheval'skiy types insofar as body proportions are concerned. On the basis of age profiles he shows that "neotenia increases from Mongolia toward the southwest, where the type approaches the noble Oriental horse. The plump, coarse Mongolian horse thus passes into the graceful Arab." (B. Lundholm, l.c. Page 164.) He concludes that the northern Turko-Mongolian was derived from postglacial horses, of which the tarpan was the last type." The southern Arab horse is related to "a mountain horse that lived in Iran." (L.c. Page 164.) However, Lundholm regards it as "more probably that both types had a common

origin" in the tarpan (l.c. Page 165.) Antonius (l.c. Page 283) also related the Arab horse to the tarpan. In view of the fact that the Turko-Mongolian horse greatly resembles the Przheval'skiy horse in body proportions, it is most likely a cross between the latter and the tarpan.

Comparison is made much easier on the basis of living animals than on the basis of bone finds. Hilzheimer cautions therefore that "single bones, parts of skulls, or perhaps single teeth, even entire rows of teeth, are not sufficient to determine the type of equine. This requires whole skeletons, since not even entire skulls suffice for this purpose." (L.c. Page 109.) For complete certainty, this skeleton must also be encased in flesh. That is no longer possible in wild forms, except for the Przheval'skiy horse. We have reliable descriptions of the extinct tarpan, which give us an accurate picture, as we shall discuss further below. We can thus assume that both the Przeval'skiy and the tarpan are represented in the Turko-Mongolian horse.

### 3. The Tarpan Type

A third variety is a slight, slim build with high legs. It has a more delicate, short-jawed head and longer ears. The hind legs have no chestnuts. This variety is found especially along the Tatung River among the Sem-nyid tribes and south of the Yellow River. It is unmistakably related to the tarpan. This animal "was far nobler in the hoppologic sense, with higher and thinner legs, and a more erect head. The head, with its short, high jaw section, differed quite markedly from the heavy, long-jawed *Equus ferus*." (O. Antonius, l.c. Page 258; cf. Figures 121, 260, and M. Hilzheimer, l.c. Figure 43, Page 110.) The somewhat arched forehead produces a "concave profile." The back and the loin sections are longer, the rump slighter. Chestnuts are found only on the forelegs. The tarpan type is rare among the A-mdo ponies, the Przheval'skiy type is more common. The most numerous is the Turko-Mongolian mixed type, which most likely originated in a cross of the first two. However, all three types are ponies. Consequently the A-mdo horses appear far more uniform than, say, the horses of Turkestan, which Schwarz differentiates in the following manner: Turkmen, Argamak, Kirgiz, Karabair, mountain, Kashgar, and Kalmuch horses (Figure 5).

The Przeval'skiy horse, moreover, was formerly more widespread, especially toward the west. "In the steppe period of the recent Quaternary time, horses of the *Equus ferus* form were also found in Europe, at times in large numbers... It follows that the wild horse of the *Equus ferus* type can be regarded as characteristic of the steppes of the postglacial period." (O. Antonius, l.c. Page 254 f.) The horse skull found in a peat bog on the southern Bug has Przheval'skiy characteristics. (B. Lundholm, l.c. Page 166.) Antonius regards it "as possible but not definite that this animal long survived in Hungary, for example." (L.c. Page 255f.) We still lack sufficient data on the various retreat stages. Under these conditions it would have been surprising if the Przheval'skiy horse had not been domesticated. The representatives of this type among the A-mdo horses clearly indicate this and therefore "the tarpan

could not have been the sole origin of the Asian domestic horse," as Lundholm would have it (l.c. Page 167), but shared that role with the Przeval'skiy horse. As a matter of fact a number of heavy European horses could be descendants of the Przeval'skiy horse.

We have of course no way of knowing which of these wild horse types was the first to be domesticated and therefore we cannot infer the first area of domestication from the distribution of the various types. Anyway the horse is not the oldest domestic animal. Cattle sheep, goats, camels, asses, and the onager were domesticated earlier, as shown by prehistoric finds. The breeding experience acquired with these animals could have been applied to wild horses at various times and in various areas. We will show later on that the typical horsebreeding culture probably originated in western Central Asia.

#### 4. Horse Types and their Relation to Peoples

Can the various horse types found among the A-mdo ponies be related to specific peoples? We noted in the discussion of the domestic horse that the tarpan type is connected with the Indo-Europeans. (O. Antonius, l.c. Page 279 f.) The area of distribution of this type coincides with the distribution of the Indo-Europeans. (l.c. Page 281 ff.) The tarpan moved in the wild state as far as western Asia. (L.c. Page 277.) Which people was the first to domesticate the animal cannot be determined. It was probably not the Indo-Europeans, who, it was noted above, were originally sheep and cattle herders and adopted the horse much later. However, they must have adopted the horse before their division because the designation for horse is uniform in all Indo-European languages (O. Schrader, Reallexikon, Vol II 170b.) The Indo-European eastern group, including the Tokharians and related peoples, introduced this horse type in eastern Turkestan and farther east. In addition to Brachyceros cattle and the fat-tail sheep, the Indo-Europeans thus introduced a third domestic animal in the east, the tarpan-type horse. We have frequently observed how heavily tarpan blood is recognizable in the Tibetan Turko-Mongolian horses.

In contrast to this delicate type, we also discussed the Przeval'skiy horse, which is still found pure-bred among the A-mdo ponies. We said before that the wild Przeval'skiy horse was formerly distributed farther toward the west. It was also far more common in the east, as we will show below on the basis of Chinese sources. We can hardly assume that in addition to this wild horse there existed another one in eastern Asia that became extinct. Since earliest times the Tibetan horse has been described as small, in relation to other horses. It is a typical mountain horse that has been adjusted to its environment for a long time. In view of the fact that it is found chiefly in the highlands of Hindu Kush, Pamir, and Tibet -- areas formerly frequented by the wild Przeval'skiy horse -- we can assume that the original domestication occurred in one of these areas. This was probably not done by the A-mdo-pa, who were not horse breeders originally. The A-mdo-pa, adopted the horse, but not from the Indo-Europeans who raised the tarpan type. Nor could they have obtained the horse from the Turko-Mongols who have large horses similar to the tarpan, even though they also have Przeval'skiy features. Therefore

the A-mdo-pa must have obtained their Przheval'skiy pony from neighboring horse breeders in their original area in the Pamir. Subsequently the tarpan type of the Indo-Europeans and the Turko-Mongols was crossbred. This is the best explanation for the three different types found among the A-mdo ponies: Przheval'skiy, tarpan, and their cross.

We have already stressed the important status occupied by the horse among the A-mdo-pa. They make no use of the animal after its death, do not offer it in sacrifice, and use it only as a riding and pack animal. This contrasts the A-mdo-pa with regard to the Turko-Mongols as well as the Indo-Europeans, who eat horse meat and make use of mare's milk. This supports us in the assumption that the Tibetans obtained the horse neither from the Turko-Mongols nor from the Indo-Europeans but from a people that did not hold the horse in such high regard, which is the case among typical horse breeders. This people must have been one of the Pamir tribes.

#### (b) The Mule

The nomads do not raise any mules.<sup>?</sup> These animals are very sensitive to the cold. Even during the summer, when trade caravans using mules travel through the highland and come unexpectedly upon cold and snow, many mules die. The mule is raised, however, in warmer, lower areas inhabited by settled Tibetans, Moslems, and Chinese. The mules of A-mdo (a cross of a male ass and mare) are widely known and are traded throughout Tibet, China, and even in India. There are excellent pacers that are superior to horses for long journeys. These beautiful riding animals are well built, with broad chest, smooth neck, delicate head, and fine body. The animal thus resembles the horse in all respects. Only the long ears, which still are nicely curved, the forelegs, hooves, and fetlocks are distinctly asslike. The tail is halfway between the horse and the ass. In addition to being excellent riding animals, they are also excellent pack and cart animals, superior to horses in endurance and strength.

The hinny (a cross between a stallion and a she-ass) is much less valued, far smaller, and resembles the ass both in body and stubborn mentality. The mule is known as rta-dre in A-mdo, and ma-lo-tsu in Chinese; the hinny is known as bong-dre (bon dre) and lu-lo-tsu. The most popular colors are black, dark brown, brown, reddish brown. The others, ass gray and whitish, are less prized.

#### (c) The Ass

Asses are also raised in the crop areas of A-mdo. The nomads keep no asses. There are however excellent riding asses. They are also used as pack animals. Occasionally the Chinese have the ass pull a small cart. The animals are used more commonly for plowing, either two asses paired or an ass and an ox. Oxen, mules, and horses are commonly used for plowing. Asses come in a great variety of colors: blackish with a light belly, rust brown, reddish, mouse gray, ashen gray. Some have a back stripe, shoulder stripes, and leg markings. Both color and size vary greatly. There are large, mule-sized

asses. The ass is called bong-lu (bon lu) or bong-gu in the A-mdo dialect and lu in Chinese. There are no real wild asses in Tibet and Central Asia. Ass raising thus originated in the Near East.

## 6. Riding Animals

The following should be noted regarding riding animals. The nomads mostly use the gelding for riding; stallion and mare may not be used for this purpose as a rule. Among the Chinese and Moslems, men of position ride a gelding. Riding a mare is not regarded as honorable. In the case of the mule, it is the other way around. The mares are used for riding, while a castrated animal is avoided. The ass is the riding animal of less important persons.

Pages 201-2457

### (h) The Tibetan Dog

One of the indispensable animals of the A-mdo-pa is the dog. It is first of all the guardian of the tent. Each tent has a number of ferocious dogs. At night, when the herds rest near the tent, the dogs keep the wolves away. Then there are personal dogs that accompany the shepherds and watch the flock. Because of these valuable services, the nomad holds the dog in high regard and is much devoted to it. The original animals in mythology include khyi-mo-kar-mo (khyi mo dkar mo), "the white bitch." Throwing a stone at a dog or beating it is regarded as an insult by the nomads. When approaching a tent, it is best to call the people and have them hold their dogs. Only then should the tent be approached. A Tibetan proverb says "One does not beat a dog that has been called (khyi-bos-na-ma-rdung, khyi bos nas ma brdun)." This also means that one does not insult an invited guest, even if he is evil. The nomad must never be expected to sell his dog. That would again be a insult. He is likely to give puppies away to friends but never parts with a grown dog. Though the animals may have reached an advanced age and can hardly be expected to live much longer, the nomad can never bring himself to shoot them or kill them in any other way. The animal that has served him faithfully all its life must die a natural death. The nomad will never touch dog meat or use the animal's fur. Since the dog is a true friend and companion of man in his lonely nomadi life, the Tibetan loves and respects the animal but does not make it the subject of any religious devotion. The A-mdo-pa is not familiar with any myths regarding the origin of the dog.

The Tibetan dogs include a number of breeds. One large and heavy bulldog-type animal has a mighty head, a short, broad nose, long hanging ears, long, straight hair, and a long, hanging tail. It is usually deep black. This is the common type of dog among the A-mdo-pa.

Then there is a sort of a herd dog of large build, with flat head, medium-long muzzle, slight stop, long, hanging ears, and smooth, hanging tail. Its hair is long and straight. These animals are black with lighter markings on face, chest, and legs. In southern A-mdo

there is a bulldog type with a mighty skull and short muzzle. This animal has a peculiar sort of neck fur. In the tent of the Wang-thag chieftain west of the Kuku Nor, I found a large bulldog with a short-haired, smooth coat that was basically grayish white and spotted in black. I suspected that this dog had been brought from elsewhere and was assured that this was its home. The dog was unusually tame and friendly, quite unlike the others. It came at once into my tent and let me scratch its head.

The true herd dogs that accompany the herders are of still another type. They are smaller, with a more elongated head, a rather short muzzle, shorter and curly hair, and light coloring. Other parts of Tibet have still other dog breeds. Different types of breeds have been crossbred repeatedly. In the province of Kham, south of A-mdo, "chained dogs kept in courtyards are long-haired, up to 50 centimeters in height, halfway between collie and German shepherd. They look very handsome with their yellow-and-black muzzle and black gums. A very valuable breed, which I never saw near the Kuku Nor, is the 'Shadchuch,' the hunting dog, a long animal, which pointed muzzle and short hair, half greyhound, half pointer, which is used in fox-hunting and when traded around Cherku, is worth about as much as a good riding horse." (A. Tafel, 1914, Vol II, 152.) Contrary to many reports, there is no real wild dog in Tibet. The wolf is also called Khyi-rgod, "wild dog," and the Tibetan dog is said to be descended from the black wolf. The real sheep dog, is sort of pomeranian, is the most recent and most specialized type. According to an old theory, the true, heavy bulldog is a descendant of the Tibetan dog. According to more recent studies, the Tibetan dog is said to be a direct cross of wolves (Cf. Table of Descent, Page 286 [of original]).

## (i) The Animal Husbandry of the A-mdo-pa

### 1. Stock Herding

We will now briefly describe the animal husbandry of the A-mdo-pa. Only the sheep are actually watched to keep them from straying and being attacked by wolves. On one of my journeys I came upon the remains of about 20 sheep, which had been torn to pieces by wolves, and were being removed by the nomads. Upon inquiry, I was told: "As soon as the shepherd had left the flock, the wolf attacked, sank his teeth into the throats of the sheep, and guzzled their blood." Early in the morning, horses and cattle are driven to specified grazing grounds and left there by themselves. Once a day one of the herders rides out to the horses to make sure they have not strayed too far. This need not be done for the slower cattle. The shepherds are young boys, old men, grown girls, or women. The men handle the horses while the women are busy with cattle herding and milking. It also happens that colts and calves are attacked by wolves or jackals, especially in wooded areas; even horses and cattle have been attacked.

In the evening the animals are driven back to the tent. Since there are usually only a few tents in the group, they do not form a closed circle in the middle of which the animals can spend the night. The milk cows and calves are put closest to the tents, as

we mentioned already. The other cattle rest nearby. The horses are kept at the other end, with stallions and wild geldings hobbled down. The shackle consists of strong fabric woven out of sheep wool and supplied with loops that are fastened to the front and hind leg. This forces the horses to walk and keeps them from running. It prevents the horses from running away if wolves should cause a panic at night. The mares and the colts stay near the stallions. Control over the stallions and wild geldings thus gives the nomads command over the entire herd.

It is therefore out of the question that the original horse breeders kept only mares which they mated with wild horses, as is sometimes asserted. (Fr. Flor, 1930, Page 202.) According to this legend, the Scythians only rode mares. However, we said above that the Tibetans do not ride mares. "A Turkoman never rides a mare, which he like other Central Asian nomads, regards as being below his dignity." (Fr. Schwarz, 1900, Page 132.) The nomads undoubtedly brought mares along on their military expeditions, but merely as a source of milk, blood, and meat. The original horse breeders first had to tame the stallions in order to keep the mares together as a herd. They certainly did not allow the young stallions to return to wild life.

The sheep herds are also kept near by. The herds are placed in such a manner as to be protected against surprise attacks by wolves and so that they can be defended by the dogs. The A-mdo-pa are not familiar with pens enclosed with stone or mud walls. Only the tribes that have permanent winter dwellings build corrals enclosed by young tree trunks. The Uighurs and Mongols, who lack timber, build such corrals with mud walls. The livestock holdings of these tribes are much smaller.

Which animals require the greatest care? This is a two-fold question. Which animals require the best pasture? The goat is the one that is least demanding, followed by the sheep. Cattle require better pastures. Horses, on the other hand, are very choosy and want the best grass. It is for the horses that the best grazing grounds must be found. Which animals make most of the work? Those that supply milk. In the case of the A-mdo-pa, this means the yak, since mares are not milked. Among the Altaic horse breeders, most of the work is involved in milking the mares; this is done by men because of the wild nature of the animals. It cannot be said therefore that cattle raising requires greater care and is more conducive to a sedentary mode of life and crop raising than the raising of horses.

## 2. Castration

The A-mdo-pa have their own castration method. They usually take young colts less than one year old. A strong, pliable tendon is used to tie up the sperm duct. This cuts off the blood circulation and leads to the degeneration of the testicles. An alternative method consists in burning through the sperm duct with a red-hot iron point, which also leads to the degeneration of the testicles. The use of a knife and the flow of blood is not permitted in castration.



Neighboring tribes use other methods. They usually castrate 4- or 5-year olds, more rarely the colt. The latter is called nai-shan-ma, literally, "milk-castrated horse," because he was castrated at a milk-suckling age. Seven-year olds and older horses are rarely castrated because the operation may easily fail at that age.

In the latter method, the horse is tied by its front and hind legs and laid on the ground. One man kneels on the head of the animal, others on the legs. The testicles are cleaned with warm water, as are the instruments. The sperm duct is then tied with a strong pliable cord. The operator then hits the testicles repeatedly to drive out the blood. He then makes a 4 to 5-centimeter long cut in the right scrotum and expresses the testicle. He then pinches off the head of the sperm duct with wooden tongs and ties them so that they will not yield. He then drives a wooden splinter through the testicle and twists it off. The same operation is performed on the second testicle. The wound is then rubbed with lamp oil, i.e., oil that has been heated and thus disinfected. The animal is then freed to stand up. If it shakes itself, it is regarded as a good omen for the success of the operation. The tail of the horse is braided and tied to the side of the animal to prevent the animal from hitting the tail against the wound. The horse must be led by hand a good deal and must not be allowed to lie down so as to keep the wound away from dirt and insure its proper healing. Horses are generally castrated in the spring when there are no longer any night frosts and it is still too cold for flies that would infect the wound. This castration method is not used by the Tibetans themselves, although it is also a very old one. This is indicated by the use of wooden instruments.

A similar method is used by the Yurak Samoyeds in castrating their reindeer "sometimes when a calf, mostly at a later age, at the latest at 3 years ... The operation is accomplished in the following manner. The bull is thrown to the ground and kept down. One man bends over and bites off the testicle with his teeth; this gives off a popping sound. He then bites off the other testicle and rubs it with his finger so that 'only the water remains' in the scrotum. In another method, the scrotum is cut with a knife and the testicles are torn off by hand or cut off with the knife. Still another procedure consists in tying off the scrotum behind the testicles by means of a tendon, in which case the scrotum will drop off by itself." (T. Lehtisalo, 1932, Page 114.) It is not quite clear to me how the man can tear off the testicles by hand since the sperm duct of a 2 or 3-year old animal would ordinarily be too strong. Possibly the scrotum is twisted off, as described previously, so that we are dealing here with an inaccurate description.

We can group the following methods. The most recent method is the removal by knife, which is also used by the Chinese on steers and rams. The twisting method is an older one. Still older methods involve pushing, tapping, crushing, squeezing, burning, tying, and biting. Pushing and tapping were practiced in ancient India and are still the custom in Hercegovina. (O. Schrader, Lexikon, l.c, 11, 598a.) Tying was generally in vogue in Europe before the method prescribed by the government was introduced. The Tibetans are familiar

only with the oldest method.

### 3. Slaughter

The slaughter practice of the A-mdo-pa likewise differs from that of the surrounding peoples. The animal to be slaughtered is tied down and laid on the ground. The muzzle is then tied with a thin rope and the animal suffocates. The belly is then cut open and the intestines removed. The blood is collected in the belly. It is not supposed to flow to the ground. The nomad never uses a knife in killing an animal.

The suffocation method used by the Tibetans is one of the oldest. A similar method is used in India. "The Indian animal offering in general, and in the Asvamedha in particular, is killed by suffocation." (W. Koppers, 1936, Page 349.) A similar method appears to have been used by the Persians. Herodotus reports the following about the Scythians (IV, 60) "The front legs of the sacrificial animal are tied together; then the sacrificer, who stands behind the animal, makes it fall by pulling a rope, calls the god to which the offering is to be made, and suffocates the offering by means of a noose." (O. Schrader, Reallexikon, l.c. Vol II, 136b.) In China cattle and horses to be offered were killed by means of arrows (Chou-li 8, 14b/15a). Kuo-yu 18, 4b says "cattle were shot, sheep stabbed, and hogs beaten to death." But regarding sheep offerings it is also stated that "the sheep man strangled the sheep in the forecourt and showed its head in the inner court, as was done by other officials with the heads of steers and horses." (Chou-li, 30 14.) Even today the reindeer Samoyeds strangle the reindeer that is to be offered to heaven. (W. Schmidt, UdG. III, Pages 368, 373 ff.) "This is still the custom among the Altaic tribes; traces of this sacrificial method are still found in the horse offerings of the Buryats and the sheep offerings of the Beltirs and the Yugurs." (W. Schmidt, 1942, H. 4, 137.)

The Yakuts formerly also strangled horses to be offered to the Supreme Being. This was reported by Strahlenberg in 1720 and by Myagkin in 1828. The custom is no longer practiced. (Th. Chodzidlo, 1949, Page 352.) The "sacrificial suffocation" and the "simple slaughtering" among the above-mentioned Samoyeds, Ugric Ostyaks, and probably also among the old Turks, Tungus, and the Ugric Magyars, are regarded by Gahs as the slaughter method of the original nomad culture. (Al. Gahs, 1926, Page 227.) In the course of the Yagnam offering in India, a ram is first slain by suffocation. Butter also plays a role in this offering. (I. A. Dubois, 1928, Page 512.) Among the Baiga and the Gond of central India, a hog is slain by suffocation in the Larukaj offering. (Private communication from St. Fuchs.)

The African cattle herders, the Masai and Nandi, are also familiar with the suffocation of offerings. (W. Schmidt, UdG. VII, 392, 446, 450.) The suffocation method can be regarded as the oldest rite both in lay slaughter and in ritual offerings.

In contrast to the oldest custom practiced by the Indo-chinese, Altaic, Palaeo-Siberian, and Hamitic peoples, the Semites used

ritual slaughter in which they cut the artery and let the blood flow. This custom involves another concept of the seat of the soul, as being found in the blood. "But flesh with the life thereof, which is the blood thereof, shall ye not eat." (Gen 9, 4.) "Ye shall eat the blood of no manner of flesh, for the life of all flesh is the blood thereof." (Lev. 17, 14; this idea and the consequences are especially stressed in 17, 10-16.) This is also evident in the sentence of James, who instructed the gentiles "to abstain from things strangled, and from blood." (Apg. 15, 20.) Since the soul resides in the blood, blood is the carrier of life. On the basis of this idea, the blood of the offering assumes the dominant role. That is why this slaughter method provides for the outflow of the blood. These bloody offerings have their origin in matriarchal agricultural cultures, as Gahs shows in a detailed study of the origin of bloody human and animal offerings. (W. Koppers, 1936, Page 314.) The concept of blood as the seat of the soul and the carrier of life was widely diffused by the matriarchates to other cultures, including the Semites, and the old Semitic offerings involved essentially "the gushing forth of the blood." (Fr. Heiler, 1921, Pages 73 f.) "The outflow of blood is customary in Arab animal offerings." (J. Henninger, manuscript, Page 183.) Whether this custom was actually the original method among the Semites or whether they also knew a previous strangulation method remains to be investigated. (Cf. J. Henninger, Anthropos [Man], 1942-45, Vol XXXVII/XL, No 1/3, Page 319.)

The suffocation of slaughter and sacrificial animals is probably a characteristic feature of the oldest cattle, reindeer, and horse raising cultures. The same is true of all subsequent non-bloody rituals. The blood plays no role in this offering, since it is the breath, not the blood, that is regarded as the seat of the soul and of life. Could it be therefore that suffocation is practiced to retain the breath, i.e., the most valuable part of the offering, in the body?

#### 4. The Protection of Livestock

The A-mdo-pa makes use of consecrations and prayers to protect his herds against illness and make them fertile. These will be discussed in more detail under religion. As a defense against epidemics, he attaches an "epidemic defense charm" within the tent. This may consist, for example, of a piece of lung of an animal that died of lung disease, magic sayings against hoof-and-mouth disease, and a medicine bag against pox. Ravaging epidemics are greatly feared. When an epidemic sets in, the nomads leave the affected animals behind and flee to higher areas. But many animals have been infected anyhow and carry the bacteria with them.

The A-mdo-pa know only a single protective agent against pox. They tap the blood of infected animals and administer it to healthy animals. This is a type of "vaccination." The crusts of cowpox pustules are collected, dried, and ground into a powder. A small portion of this powder is then blown into the nostrils of small children. The children are thus "vaccinated." If the portion is too strong, they are likely to die. When I arrived at the upper rMa-chu, the Tibetans wanted me to vaccinate their children at once. I was

told that 10 years before an incarnation had vaccinated the children by the old method and that all had died. Since that time no one had been vaccinated in that manner. Since the nomad proudly regards his stock as his only wealth, he uses many religious and lay means to ward off danger and speed fertility.

##### 5. The Special Status of the A-mdo-pa

It will have become evident from the above discussion that the A-mdo-pa are nomads of a peculiar sort. They were sheep and yak herders at first and later adopted the horse. Flor stated the reverse relationship. "In trying to determine the principal horse raising culture, my attention was naturally directed to the Tibetans, in particular the eastern Tibetans, who are nowadays still in close contact with Altaic horse breeders. I have noted many relationships, particularly among the eastern Tibetan ngGolokhkaksum (south of the Banagkaksum along the upper Yellow River), the Mah' ah' Kami, the Drogpa, and the Tanguts, that certainly establish in my opinion a former tie with horse herders, and perhaps even with old reindeer herders. It is quite probable that this early horse herder stratum was linked to the raising of the yak which, as we said above, is the oldest domesticated wild cattle type; the yak probably took the place of the horse directly, as explicitly reported by the Tanguts." (L. C. Page 160 f.) Flor does not say where this has been reported by the Tanguts.

The confusion of names is quite typical in his discussion, as we have stated once before. Go-log is a tribal name; rMa-har-kha-na is the designation of the area on the other side of the rMa-chu; Brogpa means nomads of Tibet; and Tangot is the Mongolian designation for these nomads. Flor regards all four names as the designations of different tribes. The following conclusions are equally erroneous. "This demonstrates the extraordinary significance that must be ascribed to the Tibetan horse herders as proof of an original tie between horse and cattle raising." (L. C.) There was no such tie; the yak did not replace the horse. It is also wrong to say that the Mongolian culture "had at an early stage a, so to speak, connubial relationship with the Tibetans, or, what is more probable, represents nothing but an Altaicized Tibetan stratum." (L. C. Page 232.) Since ancient times, it was the eastern Indo-Europeans who were the immediate neighbors of the Tibetans, followed by the Hsiung-nu and the Uighurs. The first Mongolian contact with the Tibetans was achieved through Jenghiz Khan. The despotic fist of the Great Khan amalgamated peoples of many races within his empire and greatly expanded the use of the Mongolian language. Calling the Mongols an "Altaicized Tibetan stratum" is out of the question. The A-mdo nomads differ in many key points from the Turko-Mongols and occupy a special position in Central Asia.??

##### 6. The Livestock Raising Motives

Since the A-mdo-pa are among the earliest stock herders, they may provide us with the motives that led to animal husbandry. Were these economic reasons or religious grounds?

"In discussing the origin of domestic animals, Eduard Hahn has finally disposed of the opinion that it was the expected economic usefulness that made man domesticate animals. He has properly pointed out that at a time when there were no domestic animals man had no way of foreseeing what use he could derive from them. Above all, predomestication animals lacked the qualities that are essential nowadays to obtain maximum use out of the domestic animals. The wild sheep, for example, lacked wool, wild cows lacked the strong and steady secretion of the milk glands... If it was not usefulness, something else must have led man to the domestication of animals. And Hahn finds this something in the relation that some animals had to religion in their role as holy animals that were offered to the gods. He reasons that the nomads resorted to domestication in order to have a steady supply of such sacrificial animals at hand, independent of hunter's luck... The young that grew up in captivity probably continued to reproduce and this gradually gave rise to a more or less regulated animal husbandry... Therefore, we must seek the first stimulus for domestication in religious grounds." (M. Hilzheimer, l.c., Page 19 f.) The same motive is supported more recently by Lundholm. "These animals (i.e., wild horses) became religious objects. This rite was well developed in the Bronze Age and it may be safely assumed that it continued to develop in Neolithic times. The consecrated horses were corralled in small areas. At first they were used as offerings. Later they were used to pull the consecrated carts and participated in religious rituals... These herds of consecrated horses gave rise to the domestic horse. Possibly the first contact with the battle wagon of the Orient stimulated the first practical use of the horse." (l.c. Page 180.) But Hilzheimer will not go that far. "This theory may apply to cattle, for which it was originally set up, and perhaps also to hogs, sheep, goats, and fowl, but it can hardly be extended to dogs, horses, asses, and camels." (l.c. Page 20.)

Aside from the differences of opinion whether all domestic animals or only some animals were domesticated for religious reasons, there remains the difficulty as to why only certain animals were tamed for the purpose of sacrifice while others that could be tamed with equal ease were not domesticated, for example, antelopes, zebras, some wild asses, the bison, and the aurochs. But aside from that, it must first be demonstrated that prior to domestication the tamed animals actually played an important and necessary role in offerings. We know a number of reindeer and bear offerings from Paleolithic and Mesolithic times. (A. Rust, 1937, Pages 110 f., 134; id. 1943, Pages 133 ff., 216 ff., 238; bear skulls in the Drachenloch [dragon hole] above Vaettis, in Petersshoehle [Peter cave] near Velden, in Mixnitz cave, and so forth). Such animals are still being offered among some Siberian peoples. (A. Gahs, 1928, Page 231 ff.) Of these two animals only the reindeer was subsequently domesticated, but not because a steady supply was required for offerings, as wild reindeer were available in large numbers. The bear, on the other hand, was not domesticated although it is easily tamed and is not very common. Although both the reindeer and the bear were hunted and offered in sacrifice in Paleolithic times, only the reindeer ultimately became a domestic animal.

Horses, cattle, and sheep were also hunted in Paleolithic times. The hunters probably also offered these animals in sacrifice, since they usually offered their most important game. However we still lack definite proof of horse, cattle, and sheep offerings from that period. The horse offerings mentioned by Lundholm relate to the Bronze Age (l.c. Page 179.) The burial mound of Mane-Lud is surrounded by a menhir fence. Each of the five stones that form the extreme northern side is topped by a horse skull. (A. de Paniagua, 1912, Page 55 f.; cf. the horse skull with stone dagger of Ulstorp, Sweden.) We thus lack proof for horse offerings that antedate domestication of the animal.

As far as we know now, sheep, goats, and cattle were domesticated before the horse. Once the domestication principal was known, it was easily applied to other wild animals. As we saw above, Hilzheimer rejects the religious domestication motive for horses, asses, camels, and dogs. He does not say why that motive is applicable to cattle and sheep but not to these animals. Even if cattle and sheep were important offerings in the wild state, this does not prove that religious grounds alone led to their domestication. Even Lundholm admits: "We must of course assume that practical usefulness was also a strong stimulus for domestication." (l.c. Page 180.) Might not economic need and usefulness, after all, have been the strongest stimulus leading to domestication?

Hunters were not very numerous in Paleolithic and Mesolithic times and had vast grazing grounds with rich game holdings at their disposal. As the hunters became more numerous in the course of millenia, they killed increasing amounts of game for food and thus greatly reduced the number of wild animals. Faced with the need of assuring themselves a meat supply, hunting peoples that no longer had any extensive hunting grounds were forced to tame the wild animals. These hunters had become thoroughly familiar with the natural habits of their game in the course of tens of thousands of years. They probably occasionally tamed a young animal, just as young wild reindeer are tamed as decoys and as we tame now and again a deer or wild ass. In view of the need of obtaining food, the hunters then advanced from this preliminary stage to domestication proper. As a matter of fact, the finds of Lo-han-t'ang (Kuku Nor), Afanas'yev (Baykal), and Anau include both the bones of domesticated sheep and cattle and the bones of hunted animals, thus indicating that the early stages of animal husbandry were still associated with intensive hunting. The objection "that at a time when there were no domestic animals, man had no way of foreseeing what use he could derive from them," since the wild sheep yielded no wool and wild cattle lacked a strong glandular secretion (M. Hilzheimer, l.c. Page 19) is not relevant because it was not the need for wool and milk but other economic needs that led to domestication. By domesticating wild animals these peoples merely expected the usefulness they had previously derived from their hunt, that is food, furs, tendons, bones, and horns and, in case they sacrificed animals like the reindeer hunters, material for their offerings. If therefore economic reasons were the principal motive for animal husbandry, secondary religious factors are not excluded. The production of wool and milk, the use of the animals for carrying burdens, pulling vehicles, and riding developed only after thousands of years.

Moreover we cannot judge from the original domestication method whether religious reasons predominated. "The greatest support for this (religious) theory is undoubtedly the fact that primitive horse raising was based on these methods. In our country we still use the same principles in raising the little forest horses of Gotland. The basic stock in this method is made up of a number of mares that have never lived in a stable and have not been domesticated. These mares furnish the foals that are then tamed and sold. This method used to be the common practice in horse raising." (B. Lundholm, l. c. Page 182.) These principles are followed by all nomadic peoples of Central Asia. Like their hunting ancestors, they have no fixed residence, but merely a yurt or tent. Much less do they possess stables for their herds. Their stock is always in the open. Horse herders, for example, break in only the animals they need for riding. These are usually the geldings. Stallions and mares lead a semi-wild existence. They cannot be approached. But it is also typical of the Tibetan riding horses that they do not like to have their head touched. Bridling requires a special knack.

This original domestication method, in which the animal always stayed in the open, was the only one possible and the one best suited to the conditions of wild life. A large herd could not possibly have been raised in an enclosure, not even by providing additional feed, which could not be procured in any case. This method is much too complicated for the original domestication practice. The primitive animal husbandry of the A-mdo-pa thus indicates the manner in which the original domestication of animals may have taken place.

The hunting peoples that have pursued their way of life since ancient times provide us with some insight into the psychology of the hunter. The Tungus, Eskimos, and Samoyeds of northern Asia, the Indian tribes of North America, the people of Tierra del Fuego in South America, the Australian and African hunting tribes, and others practice a well-regulated, planned economy with their game reserves. They kill only those animals that are required for their meat supply and take care not to kill any animal needlessly. This hunting rule is associated with heavy sanctions. Among the Eskimos, the deity Pinga "watches over the life of the animals and does not approve when too many are being killed." (K. Rasmussen, 1926, Pages 142, 144.) The following report applies to the Yurak Samoyeds: "The hunters believe that animals may not be hunted to excess because Num (the great deity of the Samoyeds) disapproves when too many are being slain for food reserves; he who does it anyhow may court death." (B. M. Zhitkov, 1913, Page 223.) The same strict hunting rule is found among the northern Tungus. "As a rule, the Tungus never kill more than they need. Hunting as practised among ethnical groups for whom it forms a sport or just a custom is unknown among the Tungus. Except when necessary, the Tungus take no pleasure in killing animals. For this reason their hunting is regulated by customs tending to preserve the continuity of the animal species except those, of course, which are the natural foes of man. It is not indeed from sentimental motive that they act thus. Long experience in hunting has convinced the Tungus of the necessity of adopting the policy of protection." (S. M. Shirokogorov, 1929, Page 45.)

This basic rule of the northern Asian hunters is also found among the Indians of North America. "Despite the continued killing in the tract each year, the supply is always replenished by the animals allowed to breed there. There is nothing astonishing in this to the mind of the Indian because the killing is definitely regulated so that only the increase is consumed, enough stock being left each season to insure a supply for the succeeding year. In this manner the game is 'farmed,' so to speak, and the continued killing through centuries does not affect the stock fundamentally. It can readily be seen that the thoughtless slaughter of game in one season would spoil things for the next and soon bring the proprietor to famine." (Fr. G. Speck, 1915, Page 293). Again the Supreme Being orders not to kill more animals than absolutely necessary. Nor may stock be destroyed unnecessarily through forest fires. (These references were given to me by W. Koppers, 1932, Page 181 ff.) The people of Tierra del Fuego in South America and the hunters of Australia and Africa follow the same hunting laws (l.c. Page 181). There thus emerges a concern for the preservation of the wild game that condemns unrestricted killing of the animals. The introduction of animal husbandry merely served to increase this care.

One other hunting principle is found among the stockraising peoples: hunting and grazing grounds are subject to the same division principle. "Every tribe has its particular tract of country; and this is divided again, among the several families that make up the tribe. Rivers, lakes, and mountains serve them as boundaries, and the limits of the territory that belongs to each family are as well known by the tribe as the lines that separate farms are by the farmers in the civilized world." (W. Harmon quoted by Fr. G. Speck, Page 330 f.) In precisely the same manner, stock herders divide their grazing lands, as we shall see below.

The mentality of the primitive hunter in search for meat was thus well prepared for the shift from hunting to animal husbandry, when the lack of game and other factors made it necessary. It is quite evident that it was not a desire to catch birds and other animals and keep them for pleasure that drove the hunters to such an important shift in their way of life.

The following incidents show how easy it was for the hunter to gain the confidence of the wild animals. During the summer the great mosquito swarms of Asia torment both man and livestock. The latter therefore seek higher elevations where their tormentors cannot follow. Wherever this cannot be done, the nomads light great fires whose smoke and heat serve to repel the insects. The domestic animals also seek the protection of the fire. Even wild animals seek refuge there and mix with the tame stock. This offers an easy opportunity to catch the game, while at the same time the wild animals become used to man.

According to an old legend of the Yakuts, their ancestor made use of such fires. The custom of repelling the mosquitoes with fire and smoke then led directly to the domestication of the horse. (V. L. Seroshevskiy, Yakuty [The Yakuts], 1896, Page 146.) The Yakuts,



Chukchis, northern Tungus, Karagass, Soyots, Kamass, and others are familiar with this practice. They also use it to attract reindeer bulls for mating with domesticated cows, a crossbreeding practice that is supposed to yield strong calves. (W. Bogoras, VII, Page 379; VI, 1927, Page 60; K. Donner, 1926, Page 187; M. A. Kastren, 1853, Page 380 f.; Pekarskiy and Koyetkov, Page 23.) Such methods are common throughout northern Asia. (P. Tretyakov, 1869, Page 456 f.) The question of whether these and similar methods actually led to the original animal husbandry was investigated by Sirelius. (U. T. Sirelius, 1916, Pages 1-35.)

If we were certain that animal husbandry preceded crop raising, then all further discussion would be superfluous, since before the development of livestock and crop raising all peoples were hunters. In that case only hunters could have developed animal husbandry. Since we are still in doubt on this question, it is possible that animal husbandry was originally tied in with primitive digging, stick and hoe agriculture. In such a culture, the woman could have progressed from the collection of vegetable foods to the planting of seed and harvesting while the man passed from the hunting stage to animal husbandry and assured meat reserves. Support for this theory is sought in prehistoric finds, which are said to show that Neolithic remains of domestic animals are always found in agricultural settlements. It is further maintained "that there are vast livestockraising regions in the world where man is totally unfamiliar with the use that he might derive from his domesticated animals insofar as labor is concerned and where the animals play no function as a means of transportation. These are the regions of what is generally called today hoe agriculture -- actually most are originally digging stick areas -- which form a wide belt around the earth, including the tropics and, before the advent of the white man, the southern temperate zone." (E. Werth, l.c. Page 182.) Nomadic livestock raising is supposed to have originated from the stockraising culture associated with crop raising because its area of distribution is said to coincide with that of land cultivation, because it is said to be economically dependent on crop raising, and because it is said to be conditioned only by climatic factors (l. c. Page 183.) According to this theory, former tillers of the land lost their fields because of climatic deterioration and, since livestock was the only thing left to them, they then became nomadic herders. There is historic evidence that tillers of the land may become herders and that herders may become tillers as a result of natural calamities, such as climatic changes, or human calamities, such as dislodgment and expulsion. The A-mdo-pa settled tillers and the Miao tribes are cases in point. More often, however, peasants who have lost their land tend to migrate in search of new land and herders seek new grazing grounds.

There is much prehistoric evidence that crop raising and livestock raising occurred together. The evidence does not make clear, however, whether we are dealing here with a primary culture or with a mixed culture of two independent components. We have repeatedly stressed that because of their nomadic way of life and their use of perishable leather and wood utensils, there is little prehistoric evidence of stock herders. There are, however, prehistoric sites without farm utensils, but with stockherding and hunting evidence, such as

Lo-han-t'ang, Selenga, and Lena. (Cf. pages 17 and 114, above.) Pre-historic evidence is therefore insufficient to settle the question of whether animal husbandry owes its origin to the stock raising of farmers. (Cf. on methodology, E. Wahle, Zur ethnischen Deutung fruehgeschichtlicher Kulturprovinzen, Grenzen der fruehgeschichtlichen Erkenntnis [On the Interpretation of Early Historic Cultural Provinces, the Limits of the Understanding of Early History], Heidelberg, 1941.) R. Pittioni admitted to me that in northern Asia and Europe, where the cold climate excluded the possibility of crop raising, Neolithic finds pointed to the existence of settlements that could have been connected with nomadic herders.

Primitive diggingstick and hoe tillers, who often practice burnbeating methods, for example, in southern China the Miao, Lolo, Yao, T'a, and others, and in Burma the Rade, Kachin, Wa, Biet, Karen, and others, also raise livestock, including hogs, chickens, dogs, cattle, and buffaloes. It is easily shown, however, that these peoples adopted the raising of horned livestock from nomadic herders or plow tillers and that animal husbandry is not indigenous. Similar conditions are evident among the primitive cultivators of India, for example, the Reddi, God, and Baiga. The Baiga give their animals to the Ahir for grazing and milking. (Private communication from St. Fuchs.) The Chenchus are hunters. According to their legends, their ancestors had no domestic animals except dogs. Nowadays most of their settlements also have buffaloes, cattle, and goats. "The fact that a tribe of food collectors had and still has the desire and the aptitude to keep and breed these animals is noteworthy and shows that under certain circumstances the transition from hunting and collecting to cattle breeding is easier than from hunting and collecting to agriculture. Although no encouragement has been given to the acquisition of cattle, whereas definite and mostly unsuccessful attempts have been made to settle the Chenchus as cultivators, it is nevertheless understandable that cattle breeding came to be readily adopted by the Chenchus, for it is fully consistent and even favored by their nomadic habits, which on the other hand erect unsurmountable barriers in the way of cultivation." (Ch. Fuerer-Haimendorf, 1943, Page 73.) The Indian government also tried to settle the Katkahi and other nomadic hunters as cultivators. But the attempt failed. The Bhil did adopt agriculture, but did not make very good cultivators. Only those who mixed with the Rajput peasants and are known as Bhilala did become able cultivators. The Banjara, who were stock breeders originally, also adopted agriculture. However, many still earn their living as guides of pack caravans. The Ahir in the eastern Central Provinces are in part pure nomads and in part the herders of tribes that have adopted cattle breeding, such as the above-mentioned Baiga and Gond.

It is noteworthy that these conditions occur in Central India. The highland to the north belongs both morphologically and ethnically to Central Asia. Here the old stockraising areas are found. Agriculture has penetrated here in the course of time. But the stock breeders returned again and again to the plains; this was true not only of the Aryans but also of the pre-Aryan nomadic herders. The Todas are perhaps pure pre-Aryans or only slightly mixed if we accept the hypothesis of Rivers that they are related to the Nambutiri (who are Aryans or under strong Aryan influence) and the Nair-Dravida.

(W. H. R. Rivers, 1906, Page 698 ff.) Thurston concedes: "Despite the hypothesis of Dr. Rivers that the Todas are derived from one or more of the races of Malabar, their origin is buried among the secrets of the past." (E. Thurston, 1909, Vol VII, Page 133.) The origin of a number of other stockbreeding tribes is also in doubt. Still others came from the north in post-Aryan times. The Ahir, for example, are said to have come from Central Asia just before or at the start of the Christian era.

It can thus be shown that the primitive hoe cultivators adopted their superficial stock breeding from nomadic herders or plow cultivators. Plow cultivation usually prospered when stock breeders mixed with hoe cultivators and harnessed the draft animal to a plow, which had previously been pulled by man.

Although carts, sleds, and plows have been found in late Stone Age sites, thus indicating the age of plow cultivation, there are still older sites that contain hoe cultivation and stockbreeding evidence, but no plow. This excludes the possibility that stock breeding arose in the idea of raising animals for the purpose of pulling the plow. It cannot be proved that pure stock breeding was a subordinate economic form that owed its origin and existence to agriculture. Nor can support for this theory be found in the fact that nomadic herders obtain their vegetable food from cultivators, thus constituting a sort of symbiosis. This is the case only where nature no longer supplies the necessary vegetable food. Where this natural supply is sufficient, as in the case of the Asian reindeer nomads, the assistance of cultivators is not necessary.

We have referred to conditions in India because it is believed that the original center of stock breeding "can only be found in India in the larger sense. This region contained five types of wild cattle until recent times: the aurochs (including the Indian variety *Bos namadicus*), the buffalo, the yak, the gaur and the banteng. All these types have been domesticated, while none of the other wild cattle of the world, in the rest of Asia, in Europe, Africa, and America, were domesticated." (E. Werth, l.c. Page 186 f.) Since northern India is part of Central Asia and "India in the larger sense", according to Werth, also includes this area, we are in agreement on the Central Asian origin of stock breeding, as we have repeatedly demonstrated. The assertion that in the rest of the world no other wild cattle were "domesticated" is not quite correct, since the aurochs was also tamed in Europe.

We are thus of the opinion that stock breeding developed out of hunting. The old Hahn theory that stock breeding was derived from agriculture and that nomadic herding was a degenerated form that arose when climatic changes led to the ruin of crop raising and left only animal husbandry, a theory that is again being defended, cannot be sustained on the basis of ethnologic and prehistoric evidence. This does not mean however "that we will revive the old three-stage theory (hunter-herder-cultivator), which was long believed to have been finally eliminated after E. Hahn's successful argument against it," just because "theories propounded by one school of ethnographers cannot be supported by the evidence." (E. Werth, l.c. Page 198.)

We are not returning to the three-stage concept. According to our concept, tribes passed from the hunting and collecting stage to cultivation but still retained hunting practices. Other tribes passed from the hunting stage to stock breeding, but still retained hunting and collecting habits. This is true even nowadays. The Tibetan tribes of the Byang-thang keep only small herds that are cared for by women. The men hunt the wild yak. Among many tribes of northern Asia, hunting is the main element; their reindeer breeding is at a very primitive level; for example, the Selkups of the Turukhansk area, the Ostyaks, and others. Complex economic forms are quite common and have been used by man since the hunting and collecting economy of earliest times.

## 10. The Property of the A-mdo-pa

### (a) Real Property; Grazing Ground Rights

The total grazing area of Tibet is owned by the various tribes. There are virtually no unowned grazing grounds that were abandoned by emigrating or dislodged tribes. Such grounds are rapidly resettled. Disputed grounds often give rise to bitter fights. Large herds require extensive grazing grounds, especially whenever vegetation is sparse. The A-mdo-pa is not familiar with ways of improving the grazing land through fertilization or irrigation. He leaves everything to nature and adjusts himself and his herds to nature's rhythm.

The grazing grounds of Tibet are in the mighty highlands. We have already discussed the effect of the climate, precipitation, and elevation on the environment. It is now up to the art and talent of the nomads to adjust themselves and their herds to the ecological conditions. First of all, the geographical environment prescribes the breeding of specific animals. At elevations above 3,000 meters, only the yak, the Tibetan sheep, the horse, and the goat can be raised. Other horned livestock or even camels cannot live in this highland environment.

The acclimatized animals must further adjust themselves to the annual rhythm, which is largely determined by the winter and summer seasons. Icy winters and biting winds make the highest areas uninhabitable during the winter. During the late summer and fall, however, those areas provide the best grazing, not because the grass vegetation is particularly abundant, but because the high-altitude grasses and medicinal herbs are of great nutritive value. This type of fodder keeps the stock healthy and adds much fat. The milk animals supply more milk with a higher fat content. After the sparse winter and spring feed, the animals' hunger for vitamins and their desire for fresh fodder is clearly evident.

Because of the high elevation and the winter and spring drought, the new grass germinates only toward the end of May and grows slowly through the month of June in the absence of rain. The first migrations toward the fresh grazing lands at higher elevation begin in May. Since the grass is still quite short, the pastures must be changed two or three times during the summer. The nomads continue to climb.

During August, September, October and into November, they use the highest pasture lands. Starting in October, they trek back to the valley. The greatest cold occurs in the second half of January and at the beginning of February. During that time, refuge is sought in the warmer, protected valleys. Here the herds find dry, though high grass. During March, April, and the first half of May, the herds visit the spring pastures, which also have only dry grass. Since it has become warmer by that time, these grazing lands can lie at higher and less protected elevations. Elevation and climate thus condition the vertical migrations of the nomads. Different grazing lands must be available for different seasons. The ecological conditions have made it necessary for the Tibetan nomads to provide twofold regulation of the grazing grounds.

#### 1. The Communal Real Estate of the Tribe

Each tribe is assigned a fixed territory delimited precisely by mountain ridges, rivers, passes, and so forth. This land is owned by the tribe as a whole. It is usually a contiguous area that includes grazing grounds for all seasons. If a very large tribe is divided into subtribes, then each subtribe owns such a contiguous area for all seasons. It is unusual for the pastures of a tribe to be disconnected and separated by the lands of another tribe. The land belongs exclusively to the particular tribe. Passing caravans of pilgrims and merchants must therefore make a payment in the form of grass and water for the use of the pastures in transit.

Each tribe or subtribe assigns grazing grounds to individual families. This distribution is usually made after the New Year by the tribal chief and his elders. Three to six tents, depending on the size of the herds, are usually combined for this purpose. These are usually relatives or good friends who live together and assist one another. If a single family owns very large herds, it is usually left alone, since large herds rapidly exhaust the grass cover and require too frequent a change. Such rich families always have some hired help if they do not have enough children or if the children are still too young. This adds another two or three tents to the group. Only in the case of very rich grazing lands do several large families settle together in groups of 20 to 30 or more tents. Grazing lands are redistributed each year to insure equitable distribution of good and poor grazing lands. Otherwise one group would always have good areas and another group the poor areas. Spring, summer, fall, and winter pastures are therefore reassigned once a year. No one is entitled to keep the same grazing grounds. This clearly shows that the grazing lands are not the property of any single family or group, but tribal property. This rule is universal.

*Example* Mountain meadows are called spang-ri (span ri); grassy plains spang-thang (span than) or spang-zhung (span gzhun). Summer pastures in general are called brog-na (abrog gnas). The grazing grounds of the four seasons are called: dgun-spang, "winter pastures," or dgun-sa, "winter place," dpyid-spang, "spring pastures," dbyar-spang, "summer pastures," and ston-spang, "fall pastures."

Whenever strange animals are found in the pastures, their tail and mane are cut off and they are chased away. If they are found again, they are confiscated and must be bought back by the owner at a price that is subject to negotiation.

## 2. The Winter Camp as Family Property

A few tribes make exceptions insofar as the winter camp is concerned, especially when the group is small and disposes of sufficient grazing lands. Whenever a group has built blockhouses in its winter camp, it returns to these houses the following year. The winter camps thus becomes family property. In lower areas, where agriculture is possible, winter camps may include some fields that also are family property. Other tribes, for example, the Ra-gya Arig on the upper course of the Yellow River, do not permit such permanent winter camps and do not allow any agriculture in spite of the favorable climate. They gave me the following explanation. The erection of permanent dwellings and plowing of the ground disturbs the earth too much and antagonizes the jealous and easily excitable earth spirits (sa-bdag), which then cause illness among men and stock. In addition, we have the pride of the nomad who despises all permanent settlement and hates the least amount of agriculture. We shall discuss this further below.

There is a greater combination of stock breeding and agriculture in the southern part of northeastern Tibet, where we find tribes that divide their land holdings into cropland and pastures. In these areas the winter quarters of the nomads are far more permanent. They usually erect poorly constructed pole huts covered with cow dung or sod. The poles are buried in the ground when the camp is abandoned for other grazing grounds. The nomads also build sod walls, over which the tent covering is then stretched as a roof. These winter quarters usually include a hay supply to make up for the lack of natural fodder. These hayfields usually belong to individual families. (R. B. Ekvall, 1939, Page 75 f.) The richer the pastures, the larger the number of families that can settle together. These permanent winter camps and the occasional associated plowed fields and hay meadows belong to the family and are no longer tribal property.

### (b) Movable Property

#### 1. The Herds

The herds make up the greatest wealth of the nomads. In terms of numbers and of economic importance, the leading role is played by the sheep. They supply meat, wool, skins, and, for poor owners, also milk and pack animals. In their earliest stage, the Tibetans may have been pure sheep breeders before they domesticated the yak. Sheep breeding alone satisfies all the food and clothing requirements of the nomad. Since the sheep had world-wide distribution in early Neolithic times, its original domestication must probably be dated from Mesolithic times, as discussed previously.

Second to the sheep are the yak herds. The yak serves as milk, pack, and riding animal. Its hair is processed and the meat and skin of old animals is utilized. It is the second most important economic animal. Its domestication among the Tibetans also dates back a long time. The Tibetans in their original territory may have first domesticated the Namadicus ox and passed only later to yak breeding.

Horses are less numerous. They are used primarily for riding. Only for quick journeys are they also used as pack animals. They are in general regarded as animals of luxury, since the A-mdo-pa make no use of their milk, meat, or skins. They bring in money only through their sale. The horses of the A-mdo-pa are thus of limited economic usefulness.

The scale of economic usefulness is also expressed by the size of the herds. The tribal chieftain of the Wnag-thag on the Buhain-gol, west of the Kuku Nor, had about 30,000 sheep, 4,500 yak, and 800 horses. Percentagewise, sheep make up 85 percent, yak 12.8 percent, and horses 2.2 percent of the herds. Only very large and well-known tribes have such rich chieftains. Other rich families had 5,000 sheep, 400 yak, and 70 horses, or percentagewise, sheep 91.4 percent, yak 7 percent and horses 1.6 percent. A small family had 550 sheep, 35 yak, 5 horses, or 93.2 percent sheep, 6 percent yak, and 0.8 percent horses. The number of animals varied from family to family but remains more or less in the above ratio

The concept of wealth varies with areas. Among the A-mdo-pa, several hundred yak are a sign of wealth. (C.f. Przheval'skiy, 1877, Page 345.)

The herds are the property of the individual families. The head of the family makes the decisions regarding sale, slaughter, and gifts to monks. The man of the house probably discusses the matter with his wife and grown sons, but does not regard their decision as final and even acts in opposition, as I had occasion to observe. One exception are the animals that the wife brought with her in the form of a free dowry and are not part of the bridal price. These are mostly sheep and a few yak, occasionally a horse. These animals may be disposed of only with the consent of the wife. On the other hand, the wife does not act without the husband's consent. If the marriage is ended and the wife returns to her parents, she takes her animals with her. Sheep and cattle sometimes bear property marks on the left ear. In the case of very large horse herds, such markings are branded on the left thigh.

Is the head of an individual family or of a family group to be regarded as the rightful owner and administrator of the herds? When a nomad has several grown sons and large herds, the entire family usually stays together and constitutes a large family and settlement group. It also happens that a son who does not get along with his parents gets his share of the herd and lives separately. Whenever several related or well-acquainted families form such a settlement group, their herds are grazed in common. Each evening, however, the milk animals are returned to their owners, who are the only ones who

milk them. Property, utilization, and disposal rights are thus retained by each individual family. They are not matters to be decided by the chief of the settlement group. The herds are merely grazed in common. If the father dies before the sons are grown up, the mother becomes the head of the family. A clever and strong-willed widow is sometimes able to hold the grown sons in a large family group. In most cases of this type, the herds are divided among the heirs. The brothers stay together if they get along, forming a new settlement group subject to the above-mentioned individual family rights, or they live separately.

## 2. Other Family Property

The tent and its equipment, domestic utensils, kitchenware, riding and pack saddles, butter, wool, and skin stores are also family property; similarly the food, such as meat, milk products, and grain stores. The nomads are economical with their flour. Tribes that live far inland at great distances from grain-growing areas, sometimes eat no flour for months, or at least very little.

No hospitality is offered to ordinary travelers, such as pilgrims and merchants. Each traveler must have his own tent in nomad areas and prepare his own food. Only well-known or important persons are invited into the nomad's tent and fed there. Upon my departure, the housewife even gave me meat, butter, curds, and flour for my trip.

Hunting no longer plays a major role in supplying the A-mdo-pa with meat. The influence of Lamaism has led to the protection of wild game. In the past, according to the legends, hunting was a popular occupation. Nowadays hunting is largely restricted to fur-bearing animals, including the fox, marten, sable, and others, as well as to the musk deer for its musk. The killed game is the property of the hunter.

The inhabitants of the Byang-thang, on the other hand, are very able hunters. The women care for the small herds. This type of dual economy shows again that this highland cannot be inhabited simply by hunters.

The women are free to collect tubers and mushrooms which are most abundant near old camping grounds. Families that camped there previously have no special rights in this regard. Whoever digs them out may keep them. The same is true of medicinal roots and herbs. These are usually gathered by medicinal experts.

## 3. Personal Property

In addition to family property there is also personal property, for example, clothing and jewelry, weapons, pipes and accessories, knives, and so forth. This also includes the wife's extra-curricular dowry. When a marriage ends, the wife also takes her clothes and jewelry with her. Girls usually have their own jewelry which they take with them into marriage. Some women also have "pin money," which they can use at will.



#### 4. Protection of Property

We said before that the grazing lands were protected tribal property. The nomads therefore demand grass and water payments and confiscate strange animals found on their land. The protection of the herds against theft is even more rigid. If a thief steals an animal and is caught, he must return ten animals, including the stolen one. This rule is firm and is carried out to its fullest extent. If the theft occurs within the tribe and the thief repeats his offense despite punishment or if he is poor and cannot meet the penalty payment, then his entire property is confiscated and he is expelled from the tribe. In the A-mni-rma-chen I once met a young Tibetan with his mother, sister and brother-in-law; he had been subjected to this punishment and was trying to make his way to a new life in the Ra-gya lamasery. Thieves caught in the act are sometimes shot to death or at least shot at. This can easily lead to a blood feud because intent to steal can simply be denied. Sometimes the Achilles' tendon of thieves is severed as punishment.

Of course it happens quite often that horses and yak get lost. This situation differs from the above-mentioned presence of strange stock on one's grazing land. Such lost animals are caught and kept with the herd. If the owner is known, he is informed. If he is not known, the finder waits for a report of lost animals, for the nomads are likely to search for their lost stock for days and weeks. Not only the Tibetans but also the neighboring Chinese have the capacity to remember the color, form, and features of horses or cattle that they are likely to meet on the way. While riding past, the image imprints itself on their mind. This is part of the "nomadic instinct" and plays a key role in the search for lost animals. If any other objects are found, such as ropes, knives, and so forth, they must be left alone. If the finder meets the owner, he informs him of the place. This is of course unusual in sparsely settled areas. If the finder were to pick up these things, he could be regarded as a thief and punished accordingly. Once a tribe sets out to pillage, all these tribal customs do not apply to strange tribes.

#### 11. The Psychology of the Herder

##### (a) In Animal Husbandry

We shall now discuss the essential features of herder psychology as they arise out of the interrelationship between man and livestock. The previous discussion showed how the A-mdo-pa in interaction with nature created his own economic form. By applying his creative will, the herder succeeds in domesticating and deriving use from his sheep, yak, and horse and wresting the necessary grazing lands from the inhospitable high mountains and high steppes of "the roof of the world." The animals of the nomads provide their means of existence -- food, clothing, shelter -- and their means of transportation as riding and pack animals. The nomad is thus able to make his home in this lonely and inhospitable mountain world, which ordinarily offers refuge only to the fleeing game. It is a home to which he is attached with all the fibers of his heart and to which he speedily returns from his trading or pilgrimage trips to the

lowlands. His battle against the powers of nature and the inclemencies of weather requires the utmost exertion of his strength, sacrifice, and deprivation and the rejection of conveniences and a quiet life.

The herder thus shapes his economy. But the nomadic economy in turn shapes the herder. Stock breeding makes him more independent of nature, its calamities and whims. If he adjusts himself to nature's rhythm, it is only to be able to master it better. In multiplying his herds, he gathers large stores of food and wealth that relieve him of the accidental nature of hunting and the insecurity of agriculture.

The nomad must break the strength of the stubborn steer, he must tame the wild stallion, and he must guide his herds of stock. He must protect them against hungry wolves and human robbers out for booty. In open terrain lacking natural protection, he must be even more alert and ready for a fight. This in turn tends to make him more belligerent, restless, and stronger. All these traits are combined in the nomad. The continuous schooling of nomadic life and the Spartan character of his existence harden him physically and mentally. The herder is farseeing and thoughtful, agile and alert. Physically he is able to endure all possible derivations and complaints. His hearing is extremely keen and he can distinguish the greatest variety of sounds. He has a very sharp eye and is able to tell the color of a horse even at great distances. Once a Tibetan looked through my Zeiss glasses and laid them down contemptuously, saying, "I can see that with the naked eye just as well."

This steady struggle against nature and its powers, the guiding, protecting and defending of the herds, tend to produce a strong feeling of self-confidence in the herder and arouse a superior masterful spirit in him. All these influences give the nomad a peculiar character. He is free, independent, self-assured, and self-confident; he is a man of distinct individualism, who is proud, strong, frequently stubborn and does not easily submit to the will of another, except that of a superior leader. Such is his temperament: solid and strong, resistant and at the same time pliable. This is true not only of the men, but also of the women, not only of the adults, but also of the children.

The nomad likes to give the expression to his belligerent disposition in the form of pillaging expeditions and competitions. During the period of independence, small and large groups often ambushed pilgrim and merchant caravans or attacked nearby tribes. They removed the livestock and other wealth partly through trickery, partly through force. So far as possible, bloodshed is avoided. Aside from plain aggressiveness, other reasons may lead to pillage, such as loss of the livestock through epidemics and theft by another tribe, and insult or murder on the part of outsiders. All these activities are called ra-mda. Ra-mda-pa means "friend, companion, helper; ra-mda means "help, support, assistance," and by extension "pursuit, chase." Such heroic adventures are even undertaken by some especially courageous individual herders. These enterprises are depicted with great dramatic effect in the old epics. The expeditions often led to tribal feuds that lasted for decades and centuries, for nomadic pride calls for revenge of insults, loss

of livestock, or even loss of human life. If the feud cannot be settled through negotiation and the payment of damages, arms must intervene. The law of vendetta must be observed. These pillage expeditions did not arise out of the instinct of a beast of prey; they were the expression of a belligerent character.

This is after all the typical mentality of the nomad fighter, which is or was peculiar to the Altay nomads, the Indo-Europeans, and the Hamito-Semites. This competition also gave rise to the horse races and wrestling of the Tibetans. Here again they want to test and measure their strength. The herders are therefore rough and aggressive, heated and excitable, but again thoughtful and calculating, sentimental and faithful.

#### (b) in the Family

As we have said, all nomads have these character traits: men and women, boys and girls. In the course of animal husbandry, they learn that large herds are of greater use than small ones. Therefore they avoid early division of the herd for the heirs. Whether the herd is large or small, its maintenance always requires many hands. Since the keeping of the household, the making of butter, and other chores must also be handled, the parents are usually unable to do all the work as long as the children are small.

The married sons usually stay with the parents. The herds thus remain together and give a greater yield. The family then has enough manpower to attend to the keeping of the stock and the other chores. These circumstances gave rise to the closely-knit large family group of the nomads, in contrast to the loose grouping among the cultivators, where the married sons are economically independent of their parents and retain only certain social obligations toward them. (W. Schmidt, 1940, Page 187.)

In keeping his stock, the nomad learns that purpose and order are necessary. Therefore he also insists on purpose and order within the family and requires that its members, who are otherwise inclined to be individualistic, adjust themselves to the family group. The head of the family is master. His position is consolidated by a strong patria potestas. Among the A-mdo-pa, however, the father does not exercise unlimited mastery and power over his family. His wife has the same status. She is the mistress of the tent. If she is clever and strong-willed, which is frequently the case, she is often asked for advice, as we have had occasion to observe. Ekvall says: "Finally, if assigning a higher position to women is any criterion, the nomads are notably above the farming Tibetans." (This refers to the farming Tibetans of A-mdo, not the totally different Tibetans of the southeast, south, and southwest.) "In both instances the women are amazingly industrious, but among the nomads the women have much more to say about the management of affairs and have a definite claim to a share of the family wealth... the women have such an important place in the nomad economy and they are so indispensable in the management of the capital wealth of the tent that they have gained greater power and voice in affairs. The women of the farming communities have a similarly important role in the agricultural routine, but they do

not have similar status." (R. B. Ekvall, 1939, Page 78.)

The children are willing and obedient, but grown sons are also consulted for advice. I have had occasion to observe how very old men delegated all their power to the oldest son. The nomad woman is as self-assured, quick-witted, and calculating as the man. She is not shy in the presence of strangers and shows no fear or reticence. Even 3-year olds are not afraid of strangers and become very friendly. The children, both boys and girls, help with the chores, such as guarding the stock, spinning, and so forth, since early youth. Thus the form of the economy also trains the children.

(c) in the Tribal Group

As we have already said, many families form a settlement group. This is to the advantage and protection of animal husbandry. This group is also headed by a leader. "...among the nomads, although there is usually one person in the encampment who is known as the headman by right of his influence, it is seldom that he has been chosen formally." (R. B. Ekvall, l.c. Page 68.) The combination of the settlement groups gives rise to a tribal group, which protects the grazing lands of these groups. To insure sufficient authority and influence, many groups must combine in forming a tribal group. Originally the tribal group was based on kinship and was nothing but an enlarged family group. Nowadays the internal organization of the A-mdo-pa is no longer uniform and uses a number of systems.

There are very small tribes that have no chieftain and are ruled by the elders of the individual groups. This council of elders is not formally chosen but merely recognized in terms of ability. In other tribes, especially large ones, these elders select a dominant personality as the chieftain. There are also tribes in which the leadership is transmitted within a certain family, usually the richest and most influent in the tribe. In other tribes, the leadership stays within a family as long as it has an able son; otherwise another chief is chosen. In a large tribe that is divided into subtribes, each subtribe is headed by a subchief and the tribe as a whole by the head chief. The subchiefs again may be chosen or stem from a specific family within the subtribe. There are also combinations of several tribes that are headed by a king. This position may be inherited.

The power of the chief depends entirely on the strength and influence wielded by the particular personality. If the personality is not dominant, it merely holds the title but wields no power, which is then relegated to the elders. But even the autocratic power of a strong leading personality is strictly limited, restricted, and under Argus-like scrutiny. This scrutiny is not limited to the persons charged with such a task, but expresses itself in the desire for freedom and independence of the individual families. The nomads hate arbitrariness and despotism and their pride does not permit any tampering with their rights. One example will suffice. The rich and influent chief of the Da-bzhi north of the Kuku Nor sought a daughter-in-law. He selected the able daughter of a tribal member of moderate

wealth. Since she was destined for a chief's family, the marriage price was set correspondingly high. But the chief was a miser and sent less valuable presents through his aides, who then removed the bride by force. The father of the bride was of course unable to take steps against the powerful chief and his clan. He returned the gifts, dismantled his tents, and left the tribe for a neighboring tribe, renouncing his allegiance to the chief. This incident was of course very embarrassing to the chief. He was now ready to pay the agreed price and asked the father of his daughter-in-law to return. He even offered to add a few horses to make up for his deed. However, the nomad rejected all intermediaries and bearers of presents with scorn and anger and remained with the strange tribe.

This strong family individualism and tribal particularism is of course a strong obstacle to the formation of a state. The nomadic tribes of the Tibetan highlands therefore united very seldom under a dominant leader heading a state-type organization. But when the loose tribal groupings were combined in such a state, they wielded a tremendous power that endangered even the great Chinese domain. The Tibetans in the southwestern and northwestern border areas in conjunction with the indigenous cultivators have of course set up states in the course of millenia and have brought fresh blood to Chinese culture. But the nomads in the highlands retained their ancient family and tribal organization. They have no aristocracy and no nobility, such as are found in southern and southeastern Tibet where the herders conquered the indigenous cultivators and became the ruling stratum.

The herder mentality discussed above is typical of all stock-breeding nomads, the Turko-Mongols, the Indo-Europeans, and the Hamito-Semites. But it is expressed most sharply among the peoples that inhabit inaccessible highland areas. Schwarz says the following about the Kara-Kirgiz of the Pamir highlands. "While the society of the Kirgiz-Kaysaks (steppe dwellers) is set up on an aristocratic basis, the Kara-Kirgiz do not have any hereditary nobility and only the batyrs (daring robber barons) enjoy their honor and respect. Before the Russian conquest, the Kara-Kirgiz, like their brethren in Chinese territory today, were ruled by so-called manaps, who were chosen by the people regardless of social origin and whose greater or lesser power depended mainly on their personal reputation. These were usually batyrs who had gained wealth and fame through daring pillaging expeditions. The villages and tribes of the Kara-Kirgiz were quite independent of one another and usually involved in feuds. As a result of their life in mountain areas, the Kara-Kirgiz, like all mountain peoples, are less sociable, shier, and wilder than the Kirgiz-Kaysaks and are much more difficult to subdue." (F. Schwarz, 1900, Page 125 f.) Exactly the same can be said of the A-mdo-pa.

#### (d) Herder and Peasant Life

Life in this mountain world and in a free natural environment is one more factor shaping the free and independent character of the herders. They live in the highlands that reach toward the sky and in the broad highland valleys. From these free vantage points they

always look down into the constricting lowlands. The gigantic mountain world frees and releases, hardens and strengthens. In the lowland the nomad feels himself constricted in the narrow valleys. The narrow houses particularly impress him like a straight-jacket that hampers and constrains. His airy tent, on the other hand, serves only as a night encampment and as a hearth where he prepares his food. At other times the A-mdo-pa is always in the open under the vast dome of the sky. Life in the mountains thus has a releasing and exhilarating effect.

Agriculture exerts the same stifling pressure on the nomad as does the lowland in general. He sees himself chained to the ground and even "crawling" into the ground in the course of his tilling of the soil, an activity that is bound to antagonize the spirits of the earth. He therefore despises the cultivators. The farming Tibetans themselves also regard nomadic life as better and superior. "We may start with the bold statement that the nomad is definitely superior, not solely by his own account but by that also of all who have any dealings with the two cultural groups. The Moslem and Chinese traders so evaluate them; the nomads naively classify themselves as superior and the farmers agree, for the stationary communities of northeastern Tibet are oddly apologetic of their lot and status. The farmers, in fact, have a definite inferiority complex; they will say, 'Oh, we are only farmers, not nomads.' The farmer labors under a definite sense of disability in spite of his more secure existence and the greater degree of comfort in his more sheltered life; though debarred from it he agrees that life in the saddle and in the tent would be ideal. Certain facts stand out to buttress this evaluation. Given a higher role by public opinion, the nomad lives up to it by greater liberality in his social relationships, by greater sportsmanship, in the carrying on of feuds and raids, and by being, in general, more trustworthy." (R. B. Ekvall, l.c. Page 77.) No nomad would therefore choose agriculture if he can avoid it; every A-mdo-pa farmer, on the other hand, would prefer nomadic life if he could return to it.

Such is the psychology and self-confidence of the nomads: a free and independent person in his family and tribe; proud and materful toward farms and traders. He is devoted only to the Lamaist monks and incarnations. This devotion results from entirely different forces in his character, namely his religious traits. The free, natural life not only brings the nomad closer to nature but also to religion; he is more receptive and open-minded with regard to the supernatural.

## 12. The A-mdo and Alpine Herders

### (a) The Herder Personality

Since I wrote the present study in Switzerland, I was constantly impressed by parallels between the A-mdo and the Alpine herders, which can be traced into surprising detail. The following discussion will touch only upon some of the most evident features.

Nature has created similar conditions in both areas; the Central

Asian highlands are "the roof of the world," while the Alps are "the roof of Europe." The herder culture has shaped corresponding peoples in these two similar environments. "Switzerland owes its origin to the herders of the Alps. It owes to them a major part of its state organization and its national development. Historically the Swiss can still be called the "herder people," though nowadays only a small fraction of the people are engaged in Alpine herding." (R. Weiss, 1946, Page 106.)

The Alpine herders are also a freedom-loving, proud, and ancient people. Gotthelf has described their nature in an unexcelled manner; "They came down so proudly and yelling ever so loudly with joy, and drank only ten-batz wine; the boys teased all the girls, the cow girls had an impudent look on their faces, and the women sat like hens, proud and happy in the midst of the small children, on a bedstead in the midst of their swarm. Toni was from Lucerne and had eight children, all handsome, as red as milk and blood and as slim as the pines in the forest, with teeth as white as snow; but all were covered with dirt as if with a coat of lacquer to protect the fine, tender skin underneath against the cold and wind. So there were these children and behind them this tremendous Entlebuch woman, who in case of need could well have chased a dozen national clubs to the devil with the help of an iron club." (J. Gotthelf, Vol 9, Page 345.) This is the family picture of the daring and proud herders who love their mountains above all. "After all, life in the mountains is so different from those dungeons down there and yodeling on the pastures is so much more fun than hoeing furrows or cutting cabbages." (J. Gotthelf, Vol 20, Page 223.) They look down on the peasants and make them aware of their own superiority. "Yes, when such a herder came down from his beautiful mountain to the Langnau market, he would ram his stick into the ground right in the middle of the street and sit on the other end like a king on his throne, and woe to him who would brush against the stick; he would have exposed himself to less danger if he had shaken a king's throne. This herder prince not only wanted to sell his cheese but buy some hay for the winter. He loved to have the farmers seek him out as if he were doing them a favor by deigning to take their hay for virtually nothing and practically steal their straw." (l.c. Vol 12, Page 210.)

Such was the self-confident mood of the herder with his proud mannerisms and his strong occupational ethos. "The highly respected herders, who usually were cantonal councilmen, set the tone with their habits. They still wore the traditional herder costume, engaged in herder games, and got together in those Alpine inns that are still typical of the northern Alpine areas." (R. Weiss, l.c. Page 108 f.) Trait for trait we thus find the A-mdo-pa and the Alpine herders similar in character, pride, and custom.

The Alpine herder, too, "who is still obsessed with some nomadic restlessness and temperamental mobility," (l.c. Page 109), is a strong character who seeks an outlet, full of daring enterprise and always ready for a fight. They found peaceful training in the herder games, where they matched their strength in sports competition. These old herder games include above all Swiss wrestling, free-style wrestling, and foot races. Yodeling and

blowing the Alpine horn were also associated with these games. These games took place in mid-summer or in the fall at the time of the valleyward migration, in other words at the very same time when the A-mdo-pa stage their festivals. Just as "the constant military readiness of the old Swiss confederates, especially the wild and prankish raids staged by the youth," (l.c. Page 107), used to keep these herders in trim and many mercenaries practiced their military prowess in foreign armies, so the old belligerent disposition of the herders today finds an outlet in these games.

#### (b) Organization

The Alpine herders also had their large family group, for the highly decentralized animal husbandry required many working hands. Married sons therefore stayed with their parents. The pastures are not regarded as private property. The Alpine meadows are the communal property of the community. Even part of the farmland is communal property. "Even plots of land, meadows, and farmland that have passed to private ownership are temporarily declared open to all by the ancient institution of communal stock feeding, which even today turns the entire territory of certain communes in Graubunden into a public pasture during certain periods in the spring and fall." (l.c. Page 79.) Originally the herders did not have their own winter quarters and rented rooms from settled peasants, as they still do occasionally today. The time of the migrations into the mountains and back into the valley is set by joint decision." The entire stock holding of the commune stays together in the mountains, for better or for worse, the meadows are used jointly, the communal property is administered and worked jointly." (l. c. Page 80.)

These herders also defend their rights and property in common. The Alpine communes, which probably were originally nothing but enlarged family groups, were the oldest political units. These later combined into federations that defended their rights against the feudal lords. We thus find "a state-promoting feature in the political power since ancient times until about 1830, when "the peasants of the Swiss midlands entered political life." (l. c. Pages 106, 108.) But the belligerent spirit of the herders remained and to today they "find an outlet for their political energy in fruitless, stubborn opposition to centralization and especially to the economic measures taken by the Swiss Federation," because "the new state is strange to them for religious and federalist reasons." (l.c. Page 180.) Here we find again the individualistic nature of the herder that gave rise to the "cantonal spirit." The exact parallel can be found among the A-mdo-pa.

#### (c) Herder Traditions and Customs

Parallel features are also found in the musical instruments. The large horns of the yak and the aurochs were natural trumpets. All one had to do was to make a hole at the point and blow in air with tightly-pressed lips to be able to produce a dull tone. The word "horn," Latin cornu, Gothic haurn, also bucina, which was probably derived from a word related to the Old Slavic byku,



"steer," also Latvian taure, "hunting horn, herder's horn," all these clearly show the connection with the cattle horn and "may have also designated the blowhorn in ancient times." (O. Schrader, Reallexikon, Vol II, 81b.) The herder's horn is still typical of the stock breeder. A simple refinement of this horn is the Alpine horn. This is an elongated horn, in which a wooden tube, one to 4 meters long, has been inserted. "The herders of all periods and all areas used the horn of the goat, sheep, or cow, a natural wind instrument, as the original 'horn'" (R. Weiss, l.c. Page 228.) Historic fame was achieved by the "uri steer" and "Roland's horn." In Sanscrit, both the "horn" of the animal and the musical instrument are called sing or shakh. It has the same meaning in Hindi and sing also designates the conch shell trumpet. The shell is also called sankh. (Private communication from St. Fuchs.)

If now a wooden reed is attached to the point of the horn, the horn serves as a conical resonance pipe. This is the ancient herder's pipe. The pipe can be made of bark, wood, or bone. Then the reed is added. The Tibetans call the ordinary flute rgya-gling (rgya glin); the one made of bone is called rkang-gling (rkan glin); in the Chinese border areas the pipe is called so-na. The Tibetans combine these types under the designation for flute, which has the general name of gling-bu (glin bu). It is the usual musical instrument of the herders. Two flutes are usually bound together.

Bone flutes made of reindeer phalanges are known from Paleolithic times; other bone flutes with holes were handed down from Neolithic times. (M. Ebert, Reallexikon, Vol VIII, 354b.) The flute made out of a tibia is also an ancient instrument used by the herders. The Romans called both the shinbone and the flute tibia. The old herder pipes are the favorite instruments of the Alpine herders. "Piping belongs to the skills which according to a widespread Alpine legend, the herder learned from the demonic 'Alp devil.'" (R. Weiss, l.c. Page 227.) Flutes made out of the sheep or human tibia, eagle wingbones, or bamboo and metal with six or seven holes are also known among the A-mdo-pa. The "mouth drum" or "jew's-harp" is not made by the Tibetans themselves, but by their neighbors, the Lisu and others. This kha-pi is very popular in eastern Tibet.

The Tibetans call the "Alpine horn" dung-chen (dun chen). Dung means "conch shell, shell trumpet, trumpet." Trumpet thus is originally related to the shell, not to the horn. This is the Triton's shell which is known in music as the Triton's horn. If we add chen, meaning "large," we get "Alpine horn." Rwa-dung (rwa dun) is the horn trumpet, for rwa means "horn." Rag-dung is the copper trumpet and rkang-dung the bone trumpet. dMag-dung is the war trumpet. All this shows that the first Tibetan trumpet was not made out of the horn but out of the conch shell. Here again an ancient custom of herding has been preserved, for "curiously enough, even in Central Europe the conch shell is used as a weather horn by the shepherds who are familiar with the secret forces of nature." (G. Buschan, II, Part II, Page 376.) The shell was "apparently used in a number of areas since prehistoric times, notably in the Muehlenviertel and the adjoining Bohemian Forest." (L. Schmidt, 1948, Page 114.) I found two of these shell horns in the Vienna Museum of Ethnology. In contrast to the Asian

horns, which are perforated on the side, these have the hole at the point. The Romans used these shells as military trumpets.

The Lamaists derive the religious use of the conch shell from Buddha himself. Buddha is supposed to have received a white conch shell from the Dragon King and used it during the rainy season for the prayer call instead of the trumpet. Buddha ordered the Moggallana to bring the shell to Tibet and hide it under a mountain, where his great disciple was expected to find it. And so it happened. Tsong-kha-pa is said to have found this conch shell during the founding of the Galdan monastery, where it is still being kept as a valuable relic. (Biography of Tsong-kha-pa.) This legend shows how Lamaism attempts to justify the use of an originally secular instrument for religious purposes.

Yodeling is also "widespread throughout the world from America through Polynesia to many Asian and European mountain peoples." (G. Buschan, l.c. Page 233.) But mountaineer stock breeders in particular have this custom in common. The A-mdo-pa use short yodels to call one another from one mountain top to another. He sings a meaningless syllable, such as kyi, in the head voice, using rising and descending drawn-out notes. Usually the yodeler accompanies and ends the improvised song, similarly to the Alpine limerick of the eastern Alps. The A-mdo-pa, too, are passionate and tireless singers, whose songs ring from the mountain tops. On one of my travels I was accompanied by a Tibetan guide, a young man of 25. Suddenly the yodel and song of a shepherdess resounded from a mountain top. My young man replied. A long duet of love songs ensued. In the course of the singing, the shepherdess, a girl of about 23, descended toward us. My young man lost out in this song contest. This greatly amused everybody, especially the girl, and there was much laughter at the expense of the young man. All these songs are conducted in Alpine limerick style.

One final comment regarding cowbells. These have been known in the Alps since ancient times. They are not used among the A-mdo-pa but by the neighboring Chinese and Mongols. Lead animals in caravans carry large bells as pack animals, horses, mules, and camels. Bells are also attached to caravan carts. These bells are identical in form with the Chamonix bell; they are flattened, cylindrical, and made of black bronze. They do not however sound a triad like the European bell. Horses arriving for the races often wear a neckband of small brass bells. The A-mdo-pa lack all this.

Music and singing are associated with dancing. The A-mdo-pa know round dances in which women and girls alone or with men, especially good singers, dance in a circle, singing songs. Such dances are staged especially during the summer and fall festivals and at weddings. The round dance was also the original Swiss dance form. Here again the herders distinguish themselves through their enthusiasm, "especially in the core areas of northern Alpine herding, which are associated with the old tradition of Alpine music and generally with a musical and lively temperament which manifests itself also in the festival games." (R. Weiss, l.c. Page 218.)

The masquerade dances are quite different. At New Year, the old year with all its evils and calamities is driven out and the new year is welcomed in. On this occasion straw figures are burned, similarly to the Zurich "Boeoegg." The evils and calamities have previously been conjured into these figures and are then destroyed by burning. These are the remnants of old vegetation rites that consecrate a new, fertile year. Masked figures, the remains of old shamans, appear in this ceremony. These affairs take place at the winter solstice and at the New Year, at the time of the fated advent of the new year. They recall quite clearly an agrarian vegetation rite accompanied by dance-like spring processions. The real carriers of this rite are the urban guilds, especially the coopers and the butchers, in other words the cultivators as opposed to the stock breeders. (R. Weiss, l.c., Page 214ff.) "Bern and Basel used to stage such cooper's dances until recent times and Zurich had a precursor of the "Sechselaeuten," the butcher's procession, which was attacked by Bullinger in his city chronicle and finally prohibited in 1728. In this procession, 'jesters and merrymakers' danced in a bawdy and dissolute manner around a bride and bridegroom (the vegetation couple' of the festival of spring) indulging in all sorts of obvious fertility rites in a bacchanal masquerade." (L.c., Page 215.) Here we still find the obscenity typical of the agricultural vegetation rites. These customs are clearly related to the farming stratum.

The A-mdo-pa nomads lack such vegetation ceremonies at the turn of the year. But they are being practiced among the farming Tibetans in the west, south, and southeast. We thus have new evidence of the difference between the stock-breeding and farming cultures. These ceremonies are staged in the lamaseries of all sects.

In view of the type of economy of the stock breeder, his food consists typically of milk products. "The food of these areas until 100 or 200 years ago consisted mainly of milk and milk products. In Oberhasli and other stock-breeding areas, lean cheese instead of bread was eaten with the fat cheese. Breakfast in central Switzerland consisted of milk and whey cheese or "Ziegersueffi" (fresh white whey cheese in whey), often with dried fruit as a bread substitute." (R. Weiss, l.c. Page 137.) Bread was eaten little or not at all. A native type of bread is the "pear bread." "A thin layer of bread dough is wrapped either around a mush of dried pears or around a compact mass of fine-cut dried pears and nuts." (K. Meuli, 1947, Page 89.) Potatoes, too, were virtually unknown. "Up here we don't eat potatoes until they stick out of our skin like they do down there. That's why we aren't as stupid as they, acting as though they were stuffed with lead and glue; we're a gay and clever little bunch and can bamboozle one of those fat potato-bellies ten times before he knows what's happening." (J. Gotthelf, Vol 9, Page 345.)

To the milk we must add the meat of domestic animals and game, formerly probably also blood, for "Swiss chamois hunters still insist that if they drink the blood of a freshly killed chamois they will acquire the eye and the speed of the animal." (R. Weiss, l.c. Page 129.) Other traditions point in the same direction. "The little wild men of "Faengen" of Alpine folk legend are so speedy because they live on chamois milk." (L.c. Page 129.) In sharp

contrast is the feeling of the farmers with respect to this type of food, for they maintain that mutton and veal do not add to their strength but rather make them weak. The peasant mother is afraid that her baby may be estranged from here if it is fed animal milk or the milk of another woman. (L.c. Page 129.)

The milk products of the Alpine herders are of course richer than those of the A-mdo-pa, who are not familiar with cheese making. In some products there are interesting parallels. The A-mdo-pa prepare a real yoghurt. The Alpine herders have something similar, called brocheta. The stomach of a sheep, goat, or calf is cut into small pieces and steeped six to eight days in lukewarm water in a warm place. The strength of this sour decoction is then tested and the necessary amount of fresh, body-warm whole milk is then added. The mixture is kept at a temperature of 30 to 35 degrees centigrade. The acidity breaks down the milk and solidifies it within 4 to 5 hours. Because the milk is broken down, the product is called brocheta. The remaining whey is used to make whey cheese. Brocheta is eaten with pure cream and a little sugar. This is the sweet and festive food of the Alpine herders. The chu-ra, dry curds, of the A-mdo-pa corresponds in the Alps to whey cheese. The whey is mixed with a little vinegar or sour milk. It thus coagulates and turns into whey cheese. This is then placed in bag to let the water run off. After two days, the whey cheese is placed in the chimney, where it is dried and smoked. After one or 2 months it is well dried out and is then eaten as a bread substitute.

The Swiss Alpine stock-breeding culture is only a segment of the once widespread stock-breeding culture of Europe. All the mountains of Europe offer suitable pastures for the herds on their treeless heights above the tree line. We still find the remnants of this old stock-breeding culture from the Caucasus to Scotland, from southern Italy to Scandinavia, from the Alps to the Pyrenees. The raising of small livestock, sheep and goats, forms a separate culture, which is still preserved in the Dinaric Karst lands. (G. Buschan, l.c. Vol II, Part II, Page 363.) The economy of the nomads of Central Europe has been described in great detail by Froedin. (J. Froedin, 1940.)

This type of animal husbandry has left evidence in Switzerland since early Neolithic times. Because of the nomadic way of life, settlements did not remain long in a single place and therefore left no major traces. However, we find the evidence in the pile dwellings, where farming and stock breeding were combined. The pile-dwelling site Seematte on the Baldeggersee yielded from its two horizons the remains of 39 sheep and goats, 91 head of cattle, 58 hogs and 20 dogs, or a total of 208 domestic animals and 225 wild animals. "The list of animals agrees quite well with the finds in the pile dwellings on the former Lake Wauwiler, including the results on pile village Egolzwil 2. (Diggings from 1932 to 1934 yielded more than 1,100 animals.)

"As in the case of Egolzwil 2, Seematte did not yield any remains of rabbits or horses. The pile dwellings of Wauwiler Moor yielded only very few remnants of these two animals. Those of the horse must be ascribed to a wild breed. Since the western Swiss

Neolithic pile dwellings also failed to yield any domestic horse remnants, we can accept it as a fact that domestic horses were not kept in the Swiss pile dwellings of the Neolithic period and that the wild horse was occasionally hunted. Bronze Age sites include many remains of the domestic horse." (R. Bosch, 1938, Page 15f.)

A similar situation prevails in the Neolithic sites of the rest of Europe. "...We know the domestic animal holdings of the band ceramics people far better than their useful plants. They domesticated cattle (peat cattle and domestic cattle), the peat hog, goat, sheep, and a number of breeds of dogs." (W. Buttler, 1938, Vol 2, Page 54.) Obermaier says: "This rapidly growing short-horned cattle appears in Central and Northern Europe as early as the early Neolithic period". It is found associated with sheep and goats. (H. Obermaier, 1931, Pages 271 ff.; cf. appendix on Page 285.) We thus find the same conditions as in the old livestock raising areas of Asia. The oldest domestic animals are sheep, goats, and cows.

One more brief mention should be made of a surprising parallel. The oldest form of castration in Switzerland also used the tying method. The new method was introduced only 30 years ago as a result of a government order.

These several parallels between the A-mdo-pa and the Alpine herders will suffice to show the close relationship between cattle herding cultures, which we will now proceed to investigate in the rest of Europe and in Africa.

#### (d) Nomadic Herders and Mountain Farmers

I found a surprising confirmation of my theory when I met D. J. Woelfel and became acquainted with his studies. His specialized territory is the Canary Islands and West Africa. In his cultural analysis he found a widespread, old stock farmer component which he was able to trace to Europe and Asia. He differentiates the following.

1. Migrating farmers or nomadic herders. They keep predominantly sheep and goats. They spend the summer in the mountain pastures and descend in the late fall into the low-lying, often very distant snow-free winter pastures, since they are not familiar with livestock pens or the preparation of a hay supply. The animals thus spend the entire winter in the open and feed on dry grass. These herders have permanent homes in the form of village settlements that are located on the mountain slopes in the vicinity of arable land. The old type of structure consisted of a stone-wall enclosure covered with a roof of twigs and branches. These houses are probably derived from a skin-covered branch hut. The black tent was only introduced by the Arabs into Africa. These people also erected high stone towers that served as refuges. These towers had their entrance at the top and were reached by means of a ladder. Food reserves and other stores were also kept in these towers.

These herders cultivate a little barley and millet to cover their vegetal food requirements. A large segment of the people spend their time in the fields during the growing season and during

the harvest. Since no hay reserves are piled up, this type of work need not be done. At first bread was unknown. The herders, like the Canarians and the Berbers even today, ate cofio, kuskus, or barley meal. The barley is roasted on a heated iron plate or a piece of earthenware. It is then ground and mixed with butter or oil. This food is also known in Central and Northern Europe and offers an obvious parallel to the tsam-pa of the Tibetans and other Asian nomads.

Woelfel holds that the sheep and goats were there before the cows. The Canary Islands only raised small livestock. Both sheep and goats played a key role in the economy and religion of pre-Indo-European and Indo-European peoples. The Canary Islands did not have any cattle or horses. The subjugated peoples of the Saharan camel breeders are called Kel-Ulli, i.e., "sheep people." The oldest type of sheep was the hair sheep, which now is found chiefly in marginal areas. In the north and the center it was dislodged by the wool sheep and in the south and southeast by the fat-tail sheep. (D. J. Woelfel, 1941, Page 111.)

The nomadic herders are said to have been distributed in the following area. Only the temperate and subtropical zones are involved, covering a region in northern Africa as far as the middle Sudan; the Mediterranean area; the Iberian Peninsula from the Pyrenees to the Cantabrian Alps, Estremadura, and La Mancha; the French, Swiss and Italian Alps, where nomadic herders either still exist or where there is historical evidence of their presence; in the Balkans the Vlach herders; the Slavs and the modern Greeks; Anatolia, Caucasus, western Iran, Afghanistan.

2. The mountain farmers differ from the nomadic herders in the following respects. They breed more cattle and less sheep and goats. During the winter they put the livestock in stables and supply it with hay, straw, and green twigs. Hay-making requires larger farm and pasture holdings. But since arable land is limited in the mountains, these mountain farmers prefer isolated dwellings that lie in the vicinity of the fields.

Their houses are built in the Alpine style, with the ground floor, which usually is built into the slope, consisting of stone walls. The superimposed timber foundation juts beyond the wall, forming the balcony. It carries the wooden upper story, which is covered with a gable roof. The farmers also build refuge towers similar to those of the herders. Their clothing is made of felt and woollens. Socks and leggings are worn everywhere. Typical of this culture are the many wooden containers that are made in a characteristic style, particularly the barrel staves. Milk is heated by dipping hot stones into wooden vessels. The cheese forms are also the same everywhere.

The musical style is also noteworthy. Certain tones are greatly modulated through yodeling. Multi-voiced, pentatonic singing is very popular. "There are without any doubt certain common features in the folk music of the various mountain dwellers of Europe and Asia." (L. Schmidt, 1948, Page 112.) The herders use

chiefly melody instruments. They like to imitate the instruments with their voices, for example yodeling in imitation of the Alpine horn. In sharp contrast is the dull, drum-accentuated rhythm of the farmers. The reference to the music and singing of the herding peoples is kept brief here. Widespread distribution is also found for cowbells, which sound the triad. There is also some agreement in the stock neckbands.

This type of culture has maintained itself in the Rif of white Africa, less distinctly in the Moroccan Atlas, in the Algerian Mountains, somewhat weakened in the eastern horn of Africa, in Spain and the Basque country, in the Alpine countries, Scandinavia, the British Isles, the Carpathians, also in Asia in the Caucasus, Pamir, Hindu Kush, Himalaya, Tien Shan, and Altay.

[Pages 258-285]

### 13. The A-mdo-pa Farmers

To round out the picture of the A-mdo-pa Tibetans, we must still discuss the essential features of the quite different economy of the A-mdo-pa farmers. It will not be necessary to describe their agriculture, for as we shall see they adopted this type of economy from others.

#### (a) Time Limits and Geographic Limits

Farming was practiced in the area of the A-mdo-pa nomads as early as Neolithic times, for example in the valleys of the Sining and Tao rivers (see Page 19 [of original]). We also saw how the Chinese farmers kept expanding their core area, plowing under the grazing lands of the foreign nomads and pushing the herders farther and farther westward (Page 29 [of original]). These events would tend to indicate that the Neolithic farmers of A-mdo also differed racially from the nomads. In antiquity, as today, the herders probably despised and rejected agriculture. Since the land was sparsely populated in ancient times, agriculture was on a rather small scale, and the grazing lands were not confiscated, there was no compulsion for the nomads to quit livestock breeding and become farmers. Such a compulsion arose only during the Ming dynasty (1368-1644), when the Chinese soldiers of the military colonies along the Tibetan border increasingly engaged in farming and the sown area was gradually expanded by their descendants and new immigrants. During the subsequent centuries of the Manchu dynasty (1644-1911) ever more farmers immigrated into the border area from overpopulated China. A number of Chinese in Tsinghai and Kansu told me when and from what province their ancestors had immigrated (see Page 34 [of original]).

As long as enough grazing land remained at their disposal, the nomads were able to sidestep the pressure of the settlers and withdraw. But as soon as there began to be a shortage of pastures, the nomads had no choice but to leave the area or become farmers. In that capacity they were able to make a living on a small area. In the course of centuries this gave rise to a farming zone along the A-mdo--Chinese border, which by this time has probably reached

its maximum extent? Nearly everywhere it has reached the maximum elevation at which agriculture is possible. This zone lies in the favorable valleys of the northeast at an elevation of about 2,800 meters, reaching up to 4,000 meters in the southeast. As a rule the cultivated fields extend along river valleys deep into the grazing zone. In the northeast, the barrier is formed by the mountain ranges of the Nan Shan. The eastern foothills are cultivated and at higher elevations we find the nomads. The middle and lower course of the Pingfan River and the adjoining lower hill slopes are cultivated and the higher regions contain pastures. The same conditions prevail in the Tatung valley up to about 15 kilometers above the county seat of Mengyuan (Tatung). From there the farming limit runs south about 20 kilometers above Tatung (Maopaisheng), 30 kilometers above Hwangyuan (Tangar), to Bale-kun-go-mi on the Yellow River, thence downstream to the Ba Plain (aba than). In a few favorable spots, agriculture penetrates even more deeply into the nomad territory, for example, west of Gom-pa-so-ma (dgon pa so ma), in Cha-bcha and Tulan. This triangle between the Yellow River and the Tatung River contains most of the farming population of Tsinghai. This is the grain basket of the province. Only the higher slopes of the watersheds offer grazing land.

South of the Yellow River, the terrain rises again and forms excellent grazing land. From Bale-kun-go-mi down along the Yellow River and in the valleys of the larger tributaries at Kweiteh, Rongbu (Tungjen), and Shunhwa, there is agriculture. From Shunhwa the limit runs south to the Sia River, then upstream to La-brang (Siaho). Up to this point I verified the limit in person. For the area farther south I rely on Ekvall's data (1935, Map No. One). On the right bank of the river, the farmed area rises even higher. Toward the south the Hei-dzo, A-mchog, Bo-ra, and Sam-dza-rong tribes have cultivated a good deal of land in the upper reaches of the Tao Ho and its tributaries. Next follows the farming area of the Co-ne, West Minchow, Den-ga, and Lower Tebu. The Tebu are settled along the upper course of the Hei Shui, one of the main source streams of the Pailung River. Here the boundary turns southwest toward Sungpan. This southern part of the Shar-pa Tibetans no longer forms part of A-mdo.

This farming zone also contains the ethnic Tibetan--Chinese boundary. Moslems and Tu-jen form ethnic islands. The Mongolian nomads have been largely pushed into the Tsai-dam area and into the upper reaches of the Tatung River. In the contact zone proper, the Tibetans have given up their language, and speak Chinese. Their clothing, customs, and way of life is however quite Tibetan. The Sinification process was speeded in the last decade when the Chinese government set up Chinese schools in the area. Farther away from the contact zone, the use of Chinese decreases. At first it is still a bilingual area. Then follows the purely Tibetan zone. The fully Sinified young people, who attended school, are often ashamed of their Tibetan origin. I asked a few young men, whom I had recognized as Tibetan from their facial features, to which tribe they belonged. They denied that they were Tibetans and pretended to be Chinese whose ancestors had immigrated from the Nanking area. Later I learned from another source that they were pure Tibetans whose



parents still spoke their native tongue. Usually the A-mdo-pa do not hide their ethnic origin and differentiate themselves quite consciously from the Chinese. An even greater distance is of course kept by the Chinese themselves, who are proud of their culture and do not easily intermarry. It may happen that a Chinese or Moslem living among Tibetans will marry a Tibetan woman, but the reverse case in which a Tibetan man marries a Chinese woman does not occur. Political marriages, in which Tibetan princes formerly married Chinese princesses, are the exception. Chinese culture and customs thus gradually penetrate farther and the A-mdo-pa of the contact areas increasingly become Chinese. Ekvall describes this process as follows for the southern area. "Following the river (Tao) up this steadily changing valley, we pass from one clearly defined culture pattern to another, progressing through all the intermediate stages in the successive villages. Thus a trip of 70 or 80 miles takes one through a veritable laboratory of cultural change, with every step labeled and illustrated. In the first village Chinese culture is dominant, and there are only vague traces of Tibetan influence; as one moves on, Tibetan influence increases to a point where the two cultures are evenly balanced; and from there on Chinese influence decreases until in the farthest villages the Tibetan aspect of life and manner is virtually unadulterated.

"Such a trip likewise recalls a certain sequence of events that makes it almost a journey into the past; for leaving the first village, which is Chinese in almost everything but its name (even that is pronounced with a Chinese inflection and tones), one leaves, in a sense, the present and travels gradually backward in time until he reaches the last village, which, with its dominantly Tibetan character, represents what the now definitely Chinese village once was." (L.c. Page 30.)

In the valley of the Sining River (Hwang Shui) and its tributaries, the Chinese farmers made their deepest westward penetration into A-mdo. The most advanced enclaves are in the Tu-lan area. Chinese and Moslems can be found everywhere in the large river valleys and their foothills. The history of the settlement of the Salars near Sunhwa and the various Tu-jen groups was somewhat different. The Tibetans were pushed into the higher regions. The narrow Yellow River valley, enclosed by high mountains, offered natural protection. The Tibetans were thus able to offer greater resistance to the Chinese advance. Except for the Salars, the Tu-jen in the Minho area and the Moslems, who penetrated from Hochow into that area and adjoining Hwalung (Ba-yan-wen) county, the Chinese have settled mainly in the county seats of Shunhwa, Hwalung, and Kweiteh. Moslem inns are often found along the major caravan routes. The easternmost Tibetan group is settled between Pingfan (Yunteng) and Kulang in the Sungshan and the Momo Shan. The interlocking of the two settlement areas is of course very complex in the contact zone. The non-Tibetan settlers still have records of their original immigration. Such records can be found in the hsien histories of Kaolan (Lanchow), Lungsi (Kungchang), Wuwei (Liangchow), Changya (Kanchow), Kiuchuan (Suchow), Lotu (Nienpei), Tatung (Maopaisheng), and in the Sining fu history. Oral records are found along the large Tibetan tribes, for example, the Pa-ri (dPa ris), Pra-de (Pra sde), Zi-na, and others, and written

records are found in the A-mdo-cho-byung (a mdo chos abyun). The latter tell how nomadic tribes once became farmers. (Cf. the farming and racial boundaries in Map No 3.)

### (b) Organization

The A-mdo-pa farmers call themselves Rong-pa (ron pa), i.e. "valley people," valley being used in the sense of cultivated valley. The nomads in contrast are called Brog-pa (abrog pa), "grass steppe people." The Chinese call these farmers Cha-fan-tse, "tame Fan-tsu", or Pan-fan-tzu, "half Fan'tsu."

The settlements are called De-pa (sde pa). They vary in size from a few households to 20, 30, or more. De-pa designates both farming settlement and a tribe of tent nomads. Let us examine the situation of Go-mi, the area north of the Yellow River opposite Kweteh, to gain insight into other organizational features. Several settlements are placed under a rGya-pon (brgya dpon), chief of a hundred, known in Chinese as Pei-hou. The entire group and its chief have a common name, for example, Hor-gya at the Yellow River bridge near Kweiteh. Hor-gya-de-pa means Hor-gya tribe. This includes all settlements making up a sub-De-pa. Hor-gya-pon-po is the chief of the Hor-gya tribe. The latter is subordinated to the Tong-pon of Ka-rang (bka ran ston dpon), who is chief of a thousand (called Ch'ien-hou in Chinese) and is in charge of five sub chiefs and five subtribes. The entire area includes three such tribes: the Lower (zh ma), Upper (stod ma), and Middle (bar ma) Go-mi. The three tribal chiefs and their three tribes stand on the same level and have no higher authority.

Their eastern neighbors, who are centered on the De-dza lamasery, have the following organization: The highest chief is the Nang-so (nan so). This is an old title that was rarely granted and designated a rank above the Tong-pon but below the Khri-pon, "leader of ten thousand." The De-dza-nang-so is in charge of eleven De-pa, each of which includes a number of village settlements. Here again these eleven De-pa represent tribes. The six lamasery tribes of the monastery Ku-bum now constitute six De-pa with their permanent settlements. The noted Zi-na tribe has become settled and now lives in the Zi-na valley near To-pa above Sining. They are ruled by a Nang-so. The old lamasery of this tribe used to be farther down in Hei-tsui-p'u. It has disappeared and the entire area has become Chinese. The Pa-ri tribes on the Tatung and the Pingnan rivers have become farmers only in part, the rest having remained nomads. However both parts have the same tribal organization. They have Tong-pon with subchiefs or smaller individual tribes and settlements headed by a rGya-pon. Another rank is that of the Tu-se, which the Chinese Government has introduced in farming areas. The Lu-tu-se of Liencheng and the Li-tu-se of Minho rule only over Tu-jen. The village elders of the individual settlements are subordinated to them. The administration of the Yang-tu-se, who rules the Co-ne, is described by Ekvall in the following terms. "Choni Tu-si holds authority from the Chinese government. The pattern of hereditary rule is little changed by such an overlordship on the part of the Chinese authorities. The Choni Tu-si, or, as the Tibetans call him, Choni Thon-po, administers the affairs of the region through village headmen. The court of final appeal in matters of law, equity, or administration is the Choni Tu-si

himself... In each village there is a headman ('seng-kuan'), who is appointed by the Choni Tu-si and who is responsible for the affairs of the village. As the village is the basic unit of control, this headman has a position of considerable authority. Next above the village is 'the banner' -- an aggregation of several villages -- which has to do with the organization of the militia, to which every village furnishes a quota. Matters concerning the 'banner' as a whole are settled in a council of the headmen under the direction of officials appointed by and acting under the Tu-si himself." (L.c. Page 31.)

Even the Mandarin administration introduced more recently by the Chinese government could not get along without this native administration and let it remain. The chiefs administer all affairs, both religious and economic. They determine the time for the start of field work, sowing, harvesting, and the associated closing and opening of the communal property areas. They assign the common property, the use of the forest, communal work, such as road construction, and so forth. They settle disputes and also act as courts. The organization of the farmers thus corresponds entirely to that of the nomads.

The rank of senior chieftain is usually hereditary among the farmers within certain families. This is also frequently the case for the subchiefs. In the latter case, however, the most able person is sometimes chosen to head the group. This also applies to the village elders. It may be that elective office is more common among the farmers than among the nomads. In general, however, the succession question is handled in a similar manner among the two groups.

The family organization of the farmers is based on a large settled family group. Married sons usually remain in the household of their parents. Among brothers the law of primogeniture is of key importance. The oldest son takes over the authority of the father upon the latter's death or retirement. The Tibetans are however not familiar with the strict family grouping or the clan system of the Chinese, where cousins and great-cousins having the same family name are far closer. The Tibetans have only personal names and no family names.

Monogamy prevails among the farmers. Polygamy is very unusual. It occurs mostly when the first wife bears no children. But such families also adopt children, even Chinese children. I found no case of polyandry in A-mdo and did not even hear of any. The A-mdo farmers greatly differ in this respect from the southerly Kham. The status of the woman is a very important one. Aside from her household duties, she also takes over much, if not most, of the farm work. Women are even found doing communal work, such as road construction. The men usually let the women do all the heavy work. They only take care of the plowing and harrowing. I found one settlement where women even did that work; it was Wuchung, below Rong-bu. This village displays a peculiar racial mixture. It was founded by Chinese soldiers of the Sung dynasty who had married Tibetan women.

The woman among the farmers thus plays a similarly important role as among the nomads. In both groups she is extraordinarily diligent, free, and independent. Her word also carries much weight in family affairs. In public affairs, however, the influence of the farmer woman is less than that of the nomad woman. The role of the Tibetan woman is in sharp contrast to that of the Chinese woman, who feels herself very constrained outside of her household because of her traditional decorum and restrictive habits. In the border areas, to be sure, the Chinese woman is approaching the Tibetan in that respect and stands in sharp contrast to her compatriot in the Chinese areas proper. Even the Chinese will admit that the Tibetan woman is more desirable in view of her great social freedom and independence, her robust and skillful handling of hard farm work, and her natural manners. Chinese therefore like to marry Tibetan women in the border areas. Even in the home, the Tibetan woman, through her devotion and affection, is said to be superior to the Chinese wife.

Many sexual liberties are taken among the Tibetan farmers, especially the unmarried ones. Venereal diseases are therefore more common than among the nomads. This situation is not due to any obviously low state of morality but rather to greater opportunity for such sexual deviations. The settlements include a larger number of families and there is a greater traffic of outsiders than in the lonely steppe country. The marriage age of Tibetan girls is much later than that of the Chinese. They are married at 18 or 20 or even later. At that time they are physically strong enough to do heavy work. Chinese girls are married at the age of 12 or 13, at a time when they are not yet fully developed. All these factors must be taken into account when sexual morals are judged. The family life of the A-mdo-pa farmers does not differ essentially from that of the nomads. Customs regarding engagements, weddings, and administration of justice are in wide agreement.

### (c) The Economy

The A-mdo farm is usually situated on a sunny, wind-protected terrace in the valley. The buildings are surrounded by a high wall. A gate leads usually into a forecourt, where the livestock is kept in stables. Another gate then leads into the main courtyard. Here there is usually a two-story residential building on the north side, with balcony and windows facing south and thus getting most of the sun. The lower floor includes the guest and reception rooms as well as the quarters of the master of the house. A wide wooden stairway leads to the upper floor, which contains a prayer hall and additional rooms. The balcony of the second floor leads to the flat roofs of adjoining one-story buildings. On the west side is the large kitchen building with living rooms. This side is favored because it gets the morning sun. On the opposite side, in the east, are storage rooms, and if necessary additional living rooms. The stables are usually on the south side. In the middle of the courtyard stands a hearth that is used for offerings. The residences of chiefs usually include a number of courtyards, where the form of the windows, the paneling of the rooms, the location of the toilet, and so forth, are elements taken over from the lamasery construction style. There are also very simple huts, whether wooden blockhouses or coarse buildings

without courtyard walls or dwellings that consist of mere piled-up stones (cf. Figure No 3).

The construction of the buildings is otherwise typically Chinese. The timbers are set up first. The beams are then set into the pillars. Multi-story buildings have pillars of one piece. The roofs are usually flat; occasionally gable roofs are covered with tile. The k'ang, which is used in northwestern China, serves as brick stove bed. But the A-mdo-pa home differs in one important point from the Chinese home, and that is the kitchen. The Chinese usually have their kitchen in an adjoining room, which is generally dark and unfriendly. It is used only by the women who prepare the food. From there the food is served to the men and older women in the living room. The younger women eat in the kitchen, which is therefore regarded as a secondary room in Chinese life. Among the A-mdo-pa, on the other hand, the kitchen is the center of the home. It is usually a roomy and light place. A large k'ang adjoining the hearth provides room for many persons to eat and sleep. Well-to-do Tibetans even have a wood-paneled kitchen. In this room the family gathers not only for meals but also for other work and consultations. Just as the hearth in the nomad's tent is the center of his family life, the kitchen of the A-mdo-pa farmers is the focal point of his home. In this respect he differs fundamentally from the Chinese farmer.

In a quite different respect the home of the A-mdo-pa farmer also differs from the Tibetan houses in Kham and other Tibetan farming areas. There the method of construction is quite different. First the pillars of the lower floor are set up and the beams and ceiling are laid. A second and third story are then erected on top of the first. The pillars of the upper stories are not set directly on the pillars of the lower stories and can be easily exchanged. The wood-work thus lacks stability. In order to assure stability, well-to-do buildings have strong outer walls of clay or stone. The beams thus are supported by the walls in contrast to the Chinese construction, in which the walls merely enclose but do not support. The better homes have three or more stories, with the livestock kept in the unpartitioned ground floor. From there a single-beam ladder leads to the upper floor. Only officials are entitled to a wooden stairway. (Jen-nai-ch'iang, 1946, Page 28 ff.)

The main room of the second story is the kitchen, which is the meeting room of the entire family, with adjoining sleeping quarters and store rooms. The brick stove k'ang is missing. The family sleeps and sits on the wooden floor. A stairway leads to the third floor, which includes the prayer hall and one or two guest rooms. These are often occupied by the monks who conduct the prayers. The flat roof is reached from the top floor. On the roof is the hearth used for offerings and next to it is the Mani pole. Other poles used for ripening grain are also set up on the roof. Straw and hay reserves are kept in a shed. (cf. A. Tafel, 1914, Vol. 2, Pages 121 f., 132.) The great chiefs build their fortress-like homes in even greater style. Kham also has other construction styles, especially among the non-Tibetan population (cf. A. Tafel, Vol. II, Plate LV, LVI, LVII). There the narrow high defense towers are noteworthy. This type of structure extends only to the south of the Min Shan and is not found in A-mdo (cf. W. Eberhard, 1942a, 89; cf. the defense

towers of the mountain culture page 244 f.).

The construction of the farmhouses thus serves as a further criterion for differentiating the a-mdo and Kham peasants. Since the ground floor of the South Tibetan farmhouse consists only of pillars, it is often referred to as a pile dwelling. But the real pile dwellings of South China have quite a different roof construction in their gabled roof. It is also maintained that these Tibetan houses are related to those of the Hindu Kush and the Caucasus. They do have something in common. They all are defensive settlements in which multi-storied blockhouses surround a quadrangular courtyard. In the Hindu Kush, three and four-story defense towers occupy the corners (cf. G. Buschan, l.c. II. i, 460 ff.). In the Caucasus, as in Tibet, the narrow, high defense towers stand separately, next to the houses. Even though in both cases the flat roof may be used for threshing, major differences between the Hindu Kush and Tibetan houses refute a direct connection. (S. Passarge, 1938, Page 51.)

The A-mdo-pa calls house and building *khang-pa* (*khan pa*). If he is asked, "Where are you going?" he replies, "Yul-na-gyo-gyi-red, I am going home." Yul means home, whether it be a house or a tent. *Khyim* and *khyim-thzang* also mean "home, family, household." *Khyim-pa* means "master of the house, married man, a lay person"; *khyim-pa-ma* means "housewife." These expressions are used both by nomads and by farmers. Thus, where we use compounds including the word for "house," the A-mdo-pa uses expressions that apply to both house and tent.

Some additional features of the A-mdo-pa's farm life should be mentioned. The farmers still breed livestock. Since they have been pushed into the mountains, grazing land is easily found. Various forms of animal husbandry are found, depending on geographical location.

1. Settlements with limited amounts of grazing land keep some productive stock in addition to draft animals. Instead of the yak they usually breed the cross of the yak cow and the ordinary bull. These animals are more suitable for farm work and can bear the warm climate. In contrast to the nomads, the farmers like to keep asses and mules. They also have more goats, in view of their unpretentiousness. The sheep kept by the farmers is not the true Tibetan sheep but a cross between it and the fat-rump sheep. They also have a number of riding horses. At night the animals are always driven into the courtyard. Since the pastures are very sparse during the winter, the farmers resort to auxiliary hay feeding in the stables.

The A-mdo farmers keep no hogs or chickens and eat no pork or eggs. The entirely Sinified farmers are an exception.

2. When the settlements lie at high elevation where grazing land is more abundant, more livestock is raised. During the summer, larger herds migrate to the pastures and stay there until winter. Some persons who take care of the herds and produce butter and dry curds live in tents. At the start of the winter, when the grass has been grazed off, the herds are driven home. During the winter and

spring they graze on near-by pastures and fields and are fed in the stables. Farmers who have too little stock to make transhumance worth while give their young stock into the care of richer neighbors.

3. By way of a third possibility, the tribe may consist of two parts. The farmers with small stock holdings live in the lower areas, like those discussed under point 1 above. They obtain their milk products from the second part of the tribe, which lives in the highland steppes in purely nomadic fashion. Either individual families are split into nomadic and farming sections or one family farms while the other breeds livestock. This situation prevails among the Sam-tsa in the source area of the Tao River.

4. The fourth case was already discussed under the nomads. When stock breeders have permanent winter quarters, they also engage in some farming under favorable conditions. A few persons then stay in the fixed settlement to take care of the field work.

It is especially noteworthy in A-mdo agriculture that the Tibetans carry out all their work at fixed times in a distinct communal spirit. There is no leeway that would permit an individual farmer to conduct his work at will. This is surprising in view of the individualistic nature of the A-mdo-pa, who is always jealous of his rights. Chinese agricultural practices are far more individualistic and not bound by this communal spirit.

Before the New Year the women prepare the dung, of which the Tibetans have far more than the Chinese in view of their larger stock holdings. On the more distant fields the sod of the balks is cut, stacked, and burned to ashes, which are then spread as fertilizer. After the New Year festival the dung is carried to the fields, either by animals or by the women. The A-mdo-pa do not use carts, partly because of the hilly terrain, though carts are not used in level terrain either. Plowing and sowing starts at a definite time in the spring. The farmers then put on their best clothes, for they are in a holiday mood. The field fences are repaired to keep animals from trampling the fields. From that time on until the harvest, the farming area is closed to caravans. If travelers pass through anyhow, payment must be made for possible damage to the fields.

The main crops are spelt, oats, beans, and in lower areas wheat, linseed flax, Chinese white cabbage, and white beets.

Agricultural implements, such as plows, harrows, clod breakers, weed irons, sickles, and so forth, are similar to those used by the Chinese and are usually made by Chinese artisans.

The A-mdo farmer has surrounded the most important aspects of agriculture with religious customs. These include sowing, the appearance of the first sprouts, ceremonies designed to keep hail away, prayers for rain in case of drought, the start of the harvest, and, by way of thanksgiving for the harvest, the great sacrifice to the heavenly sheep (gnam gyi lug). These ceremonies are not all of Tibetan origin but have their corresponding rites among the Chinese. The A-mdo-pa have adapted them to their needs and added Buddhist ceremonies.

This leads us to another character trait of the A-mdo farmers. They are far more disposed toward religion than the nomads. Various religions and sects have their widest distribution among the farmers and maintain themselves tenaciously. The pre-Buddhist Bon and the various old Buddhist sects are at their strongest among the farmers. The main centers lie in the farming areas of Kham. Original Buddhism was essentially a monastic religion in which the people could participate only as the donors of gifts. This relationship has been preserved in the Yellow Sect, which was derived from the ancient monastic ideal. But the old Lamaist sects differ in this respect. In the strongest Lamaist areas, for example in the Kweitech-Rong-bu area, each village has its own temple. Most of the men take an active part in the prayers and the women help in the temple kitchen. In addition to the various agricultural ceremonies in the course of the year, there are a number of prayer periods at which the entire village assembles. Lamaism has thus become a folk religion. The same is true of the Bon. The farmers thus adhere more strictly to the rites and observe their religious obligations far more enthusiastically and precisely than the nomads. This is of course made possible by the communal life in settlements, which makes assembly simple. The great distances separating the nomads offer far greater difficulties. In A-mdo the nomads are generally followers of the Yellow Sect. But there are nomads who adhere to the Red Hats, for example in Ba-mdo (aba mdo) on the Yellow River.

Ekvall also notes that "sedentary people appear to be completely under the domination of the lamaseries and are more meticulous in the observance and performance of all the religious duties incident to Lamaism. Also among them there is a much greater amount of animism -- the still active residue of the ancient Bon religion of Tibet -- than among the nomads. In Reb-kong and Te-kok, the most typical sedentary districts of A-mdo, are found the headquarters of two branches of the 'sorcerer sect' and the people of the valleys, the rong-wa, are the most devout of all Tibetans." (L.c., Page 65.)

The A-mdo farmer is the owner of his farm and the fields that he cultivates. Grazing land is communal property. An exception are the fields that belong to lamaseries. These are rented to tenants. A-mdo thus has no feudal or landlord class which owns large areas and rents them out to tenants. This is the case in other Tibetan areas that engage in agriculture (cf. Page 93).

#### (d) The Farmer Type

Everything points to the fact that the A-mdo farmers were once nomads who adopted agriculture. There are no essential differences between the two groups with respect to race, sociology, tribal organization, language, and religion. Tribes that are partly farmers and partly nomads clearly show the transition to agriculture. Many tribes that have been settled for a long time still retain the tradition of once having been nomads.

In spite of the common features, a certain differentiation has gradually set in and is becoming increasingly greater. The nomad, who



has adopted agriculture, has taken over a new economic form, changed his way of life and diet and acquired a new psychological orientation. He eats more flour products, bread, and noodles, and less meat and milk products. Living in houses and sleeping on the k'ang, as well as the new occupations also have their effect. All these profound changes and reorientations gradually transform the physical make-up, the phenotype. The sharply-cut weather-hardened nomad face becomes a soft and rounded peasant face. The farmers lose their resistance and become more receptive to disease. They have a far greater number of illness, even leprosy, which is unknown among the nomads. They are no longer as healthy and strong as the nomads. Nevertheless they have more children. We have discussed elsewhere the reasons for this (Page 84). All this shows that physical changes are gradually taking place and are likely to produce racial differentiation after a long time. This process was experienced by a number of nomadic peoples who disappeared in the Chinese cultural world. These somatic changes thus give rise to the peasant type that differs from the nomad type.

A similar change is also taking place in the language. The A-mdo farmers slur over prefixes and final consonants and like to indulge in vowel shifts. The people in the vicinity of the Gyo-tsang lamasery in the mountains south of Lotu, for example, pronounce mar (butter) as maer. The "r" is sounded very lightly and will probably disappear soon. The dialect spoken in this area is so corrupted that I found nothing like it elsewhere in A-mdo. Other Tibetan farmers exhibit a similar tendency in their language, for example, those speaking the Lha-sa dialect. The nomads adhere far more conservatively to the old pronunciation. The differences have already reached the stage where the Tibetans, like the Chinese and Moslems, differentiate between a rong-kad (ron skad), peasant language, and a brog-kad (abrog skad), a nomad language, in A-mdo. Differentiation along these lines is constantly increasing, as shown by the development of numerous dialects in the farming areas.

Similarly, these changes are gradually producing a typical peasant psychology, rooted to the soil, fearful and peaceful, in sharp contrast to the dominating, aggressive and belligerent spirit of the nomads. We have already referred to the religious differences.

Just as the different economic forms create from the very start two sharply differentiated economic groups, the present differences are bound to deepen in the course of time and produce two different racial groups: a distinct peasant and a distinct nomad type. This example shows how cultural change reaching into all walks of life gradually produces racial change.

This process has been most common in the Chinese Empire. We can trace it back to Neolithic times when nomads from Central Asia penetrated into the Chinese farming area, dominated the farmers, but were themselves absorbed by the peasant culture. This process was repeated over and over. One movement is made up of nomads streaming into the farming area; the other movement consists of farmers pushing into the nomads' land, plowing up the grazing grounds; the nomads who stay are transformed into farmers. This process gave rise to the northern Chinese farmer type; the latter differs from the central and

southern Chinese farmers. Hunting peoples that settled in the Chinese area suffered the same fate. This process is important in understanding the formation of racial and regional types.

### C. SUMMARY

The economy of the A-mdo-pa thus shows that they are ancient stock breeding nomads. To be sure, this is being disputed. Since the nomads think so highly of themselves and are regarded as superior by the A-mdo-pa farmers, the farmer is said to be the older type, who subsequently passed into the higher stock breeding stage. "The matter of priority is a question that arises in every respect of our comparison of the two peoples (nomadic and sedentary A-mdo-pa), but there seems to be no certain answer. The linguistic conservatism of the nomads might indicate the greater antiquity of their mode of life. But their unquestioned superiority and their higher standards might indicate that as their mode of life is higher and better so it is a later development, away from the sedentary way of life. History, such as there is, gives no clue. At the present time certain population trends that we shall explain seem to indicate a movement from the sedentary manner of life to the nomadic manner of life. It may be that there has been here, as Owen Lattimore suggests in the case of the Mongols, a succession of changes presenting at this time anomaly of two cultures -- one sedentary and one nomadic -- existing side by side, with unmistakable signs of drift from the sedentary to the nomadic and with the latter by most criteria definitely superior." (R. B. Ekvall, l.c., Page 80.)

The A-mdo-pa nomads and farmers differ neither in race nor in religion (l.c., Page 65) only in their economy. Since the herders regard themselves as the superior and more important and are also so regarded by the others, their economic form is said to be more recent than that of the lower and inferior farmers; according to the evolutionist principle, the superior form has developed out of the inferior form. But precisely the same evolutionist principle led to the three-stage hunter-nomad-farmer theory in which the farmers were said to have been derived from nomads. Now it is asserted that the nomads had originally been farmers. This amounts to replacing one evolutionist theory by another.

We are here differentiating between evolutionism and evolution. By evolutionism we mean that typical developmental theory according to which man -- this refers only to the development of humanity, not development in the general sense -- developed in all respects, in ergology, economy, sociology, anthropology, ethics, and religion, from coarse, primitive, animal-like initial stages to higher forms and will continue to rise to even higher stages. The formulation of the developmental scheme is based on the following a priori value judgment: the initial stage is the inferior, the later stage the superior; at first there is animal-man, at the end comes superman.

By evolution we mean the development from the simple to the complicated, from the undifferentiated and nonspecialized to the differentiated and specialized. And now we come to the decisive point: this developmental series is not based on any corresponding value

judgment series. The simple, for example, can be more valuable than the complicated; the undifferentiated can be higher than the differentiated. The decision whether worse or better, whether inferior or superior, must be based in each case on investigation. We know of enough cases in human history where material culture reached a high stage but morals and ethics were at a low level.

Our concept of "evolution" is of course not intended to be a principle of general application to gradual progress. "Evolution" and periods of gradual differentiation are also interrupted by epochs of "revolution" or sudden, explosive change. (Cf. E. Wahle, 1941, Pages 143 ff; R. Pittioni, 1941, Pages 393 ff.)

By "evolutionist" we understand the above-mentioned evolutionism. By "cultural-historical" we designate the theory of human development based on historical methods, i.e., development in the sense of evolution as discussed above.

Cultural-historical ethnology has demonstrated the evolutionist stage theory to be untenable in the case of economic change. The absolute ethnologic age of economic stages cannot be determined by the very subjective method of the transition from the lower to the higher, from the coarse to the refined, as applied by evolutionism; the sequence of development can be determined only through the use of the key criterion of cultural conditions in relation to locational conditions. (Cf. W. Schmidt, 1937, Pages 9 ff, 215 ff.) We need not maintain that the primary cultures -- farming and stock breeding -- necessarily arose out of each other. Each one should rather be regarded as having had its independent origin: stock breeding in the northwestern zone and farming in the adjoining southern zone of Asia. Each one had its original cultural form. (Cf. W. Schmidt, l.c., Pages 203 ff; he believes that farming originated only in the river valleys of the Indian hinterland.) Stock breeding was supposed to have been derived from hunting to assure meat reserves, and farming from collecting to assure a supply of vegetable foods. "Instead of the rigid and strict rules that a psychological evolutionism has imposed on the cultural-economic development of mankind, we are thus confronted with a rich and varied historical life. The great variety of cultural forms corresponds to an equal variety of economic forms." (W. Schmidt and W. Koppers, 1924, Page 392.)

Nor can we assume from the very start that stock breeding originated only once and that farming originated only once. We must accept the possibility that wild animals were domesticated in a number of places independently of one another. The same applies to a greater extent to farming. Grain, such as spelt, rye, wheat, millet, and related seeds, could be cultivated first only in those areas that had the wild seed. Another situation existed with regard to rice and the tubers, such as yams and manioc, which required cultivation in quite different areas under different climatic conditions. The cultivation of roots and tubers could thus have developed quite independently of grain. Detailed investigation would be required to show whether the various cultivation methods arose independently in various parts of the world or whether a relationship existed. Above we thus investigated the domestication of animals.

At any rate the general question of the relationship between one form of economy and another cannot be settled by a single case in a limited area such as A-mdo. Here the nomads did as a matter of fact become farmers because they had lost their grazing land. But farmers can also be pushed out of their farmland into the grassland, which cannot be made arable and forces the farmers to become stock breeders. Such special cases do not settle the question of the general development of an economic stage.

The conditions in A-mdo also show that subjective evaluation cannot determine the priority of an economic stage. Because the nomads regard themselves as superior and are so regarded by others, they are said to have progressed from the inferior farming stage. But the comparison here is made between A-mdo nomads and A-mdo farmers, of which the stock breeding nomads are regarded as superior. If a comparison were made between a Chinese or a Moslem A-mdo farmer and a Tibetan nomad, then the farmer would regard himself as superior and would apply the derogatory name Ya-fan, "wild Fan," to the stock breeder. This example clearly shows the subjective nature of this evaluation scale. The A-mdo-pa regard nomadic life as the better and superior way because it is their original economic form, which is in accord with their nomadic character and for which they are best suited. This is also supported by their tradition.

According to this tradition, only stock breeding was originally known in Tibet. Prior to the time of the ruler Bya-khri or sPu-du-kun-rgyal, the Tibetans were solely stock breeders. This king is said to have been the first to introduce agriculture and irrigation. (This is reported in a number of Tibetan sources, for example, in Deb-ther-sngon-po, rGyal-rabs-gsal-bai-me-long, Ma-ni-bka-bum.) From the Tibetans this tradition also passed into Mongolian sources. (Cf. G. Huth, 1896, Pages 2, 5; J. Schmidt, 1829, Page 318.) In his myths of creation, the Tibetan discusses the origin of the animals. "The contrast between the Tibetan and the Dard could not be made more distinct than by their legends on the creation of the world. The Tibetan, a hunter and stock breeder, talks about the animal world; a Dard, an able cultivator, talks only about the plant world." (A. H. Francke, 1923, Page 8.) This concept even applies to the farming Tibetans in the west and south. "When the question of the origin of barley and other grain types arises, he starts talking about the hunt. His ancestor caught all sorts of birds and once when he caught a pigeon in his net he found seven (not nine) different seeds in the bird's stomach, which gave rise to the types of grain." (l.c. Page 9.) The original animals play a key role in creation and are aligned next to the sun and moon and the gods (l.c. Page 8).

Thus, because nomadic life is the older and original way of life, the nomads regard themselves as superior to others. "Dopkas generally pride themselves on being superior to the ordinary Tibetan of the towns and villages." (G. Sandberg, l.c. Page 146.) Bell also says: "The first Tibetans apparently led a pure herders' life. Even today we can find the purest racial type among the shepherds and stock breeders." (C. Bell, 1925, Page 26.)

In the highlands, where agriculture is impossible, the nomads and hunters have certainly been the first peoples. In the farming areas of the south and southeast the stock breeding stratum was superimposed on the native farmers of another race, thus giving rise to a feudal system. The nomads became masters over the farmers. In these areas, a great mixing of races followed. "Large parts (of southern Tibet) are owned by monasteries and the nobility." (C. Bell, l.c. Page 275 f.) The serfs have the right neither to ownership nor inheritance of the land. They may only work for the feudal lords, who administer at will, eject entire families, and award tenancy to others. (Jen-nai-ch'iang, 1946, Page 18 ff.) In these farming areas the Tibetans are the recent conquerors.

We do not find this type of situation in A-mdo, which lacks feudal lords and serfs. Here there is no difference in the social and political organization of nomads and farmers. (R. B. Ekvall, l.c. Page 67.) The A-mdo nomads represent the purest type of Tibetan. "The purest type of Tibetan is still to be found among the pastoral tribes of that race, and when proper allowance has been made for foreign influences everything points to a time when the whole Tibetan race led a purely pastoral life; it would seem that the early home of the Tibetans must be sought, not as they claim, in the valleys of the country, south of the city of Lhasa, but in the northeast section of the country, somewhere near the Kokonor, to which region they probably came, as Chinese annals lead us to believe, from the east." (W. W. Rockhill, 1895, Page 670.)

Only the central Tibetans maintain that their race originated in Central Tibet. The A-mdo-pa and Kham-pa dispute this. We noted before that the A-mdo-pa call themselves the Bod-chen, the great Tibetans, because they regard themselves as the original Tibetans. The A-mdo-pa have retained the tradition that they first advanced south into Kham from the Kuku-nor area. From there they settled in central Tibet, having advanced from Yar-lung and Mar-sog-kha to Yar-lha-sham-po between Lhasa and Bhutan. The time of these advances cannot be determined, even approximately. Laufer has this to say. "Before that time there were a large number of individual tribes, part of which could have contributed subsequently to the formation of the Tibetan nation and whose original territory must not be sought in (central) Tibet but farther east in (present) western China. The traditions of the historical Tibetans, Indochinese linguistics, and the history of the migrations of the Indochinese tribes agree that the Tibetans advanced from east to west and that the present Tibet is the terminus of their migration." (B. Laufer, 1901, Page 446 f.) By Tibet Laufer means the central area of Bus and Tsang.

We now have an interesting criterion that enables us to trace the migration of the A-mdo-pa in their original Tibetan area. The greatest Zhi-bdag, "guardian spirit," of A-mdo is rMa-rgyal-spom-ra, "the royal and might rMa," a deified tribal ancestor (cf. Page 2). He now resides on the great glaciated mountain in the upper reaches of the Yellow River, the rMa-rgyal-gang-ri, the Great rMa Glaciated Mountain. This guardian spirit is noted throughout Tibet. He is even honored by the foreign tribes of the south, the Moso and the Kachi, who live in northern Yunnan. (Private communication from J. Rock.) In ancient times however this spirit did not reside on the

present mountain but on Ch'i-lien Shan, the highest point of the mountain range south of Suchow Kansu. This peak is now called rGyal-po-kun-du-zig-gang-kar (rgyal po kun du gzigs gan dkar), "all-seeing king, white glacier." In ancient times, the spirit rMa-chen left his original residence and moved to the upper reaches of the Yellow River. Since the guardian spirit must set up his palace as close as possible to the center of the settled area, this means that the A-mdo-pa originally lived north of the Kuku-nor and later moved farther south. This tradition has been preserved in the large A-rig tribe, one of the oldest in A-mdo. I gained further evidence from the chief of a Pa-ri tribe, who told me the original tribal home had been near a great lake in northwestern Tibet. He could not give me the name of the lake.

Others object that the Tibetans are not native to A-mdo and that the population of A-mdo is very mixed. "What does the present population consist of? Neither the Tibetans proper nor the Mongols are true natives, much less the Chinese or even the Moslems. For the time being, only the Tanguts, who have the longest historical evidence here, can be designated as 'autochthonous.' The Tanguts make up the dominant population element in A-mdo as far as the upper reaches of the Yellow River. They are related to the Tibetans and speak a language similar to Tibetan." (W. Unkrig, in W. Filchner, l.c. Page 377.) We have already pointed out that the Tanguts and the Tibetans not only are related but are the same people. Their language is not only similar to Tibetan but represents the oldest form of Tibetan. A fact that had already been noted by Tsong-kha-pa, a native A-mdo-pa, was confirmed to me by the late Panchen Lama. "The A-mdo language has best retained the old Tibetan." His brother made the same statement to Ekvall. "The drok-skad of A-mdo sounds much like bod-skad sounded when it was first written. Our dialect of central Tibet has changed very much." (R. B. Ekvall, l.c. Page 66.)

The A-mdo dialect comes closest to the old Tibetan language that has been preserved in the written records of the 8th and 9th centuries. Prefix, suffix and final consonants are still sounded, while they are largely silent in central, southern, and southeastern Tibet. The sounding of the consonants reduces the monosyllabic character of the language and reduces the number of homonyms. Therefore the A-mdo-pa is not familiar with the tone, which is gradually being used by the other dialects. The A-mdo dialect most resembles that of western Tibet; the oldest forms are thus preserved in the east and in the west.

Key indications of languages constructed on the patriarchal principle are the preposition of the genitive, possessive, the subject pronoun, the accusative, and the postposition of the adjective. All these features are found in the A-mdo language without exception, while other Indochinese languages in the Indian hinterland show exceptions. The A-mdo dialect is actually a classical example of patriarchal language psychology.

W. Schmidt says the following about the Tibeto-Chinese languages. "They are nothing but a mixture of Altaic, not Ural-Altaic, languages with tongues that are related to the present-day Austro-Asiatic. With the former they have the preposition of the genitive

in common... The Austro-Asiatic language element would explain the strong prefix formation, which is characteristic especially of older stages of Tibeto-Chinese languages." (W. Schmidt, 1926, Page 524.) However the position of the genitive varies considerably in the Altaic languages, being placed both before and after, postposition being especially common in the central areas. The Altaic languages thus lack in this respect the clear, unequivocal tendency of the Tibeto-Chinese languages. It is hard to see therefore how the latter could have originated out of a mixture of Altaic and Austro-Asiatic languages. The product of this mixture would then be far more homogeneous than the components themselves. The A-mdo-pa thus distinguish themselves also through the independent and characteristic nature of their language.

The A-mdo-pa are thus segregated not only ethnologically and anthropologically but also linguistically.

The A-mdo-pa also stand out racially. Their body size is larger than average. They have a strong nose, as a result of which they are known as the "big-nosed ones" in central Tibet. Their facial traits recall Indian types. "The nose is thick, sometimes depressed at the root, in other cases prominent, even aquiline, but usually narrow; the nostrils are broad." (W. W. Rockhill, l.c. Page 674.) The A-mdo-pa can be told from the Mongol at first glance. Therefore it would seem irrelevant to say: "The purest Mongol type with his prominent cheekbones, slanted dark eyes, yellowish to brownish skin color, straight black hair, small flat nose, and low-set body with short legs is found among the Tangut tribes in the Kuku-nor area, among the Tibetans, and the dwellers of the Mongolian steppe." (O. Franke, l.c. Vol I, Page 32.) The true Mongol differs sharply from the Tibetan, as we clearly showed above. (See Page 32 f.)

Because A-mdo "was the scene of major historical events and the transit area for tremendous migrations" it is supposed to be "especially varied from the ethnic point of view". (W. Unkrig-W. Filchner, l.c.) In the historical sections of our discussion we saw how the Yuo-che, the T'u-yu-hun (Hsien-pi), the Uigurs, and others penetrated into A-mdo and dominated the area for longer or shorter periods. But the racial differences remained and the invaders were sooner or later expelled from the area and their remnants merged with the Tibetans. A certain amount of admixture thus occurred but it was not strong enough to alter the original A-mdo type. We can best trace this process in the recent invasion of the Mongols, which we have referred to a number of times. This was the strongest and had the greatest political effect. What was its racial effect? In the course of 300 years the Mongols were almost entirely pushed back. Part of the Mongols, who settled in the Tsai-dam area, remained racially pure. But the tribes along the upper Yellow River in particular were transformed by the Tibetans. It was not the Tibetans who were "Mongolized" but rather the Mongols who were "Tibetized." Thus not even this Mongol invasion was able to change over the A-mdo type. Only in a few areas are the Tibetans influenced by the Mongols who add some Mongol features to these limited districts. The A-mdo race is a dominant race that asserts itself. That is why the original Tibetans

have best maintained themselves in A-mdo.

Let us now summarize our findings.

1. The A-mdo-pa are the oldest and the purest representatives of the Tibetan nomadic livestock breeders. A-mdo is the cradle of the Tibetans.

2. They are the representatives of an old, original pastoral culture, which has maintained itself in Central Asia.

(a) Originally they only knew sheep and yak breeding. The Tibetan sheep and the yak represent very old forms of domestication.

(b) Horse breeding was adopted at a later stage because the horse now occupies a sort of taboo position. But the domestication of the horse must also have taken place a long time ago, since the Tibetan pony represents a separate highland breed.

(c) Their way of processing milk is one of the oldest. They make butter and yoghurt. Cheese making by use of rennet or from kumiss by means of yeast, and distillation are unknown.

(d) Their castration method is one of the oldest.

(e) Their black tent is not used by any other people of Central Asia but is common farther west.

3. The pastoral A-mdo-pa culture is a specialized highland form. This specialization may have taken place in Tibet but cultural relationships point to an original area in the Pamir--Hindu Kush territory. Elements of Tibetan material and spiritual culture are also found there.

(a) Material culture. Black tent, swimming bags, skin rafts, skin boats, gauze-like protective eyeglasses, simple loom without stand, used to weave narrow tent strips out of yak, sheep, or goat wool. Sheepskin and woolen coats, sleeveless felt raincoats, and leather boots agree with respect to clothing. Here and there women braid yak and horse hair or woolen thread into their hair and extend their braids. The ornamental use of arm and finger rings and necklaces is indicative of cultural agreement but the wearing of breastplates is not. The raising of the yak and pony and the use of the herder's flute, and so forth, also coincide.

(b) Spiritual culture. Ordinary dances with short body, arm, and leg movements; masked dances in which "the devil's mask made of sheepskin and horns resembles the masks of the Alpine peoples," (G. Buschan, l.c. Vol II, Part I, Page 416); stone heaps into which are stuck poles with yak tails, colored rags and horns and which are used for offerings; amulet boxes with magical sayings and remedies; extraordinary homage paid to the guardian spirit of the herds; some agreement in mythology: heavenly god, original man and original animal, myths of creation.



4. The original center of the cattle breeding culture must be sought in western Asia. From here this culture was diffused to the Middle East, Egypt and Mesopotamia, then to Africa and Europe, to India, Mohenjo-Daro, Toda. In Central Asia the yak penetrated two areas: toward the northeast in the Tien Shan and Altay and toward the southeast in Tibet. However the A-mdo-pa did not take the shorter route across the Karakorum to western Tibet, as is indicated, but, being highland nomads, must have proceeded along the northern slopes of the Karakorum, the Kunlun and the Altyn-tag to the Ch'i-lien (Nan Shan) Mountains. Farther east, cattle were first raised without horses. In western Asia, Anau and Iran are witnesses of this culture.

5. The oldest stage of animal husbandry is the raising of horned stock, first sheep and goats, which are still being kept exclusively, followed by cattle. The most important and oldest area of domestication of the domestic sheep from the wild "Kreishorn" sheep or a related type is suspected to be trans-caspia or eastern Iran. (O. Antonius, l.c. Page 226.) It coincides with the original center of cattle domestication. It is therefore likely that the principle of domestication passed from the sheep to the cattle. In the earliest Anau culture, two sheep breeds are represented, i.e., a large-horned and a small-horned; the same is the case at Mohenjo-Daro. (O. Menghin, l.c. Page 304; H. Friederichs, 1933.) Prehistoric data yields similar findings. "The original domestication area of horned livestock is apparently western Turkestan, including perhaps, northern parts of the Iranian highland." (O. Menghin, l.c. Page 321.) The ass, the onager, and the camel followed. Both the horse and the reindeer appear to have been domesticated much later.

Study of the A-mdo-pa economy may thus contribute to the study of domestic animals and makes it possible to shed light on the cultures of pastoral nomads, to set up boundaries, and to refine their time sequence.

In conclusion we will briefly discuss the chief attempts that have been made to settle the domestic animal problem. E. Hahn was probably the first to recognize its importance. His posing of the problem "Was ancient man a nomad between the hunting and the farming stage?" -- this was the title of his first work on this topic (1891) -- shows that he recognizes the core of the problem. To be sure, he replies: "These rather advanced pioneers of our culture (he refers to the Babylonian hoe cultivators) bred cattle for religious reasons and then, after the animal's domestication, used it for plowing and thus rose to be farmers. At the same time, they or neighbors under their influence tamed the goat, which then came the first herd animal and led to the formation of nomadic peoples in the steppe; the development of the nomads was subsequently furthered by the sheep, the horse, and the camel... These nomads thus arose directly or indirectly out of farming, not hunting. Hunting peoples who acquired these domestic animals could also learn how to make use of them. But nowhere did hunters become herders through direct independent domestication of animals, without adoption or foreign influences and nowhere did nomads become farmers through independent acquisition of cereal grasses." (E. Hahn, 1891, Pages 481-487.) According to Hahn, the farmers in Mesopotamia bred cattle for religious reasons and then

used it for plowing. The domestication practice was then extended to the goat and later to the sheep, horse, and camel. In subsequent publications Hahn expanded his theory and found many disciples. As we saw previously, the theory is still prevalent today that pastoral peoples originated in farmers who had lost their land.

Grosse already stated the principle that "the economic activity is the life center of any cultural form" and that "the form of production is the primary cultural phenomenon." (E. Grosse, 1894, Page 34.) This view contradicts the religious origin of certain economic forms. Schurtz admits that observations among primitive peoples do not support the view that "holy animals are being raised" and rejects the religious theory of the origin of animal husbandry. (H. Schurtz, 1900, Page 260.) Graebner also rejects Hahn's theories. (Fr. Graebner, A. 1909, Page 1030.)

These disputes involved only matters of detail. It was only W. Schmidt who, in opposition to Hahn's theories, set the original and independent nature of animal husbandry on a broad foundation. (W. Schmidt, A. 1915-16, Pages 593-610; id. 1924, Pages 193 ff.) The original territory of this culture is to be sought "in the steppes that extend to the north of the mighty highlands of Central Asia, with northern Central Asia designated as the real core area." (L.c. Page 194.) He refers in particular to the Altay and the Sayans. The ancient hunting peoples of the proto-Samoyeds and the ancient Eskimos are said to have supplied the first pastoral peoples; [thence] "some Paleo-Asiatic tribes, the Samoyeds, the Chukchi (and Koryaks) and then all the Ural-Altai peoples." (L.c. Page 197.) The first domesticated animal is said to have been the reindeer; later came the horse and the camel (l.c. 195 f.) Schmidt then discusses the sociology of pastoral peoples from the point of view of the patriarchal family group (l.c. Pages 194 ff.). Koppers gives supplementary data on the economy of these nomads (l.c. Pages 502 ff.). The basis for the study of a new independent cultural form in the development of mankind was thus laid. It is self-evident that this initial basic work does not provide a complete solution and the final answer to the problem. It was only the beginning of the cultural-historical analysis of ethnologic data and is far from being finished. Auxiliary fields of knowledge, in our case especially archeology and the study of domestic animals, are also constantly gaining better and more basic data that must be taken into account. In this way, for example, Menghin through discussion and exchange of data with Schmidt, Koppers, and Gals recognized the cattle breeding culture as a separate form (O. Menghin, 1929).

A further comprehensive attempt to solve the animal husbandry problem with the aid of auxiliary fields of knowledge was made by Flor in his study Haustiere und Hirtenkulturen [Domestic Animals and Pastoral Cultures] (Fr. Flor, 1930). He devotes his attention mainly to the domestication of the dog, the reindeer, and the horse. He finds that the first domestication of the dog occurred in the proto-Eskimo and ancient Arctic area and that the reindeer was first domesticated by the proto-Samoyeds and the ancient Lapps. The first horse was domesticated by the proto-Altai peoples (l.c. Page 235 f.). The reindeer was harnessed to sleds in imitation of the use of sled dogs (l.c. Page 138). Reindeer raising in turn provided the basis for

horse raising (l.c. Page 140). Animal husbandry was "at first merely an extension of Arctic hunting customs" (l.c. Page 236) and cannot be explained on magical or religious grounds.

Woelfel's studies as well as our own independently of one another led to different findings. The oldest systematically domesticated animals are the sheep and the goat, followed by cattle. The great significance of the raising of small horned livestock was not recognized previously and was not taken into account. Domestication of cattle was followed by the ass, onager, camel, and only then by the horse and reindeer. The original domesticators were not the proto-Samoyeds and the proto-Altaic hunters of the northern zone, but an as yet undetermined hunting people in western Asia (Turana-Iran). From there these domestic animals were introduced into other countries or wild forms in those areas were domesticated by means of the adopted domestication principle. The dog and the hog were domesticated in another manner.

We are thus increasingly accepting the real existence of pastoral nomadic culture proper, its gradual development and worldwide diffusion. Further studies in all fields of human history will unearth further data and add to our knowledge. Human knowledge can only supply approximations. We hope that through this piecemeal recognition we will come closer to the real being and the whole truth. As time-restricted, historical human beings, that is, "men who are on their way," we shall never reach complete, final, and thus ultimate knowledge and truth. But piecemeal knowledge is also worth the trouble.

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