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A cultural ecological overview of high altitude  
adaptation in the Northwest Himalaya

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This paper discusses briefly the manner in which the Tibetan speaking inhabitants of Limi, in Humla District, Northwest Nepal, have adapted to their high mountain environment. It indicates the importance of agriculture and pastoral nomadism in their economy, and the important role played by crafts and trade. It also illustrates the way differences in social strata, produce different adaptive strategies on the part of their incumbents and how questions of deficits and surpluses must be viewed within the context of the area's social structure.

La population de langue tibétaine de Limi, haute vallée du Nord-Ouest de la frontière tibétaine, a une économie basée sur la culture de l'orge, l'élevage des yaks, la fabrication de bols en bois, un commerce transhimalayen restreint, et différents types de travaux saisonniers dans les régions de basse altitude. Le monopole de la propriété du sol et des grands troupeaux est détenu par un petit nombre de familles, mais l'ancien commerce du musc, récemment réapparu, apporte une solution économique de plus en plus importante. Le commerce transhimalayen a été très influencé récemment, dans la région de Limi, par les bouleversements politiques, et la survie de la population exige un grand nombre de réponses d'ordre économique.

There is a great deal of interest in the nature of the adaptation of high altitude dwellers of the Himalayas, particularly with respect to the interaction of agriculture, pastoralism and trade in their subsistence endeavours (1). Although it is obviously impossible to enter into great detail in a paper with restricted length such as this, an attempt will be made to outline briefly the salient features of the adaptation of the inhabitants of one such area, the high mountain valley on the Northwest Nepal-Tibet frontier called Limi (*sle mi*) (2). In particular, this paper will attempt to show the dynamics of their adaptational system, that is to say, the intricacies of the adaptive strategies employed by these high altitude inhabitants.

The Limi Valley is the most remote part of Humla District in Karnali Zone. It is a high, narrow mountain valley inhabited by Tibetan speaking people that runs Northeast-Southwest and contains three villages, two along the main river, and a third a short way up one of its tributaries. The three villages from East to West are called Tsang (*mdzang*), Alzhi (*wa rtse*) and Til (*til*) and are respectively 3 950, 3 700 and 3 900 m in elevation.

Although there are several trails linking Limi with the rest of Nepal, only one of these is completely within Nepalese territory. This trail runs from Limi, via the approximately 5 200 m Nyalu Pass, to Simikot and the other villages along the Humla Karnali River and its tributaries. From Tsang, the closest Limi village, the trip to Simikot takes anywhere from three to five days on foot depending on weather conditions and the nature of the load carried. During summer when the pass is clear of snow the trail is easily travelled by animals, but during the winter months (roughly mid-November to mid-April) it is totally closed to traffic of any kind (3).

Two other trails link Limi to Nepal but both of these require transit through Tibet. The most important of these follows the trail connecting Limi with Purang (Tibet) but veers Southwest and goes via the Tingar Pass on the Tibet-Nepal border back into Nepal and then to the Darchula area. From Darchula the trail goes into India and ultimately to Kathmandu via Tenapur, Lucknow and Raxaul. This trip takes about twenty days from Limi to Kathmandu and is the main route used by Limi traders. However, like the Nyalu Pass trail, it is unusable during the winter months.

The other route also passes through the Purang corridor but this time veers Southeast over the approximately 5 000 m Nara Pass to the Yari region in the western Humla Karnali River valley. It is infrequently used and is, in any case, impassable during the winter months.

Limi is linked to Tibet by two major trails. One of these goes North to the pasture areas East of the Lake Mánasarovar Region of Tibet and the other one North-Northwest to the major Tibetan trading center of Purang. The Purang route is usable all year round and goes up the Purang valley through the Tibetan villages of Sher, Kojar, Gangtse, Gajin and Purang (*Gonggò tö*). It takes from two to five days, depending on weather and load, to get from Til to Purang.

The second trail runs North of Limi via the approximately 5 500 m Labcha Pass to the Tibetan « Northern Plain » (*byang tshang*) East of the Mánasarovar region. It is the route used by the Limi yak and sheep herds in their annual moves to and from their winter pasture in Tibet. It is not usable during the winter months but individuals on foot can sometimes cross the pass during spells of good weather. It takes roughly one day from Tsang to the pass.

Geographically, then, while Limi is totally cut off from the rest of Nepal for the winter, free access to the Tibetan region of China exists throughout the year. This situation in a sense symbolizes Limi's traditional binational orientation. Completely Tibetan in language and culture, Limi for centuries (going back at least to the era of the Jumla Malla kings) has had political ties with Nepal.

FIG. 33. — Til village, early June (Ph. M.C. Goldstein).



In fact, although Limi traditionally paid « person tax » (*mi kbral*) to Tibet, it more importantly paid « land tax » (*sa kbral*) to Nepal. This ambivalent practice ceased, however, following the 1961 Sino-Nepalese Border Treaty in which it was settled that Limi is unambiguously an integral part of Nepal.

The population of Limi is 791. The largest village, Alzhi, has 320 persons. Tsang is next with 288 and Til is smallest with 183. These three villages comprise an endogamous population (4). The age distribution of the Limi population does not follow the standard pyramidal shape of most developing countries, resembling instead more that of the U.S.A. or the U.S.S.R. For example, in the village of Tsang 31.6 % of the population falls into the pre-reproductive age bracket (0-14), 50 % falls into the reproductive age bracket (15-44) and 18.4 % into the 45 and up post-reproductive category.

As one would imagine from these figures, Limi is still basically in the pre-modern medicine era. As of 1974 Limi had virtually no access to modern medical care. The nearest facilities are either in Tibet or in Simikot where there is a health clinic staffed by paramedics. Both of these are too far from Limi to be effective and are used only when a person happens to take ill while in their vicinity. The government of Nepal has begun sending mobile smallpox inoculation teams and occasionally Limi traders bring back medicines from India and Kathmandu, but by and large population growth is controlled by high mortality and inhibiting cultural mechanisms such as polyandry. These, as in the past, are still acting to prevent the dramatic population explosion typical of many other peasant areas in Asia. Note should be made, however, that as a result of new trade potentials generated by the Chinese takeover in Tibet, a new assessment of the opportunity costs of establishing individual (neolocal) households is being made and polyandry is becoming a less effective regulatory mechanism. It suffices here to indicate that while Limi is experiencing population growth, it is clearly not on the magnitude found in neighbouring Asian countries or even other parts of Nepal.

A great deal of the difficulty in understanding the overall adaptation of an area such as Limi stems from the fact that there are major internal social divisions which have different access to resources and consequently different adaptive strategies. For example, the average size of families varies considerably with social strata, of which there are three in Limi. The highest stratum is called *trongba* (*grong ba*) and consists of the « old » families who in theory are the corporate descendants of the founding families (5). For the 13 families in this stratum the average size is 8.4 persons. The second stratum is called *mirey* (*mi re*) and consists of families who originated by splitting off from the *trongba* families. There are 29 such families and their average size is 5.6 persons per unit. The third and lowest category is called *morang* (*mo rang*). It consists of households of individual men or women, or in the case of mothers, women with their unmarried children. There are 10 such families each averaging only 2 members. These hierarchical categories are not simply cognitive maps for sorting out relationships etc. but relate directly to resource availability and use and consequently to decision-making patterns.

The subsistence technology in Limi includes both agriculture and pastoral nomadism and thus falls within the agro-pastoral subsistence mode found widely throughout Tibet and called *samadro* (*sa ma 'brog*) in Tibetan. Agriculture is clearly considered the foundation of their economic system and one frequently hears the comment that « land doesn't die the way yak and sheep do ». On the other hand, many Limi families have sizable herds of sheep and yak (6) which winter in Tibet and summer in Limi. B. SPOONER, in a recent publication on pastoral nomadism, differentiates transhumance from pastoral nomadism by saying (1973 : 42) that « 'transhumant' is best reserved for the seasonal movements of cultivators who have fixed habitations but move their flocks according to seasonal variations in pasture ». While this generally fits the situation in Limi, I find it too all-encompassing and prefer to use the term agro-pastoralism for subsistence modes like Limi where the herding part of the economy parallels « pure » nomadism in that the herds are moved seasonally and the herders live in tents throughout the year. I would reserve the term transhumance for situations where animals are moved seasonally by agriculturalists but where transportable dwellings are



not used throughout the year. Agro-pastoralism seems to better conceptualize the additive nature of agriculture plus pastoral nomadism which typifies the Limi and Tibetan adaptation.

With respect to agriculture, water is clearly the single most important limiting factor and all agricultural land in Limi has to be irrigated. Fields are also fertilized extensively with both human excrement (composted with ash and dry leaves) and animal manure. The growing season is from mid-May to mid-September and barley, the staple crop, accounts for 95% of the total acreage sown. Barley is normally grown at altitudes between 3 650 m and 3 950 m in terraced plots of irregular size and shape. The two other significant crops grown in Limi are mustard and turnip. Wheat is grown in small amounts in Til and two of the largest landholders plant a few plots with potatoes and beans (for fodder) but these are of little overall importance.

Virtually all households have land resources (7) but the distribution of these is unequal. In Tsang, for example, most of the 13 *trongba* families have holdings averaging about one acre per family, while the *mirey* families average less than one-third of an acre and their land is generally of poorer quality.

The soil in Limi is very sandy (8) and is thus ideal for barley cultivation. It is not surprising, then, given the soil quality and the availability of water and manure, that yields for barley are very good. Barley yields of between fifteen and twenty times the seed sown are considered normal (though good) in Tsang. Nonetheless, the agricultural output is sufficient only for the large landholders. Substantial amounts of barley and, to a lesser degree, sour buckwheat, wheat and rice are imported from the ecological zone immediately South of Limi where two crops are grown annually (this zone includes Simikot and the other villages along the Humla Karnali River and its tributaries). Because of space limitations we can only note here that this deficit in agricultural output is not because there is no potentially usable (arable) land in Limi. There is considerable land which could be developed for agriculture and some, in fact, has been in recent years (9). If all of this land now considered marginal were opened there is no question but that Limi could become much more, if not completely, sufficient in food bulk though certainly not in variety. With respect to intensifying agricultural production, then, the people of Limi at present generally prefer alternative economic strategies to make up food deficits.

Pastoralism is the second major dimension of Limi's overall adaptation. Limi has excellent pasture areas and there are about 5 000 sheep and 1 000 yaks (10) in the area. There are also smaller numbers of goats, cows, hybrids (such as *dzo*) and horses. There are three patterns of animal husbandry practiced in Limi. One consists of large scale pastoral nomadism. Here sizable herds of sheep and yak are moved periodically to different pasture areas in Limi and Tibet (in winter) with the herders living throughout the year in the traditional Tibetan nomadic black yak-hair tents. It should be emphasized, however, that these herds are owned by corporate family units which also own agricultural land. There are no pastoral nomadic families independent of the agricultural families (11). Furthermore, although there is a tendency for families with large herds to have family members (particularly women) who « specialize » in animal production and live with the animals all year round, people do shift back and forth between the pastoral and agricultural areas.

The second pastoral pattern is similar to that generally found among peasant farmers in that only small numbers of cattle and other animals are kept and then mainly for traction and milk products. Unlike the first pattern, animals are normally wintered in the village where they are fed fodder. This pattern is typical of the poorer families, however, even those with large herds keep some of their cows, hybrids and horses in the village over the winter.

The third pastoral pattern is practiced only in the village of Til. It is not much lower in altitude than Tsang, but winter pasture in protected valleys is available there and it is thus possible to maintain considerable numbers of yak in the village over the winter. During periods of bad weather the animals are fed fodder and the rest of the time they are sent out to graze during the day. Sheep do not survive well under this system and are not kept, but yak and goats do satisfactorily and most families have between 6 and 30 yaks. The main advantage of this strategy (*vis-à-vis* keeping larger herds in the all-year pastoralism) is that it requires less manpower. Individuals who

would otherwise be occupied in Tibet in winter are free to undertake long (and usually profitable) trading trips to India and Kathmandu. On the other hand, families still have a source of animal power for carrying loads (particularly salt) and a source of animal products for their food and clothing needs. While this pattern is found only in Til, the other two pastoral patterns are also found there. There are two families with large herds that winter in Tibet as well as a number of families with either no cattle or just a few.

The maintenance of herds of sheep and yak is very lucrative. These animals are not only usable for carrying salt from Tibet to Limi and from Limi to the Humla Karnali ecozone in the South but also for wool, meat and milk products. In 1974 the price for wool in Limi was six to nine units, *pbre*, of grain per sheep's wool, the range in price depending on the size and quality of the wool. Taking seven as an average price, a person with 170 sheep would obtain grain equal to about one-half an acre. This, as will be remembered, is more than what the *mirey* level families normally have in land. Another example of the large profits associated with animals can be seen from a 1973 example. In this case a family with a herd of about 350 sheep took 150 of the males and old females to Jumla to sell and got an average price of 150 per animal or a total of 15 000 rupees. The

FIG. 34. — Herding yak on horseback in Dragtse (4 115 m) just East of Tsang. The horses in Limi are standard Tibetan horses which are either bred locally or bought from Tibet. A good horse costs from 2 500-4 500 rupees (*Pb. M.C. Goldstein*).





FIGS 35 et 36. — Left, Tsang fields with piles of composted human and animal manure. *Dzo-pa*, male cross between a bull and female yak, with plowing set up in early May. In Limi the first plowing is done by a single *dzo* and the second by a single horse. Above, *dzo* hybrid with plowing set up. Early May (Pb. M.C. Goldstein).

family still had over 100 *mamo* (adult female sheep) so that in a few years' time it could easily rebuild the herd to its original size.

While the limiting factor regulating herd size in Limi is ultimately pasture, in reality it is the human and not the physical environment that is critical. The herders of Limi have traditionally wintered their yak and sheep herds in Tibet and this access is necessary for their survival. The events following 1959 in Tibet, however, suddenly altered this heretofore unquestioned access to Tibetan pasture-land. The Chinese have generally not permitted Nepalese nationals to use Tibetan pasture-land and consequently many areas such as Mugu have lost their herds (12). Although the people of Limi can be considered fortunate in that they have not been cut off from wintering in Tibet, they have been restricted to only one area which is considered far poorer in quality than those they previously used. Consequently, while better off than most of the Northern Tibetan speaking areas, the inhabitants of Limi still view the long term future of their pastoral activities as very dubious and have consciously restricted the size and growth of their herds. The risks involved in developing pastoralism in Limi are simply perceived to be too great vis-à-vis other alternative uses of capital such as trade, and none of the larger herd owners will allow too much of his capital to get tied up in animals. The only thing that could significantly alter this strategy would be the consummation of a long term pasture use treaty between Nepal and China.

In any case, like land, the distribution of animals in Limi is very uneven. Taking sheep as our example, in the village of Tsang only 17 out of 52 families have 90 or more sheep. In all of Limi there are only 22 such large sheep owning families. Of the 17 herd owning families in Tsang, 7 are *trongba* and 10 are *mirey* but those 7 represent 54 % of the *trongba* families whereas the 10 represent only 34.5 % of the *mirey*. The *morang* have no sheep at all.

Because of this uneven distribution, a majority of Limi families not only do not have enough land to produce a subsistence level of food but also do not have enough animals to make up the agricultural deficit. Even in Tsang, the village with the most animals, there are at least 29 (out of 52) families who must engage in other activities to survive. What strategies, then, do these people employ to satisfy their basic needs? Although trade is commonly cited as the answer, this is really misleading since trade is on the whole restricted to those already wealthy in more basic resources such as land or animals. The salt trade, for example, is only engaged in by those Limi families with herds of sheep and yak since these are necessary for carting the salt from Tibet. The main adaptive strategies employed by the poor and moderately poor, then fall into two — not mutually exclusive — categories: 1) craft trades, 2) different types of labour. These will be discussed briefly below.

One of the most important sources of income for the moderately poor and middle income families is the making of wooden eating and drinking bowls called *poba* (*pbor ba*) in Tibetan. This is a traditional craft for which Limi is famous all over Tibet and now wherever Tibetan refugees live. The wood for these bowls is found in forest areas in North India and in November, after

agricultural work is completed, teams of three to five Limi males travel there via Darchula and spend the winter months collecting and shaping the wood. They return in March-April and finish the sanding, staining and varnishing in June-July after the fields are planted. In the winter of 1973-74, seventy Limi men went to collect wood and averaged 325 bowls per man. The average expenses were 500 rupees per man, this including transportation and food. Though curiously not mentioned in HAIMENDORF'S 1973 study on trade in Humla, *poba*-making is an extremely lucrative business bringing in well over 200 000 rupees to Limi in annual sales.

It is common for these bowls to be sold by the makers either directly to Tibet or to Limi and Mugu traders who take them to India, Kathmandu and other areas of Tibet. At the average bulk rate of 10 rupees a bowl a typical maker would net, after expenses are subtracted, about 2 750 rupees profit. In terms of the amount of grain that can be purchased, this profit is equal to the yield of about 0.4 of an acre of land.

Carpentry (including wood carving) is an important source of income not only for the moderately poor and middle income families but also for the very poor. Limi is fortunate in having substantial birch and pine forests nearby which are used to make a variety of products ranging from tent stakes to house pillars. Eating and drinking bowls like the ones mentioned above are also made from local birch although they are considered of much lower quality. Because there is no wood in the areas of Tibet adjacent to Limi, these wood products are a critical component of the Limi-Tibet trade. Although some yak saddles are sold to Mugu traders who come to Limi and some wood products are sold to wealthy Limi traders for their dealings with Tibet, most of the products are sold directly by the makers to Tibet. In return for these wood products the carpenters obtain such things as brick tea, manufactured goods, and Chinese currency (13).

Weaving of woolen cloth by women is another source of income. Most of the unmarried women with separate households (the *morang*) do a considerable amount of weaving, selling it generally to the villagers in the Humla Karnali ecozone who use it to make clothing.

For the real poor, however, labor is the main source of subsidiary income. The poor perform a variety of labour functions in Limi including agricultural and herding tasks, carpentry, wool work, leather tanning and sewing. These are done both on a day wage basis and, for herding, on a seasonal basis. Wages always include food and beer for the days employed and sometimes also salary in the form of foodstuffs and loan of traction animals and equipment.

In addition to the labour opportunities in Limi itself, the Humla Karnali ecozone offers lucrative labour opportunities in winter. During the winter months a substantial number of people from Limi move to one or another of the villages (both Tibetan and Nepali speaking ones) along the Humla Karnali and its tributaries. They stay there roughly from November to the first week in April when the Nyalu Pass is crossable and return to Limi is possible though not easy. In 1973-74, members from 17 families in Tsang wintered in Humla performing a variety of jobs such as: carpentry, leather work, weaving, wool work, sewing and field labor. Suffice to say here that in addition to earning their food consumption requirements during the winter months, there is always some profit to carry back to Limi in spring. The amount of this profit, of course, depends to a large extent on the ratio of workers to consumers in each family unit.

Trade remains as the last important dimension of the overall Limi adaptation. Unfortunately, it can also only be discussed here in very general terms. Trade breaks down into three broad patterns: 1) trade with Tibet, 2) trade with the Humla Karnali ecozone, and 3) trade with India and Kathmandu. In traditional times only the first two patterns were important. Limi people rarely went to India and then generally only to visit the important Buddhist pilgrimage sites. The event in 1959 in Tibet substantially altered the old patterns. Limi traders are no longer permitted free trade with Tibetans, being restricted to trade only in the trading center at Purang. All Tibetan/Chinese products, moreover, can only be purchased through the official Chinese stores and individuals can no longer directly buy wool and tea from nomads, nor can they take long forays into northern Tibet to collect their own salt. These and other restrictions have seriously affected the traditional Limi-Tibet trade. On the other hand, the





FIG. 37. — Foot-operated traditional lathe used for finishing wooden bowls. The bowls are initially shaped in India on water driven lathes and then brought to Limi to finish in summer. In Limi the bowls are glued on the ends of the horizontal bar which is moved back and forth by the feet and sanded with various grades of locally made « sandpaper ». The sandpaper is made from strips of leather on which sand of different degrees of coarseness has been glued  
(*Pb. M.C. Goldstein*).

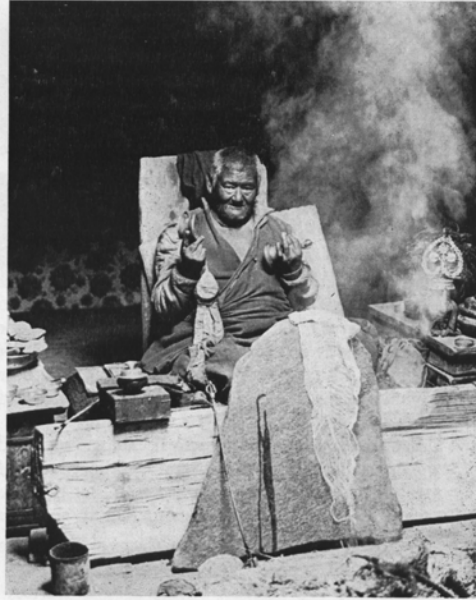


FIG. 38. — Leading lama performing a ritual to ensure a good crop in Tsang. There are three monasteries and 50 monks in Limi all of the Drigung Kadjupe sect. The monks are recruited in the form of a tax and live together in the monastery for about three months during the winter. Monks are not celibate and do not wear robes when not in the monastery or performing rituals. They do, however, keep their hair cropped short  
(*Pb. M.C. Goldstein*).

presence of large numbers of Tibetan refugees in India and Kathmandu has opened a new market for Limi's famous wooden eating bowls. Whereas in the past these bowls might be carried by Limi traders as far as Sakya and Shigatse (and by others even farther), today they are carried to such places as Dharamsala, Musoorie, Dehra Dun, Manali, Delhi, Benares and Kathmandu. Furthermore, other trade opportunities have developed which the Limi traders have been quick to capitalize on. In particular, I have in mind the very profitable trade in antique Tibetan paintings, statues and jewelry. Whatever losses the changing situation in Tibet has produced for Limi, the tremendous spurt of interest in Tibetan art objects in the West has more than filled the gap. The establishment of reliable contacts with traders in India and Kathmandu has also led to the development of a sizeable trade in musk, another lucrative item.

This new high risk but high profit trade is beginning to have serious consequences for social organization and may ultimately lead to major shifts in population growth patterns. For example,

there is a growing tendency for brothers in polyandrous marriages to split from their brothers and marry monogamously. They have been taking their small share of family wealth and using it to enter into the lucrative antique trade which does not require substantial herds of animals as did the old wool and salt trade. This, in turn, is significantly lessening the fertility depressing effects of polyandry and will, if the trend continues, result in significant population increases which in turn may well force a greater intensification of agriculture.

Rather than enter into detailed examination of the items involved and strategies employed in the extensive trade networks operative between the various zones (*e.g.*, over 40 items are regularly purchased from Tibet), a few general comments on the flow of the most important items will suffice. The Humla Karnali ecozone is able to produce two crops a year and thus an agricultural surplus. This is absorbed primarily by Limi and secondarily by Tibet. Limi, in turn, has available forest resources and the craft skills to work them and provides Tibet with a variety of wood products. It also has herds which provide wool and salt for the Humla area. Humla in turn takes the salt to regions further South, exchanging it primarily for rice which is consumed locally and sold to Limi. Although many from the Humla Karnali ecozone also trade directly with Tibet for salt and manufactured items, the Limi traders still have no difficulty selling whatever salt they can obtain from Tibet.

A number of Limi traders (15 from Tsang alone) also undertake long winter trade ventures to all parts of India and Kathmandu selling such luxury items as *poba*, antiques and musk for manufactured goods and cash. It should be emphasized here that while the entire trade situation is in a state of flux and slight alterations in the policies of China or Nepal could produce important shifts in Limi, the post-1959 era has seen an overall shift of orientation of Limi people from Tibet to Kathmandu. There is considerable interest in Limi in improving Nepali education and in moving more into the mainstream of Nepalese affairs. It is, therefore, not surprising that one of the leading Limi families has purchased and in Bodnath where it plans to construct a house/inn for Limi traders.

Since it is fruitless to summarize a summary, I would like to close by reiterating that this paper has tried to present a brief outline of the general environmental-subsistence structure in Limi within the framework of adaptation. The adaptation perspective implies a dynamic interaction between environmental and cultural systems. It is conceived as a « process of potential adjustment to existing and changing conditions » (J. BENNETT, 1968 : 18) and focuses on how people perceive, control and use resources to achieve their ends however these may be defined. In the context of Limi, then, this paper has tried to show the complexity of the adaptation. It has tried to illustrate how different segments of the population have differential control of resources and employ different strategies to achieve their goals. It has also tried to indicate how changes in the political environment have led to major changes in access to resources and markets and consequently to the evaluation of opportunity costs and the adaptive strategies employed.

#### NOTES

- (1) I wish to express my appreciation to the American Council of Learned Societies and Case Western Reserve University for supporting this research with a fellowship and an early sabbatical. I also wish to thank Dean P. R. Sharma and Prof. A. W. MacDonald of the Nepal and Asian Studies Institute of Tribhuvan University and Dr. Harka B. Gurung of the National Planning Commission for their assistance. I would, finally, especially like to thank His Majesty's Government of Nepal for generously giving me permission to undertake research in Limi.
- (2) The transliteration system employed in this paper follows that described in WYLIE, 1959.
- (3) Actually, only Limi people travel in April. Traffic by non-Limi persons does not usually commence until mid to late May.
- (4) There have been a few marriages with Tibetan speakers of Purang but these amount to not more than 0,005 % of the total.
- (5) The original number of families (*grong ba*) is said to be seven. Over the past centuries, however, this number has been revised upwards so as to bring the distribution of wealth into closer agreement with the distribution of status and tax obligations.
- (6) Yak will hereafter refer to males and females, the latter really being called *dri*.
- (7) In Tsang there are only two families without land. One is a *morang* with no children and the other a Tibetan nomad refugee who has married a Limi girl.
- (8) Tests on Limi soil samples have not yet been completed.
- (9) Some barley is being « test » planted in an area where there was once a Limi village at elevations of 4 050-4 110 m. Another area nearer to Tsang was opened to agriculture about eight years ago. It is located at an altitude of about 3 960-4 000 m.
- (10) Even taking into account the reluctance of Limi herders to overinvest in animals, these figures represent a low in herd numbers as the winter of 1972-1973 was extremely severe and took a terrible toll in sheep and yak.
- (11) I am excluding, of course, the handful of families of refugee Tibetan nomads who reside in the area.
- (12) Mugu now keeps only male yak which are used for carrying purposes. They replenish their herds by buying young yaks from Limi.
- (13) This Chinese currency can be exchanged in Limi for grain or Nepalese rupees since big Limi traders need Chinese currency to deal privately with Tibetans.

#### SELECTED BIBLIOGRAPHY

- BENNETT (J.). — *Northern plainsmen*. — Chicago, Aldine, 1969. — 352 p.
- SPOONER (B.). — *The cultural ecology of pastoral nomadism*. — Addison Wesley. Modules in Anthropology, 1973. — 53 p.
- WYLIE (T.V.). — A standard system of Tibetan transcription. *Harvard J. Asiatic Studies*, vol. 22, 1959. — Pp. 261-276.