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DEATH, DISEASE AND CURING IN A HIMALAYAN VILLAGE

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Introduction

This is an account of the prevalence of suffering and the reactions to pain among the Gurungs of Nepal(1). It is based on fieldwork lasting fifteen months carried out in 1968--70 and is therefore written in the 'historic present'.(2) But although much has changed and there are considerable regional differences among the high-land peoples of the Himalayas, it can still be argued that a detailed study of both the prevalence of various forms of disease and misfortune and of attempted cures contains a number of lessons for those interested in the wider area and in the present. The Gurungs themselves are a linguistic group of 158,000 persons (1961 census). They mainly live at an altitude of between 4,000 and 7,000 feet in Central Nepal, just to the north of the town of Pokhara. The particular study took place in the village of Thak in the Siklis valley. The economy is largely based on the cultivation of maize and rice, animal herding and migrant labour to the British and Indian armies. The hillsides are steep and rocky so that communications are still mainly by foot and there is little mechanization of agriculture. The temperature is moderate, seldom reaching above 100 degrees F or below freezing. The people themselves are an amalgam of several different groups who have been in this area for several centuries and who combine in their social and religious systems a mixture of the Tibeto-Burman -and Indo-Aryan traditions. There is a very great similarity between the Gurungs and other ethnic groups in Nepal such as the Tamangs, Magars, Limbus, Rais. There are also similarities in ecology and social structure when they are compared with many other groups in the middling range foothills of the Himalayas. Thus, although this is a specific and detailed case study, it is likely that many of

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the patterns are widespread in this culture area. Since there have been three monographs published on this particular group, those who are interested in the more detailed demographic, economic and religious background may pursue these matters there.(3)

CAUSES OF DEATH

Very little is known about the incidence of various diseases as causes of death in Nepal in general. The few health surveys of the country confine themselves to analysing present prevalence of illness, and the meagre statistics which can be culled from hospital records clearly give a very distorted picture of the pattern in rural areas.(4) Yet huge vaccination and other campaigns are launched on the basis of very little knowledge of local conditions. Furthermore, the economic and social future of Nepal depends very much on what happens to the relationship between the fertility and mortality rates, and we cannot hope to understand the latter unless we have

some idea of what the major causes of mortality in village society are. It is this combination of almost total ignorance and the extreme importance of the subject which justifies the following very tentative account of the situation in one Gurung village. The impressions and statistics on which the discussions are based are extremely unsatisfactory, but they may possibly give a glimpse into a subject which needs much greater study. There are two major reasons why the account needs to be treated with caution. Firstly, the author is not a trained doctor, as will be apparent, and was not able, therefore, to pose the questions which would have elicited the maximum of information, or to analyse the results in a sophisticated way. Secondly, in the absence of any system of coroner's examinations and medical certificates, or even of simple vital registration of deaths, the only way to gather information is by retrospective questioning. This was carried out on 100 sample households in Thak during the taking of a census. Informants were asked the cause of death of all infants and children stated to have died and also the date and cause of death of parents, and one other near relative who had died recently. Naturally, answers came in the form of descriptions of symptoms; for example a person was said to have died of a "lump in the stomach" or "fever". This could describe a number of ailments and checking through with a doctor left many such cases unclassified. Furthermore, there is likely to be loss of memory.

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Finally, the figures are too small for any statistical significance to be attached to them. Yet they do show certain broad features of the situation, for example the low rate of mortality at childbirth, the absence of certain epidemic diseases and the importance of dysentery /gastro-enteritis and T.B. For this reason, and those stated above, it seems worth recording the findings. Nor are the categories much cruder than those now available for such countries as Ceylon, which include, for example 'Convulsions of children under 5 years' as, a cause of death.(5)

According to replies to the census, the major causes of death were as follows:

Table 1. STATED CAUSES/ SYMPTOMS OF DEATH IN THAK CENSUS, GURUNGS AND OTHERS, 1969

Cause	Infancy	1-9	10-49	50+	Total	%
Dysentery/enteritis	5	16	3	15	39	19.5
Tuberculosis	-	7	13	7	27	13.5
'Cancer' (lump)			9	13	22	11
'Fever' (typhoid etc.)		6	2	8	16	8
Swollen body (heart, kidney)			2	12	14	7
Pneumonia' bronchitis	7	5		1	13	6.5
Typhoid		1	6	5	12	6
Accidents (fall/burns)	2	3	5	2	12	6
Warfare				10	10	5
'Stomach painful'*		3	2	1	6	3
Childbirth (mothers)				4	4	2
Infant at childbirth	4				4	2
Ulcers/'body wounds'*			2	2	4	2
Malaria			4		4	2
Meningitis	1		1		2	1
Measles		2			2	1
Malnutrition-infant	2				2	1

Epilepsy/insanity		1	1	2
Quinsy/tonsular abscess	1		1	0.5
Leprosy		1	1	0.5
Lockjaw (tetanus)		1	1	0.5
Nephritis		1	1	0.5
Goitre			1 1	0.5

Note: * The possible diseases which these broad symptoms may refer to will be discussed below. But since it is impossible to classify many deaths, the table does not give an accurate index of certain diseases-for example typhoid may appear under several of the headings above.

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Although too much weight cannot be attached to the relative incidence of various causes it is clear that dysentery/ gastroenteritis, tuberculosis, and chest infections are high on the list. Deaths from fighting in foreign armies accounted for ten men, the second highest cause of mortality among those aged 10-49, but only 5 % of all deaths. Maternal mortality only accounted for 2 % of the total 200 cases. Perhaps even more interesting than the high figures are the omissions; though a few cases may be concealed under "fever" etc., there are no reported cases of cholera, smallpox, bubonic or pneumonic plague, and only two cases of measles. Over the last sixty years Thak seems to have avoided any serious epidemics. If we look at the separate age groups, we get some idea of the major cause of mortality at each stage. Pneumonia and dysentery /gastro-enteritis account for over half the infant deaths; accidents and complications at birth account for less than one-third. In the years 1. 9, gastroenteritis/ dysentery is the greatest killer. In the age group 10-49, one-fifth of deaths were believed to be caused by T.B. and one-sixth by warfare. Typhoid and malaria also reached their peak in this stage. The last period, when 16 people were merely described as dying of "old age" (not included in this table) again saw a predominance of "dysentery" and "lumps in the stomach".

It is a commonplace observation that mortality varies with the seasons. The incidence of those deaths where I was given the month when death occurred are best shown in a diagram. It will be seen that almost all infant deaths occur in the summer months, and the same is true of children and adults. But mortality is just as high before the onset of the monsoons in Asar as it is when the village is flooded and dank. Nor do the few weeks of cold weather, often bringing frost and snow to Thak and leaving the lightly dressed villagers shivering, seem to raise the mortality; mid January to mid-March are two of the least dangerous months.

Dysentery, gastro-enteritis and associated disorders.

The best way to take this discussion further is to study each cause and/or symptom in turn and to see how it affects men and women, Gurungs and non-Gurungs, and various age groups, over time. We may start with dysentery, gastro-enteritis and associated disorders. This group of disorders is known to be particularly dangerous in infancy, childhood and old age. It is associated with poor sanitation and hygiene. The widespread habit of defecating in fields near the village, or in stream beds or, on pathways, so that water or flies transfer the amoeba or bacilli to the human mouth,

is the main cause of these ailments. Often a patient may be infected for many years without being seriously ill, but there are many side-effects such as amoebic liver abscess which may also be fatal. Rates in Nepal are generally very high. A medical survey of central Nepal found that "amoebiasis", one branch of these disorders, was the most widespread of all diseases; out of 866 cases brought to the dispensary, 121 were of this kind. About 14% of the patients surveyed had "gross, clinical amoebiasis". The highest rate was found in a hill village at 10,000 feet where a 40% rate prevailed. "Gastritis/enteritis" was listed separately, and occurred in 40 / 866 cases. (6)

There are certain reasons for expecting mortality and morbidity not to be particularly high from these causes during recent years in Thak. One factor is the Gurung belief that it is bad to leave cooked food to be eaten the following day; it is either carefully covered and stored, or thrown away. This helps to lower the chance of infection. Another factor is that whereas water used to be fetched from streams that were easily polluted, some 12 or so years ago a water-pipe was laid from a spring over one and a half miles away. Although it often breaks and is mended with an old cloth or earth, it is unlikely to be polluted in the same way as the old sources. This hypothesis is supported by the fact that the incidence of dysentery in the village is much higher during the monsoon months. During the monsoon we had numerous requests for dysentery medicine; many villagers used the streams that gushed near their houses, the water having run down the gulleys and fields which had served as latrines for the last nine months.

Unfortunately, the symptoms of those whose deaths have been included under the heading "dysentery /enteritis" are not detailed enough to enable us to be sure that all such cases were, in fact, the results of these disorders. Usually an informant spoke of death being accompanied by heavy diarrhoea (*po* (Gg) stomach, *cher* (Nep.) *diba* (Gg)), or "blood in the faeces" (*ragat masee* (Nep.)). Both may equally apply to some other diseases. Yet it is worth examining the distribution of the supposed deaths from this disease as follows.

Why all infants and those aged 10-49 happen to be female I am unable to say. If anything, the proportion said to die of these symptoms is higher in the 1960s than the 1950s, but this may reflect a better memory of what is often a hardly sensational cause of death. Among the old people, chronic dysentery probably

combines with several other ailments and brings about death through weakness. A higher proportion of the women than of the men were from lower caste families (8/21 females, 2/18 males), though again it is difficult to decide what this means.

Table 2. SUPPOSED DEATHS FROM DYSENTERY /ENTERITIS, THAK

years	infancy		1-9 years		10-49		50+		total	
	M	F		F	M	F	M	F	M	F
1900-1949	-	1	3	4	-	1	4	1	7	7

1950-1959	-	1	2	3	-	1	4	2	6	7
1960-1969	-	3	3	1	-	1	2	2	5	7
	-	5	8	8	-	3	10	5	18	21

Note: the table includes 10 non-Gurungs.

Without extensive stool tests it is impossible to assess types and rates of dysentery in the village. In a brief medical survey of the village, undertaken with the aid of a mission doctor and described below, eleven persons admitted that they were currently suffering from bad diarrhoea; this constituted between 1/4 and 1/5 of those asked whether they were thus afflicted. There was an equal proportion of males and females. The main feature of the distribution was that all those suffering were aged under 16, and 9/11 of them were under ten years. It is likely that if the survey had been undertaken during the monsoons, instead of the comparatively healthy month of January, the proportion would have been much higher. Dysentery is not a complaint for which people often go to hospital. An analysis of those who attended Pokhara hospital from Thak during the years 1961-69 shows that of over 100 patients, only one woman came specifically complaining of diarrhoea, while five others complained of abdominal pains (which could be dysentery or a number of other conditions). One reason for this absence of hospital visiting is clear: those who are most seriously affected are infants, young children and old people. They are not able to make the twelve mile journey to the hospital by themselves. Those who attended hospital were almost all aged between 20 and 50. Perhaps even more important is the fact that this type of illness is so widespread that it is accepted as inevitable, not worth 'spending time and money on. This is not merely due to shortage of cash or ignorance of medicines. A retired British Gurkha army officer, who had been

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to England and knew perfectly well that there are now medicines to treat various types of dysentery, and had the money to buy them, made no attempt to procure such medicines even after a week of bad diarrhoea day and night. When medicine was freely available at our house, however, people thronged to get it.

Since the factors causing this group of complaints are common to all Gurungs, it is not surprising to find that the rich are no more immune than the poor. But the lower caste Tailors and Blacksmiths are begrudged use of the piped water in the village and, when possible, use other trickles which may be more easily contaminated. We might therefore expect to find a higher proportion of dysentery/ gastro-enteritis cases among them than among Gurungs. There is some evidence that this is so. While approximately 18% of Gurung deaths were said to have been caused by dysentery, 25% of those of untouchables were ascribed to this cause. In the health survey, 3/9 of the lower caste villagers examined had dysentery symptoms, and only 7/5 3 of the Gurungs. An improvement in village sanitation would thus benefit the lower castes, the young, and the old most of all; in other words the dependent elements in the village population.

Tuberculosis

Turning now to another ailment, tuberculosis, it has frequently been asserted that Gurkha soldiers have imported certain of the "civilized diseases" with them, and tuberculosis is the most commonly

cited of these. Tests on Gurkha soldiers confirm that "Primary infection" is "many times that prevailing in Nepal," nevertheless this needs to be set against the generally much higher state of health of ex-soldiers as compared to those who never leave the village. (7) Throughout Nepal, up to 4 % of the chest x-rays on those aged over 14, showed the presence of probably active TB. In the medical survey of Central Nepal it was found to be the 8th most common ailment, with 37/866 patients suffering from it. Its distribution was general, though "it was somewhat less frequent at the higher altitudes" (i.e. above 4,000 ft.) Males and females suffered equally, and the average age of those affected was 28 for females, 30 for males. (8) One other figure I have is that approximately 2% of the potential recruits are turned down for the British army after an x-ray examination reveals suspected tuberculosis. (9) Because of the bad reputation of this disease, large-scale BCG vaccination campaigns are now being started.

It is not certain when TB, was first introduced into Nepal. The
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first possible case from Thak dates from 1925, but it seems likely that there were cases elsewhere long before this. One difficulty in assessing its significance is the variety of symptoms, and the difficulty of describing cases. Some 27 possible deaths from this cause were noted. In 12 cases there is more than 50% likelihood that TB was the cause of death in 13 cases about a half and half chance, in two cases less than 50% chance. But some of those that have wrongly been listed as TB would undoubtedly be replaced by other TB cases placed under other headings such as "cancer", "fever" etc. The list shows that the only words used to describe this condition are *dumgi* (*damko* (Nep) = panting) in cases where the stomach has swollen and the sufferer panted heavily, and *sukri* (Nep.) where the body progressively wasted away. In the case of adults, the duration of the illness before death was reported to be several years, in that of children, a number of months. It will be seen that in 11/27 of the cases another member of the same family was also believed to have the disease; for example, two of the Blacksmiths supposed to have it were brothers, and a third was their cousin.

How the disease was first brought into the village, we do not know. Certainly some people, like the two men now living in Thak who were invalided out of the army because of TB, caught it while serving in India or Malaya. But the fact that almost half of the adult deaths (9/20) supposedly caused by this disease were those of women (a greater proportion of female than male deaths, since we know the supposed cause of death of twice as many adult males as females) suggests that army service is not of great direct significance here. The cases, uncertain as they are, may be broken down as follows.

Table 3. SUPPOSED DEATHS FROM TUBERCULOSIS, THAK

Period	Age 1-9		10-49		50+		Total
	M	F	M	F	M	F	
1925-49		2	1		1	2	6
1950-59	1	2	3	4			10
1960-69		1	4	1	2		8
date unknown	1					2	3

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The table above shows growth in cases during the mid-century and i then a stable rate. The actual dates of supposed cases do not suggest any particularly hazardous years. It can be seen that almost half the cases occur in the age category 10-49; most of these were aged over 20. A successful BCG campaign would therefore increase the life expectation of the economically most active part of the population.

The evidence of tuberculosis in Thak from other sources is even more fragmentary. The medical survey of the village did not include any special tests to locate TB, though advanced cases would probably have been noticed by the doctor. In only two cases, both children (aged 10 and 14), were the glands in the neck swollen, suggesting possible infection. Of the more than 100 Thak inhabitants who had visited the mission hospital in the last few years, four were found to have tubercular infection. They were aged 13, 15, 16 and 20. Two of those treated at the hospital had the same infected glands as those noted in the village survey. Three were boys and one, the eldest, a girl. The major impression from the above, is that while tuberculosis is not as yet enormously widespread in the hills, it is still one of the major causes of child and adult mortality.

'Cancer' or lump in the stomach.

Moving to another cause of death, people often described the cause of death as a *gola* (Nep. round ball or lump) in the stomach. This was believed to be a disease especially afflicted women, and was said to be caused by lifting heavy objects. It was also known as *ganu* (*ghanu* (Nep) = thick, dense) or *dolda riva* (*dhollo* (Nep) shrunken, flaccid *riva* (Gg) bones) in women and *pyoh* (enlarged spleen) in men. Our assistant on the census who spoke some English insisted that this was "cancer", but this seems very unlikely except in a few cases. Some 11 per cent of the deaths were said to be caused by this, yet the medical survey of Central Nepal only encountered 8/866, cases of cancer or under 1%. (10) It seems unlikely that the rate in Thak could have been over 2-3% of all deaths. Dr. Turner thought it possible that in some cases the hard object people felt in their stomach was their own backbone. A number of cases of people attending the hospital at Pokhara and complaining of *gola* had been diagnosed as suffering from malnutrition, leading to this sensation. The following analysis of the distribution of this symptom shows some interesting features. There has been a complete cessation of cases, except for one, since 1958. This might be linked with the building of the new

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water pipe in about 1958, or it could reflect improved diet since then. But it may merely mean that such cases have been described differently. As *gola* declined, the number of "swollen body" leading to death rose. One fact that is not illustrated by the table is that it is an ailment particularly affecting lower caste men; 5 /13 of the men dying of this supposed illness were Tailors or Blacksmiths, and only 1/9 of the women. The majority of those who die with such symptoms are I over 50. Given the recent decline of deaths from such a cause, it is not surprising to find no complaints of this trouble

in the village medical survey, nor any reference to such, "cancer" or "lumps" (except for general abdominal pains) among those who went from Thak to Pokhara hospital.

Table 4. SUPPOSED DEATHS OF 'CANCER' OR 'LUMP IN THE STOMACH' THAK

Period	Age 10-499		50+		Total	
	M	F	M	F	M	F
1900-49	2	2	5	2	7	4
1950-59	3	1	3	3	3	6
1960-69		1				1
	5	4	8	5	13	9

'Fever'

Another symptom which is seen as a cause is 'fever'. Again this symptom could indicate a number of complaints; typhoid, malaria, chest infection and so on. The words used 'were usually *kuphat pordiba* (*kuphat* (Nep.) = unfit, *pordiba* (Gg.) = to have/ be) or *jar kaba* (*jaro* (Nep) = fever, *kaba* (Gg.) = to com,~); in other words the patient ran a high temperature before dying. In four of the 16 cases, the temperature was explicitly stated to last 15 days which would fit in well with a diagnosis of typhoid. In no cases was the fever stated to have lasted for over two months, or under a week; usually it varied between a week and a month.

No other symptoms could be elicited, except that in one case a person did not eat and in another the person also suffered from a headache. For what it is worth, the distribution of cases is as follows. Half the cases are recorded in the period 1950-9, while very few have been noted since 1960. The symptoms are mainly found in those aged under six or over fifty. Only one of the 16 cases is that of a lower caste villager. Not surprisingly, very little

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evidence emerges from the medical survey concerning "fever". Only one person, a man of 25 suffering in all probability from influenza, complained of a temperature and headache. A girl of three was taken to hospital with "fever" and a woman of sixty had fever, watery eyes, and weakness generally when she attended hospital. One other man had a headache and fever.

Table 5. SUPPOSED DEATHS FROM "FEVER"

Period	Age 1-9		10-49		50+		Total	
	M	F	M	F	M	F	M	F
1900-49		1		1	1	1	1	3
1950-59	2			1	4	1	6	2
1960-69	1				1		2	
1960-70								
date unknown	1	1					1	1
	4	2		2	6	2	10	6

Heart and liver.

Moving on to heart and liver complaints, it has frequently been suggested that there is a considerable amount of heart trouble in the hills of Nepal as a result of carrying heavy loads up and down steep hills. (11) On the other hand the survey of Central Nepal found this to be only the 17th most common disease, with 17/866 cases; it was confined to "higher altitudes" and consisted principally of rheumatic fever. A number of people were said to have died with their body swollen (*jiu* [Nep]-body *rhomba* [Gg], swollen). This could, of course be the symptom of a number of ailments, particularly of the heart and liver. Normally the deceased was said to have been ill for a period of a year or more. In one case the eating of salt aggravated the disease. The distribution of cases is as follows. The numbers are so small that subdivisions have very little meaning, yet we may note that this is predominantly a cause of mortality among those over 50, and that there seems to have been an increase in recent years. It is possible, as suggested above, that cases previously called "lump in the stomach" have recently been described as "swollen body". Half of the fourteen cases- occurred in the hamlets down below the main village of Thak, a much higher proportion than their population would warrant. Although the villagers living down in

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these hamlets have more climbing to reach the main village, they have less far to carry heavy loads of rice, maize and wood. Why, living 500 feet lower, they should suffer more from this complaint I am unable to say. No one in the village health survey complained of or was seen to have a "heart condition". Among the 100 + patients going to Pokhara clinic, three men (aged 32, 53, 76) were diagnosed to have such a condition.

Table 6. DEATHS FROM A "SWOLLEN BODY"

Period	Age 10-49		50+		Total	
	M	F	M	F	M	F
1900-49			2	1	2	1
1950-59	1			1	1	1
1960-69	1		6	2	7	2
	2		8	4	10	4

Chest infections, including pneumonia

The, next group of ailments to consider are chest infections. It is very likely that some of the "fever" cases above were really respiratory diseases, especially pneumonia in the young and bronchitis in the old. A temperature is one of the symptoms of both these ailments. A study of Europeans, Malays, Sinhalese and Gurkhas in Malaya showed that the Gurkhas had the, highest fairly high incidence of pneumonia in Nepal as a whole.(13) In the medical survey of Central Nepal, bronchitis was the 14th most common ailment (21/866

cases) and was generally found at higher altitudes. Only one case of pneumonia was noted. It is not surprising to find so few pneumonia cases in the above survey for, as can be seen from the following table, its incidence is mainly restricted to those under five years of age, who would not have travelled to the clinic held by the survey doctor. The above symptom is the most frequently cited in cases of infant deaths, and the second most common in child deaths. Yet there is no evidence, from the distribution of the actual dates when the above occurred, that there have been any pneumonia epidemics. The much lower rate during the last ten years, as opposed to the previous ten, is difficult to explain. Given the relative number of male and female deaths about which we have details, the sex ratio above is approximately even. The description of the actual cases

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was nearly always that the heart of the victim had - palpitated, the heartbeat had been uneven, and then stopped entirely. The widespread nature of this illness is indicated by the fact that in three cases it was simply called the "child's illness" (*balak betha*, Nep.). In one case it was stated that it is believed that a child with this ailment will either die within eight days, or recover. Indeed, in only one of the seven cases where we know the supposed length of the illness was the child ill for more than 10 days.

Table 7. DEATHS ACCOMPANIED BY HEART PALPITATIONS;
POSSIBLY DUE TO PNEUMONIA

Period	Age 0-11 months		1-5 years		total	
	M	F	M	F	M	F
1901-49				2		2
1950-59	4		1	1	5	1
1950-60						
1960-69		2				2
date unknown		1		1		2
	4	3	1	4	5	7

Note: One case of a man aged over 50 was diagnosed, before his death, as bronchitis. It is omitted in the table.

No cases of pneumonia were encountered in the hospital records or medical survey for Thak; which confirms that this is a serious killer which would go undetected by those working at health clinics to which patients are brought. Probable bronchitis, however, was encountered in 4/51 of the people aged 10 + in the medical survey of Thak; symptoms were bad coughing and large amounts of coloured sputum. Although in two cases it was chronic, it is difficult to say whether it was likely to be fatal. Only three people who attended Pokhara hospital from Thak had symptoms suggesting bronchitis; two were diagnosed as having bronchitis, the third died soon after being discharged. This man had a cough, a hoarse throat, had chest pains, and expectorated yellow sputum. Three other patients who travelled to hospital complained of bad coughs. There are now several drugs which

could deal with pneumonia and other chest infections; if available in the village they could save many infant lives.

Typhoid

Typhoid overlaps with pneumonia since one of the typical

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ways in which typhoid actually kills people is to weaken them, and then they develop pneumonia. It is therefore impossible to distinguish from the previous category, and there may also be typhoid cases concealed under the heading of "fever" above. The symptoms of those cases which seem likely to be typhoid are often a high temperature for one or two weeks, frequently called *kuphat pordiba* (illness [Nep.] undergoing [Gg]). Typhoid may also overlap with tetanus in a few cases. In three cases the disease was called the "eight-day sickness" (*aath dina betta*, Nep) which is the name given to tetanus in parts of Europe. It is widely believed that if the person is going to die, he or she will do so before the 8th day. In typhoid it is the third week of the disease that is critical, but it is possible that in some cases, the minor symptoms are not noticed by the Gurungs.

Typhoid and para-typhoid diseases arise from the same chain of events as dysentery/enteritis; the transmission of bacteria from faeces, through water, milk or food. In towns, where it often arises from polluted water supplies, there are often epidemics until the cause is discovered, but it may appear more spasmodically in villages where the sources of possible infection are more widespread. Typhoid cases were very rare in the findings of the survey of Central Nepal, only 2/866 cases, and both of these were from Pokhara. On the other hand tests throughout Nepal found that up to 46 % of those aged five or over showed signs of infection with typhoid organisms, (14) the rate varying with the type of water supply. Plotting all the cases of 'typhoid', 'fever' and 'pneumonia' separately and together onto a graph over the years did not show any obvious epidemics. The highest number of cases in any one year was three (of the above combined). What does seem to be significant is that while there have been 11 deaths from typhoid/ "fever" in the years 1950-9, all of them Gurungs, during the last ten years, 1960-9, there has been only one Gurung death from either of these causes. There have also been three lower caste deaths; which could be explained by their continued use of non-piped water, as suggested earlier. Although cases of typhoid still occur in Thak - the girl next door to us was taken to Pokhara with typhoid while we were in the village - it does not now seem to be the serious cause of mortality that it was in the 1950s. No cases were noticed in the village medical survey, and no cases from Thak are included among the patients attending the Pokhara clinic. The installation of the water pipe may have cut mortality quite considerably here.

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Accidental deaths

Accidental deaths are likely to be over-represented in the total of deaths (6%) since they are more likely to be vividly remembered. There are many hazards surrounding life and work in a Gurung village, but the recorded accidental deaths show that only certain of these are significant as far as mortality patterns

are concerned. The chief danger of fire is not that people get burnt when a house is on fire, a danger that is decreasing anyway as the number of wood and thatch houses declines with the use of stone and slate, but rather the danger to infants and young children from the open fire in the centre of the living room. The Pokhara hospital, which has to deal with the terrible burns which result from such accidents, was especially aware of this problem. In terms of human life, however, such a cause of death is not common. Only 2/200 of the deaths in Thak was said to have been caused by an infant falling into the fire, and one other child died after its clothes caught fire. The only adult death connected with fire was that of an old woman who was said to have died of shock after her house caught fire. Only one burn was noted in the village medical survey, and during our fifteen months stay, only one child was brought to us with a moderately severe, but by no means dangerous, burn. There was a bad fire in Thak in 1965 in which three houses were burnt down. Two men who were trying to retrieve possessions were burnt and taken to Pokhara hospital. One of them remained in hospital for 1 and a half months with severe burns; he might well have died if there had been no hospital. No other people from Thak had been to hospital with burns. It therefore seems doubtful whether fire is much more of a danger than in England.

The other major type of accident is falling, which accounts for over a third of accidental deaths. Only one child, who fell off one of the high Gurung verandas, died in this way. Two young people fell to their deaths down cliffs while collecting fodder during our time in the village, one of them concussing himself and drowning in the stream below. Two cases were reported from the past; an old man of 67 who had fallen down a cliff, and a younger man who had fallen from a tree. Considering the many precipitous parts of the village fields, this is really a testimony to the sure-footedness of the inhabitants. The other child death is somewhat mysterious; a little boy is said to have died after drinking a large quantity of the local millet beer. The other two

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adult deaths were those of a young man who was crushed by a huge rock under which he was burrowing for roots, and of the richest man in the village who accidentally set off the gun in his own tiger trap. We were also told of a Brahman who was killed by a landslide, but he lived outside the area of our hundred sample families.

It appears that accidental deaths are not of great statistical significance. Yet they are obviously of great emotional importance since they are often dramatic, unexpected, destroying healthy people. They are of great ritual importance also; it is believed that a person who dies in such a way is likely to be captured by evil spirits and himself to become an evil *moh* or spirit, unless particularly intense ritual action is taken to prevent this. Nor are there reported deaths from a number of expected causes. Although cases were noted in other, nearby villages, no-one in Thak was struck by lightning, committed suicide, was killed as a suspected witch or was murdered. No one was reported to have been killed by snakes, leopards, wild boar, bears, or mad dogs, all of which had been present in the past. Nor had anyone been drowned in monsoon-filled rivers, died from poisoning, died from cuts or thorns turned gangrenous, or been shot by accident while hunting or during the frequent rituals requiring gunfire (except the tiger-trap case

mentioned above). Nor were any accidents of these types encountered in the village medical survey, though during our time in the village we were constantly being asked to treat minor cuts and bruises, and to take out thorns. Only one of the patients who went from Thak to Pokhara hospital suffered from one of the above accidents: she had a snake bite, but it was already healing after a month's interval before she attended the hospital clinic. It is difficult, therefore, to see how accidental deaths could be reduced in number.

War

It has been stated that some 20,000 Gurkha troops were killed in the First World War, and another 24,000 in the Second. (15) Gurungs represented about one-fifth of those fighting in regular Gurkha regiments in the First World War; if they formed the same proportion in the Second, then some 9,000 would have lost their lives in the two wars (assuming they suffered casualties in the same proportions as other ethnic groups). Adding "peace time" deaths, this tribe is likely to have lost at least 10,000 adult males in warfare. When we realize that adult males at any one time cannot have numbered more than 50,000, it will be seen that

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this is a major loss. In Thak, 'warfare' has been given as the cause of death of some ten men; it is the second most frequently given cause of death for those aged 10-49, though it is possible that its dramatic nature may have led to a better recall of this type of cause than of other reasons for death.

Although deaths in the army still occur (one woman lost her brother while we were in Thak), there have been no other recorded deaths from this cause during the 15 years prior to 1969. Whereas three men are remembered as-dying in the First War and between four and six in the Second, unless there is another large-scale conventional war this type of mortality will not recur. All except one of the men were married. A number of the soldiers have several children, for they were mostly older men, four aged 30-39, four aged 40-9. In three cases the wife is known not to have re-married and there is no known instance where an army widow has re-married; the reasons for this are connected to pension arrangements. To what extent mortality from warfare is compensated for by the improved health and living conditions resulting from army service, both of those serving, and of those in the village, it is difficult to say. But there seems little doubt that the Gurungs, on the whole, have a better mortality record than many neighbouring groups, and that this has largely been the result of their improved standard of living which is the result of army wages.

Pains in the stomach

Six cases of death where the symptoms were merely described as pains in the stomach and a swollen stomach are beyond classification. Death occurred after several months in four of the cases, after three years and after a week in the other two. Tuberculosis of the abdomen, heart/liver diseases, chronic anaemia, each probably accounts for one or two cases. A chronic peptic ulcer was the only stomach complaint disclosed by the medical survey of Thak, apart from dysentery, but abdomen pains were reported, by five people from Thak who went to Pokhara hospital. In all these five cases, however, the patients complained of other symptoms also; chest pains in three cases,

diarrhoea in two others. In none was a diagnosis of TB or other serious disease made.

Infant and maternal mortality

Infant and maternal mortality rates in Thak are low in comparison to other parts of Nepal. Of the 86 female deaths whose cause we know, only four were deaths of mothers at childbirth. Even of the women aged 10-49 whose cause of death is known,

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less than one-fifth died from this cause. Indeed, only one case from the central village of Thak was recorded and that occurred during our stay in the village. The low rate, at least during the last twenty years, is confirmed by the *poju* or magical practitioner. When a woman died in childbirth it was believed that her spirit was especially vulnerable to evil forces and might itself become an evil spirit. The magician therefore had to perform a rite known as the *sigra moshi tiba* when such a death occurred. The *poju* thus had a good reason for remembering cases of maternal mortality. He stated that no woman had died in childbirth in the village of Thak or nearby for at least the previous ten years. He remembered one case about fifteen years ago, but said that otherwise there had been no instances during the previous twenty years. He suggested that before twenty years ago such deaths had been more common. Other informants, for instance two aged over 55 each, could not think of any cases in the village or nearby over the last twenty or thirty years.

It is possible, as the *poju* himself suggested, that the presence of the hospital has lowered the rate somewhat. But this factor should not be stressed too much. There is no evidence that maternal mortality was ever high, and it is doubtful whether women have ever gone to hospital frequently with childbearing complications. The hospital records only refer to one Thak woman being admitted during the last ten years, in this case after a miscarriage. Villagers themselves could only think of one case in the village, and one case from a nearby hamlet. Probably the hospital gives increased confidence. The wealthier families, at least, knew that if there were birth complications, the woman could be carried over the extremely bumpy six-hour track to Pokhara

What kind of complications cause death it is difficult to say. In both of the cases where a description was given he afterbirth had not come away. In both cases the woman was aged 45, and in one of them she had already had eight children.

As for infant mortality near or at birth, this also appears low. We know that in two out of the four cases where the mother died at childbirth, the child also died then or shortly afterwards. Yet the number of children recorded as dying at birth, as a proportion of all live-births is extremely small. If we confine ourselves to women aged 54 or less at the time of my census, they reported some 232 livebirths, of which only three died within a day of birth. Nor do many infants die in the weeks after birth from

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malnourishment. Only two infants were reported to have died because they received inadequate milk from their mother. In one case the mother was too ill to feed her baby properly; it died at four months. In the other case the woman's breast were dry and the baby died at a

month. If a woman is unable to give suck, it is believed that the infant should be fed on buffalo milk, or by another woman who has recently had a child. One other possible cause of death in infancy was given by women during a questionnaire on childrearing. They stated that a number of babies had died of suffocation because the mother had fallen asleep while feeding them; three cases were mentioned, though names were not given. No such cause was mentioned in the census.

Festering wounds

In four cases the cause of death was described as a festering, growing wound. In two cases the old people had retired to India, and both had swollen legs. In one case a boy of ten had a sore on his face (*poro taba*, ? *poro* (Nep.) =small hole, *taba* (Gg.) = have), and the whole of his face swelled up for one month. Finally, a woman of 45 had a growing sore on her buttocks, which killed her after fifteen months. This may have been cancerous. ,Ulcers, phlebitis, or a number of other ailments could account for the other cases. One peptic ulcer was discovered in the village medical survey, and one man went to hospital from Thak with an abscess under his armpit and a woman with the same on her breast.

Malaria

Malaria is termed *aulo betha* (*aulo* [Nep] = marsh fever or malaria, *betha* [Nep] =illness) in Thak and its symptoms are generally recognised. In the lower parts of Nepal it used to be one of the major killing diseases; thus it was the third most common complaint encountered by the survey of Central Nepal(60/866 cases). The general health survey of Nepal found no significant difference in incidence between mountainous and lowland regions of Nepal, but they admitted that many villages in the mountainous regions were, in fact, in river valleys. (16) Thak is said by villagers and doctors to be too high (c.5,000 ft.) for malaria carrying mosquitoes and all the four cases of malaria were those of men, three Gurungs and a Blacksmith, who had caught the disease while on a trip to the south of Pokhara. All four cases had occurred before 1950. Massive campaigns in collaboration with WHO have been largely successful in controlling malaria in many parts of Nepal.

Minor causes of death

We may now deal with other minor causes of death. Two deaths of what seems to have been meningitis were reported; in both cases the sufferer's back was bent backwards like a bow. One was an infant aged seven months, the other a child aged sixteen. Both occurred over twelve years ago. No cases were noted in the medical survey, hospital records, or survey of Central Nepal. Nor were any cases of measles noted in either of these sources or in the survey of Central Nepal. But one young informant in Thak suggested that children's deaths had declined in recent years because there were no longer measles epidemics (*to-misa?* *thopo* [Nep] = spot), which had once, he said, killed many children. We would expect this disease to be easily recognizable from the characteristic spots; if it had occurred extensively in the past it seems likely that this would have been apparent in the census. In fact only two cases were noted: one was a girl of three who died in about 1942, another a girl of five in about 1956.

In the survey of Central Nepal there was one noted case of epilepsy, and the hospital records for Thak referred to one young man of twenty who went to the hospital suffering from giddy attacks which may have been epileptic. In response to the census, one Blacksmith stated that her father had died of *chare rog* [Nep] = (epilepsy), in a neighbouring village some 22 years ago; this is the term for epilepsy, but the informant stated that only some three days before the death was his affliction known to other villagers, which does not really fit. It was also claimed that one Gurung man had died of "insanity" and drink in India; this could be related to the fact that his grandson was the only mentally defective boy in the village. Apart from one spastic boy, and a mongol boy (Down's syndrome), there was also one slightly mentally disturbed woman. She was aged 44, and had once been married with several children.

The other supposed causes of death, one case of each, are listed in the table: nephritis, tetanus, an over-grown goitre, and quinsy or nephritis. No one with any of these ailments except goitre (which will be discussed in more detail below) went to Pokhara hospital.

There are no traces of epidemics of any kinds in the Thak records. There were no smallpox scars in Thak, although it has been found that this disease is fairly prevalent (between 3-27 per cent of those aged 10-29 examined had scars) in Nepal, and especially in the Western Mountains. (17) Nor were there any reported deaths from this cause, although there is a Gurung name for it (*pro*) which

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suggests that there has been some encounter with it in the past. I was told that some six or seven years previously, three or four people had died of this disease in the neighbouring village of Taprang, but no one in Thak had been affected. The likelihood of future epidemics is slightly lessened by government inoculation campaigns. I was told that the inoculators had visited Thak some fifteen years ago, and then not again until three years ago. They again visited the village while we were present. Partly due to insufficient warning being given, partly due to the absence of any exhortation, explanation, or inducements /sanctions, a large number of people were missed on the visit during our presence. As pointed out concerning Nepal generally, the situation is alarming. (18)

There is no evidence of bubonic or other types of plague, of cholera, of influenza, of scarlet fever, mumps or polio epidemics. The situation is very different from that in the Terai where, up to recently anyway, it was reported that there were 'frequent epidemics of cholera, plague and smallpox... usually in the spring and early summer.' (19) Although rabid dogs occasionally reach the village, the prompt slaughter of all the village dogs (as occurred in Thak some three or four years previous to our visit) helps to prevent the spreading of the disease, and no deaths from rabies are reported from Thak. A large number of other potential afflictions are also omitted from the list of diseases above, notable among them leprosy and syphilis.

Famine

The second Malthusian check, after plague, is famine. There are no recorded deaths from famine in the Thak records, though it is, of

course, possible that some of the deaths from other listed causes were precipitated by malnutrition after harvest failure. Nor do we know whether famine was a serious cause of mortality among the Gurungs in the nineteenth century. It seems likely, however, that their diversified agriculture, part pastoral, part arable, as well as the abundant forest resources of plants and animals would have sustained them through difficult years. But as the Gurungs become more and more dependent on grain crops the threat of famine increases. If there is hail in July, the maize crop may be destroyed; if it hails in September- October, the rice harvest may be completely lost. The decline in livestock and forest resources makes this more and more of a threat. Such hail, furthermore, frequently occurs; probably one or other harvest is

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seriously damaged every five years or less. Thus in about 1964 the maize crop in Thak was destroyed, and some of the rice also. In 1968 most of the maize was lost, and the rest had to be used for seed for the following year. In 1969 five minutes of hail in the autumn destroyed over a quarter of the rice harvest.

At present, even if both crops are completely destroyed, absolute starvation would-probably not occur. The rich families have considerable reserves of grain from the previous year and other nearby villages usually prove a surplus which may be bought at Pokhara (the hail usually has a very localized distribution, just sweeping up one or two valleys). On the occasion when both maize and some of the rice failed some five years ago, the richer families had no need to buy grain, though the middling to poor had to purchase it from Pokhara at nearly twice the normal price. Some of these less wealthy villagers had to sell off some of their capital possessions, land, gold, cooking vessels, or to borrow from richer villagers. But no one died- of hunger. Some 25 years ago I was told, the rice and maize crops were both completely destroyed. One young man, just born at the time, said that a number of people died of hunger, but there is no evidence of this in the replies to the census and another older man stated that there were no deaths, for grain was obtainable from other villages. At present, it seems unlikely that this check to population growth will operate for a few years, but it is quite possible that it will begin to take effect, in combination with epidemic disease, well before the end of the century.

We have already seen how the third of Malthus' natural checks, warfare, has at present ceased to play any real part in controlling population. It seems unlikely that the Gurungs will ever again be involved in a largely conventional war. Even if they were, and casualties were 'on the same scale as previous World Wars, deaths would not curb population growth effectively though it would temporarily limit fertility.

Major impressions

Although, as repeatedly pointed out, the statistics on cause of death are extremely flimsy, it seems likely that the two main impressions from this discussion are correct. The first is that water-borne faecal diseases dysentery, gastro-enteritis, typhoid and tuberculosis are the two major causes of death in Thak. The second is that both causes are likely to decline rapidly in the next few years, and indeed have already started to do so. In the case of water-borne diseases, the installation of a water-pipe

some twelve years ago has lowered mortality quite considerably. There are plans to extend and improve such piped water facilities, and similar piped water is being made available in other villages. Furthermore, it now seems likely that the government and/or private, bodies will continue even more serious BCG campaigns in this area in the near future. This will have an effect similar to that of the malaria campaign in the Terai. A combination of these two public health measures will mean that the crude death rate could be cut by half among the Gurungs between 1960 and 1975.

Sickness in the village

We may now turn to the more prosaic afflictions which are a constant background to daily life, and to the various ways in which Gurungs try to combat disease. Apart from the humanitarian problem, of preventing needless suffering, this background of sickness and pain is important in a number of ways. At the economic level, it is often argued, especially by development planners who are trying to explain the failure of attempts to increase agricultural output, that sickness and malnutrition so weakens - people that they are unable to carry out their tasks properly. It is also often argued that a background of frequent physical pain and death will have very deep effects on attitudes in a society. It will strongly influence individual psychological development and, at a more general level, lead to a fatalistic attitude, to beliefs in witchcraft and evil spirits, and to a preoccupation with warding off evil.

The following account of the main types of illness can only be impressionistic. It is based on two main sources. The first is records of those visiting Pokhara ("Shining") Hospital from Thak panchayat. Approximately 40 women visited the hospital between 1961-9, and 68 men in the years 1965-9. In most cases a brief diagnosis was made. Secondly, during January 1970, Dr. Gerald Turner of the same hospital visited Thak and undertook a brief examination of some 64 villagers: 13 were children aged 1-9, 42 were adults aged 10-49; 9 were aged over 50. No blood or other complicated tests were taken, just a brief examination of throat, eyes, heartbeat etc. was made. We also distributed medicines throughout our stay, and hence had a stream of people at our door with various ailments. Those diseases, I such as tuberculosis and dysentery, already discussed

in the previous chapter will be omitted here.

The only blood disease for which evidence was found was anaemia. This condition was discovered in a third of those examined in the village. Half of those suffering had only slight anaemia, the other half had serious anaemia (50% or more). It is well known that there are as many possible causes of this condition as there are types of anaemia. It may, for instance, be a vitamin deficiency, lack of iron, or heavy infestation by worms, which causes the trouble. Perhaps the most interesting feature of the distribution of cases in Thak is that there is no correlation with socio-economic level. The wealthier and slightly better fed were no less anaemic. In fact, if anything, the situation was the reverse of this, if we can judge from only 21 cases. If we limit ourselves, to those aged less than 20, who were

principally affected by anaemia, it appears that of 16 *carjat* Gurungs examined, some 50 % suffered; of 15 *sorajat* Gurungs, only 35 % suffered, and of five Blacksmiths only 20% (i.e. one case) was found to be anaemic. (20) Indeed, only one out of the total of nine Blacksmiths examined showed signs of anaemia, although their diet was far less satisfactory as regards protein and green vegetables than that of the Gurungs. It is also worth observing that in a couple of cases-where boys were boarded at Pokhara there were signs of considerable anaemia, which suggests that village diet is still much better than that in the bazaar town.

If we turn to the more directly nutritional ailments, there is clearly a considerable amount of vitamin deficiency in the village. Some of it is obviously seasonal, and this helps to explain why only two cases of Vitamin B deficiency, both women of the *carjat*, were encountered in the village medical survey. A further seven people, four men and three women, went to hospital with symptoms which were diagnosed as vitamin B deficiency. The characteristic symptoms were a burning sensation all over, giddiness, and irritation in the eyes. No evidence of protein or calorie deficiency were noted in the hospital records or village surveys, and it seems likely that Thak fits in with the patterns of higher altitude Nepalese villages where a good balance of meat, milk, and other proteins has been observed. (21)

There are practically no facilities for dental treatment in Nepal. The 'Shining' hospital in Pokhara now performs extractions, and this is, in fact, its major service for villagers from Thak. Some fifteen people, nine men and six women, complained of

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toothache when they went to the hospital clinic; some of them had pyorrhoea and one had osteomyelitis. In the village survey, six people were found to have pyorrhoea or other teeth disorders, including an erupting wisdom tooth. Only one of these was a Blacksmith; often the Blacksmiths and Tailors had good teeth. A number of Gurungs cleaned their teeth with ashes from the fire each day, and a few (from the army) even had toothbrushes. We had a considerable number of requests for help when teeth ached. Normally the villagers have to bear such pain without much chance of relief. It is believed that the pain is often caused by a small worm growing at the roots of the teeth (*sa pulung*: Gurung, 'tooth worm'). A general survey of Nepal shows a very low rate of carious teeth, but cites work on Bhotia villages which describes "virtually universal presence of periodontal disease in persons over age 50." (22)

Of the 'Ear, Nose and Throat' ailments little was noticed. One boy had been to hospital with earache, another with a polyp in his nostril. One woman had enlarged tonsils according to the village census and another a sore in her nose. Finally one had waxed-up ears. Coughs and sore throats, often symptoms of other ailments, were common. No cases of post febrile deafness, of which 14 cases were found in the Survey of Central Nepal, were discovered. (103) The only deaf people were two women, a Tailor and a Gurung, both of them deaf and dumb from birth, and two others, a Gurung woman of 66 who had grown deaf during the last few years and a young Tailor of 24. A few old people were a little deaf, but certainly no more so than their equivalents in the West.

'Eye diseases' were the ninth most common complaint in the survey of Central Nepal, with 33/866 cases and another 18 cases of cataracts, and high rates are reported for Nepal generally (14-18 % of those aged over 50 were blind). (24) Three cases of people from Thak going to hospital with sore eyes were found; these were probably cases of severe conjunctivitis. This malady was extremely common in the village and there was a constant stream of people with red and almost totally gummied-up eyes. The habit of cleaning the eyes with the corner of the nearest piece of cloth was understandable, but probably helped to spread infection. Such infection often ran in families, and was especially common among children and old people. There were no totally blind people in the census area, although two old people, both over 60, had cataracts and were almost blind. Three others, all aged over 60 and all

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female, also had growing cataracts - two of them in both eyes. Unless these were removed at the hospital, the sufferers would be blind in a few years.

The major endocrine ailment in the village was goitre. This has long been known to be a serious ailment in Nepal, though recent research has suggested that the correlation of goitre areas with those areas using Tibetan salt (which is deficient in iodine) is not perfect. (25) Class III goitres (those 'visible at some distance') are not common in Thak. Only one really pronounced goitre was discovered in the census area, and one or two class II 'visible') goitres were also seen. Only four people went to the hospital complaining of an enlarged goitre, all men. Dr. Turner's systematic search of villagers discovered that approximately one in three of those examined had a class I goitre ('palpable but not visible'). Three-quarters of the sufferers were female and there was a higher proportion than one might expect among lower caste villagers. The lack of iodine undoubtedly varied even between nearby villages. A village on the other side of the river to Thak (Klamro) was notorious for bad goitres. It is also possible that when Tibet was closed at the beginning of the 1960s, and salt was then obtained from India, the situation improved. But in the past, as we have seen, only one death was ascribed to a goitre.

It is impossible to be sure about how common genito-urinary disease is, though we can be fairly sure that it does not, among the Gurungs, assume epidemic proportions. Nevertheless it has been suggested that symptoms which may be related to gonorrhoea were discovered in 6-13 % of all males aged over 10 years in western mountain villages. This was a higher rate than in other parts of Nepal, and it is possible that syphilis (possibly about 1% rate) is also more frequent in the hills area. (26) The survey of Central Nepal found that gonorrhoea (43/ 866 cases) was the fourth most common complaint and syphilis (14/866) the nineteenth. The author concluded that "the infection rate is now high throughout the hill country. " On the other hand, in the Terai, only 3/1834 cases were diagnosed gonorrhoea at Biratnagar hospital. (27)

Only one case of genito-urinary illness was noted in the village Survey: this was a young man with mild urine infection. One possible case of spermathorea in a young man of twenty was the only case taken to hospital. I have no evidence on impotence or sterility except what may be gained indirectly from the census.

No one was noted as having gone to 'the hospital asking for treatment for sterility, and we only had one enquiry about this from a man who already had a five-year-old daughter and had been trying unsuccessfully to have another child for some two years. Childlessness rates usually vary in the range of 3-8% of all women, (28) but it is impossible to be sure of the rate for the Gurungs. It is believed that childlessness is always the fault of the woman and constitutes a reason for divorce, yet there were no women in Thak who had been rejected from their marriages in other villages on account of supposed sterility. There were, however, three women living in the village who had had no children, although their husbands had had children by other women. Thus of over one hundred married women in the Census, only three appear to be sterile, a rate of less than 3%. The male rate appears even lower. Only one case of a living man unable to propagate children (he had tried three wives) was discovered.

Without a detailed examination it is impossible to be sure whether Pignede was right in thinking that venereal disease is, in fact, uncommon among the Gurungs, his evidence being that it is infrequently encountered in medical inspections of Gurung troops. Yet we found no evidence to contradict his view: only one possible case of venereal disease was taken to hospital and nothing was noted in the medical survey. It seems likely that we would have been asked for treatment if these diseases had been widespread.

If we had detailed and accurate information on other gynaecological and obstetrical matters, particularly miscarriage and stillbirth rates, we would be able to deduce more about the presence of venereal disease. The little we do know does not run counter to the argument that such disease is not widespread in Thak. The census questionnaire asked explicitly "How many conceptions (including children born dead) have you experienced?" and also, as a cross-check, "How many of the above conceptions ended in the birth of a live child?" In Gurung, a child is *pasi*, and to lose a child through a spontaneous abortion is *pasi waba* (which is the same wording as for a procured abortion; *waba*, to throw away, reject). Despite the attempt to get information, however, it is certain that the census is not complete. Only two Gurung women admitted to miscarriages, at five and two months, an impossibly low rate. Cross-checking with other informants showed cases of omission.

Judging from other societies, it is unlikely that Gurung rates will be below 3% of all conceptions. The rate among the lower castes was much higher; 4 miscarriages and a stillbirth out of a total of 81 conceptions - a rate of approximately 6%. It is impossible to be sure, but it seems likely that this does reflect a difference in incidence, rather than merely in attitude or memory.

As regards other feminine ailments connected with the procreative cycle, the Gurungs do not seem to be especial sufferers. We have already noted that complications at childbirth are rare. Most women seem to find it easy to breast-feed their children although one woman during our stay in the village went to hospital because her breasts were sore. Menstrual troubles occur occasionally; two women complained at the hospital of delayed periods, though it is possible

that one of them may have been pregnant. Three women came to us asking for medicine to help with menstruation. In one case it was a girl of twenty, unmarried and at college, who had great pain at her periods. In this case the menstrual bleeding was termed '*mahina waba*' (*mahina*, Nep. = month, *waba*, Gg, = throw away) though normally it was termed *korve taba* (*korve? taba* (Gg) to have or be). In another case a woman in her mid-thirties, who already had five children, complained of extensive bleeding at her periods, leading to weakness. weakness. Finally, a Tailor woman, aged 27 and already the mother of seven, suffered very heavy and dangerous menstrual bleeding. The Gurungs take very little notice of changes in the female sexual cycle, laying no special emphasis on. puberty, menstruation, or the menopause. There is, contrary to many societies, no centring of ritual and pollution beliefs on these events. Possibly connected to this is the fact that women do not seem to suffer too much from ailments related to the sexual cycle, they are relaxed and casual about these changes.

Mortality statistics, however, do show that female mortality used to be high just after the menopause. (30) There is no Gurung word for the menopause and we saw little indication of problems at this stage except in one case, that of a woman of 45 who had returned from Malaya two years previously. She bled for over a week at each period and became very weak. She visited the local hospital. Another woman of 45, noted in the hospital records, was described as having stomach ache, back ache, fever and abdomen pains; these may well have been menopausal symptoms.

There are many other debilitating and painful illnesses which

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afflict the villagers. The rapid change of temperature during the early few weeks of snow and ice, and frequent soakings in monsoon rain may indirectly help to explain the frequent chills and fevers from which they suffer. Tramping about in the mud for days on end during rice planting leads to swollen and cracked feet. Fungus infections, on the other hand, do not seem to be particularly common. No cases were taken to hospital from Thak, and only one case was noted in the village survey. Intestinal parasitic infections were probably very common, but it was not possible to carry out a systematic survey for worm infestation. (31) A number of villagers came for medicine for roundworm and threadworm, and there may have been hookworm and tapeworm also, though no symptoms of these were discovered. Such intestinal infections were not often thought serious enough to take to hospital. Thus the medical survey of Central Nepal only noted eight cases and the general medical survey of Nepal did not think that hookworm was a particularly serious complaint at present. (32) Nevertheless, a good deal of discomfort and loss of protein could be avoided by dispensing the cheap and simple drugs which can deal with threadworm and roundworm.

Musculo-skeletal complaints are fairly frequent in Nepal: arthritis, for instance, was the eleventh most common complaint brought to the clinic operated during the survey of Central Nepal. One arthritic patient and two others with possible rheumatic aches and pains went from Thak to the hospital, but it is likely that the majority of sufferers did not seek a remedy, In the village survey, almost one in ten of those aged ten and over had rheumatism or arthritis, mostly in the fingers and knees. The afflicted were aged from 24 years upwards, which shows that these are not just afflictions of the old. Two other people were also suffering from

pain in the knees and backache. None of the above were lower caste, except for one boy with pain in the knees. Without special examination it is impossible to be sure, but as yet there is no evidence that the carrying of immensely heavy loads (up to 100 lb.) over extremely rough country has any damaging effects on the villager's musculo skeletal structure. During our stay we had very few cases of sprains, and none of broken bones. We noticed no cases of malformation of limbs due to earlier badly set fractures.

Only a very detailed survey would indicate the amount of disease in the nervous systems of villagers. Eight such cases were

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encountered by the survey of Central Nepal, and two people from Thak went to the hospital with such symptoms. One suffered from convulsive attacks, which may have been epileptic, the other from sciatica. Both were young men. In the village itself serious cases were rare: one boy of fifteen suffered from cerebral palsy and was a spastic, and we have noted that deaths from meningitis were not unknown. But otherwise, convulsive seizures, jerking movements, Parkinson's disease, and the many other varieties of nervous disease were not noticed. One curious exception, which will be discussed at greater length when we deal with religion, was the fact that certain young girls in the village were sent into a 'possessed' state by certain drum rhythms. In one case a girl became very violent in this state, and it was believed that she would have died if a special drummer from a nearby village had not been sent for. This is not, in fact, a state merely confined to girls. At the frequent village dances members of the audience, including men of all ages, start shaking and have to be held down by their friends. Certain men and women are known to be subject to these attacks. This slight hint that below the apparently placid and contented surface of village life there is considerable disturbance is supported by the enormous demand for aspirins during our stay. People were constantly complaining of headaches and depression. Most of the poju's rites are designed to deal with situations of anxiety and uncertainty. My best informant, a young and extremely intelligent but somewhat frustrated man, was especially prone to headaches and went several times to the hospital to procure medicine. There was only one person with a noticeable stutter in the village. Otherwise neuropsychiatric disorders seemed rare. Villagers did not appear anxious and though they drank a considerable amount of the local millet beer, addiction was not obvious.

In the previous section on mortality we have already dealt with physical ailments (wounds, burns, bites etc.) and with the major respiratory diseases (bronchitis, pneumonia etc.). Skin diseases are also extremely common in the village, especially scabies. Perhaps because they only lead to pain and irritation rather than permanent damage, such ailments are not listed in the survey of Central Nepal, yet they are one of the major causes of obvious suffering in village life. The major types of skin disease are scabies and septic sores. The latter often turn into crusted eruptions when scratched and are particularly bad among children and during the monsoon season when leech bite so often turn septic. The houses are

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infested with fleas and other insects which also bite and cause sores. Apart from toothache, such skin troubles were the major cause for which people went from Thak to Pokhara hospital, which indicates how much suffering they cause. Nine men and three women complained of various sores according to the hospital records. Likewise they were a major complaint in the village survey. One-sixth of those examined had obvious sores, varying from mild impetigo on the lip to septic sores all over the body. Gurungs and service castes were equally affected. Half of the cases could very simply be dealt with by the application of the extremely cheap remedy, gentian violet.

No cases of bladder stone were discovered in any of the records, survey etc., and it is said to be a complaint which is not especially prevalent in Nepal. (34)

The general situation of minor illness

An idea of the general physical condition of a group of adults in the village will show the general state of minor illness within which people live out their lives. They were examined by chance, not because they complained of illness.

Female, age 35, Gurung : Coughing, eyes burning, stomach pain, bronchitis, anaemic, small goitre

Female, age 40, Gurung : Coughing, mild bronchitis, no anaemia, rash /sore on side of face.

Female, age 44, Gurung : Lower ribs very sore

Female, age 82, Gurung : Cracks on sides of mouth (vit. B. def.), early cataracts in both eyes, septic sores, pyorrhoea.

Male, age 35, Gurung : Had TB operation seven years ago, occasional pains in chest .now, a cold.

Female, age 43, Blacksmith : Breathless,- difficulty in walking, chronic cough,-sputum coloured, pains all over.

Female, age 13, Blacksmith : Bad diarrhoea after eating.

Male, age 19, Blacksmith : Blood and physique good-, no goitre or dysentery. Occasional pain in legs since a child.

Male, age 7, Blacksmith : Septic sores all over body (scabies).

Female, age 16, Blacksmith: 50% anaemia, dandruff. small goitre, occasional diarrhoea and abdominal pains, pain in knee.

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These ten cases indicate that when they had time to think about such things villagers almost always have some minor complaints. During the few months of intense agricultural work, however, they were able to work as normal and seemed to forget about their complaints. It is not surprising that when they go to hospital they take the opportunity to complain of more than one ailment.

Without a much more intensive study over a number of months by an experienced doctor, it is impossible to go any further in analysing the incidence of disease. As far as seasonal variations are concerned, the above analysis of mortality patterns, which showed that the six monsoon months were far more dangerous as regards health than the six cold weather months, is probably a fair indication of disease in general. If we are to single out any particular features, it is that the hot months just before the monsoon are particularly dangerous for old people, while the three months from mid-April to mid-July are particularly dangerous for infants. Thus, while we found that people spent more time complaining of, and talking about, illness during the slack agricultural period of the 'cold' weather, the statistics show that they were most subject to dangerous illness in the hot weather and monsoons.

It has been suggested above that there are a few signs that there is a different incidence of disease between Gurungs, and lower castes: thus goitre seems more common among Blacksmiths, while anaemia seems to get more common the higher up the socio-economic pyramid one looks. The general impression, however, is that, in the absence of great differentiation in diet, housing, and the access to medical treatment, the health expectations and horizons of pain of all villagers are fairly similar. The one exception, already noted, is the effect of the introduction of the water pipe, which is used predominantly by Gurungs. This lack of differentiation is an important index of the lack of real 'classes'. The Gurung village in which we stayed was an extremely homogeneous unit. Everyone in the society would suffer from some minor ailments almost all the time.

TREATMENT OF DISEASE

When a villager finds himself or his child ill he may choose between a wide range of possible remedies, or he may choose to do nothing. The principles of selection will be discussed below, for we must first classify the types of treatment available. Although

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the distinction is not a clear-cut one as far as villagers are concerned, we may make a broad division between the use of 'medicines' which are rubbed on, injected, or swallowed, and which are thought to work through their own virtue, and 'ritual action', particularly sacrifice, which works through the power it generates in the supernatural field. Within the first category come western medical treatment and local herbal remedies, in the second are rituals performed either by the private individual or by special experts.

Rough estimates of the yearly recourse to different methods of treatment are as follows.

Table 8. TYPES OF MEDICAL TREATMENT USED BY THAK 100 HOUSEHOLDS.

<u>Medicines</u>	<u>Approx. nos. occasions</u>
Pokhara (mission) hospital	10-15
Pokhara (government) hospital	?0-5
Village shop	?5-15
Bazaar doctors/ drugstores	?10-80
Local herbal	?50-200

(Our dispensary)	400-600
<i>Ritual</i>	
Poju (jhankri)	200-300
Private rituals	?100-150
Mantra (spells)	?50+
Dhami (possession)	?5-15

n.b. under 'ritual' only those rituals performed after a person became in have been included; if the very many sacrifices, charms hung round the neck etc. to ward off future evil were included, the number would probably be doubled. '?' denotes an estimate based on guesswork.

Although much of the above table is based on somewhat flimsy guesswork, the general outlines seem sure enough. While a person from approximately one in ten of the village families might go to the local hospital, each family in the village would employ the local *poju* two or three times a year and do a private healing ritual at least once a year. It is very difficult to estimate to what extent the villagers used the many patent medicine stores and bazaar doctors in Pokhara. In all the seven household inventories where informants were asked whether they had spent money on medicine, the reply was 'yes'. Five of these seven had

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definitely bought this medicine in the bazaar. A number of people whose houses we visited on medical business brought out bottles and jars of patent medicine.

Western-style medical treatment

Western-type medical facilities were practically non-existent in central Nepal in 1950 when the medical survey of central Nepal was carried out. There was a small dispensary at Pokhara run by a 'compounder' of two years training. That was all. This dispensary only received a qualified doctor in 1960. Meanwhile the 'shining' or Mission hospital commenced work in 1953, the 'Soldiers Board' hospital in 1958, and a mission-run Leprosarium in 1957. Yet the expenditure on medicine per head of the population, and the doctor-patient ratio in Nepal are still among the very lowest in the world. It has been informally calculated that in 1968 the expenditure on medicine was about 10 pence per person p.a. whereas in the United Kingdom it was some £18 per person. To cure one case of TB costs at least Rs 172 over a two-year period - without food. This would absorb the medical allowance of 86 persons for two years. In Thak, for example, the situation was as follows. One of the small shops sold a little ointment (penicillin), otherwise ex-Gurkhas could walk for four hours to the north to the army-financed dispensary (for British pensioners only) at Siklis, or south to Pokhara, about the same distance over very rough country. There was also one man in the village, an ex-medical orderly who, on his own initiative, occasionally gave penicillin injections (for almost any ailment).

There were a few villages, perhaps one in each major valley, with a small dispensary. One example was Mohoriya, where an Indian-army sponsored medical post had been set up in 1959.

Later it was taken over by the Nepalese government. It has drugs for minor complaints, like headache, coughs, stomach upsets, eye infections worms and cuts and bruises. Unfortunately I was unable to discover how much medicine was actually distributed, for the doctor in charge was away in Pokhara during our week in the village. He was said to spend much time away from the village. He was also said to receive Rs 300 per month, twice the sum paid to the headmaster of the Thak primary school, and his assistant Rs 75. If this is true, some Rs 4,500 were paid annually in wages, whereas only some six or seven hundred rupees of medicine was freely provided. This was not enough to cater for local needs and forced the doctor, we were told, to charge large sums for injections, tooth extractions, etc. The fact that the

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doctor was a very young man of about 22 and not a Gurung (but a Tibetan, a people somewhat despised by Gurungs) did not ease matters. Judging from the cases we encountered in the village, the dispensary seemed to have had little impact on health. Many of the same type of criticism could be made of other health clinics in the country at that time, for example the government clinic at Sikha, where most of the money went on salaries and expensive training, little on medicine. There seems little doubt that, if the aim is to provide the cheapest and most effective medicine, one of the villagers, perhaps with a week's training at the local hospital, would be happy to give out medicine for Rs 50 per month. As we found during our temporary dispensary running activities at Thak, such work is not a full-time business and does not require any great expertise. The medical needs of a group of villages can be dealt with in an hour a day. A short course on giving injections, diagnosis, and bandaging plus Rs 100 of medicine and Rs 50 fee per month would provide as good if not better service as that in Mohoriya for one third of the price. (35)

In Pignede's time people seldom went to hospital at Pokhara mainly because of the distance and expense (both of medicine and accommodation). Considerably more use is made of Pokhara facilities by the Gurungs living in the Siklis valley, for Pokhara is nearer and is their natural market centre. They can combine a visit to fetch cigarettes, sugar and other commodities, with a visit to the hospitals. The Soldier's Board hospital to the south, run by the government, always seemed deserted when we visited it, except for the medical staff. I was not able to find out how often Gurungs attended it, but there is no doubt that those from Thak preferred the Mission hospital. This hospital not only prescribes drugs, performs major surgery, and delivers babies, but it also provides in-patient facilities. Medicines were not free and their price was added to by the customs duties which have recently been charged on medicines brought into Nepal. Yet the prices are much lower than those in the bazaar. The hospital is short of many pieces of equipment, for example the X-ray machine which would make it easier to diagnose TB. Its services, among the best outside Kathmandu, are being improved by rebuilding and by extension of the leprosarium to which it is allied. We heard none of the usual criticisms of western-type hospitals, that they are places where people always die, that the doctors and nurses are witches who eat the souls of patients, that such institutions are impersonal and

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frightening. The only criticism we heard in the village was from one young Gurung whose wife went to the Mission hospital with painful breasts. He said that the hospital gave out poor medicine so that the patients would take longer to recover and hence have to spend more. After some argument he admitted that the doctors were not to blame, but thought that it was the orderlies. As with their own medicine and ritual, if the hospital failed to cure a person no blame was attached to it and no anger felt.

We have already mentioned the various public health campaigns; malaria eradication, smallpox vaccinations etc. The latter, though it caused considerable blistering and bad temper among infants, did not appear to arouse fear or opposition from villagers. Those who were given due notice tended to be vaccinated, probably out of a mixture of desire to comply with government orders and the vague feeling that it might be beneficial. The only other 'western' medical technology available albeit somewhat diluted, is located in the bazaar medicine shops. The contents varied from very powerful modern western drugs to bottles of local herbal potion. How often villagers attended such shops and how effective their medicine was would make an interesting study, but such a survey could not be undertaken during our visit.

Local herbal remedies

When Pignede was in Mohoriya in 1958, he observed that Gurung pharmacology was 'flourishing' and that local herbal remedies dominated the medical field. He described such remedies for headache, fever, stomach-ache, dysentery, dizziness, cuts and burns, coughs, lung troubles, skin and eye troubles. It is probable that in Thak, likewise, such herbal remedies were once extensively used; but the availability of supposedly more powerful medicines in Pokhara and, possibly, the transition from the high pastures where herbs, were more abundant, has, meant that when we visited the village only a few very simple remedies were left. We were told that in the past shepherds and hunters used to bring many plants through the villages and these were bought by Gurungs. Now people no longer want them, or know how to prepare them for use, and so they are taken south to be sold in the Terai or India. Some plants from the high forests many hours from the village are still occasionally fetched 'by the villagers: for headaches and sore joints there is a root called potamsala which is smeared on the face and eaten. For fevers

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another root called *teedo*, is beaten and strained before eating. For blisters and skin infection *nermo-shi* (*shi*, Gg., = wood) is used. The local forest, to which villagers go daily in certain seasons, is believed to contain very little of medical value. For sick eyes one may apply the juice of *tsodru* fruit, and we saw a girl chewing a rhododendron flower which she said was good for her throat. Another, orange beery called *bia*, was also said to be good for headache if crushed and rubbed on. Otherwise, use is made of plants and objects from house and garden. For broken bones a plant called *had jorne* (Nep. Literally bone joining) is applied with a splint tied round it. For headaches there was *sadwa*, also grown in the garden, and the burnt-out mantels (wick) of pressure lamps were also said to be good for headaches. Ashes from the fire, mixed with water, was widely held to be useful for a sore stomach, and we were told that a little millet beer was a good cure for dysentery. Millet paste was often

rubbed on burns, and *bissaro* (saffron), obtainable at Pokhara, was put on cuts. Juice from a very ripe cucumber (*lokhai*) was said to be good for coughs; and a vegetable called *olbi* was eaten to cure stomach pains. The above list hardly suggests a detailed and systematic pharmacopoeia. The confused state of affairs, in which each person has his own private remedy, is illustrated by questions I asked as to what were the supposed cures for dysentery. Five of the twelve informants to whom I put this question suggested something called *kauou*, though some described it as a plant, some as a small animal like a frog. One suggested a vegetable called *lowtah* (*tah*, Gg. = vegetable) pulped and drunk, another recommended sour buffalo milk and rice. Two suggested pulp made from the *belkuti* (?) fruit, and another two thought that millet beer, chicken meat and spices would help. The same twelve respondents, asked what the remedy for TB (*dumgi*) was, suggested in five cases that juice from a thorn tree (*donshee*) might help, if drunk; the other seven said they knew of no cure.

Though it is possible that we missed a good deal of this informal healing activity, there was little evidence of the use of herbal 'medicines', not of much faith in this type of cure. It is likely that if a person was ill he tried some near-at-hand remedy first of all, for instance millet beer or ash water. Certainly in the case of a bad burn or cut he would rub on some saffron or millet porridge. Yet there seems to be little system about this; there is nothing like the subtle symbolic association between disease and

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cure which we find, for instance, in an African tribe. (38) The Gurungs appear to know little about the medicinal properties of the plants around them and to show little interest in the subject. This is clearly related to their lack of interest in the analysis of how diseases actually operate.

Bleeding

One other method of healing may be mentioned here. This is similar to the 'bleeding' and 'cupping' practised until recently in Europe. The technique is employed in cases of specific sprains, or pains in joints or in the back. Such pains are believed to be the result of, or associated with "bad blood", and such blood should be drained off. It is a technique which many people are supposed to be able to use, though shortage of equipment probably means that most operations are performed by the family of the *poju*. In a particular case I witnessed, an old man had a sore back, due, he thought, to carrying heavy loads. A few small scratches were made with a little knife (= *chura*, Nep'. razor) and a little cup-like object was placed over the spot. This *nara* or cup was made partly of wood, partly of some malleable substance which made it possible for the operator to suck out the air and thereby create a vacuum. After some twenty minutes the suction cup was removed and a largish clot of blood was thus removed. The whole technique was called *nara toba* (Gg.); it was done without any special ritual.

Shamanic healing

We may now turn to ritual techniques to deal with disease. A full treatment of Gurung religious and magical beliefs and practises will have to await a later date. Here we will give only a brief sketch of the very complex situation that exists. When a

person decides, or is told, that an illness is caused by some mystical force, there are two major courses of action, open to him. If the source of the trouble is believed to be one of the village godlings, then the sick person or his, family may make a small offering to the offended deity. This is additional to the annual sacrifice made by most families in order to keep, themselves free from the wrath of such godlings. These village gods are not aroused by moral offences, but by neglect on the part of their worshippers. If they are not given proper ritual treatment at the, right time, or their small shrines (*than*, Nep-) are, damaged, they may cause sickness.. The three main deities to whom Thak villagers appealed were *Bogmoti Debi*, *Buje Deorali* (*buje* = grandmother/ old woman), and *Bhaiar*. The former two_ being female, are offered female chickens, the latter is offered a cock. Sometimes the *nak* (Nep; Gg, = *lhu*) or- snake god who lives

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near each house has been offended and needs a propitiatory sacrifice. The main feature of the ritual is the offering of some blood and, often, the smoke from burning oil, to the offended spirit. This is termed *bwok peebe* (Gg?, 'share giving') and makes the spirit happy, so that he or she withdraws the illness. Usually the rite is performed by the head of the household, though the actual killing of an animal is always done by a male. If a person recovers after such a reestablishment of relations with the godling, then this supports the original diagnosis. If he continues ill, then the diagnosis must have been wrong and the sufferer turns to other possible supernatural agents. How often sacrifices were made to godlings I cannot say, but probably in any one- year at least half the households in the village would make at least one such sacrifice.

The Gurungs believe that each person is inhabited by a number of 'souls' (Gg. *plah*); nine for men and seven for women. By far the most common cause of serious illness, particularly of long-term illness, is thought to be because one or more of these 'souls' have wandered off, or been captured by evil spirits or witches (a witch=*bokshi* [Nep.), or *pum/pumshaw* (Gg. male/female)). Another frequent cause of illness, not involving loss of *plah*, is a direct attack by some malignant force. In all such cases the ritual healing treatment is performed by a specialist; Lama, Brahman, dhami, or as in 90% of the cases in--Thak, the *poju*. In some Gurung villages, especially where there is a resident Lama and no *poju*, the situation is not as monopolistic as in Thak. But since we only witnessed the system in Thak in any detail, it will be the work of the *poju* that is described here. The variation from village to village may be seen by comparing the villages of Mohoriya and Thak. Pignede described how the lower castes in Mohoriya did not employ lamas, *poju*, and *klevri*, the Gurung 'ritual experts. (41) I confirmed this during my visit to Mohoriya, though *pojus* did say powerful mantras (spells) for the service castes. But in Thak the *poju* frequently performs- rites in lower caste houses in exactly the same manner as in Gurung ones. It does seem, however, that lower I caste households in Thak also employ dhami, or people who become possessed -with a spirit when a drum is beaten. In the one description of such a session that I was able to obtain, two people became possessed and acted like an animal. They sniffed round those present to determine who the witch was. Other parts of the rite, for instance the making of small images,

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appear to have been very similar to those of the Gurung *poju*.

The *poju* can employ a wide range of diagnostic techniques when he is consulted about an illness. He will judge partly from the nature of the illness. Blindness, sleeplessness, a temperature, all are signs that evil spirits termed *bhuts* and *prets* have been at work. If one talks to oneself, keeps alternating between sickness and health, then an ancestor is probably responsible. Scabs are usually caused by godlings (*deowta*), while cuts that do not heal are the work of witches. But since the same symptom may be caused by totally different agents, for example defective vision, temperature and loss of consciousness may be caused by godlings or evil *masan*, it is necessary to go beyond a naïve reliance on symptoms. Almost always the *poju* feels the pulse of the sick individual. By flexing the various fingers and seeing how they affect the pulse, he can sometimes tell which type of supernatural power is responsible for the illness, or whether it is merely a "natural" disease. In some cases this is supplemented by reading the hand, or in Thak the finger joints, of the patient. This examination of what are known as the *parga* helps to decide whether a person is in an inauspicious year, or whether his nativity clashes with that of any other members of the family, a situation which could well lead to the illness. Another method of divination is to draw a diagram with three wavy lines. The number of squiggles is random, and from counting them in a certain way a set of numbers emerges from which the *poju* may calculate the cause of illness. This is one of the many varieties of the *mut* (*mut* Nep. ? =opinion or vote) *moba* technique. Another is to draw a diagram with twelve divisions and then to get the patient to place a grain of rice in one of these. Depending on which he chooses, the *poju* can diagnose his illness. The actual calculations and variety of divination systems are almost endless and allow for enormous flexibility.

To judge from the actual rituals performed, we may classify the types of cause of disease as follows. Firstly there is a category of 'natural' causation, for example when a person eats dirty or decaying food and then has a stomach ache. This is not within the province of the *poju* and he may recommend people to go to the local hospital for treatment. Secondly there are *deowta* or godlings, peeved at being neglected. Thirdly there are the spirits of ancestors, *bhaio* (Nep. = *bayu*, wind or spirit of the dead). Fourthly there are witches, male and female. Fifthly there are the

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snake gods, *nak* (or *lhu*) and, possibly, the godlings that dwell in houses (*lha*). Sixthly, there are various types of evil spirit - *bhut*, *pret*, *moh*, *masan* each of which has its special characteristics. Seventhly, there are forest and field spirits, the former being the more powerful, small human-shaped creatures called *banketa*. Finally, there are the forces, related to the year and date- of birth and the present *parga* of the patient and his household.

Each of the above entails a specific set of rituals which may be used to counter its power. Thus symptoms are not classified by the part of the body they affect, or their intensity, but by the type of agent supposed to have caused them. I collected detailed information concerning 43 rituals, most of them to ward off sickness, and all used by the *poju*. Many of them last over an hour and are complex symbolic performances, probably dating back to the old bon-religion of pre-Buddhist Tibet. The central principle of many of them is to

attract down the evil spirit, or wandering soul of the sick person, feed it with blood and other foodstuffs. and thus, to make it happy or drive it out. Often the rite is extremely dramatic and enacts the expulsion of evil and suffering. The rites are also graduated. If a simpler and less expensive one does not work, it may be worth trying a more elaborate one in which, for example, a goat is sacrificed instead of a chicken. One example of such a rite may help to give substance to this brief summary.

A rite which the poju at Thak performed more than half a dozen times during 1968 was the *pih ngeh sheba*. It is performed against all kinds of evil agents. It takes over ten hours and occurs at night, starting at about six in the evening. Throughout the rite the poju recites a series of *pie* or myths which accompany and give power to each ritual action. The rite takes place- within the patient's house, until towards the end when the poju proceeds to a nearby hillock. The poju makes a number of *kedu* (little rice figures) which represent gods, and others of millet representing evil spirits. Pebbles, sand and water are specially brought from the place by the river where bodies are burnt, and four metal loop-shaped tacks and an arrow are also collected together. Likewise a variety of special pieces of wood and a goat (of any size) are brought. The poju starts the ritual in his ordinary clothes, but later dons a special belt and head-piece which are supposed to frighten away evil spirits. He sits on a rain shield (*syakhu*). Having put the *kedu* on a rice mat he sprinkles them with ash, and likewise sprinkles himself, the patient, and a patch of ground across

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the doorway. Then he starts to recite, accompanying himself at intervals on a drum. Meanwhile water has been heating on the fire. The light is then extinguished and, it is believed, the *rih* (evil spirit) enters. The sick person has been partially covered by a carrying basket and the poju then throws spoonfuls of very hot water and handfuls of the cremation dust at him. All the time the poju is reciting and, at intervals, blowing his horn. This goes on for up to an hour and the family and neighbours sit huddled in the dark. Then the sick person is stroked with a coin, which is believed to suck out the evil *graha* (luck/ fortune) and the coin is immersed in a pan of boiling water. The poju next draws a triangle in the earth and puts the patient on his sitting mat in the centre of it. Now millet flour is thrown at the patient through a flame, so that it sparks, and fizzes and he jumps about in mock (and sometimes real) pain. The *kedu* of the evil spirit is circled round the patient's neck nine or seven times (depending on sex) and is then stroked against the patient. Then the ash at the door is examined for footprints; if those of a chicken, centipede, human, buffalo or other animal appear it indicates what evil spirit was involved (the door is kept closed during the proceedings). And so the ritual goes on. We have only reached half way but a full description and analysis must await another publication. Later a goat is sacrificed, the poju rushes into the house with the head of the goat in his teeth, a lighted arrow is shot off into the darkness. Each act is a symbol and many of the minor actions have been left out of this account. Clearly the audience do not have much idea about what all the actions mean, and do not understand the drone of words that accompanies them all. The main drama of the luring and forceful expulsion of evil is obvious to all, however.

Choice between treatments

Most Gurungs appear to see little conflict between 'medicines' and healing rituals. Throughout their history they have used the two alongside each other. Now that western doctors have replaced those medicines obtained from the high forests, the Gurungs do not find it difficult to continue to use 'medicines' alongside the rituals of the poju. The villager's chief interest is in the comparative efficacy and cost of various remedies: at present it could well be argued that western medicine has advantages as far as efficacy is concerned, but is more expensive and less interesting or socially satisfying than ritual. Numerous examples of the way in which people used the two systems alongside each other occurred during our stay; they paid no attention to the fact that the premises

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were totally different, but merely sought the most effective treatment. The importance of this is that it suggests that western medical technology does not necessarily discredit the older magical practices. The two may blend well. Thus those who had seen western medicine in action in the army were easily absorbed back into the village and immediately sought magical healing. On many occasions people came to us for medicine, for example for coughs, when they had already undergone a small magical rite for the same affliction. If they recovered they might decide that either of the two remedies had been responsible. For instance, the old woman in the house next door to us had a severe skin rash and went off with a whole tube of our skin ointment which she vigorously applied. A few days later we learnt that she had recovered, after the poju had performed a special rite over her! Perhaps the outstanding example was the poju himself. While still daily carrying out magical rites, he was a great admirer of the 'Shining' hospital where he had been cured after being severely burnt. On one occasion all his family had Asian 'flu and he sacrificed a cock in front of the house to drive it away. A few days later we met the whole family just returning from the hospital where they had been for injections.

Yet it would be wrong to paint a completely harmonious picture. There are signs that some of the younger, more intelligent, people are aware of a clash between the two systems. Thus a boy at school in Pokhara said that he would prefer to use western medicine for minor complaints, while other people, he thought, still preferred the poju. The headmaster of the local school, who had been for some time in Kathmandu, was also somewhat keener on western medicine and a little sceptical of the poju. But the fact that his father, who had neither been in the army nor away from the village, nor received any formal education, was more sceptical than any other villager about magical healing, suggests that education and army service are less important than personality and intelligence in causing scepticism. This is also illustrated in the case of the poju's son. He had received little education, unlike a number of young men in the village, and had not been able to get into the army. Yet he was by far the most articulate and sensitive informant on the question of the irreconcilability of the two systems. Probably the fact that he was at this time taking over his father's role as poju made him especially sensitive to the clash. When I asked him whether a general *puja*

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carried out for the benefit of the village sick was good or bad he replied that he had "two thoughts" ([Gg] *ni*, [Nep.] *bicar*). "Science"

- and he used the word which he had heard on the radio -told him that this was a bad custom, but as a Gurung he thought it was good. He then said that as a practising *poju*, when he was doing a sacrifice, he had the same two thoughts. He listened to the radio a good deal, and it seems clear that he had picked up some of the denunciations of 'superstitious healing' from that source.

Although I was unable to find out how much time is devoted on 'Radio Nepal' to denigrating 'old superstitions', it is clearly a belief among some development planners and medical practitioners that alternative, traditional, systems must be swept out of the way. Yet there seems little reason for such attacks. Nepal is so ill equipped medically that there is plenty of work for everyone. Given the present inadequacies, the ritual experts are probably doing as much good, judged in terms of human happiness and hope, as are the doctors. Nor if Thak is representative, do they intentionally obstruct the work of other doctors.

One major difference between the magical and medical practitioners is that western-type doctors really do have access to a superior technique (judged solely by the criteria of physical results). There is still much hocus pocus embedded in 'western' style medicine, and poor medical facilities plus the inability to change the basic causes of disease means that patients often become ill again when they return home. Yet it can be legitimately argued that if a patient is prepared to spend time and money attending a good doctor (if there is one available), he does have a higher chance of recovering from typhoid or TB than if he sacrifices cocks and says spells. Undoubtedly a number of villagers realize this, and hence they are keen to obtain western medicines. There is no doubt that if there was an effective dispensary, run by someone who was trusted, and providing cheap treatment, there would be no shortage of patients. But the present cost of medical treatment is still too high for all but an occasional visit by a middling-rich or affluent villager. I remember no case where a poor Gurung family went to the local hospital, and it is doubtful whether the lower castes from the village will ever go. It is impossible to persuade them that Rs 50 for medical treatment which may save a person from crippling disease, is money well spent. Whereas the *poju* was aware of the wealth of the family

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he was treating and his fees were geared accordingly, western medicine is standardized in cost. Consequently there is a growing double standard of health. One of the major features of a class system is being created - money can buy better health.

A rough indication of the relative cost of hospital treatment as compared to treatment by the *poju* shows the following. In the household inventories which I obtained, three out of seven people said that they had spent between Rs. 5-10 in the previous year on medicine, the other four had spent between Rs 20-24.42 As. A proportion of their total budgets, these sums are very small. But none of the family members- had been seriously ill. For a major illness, requiring a minor operation I or a few days' in hospital, up to Rs 100 would probably be required. When I asked how much it would cost for a lower caste man, obviously dying of some liver or heart disease, to be taken to Pokhara and given medicine, several people

gave this figure. Likewise, when a man had a bad thorn in his hand he went to a nearby clinic and spent some sixteen days away from the village. Each injection cost him Rs 2 1/2 and the actual extraction Rs 7. The whole visit cost about Rs 100 and he had to go again later since the arm was not properly cured. Such cash amounts are beyond the reach of the poorer villagers. Even villagers of middling wealth may have to sell off capital. Thus, when I visited a man whose son was later diagnosed as having TB, I found him wrapping up his wife's golden ear-rings which would have to be sold to pay for the treatment. Probably over half the cost arises from the need to pay for food and lodging near the hospital, rather than the actual medical treatment. Some villagers have relatives with whom they may stay, but many have to hire accommodation, and food is notoriously expensive in town. The fact that the poju is at hand and can treat sick people in their own homes is probably one of his main attractions. A sick person is naturally loath to walk or be carried down a 2,000 foot rocky slope, and then over twelve miles of rough ground, to a place where he will be among strangers.

It seems hardly worth trudging off to Pokhara for small ailments -a cut, sprain, headache, bites, cough, sore chest. Thus, as he walks around the village, the poju is constantly being asked to do small rites, blowing mantras to heal a sore, tying a charm round a fretful baby's neck, blowing down a tube onto a woman's swollen and painful gums. For such small cures he is given 1 rupee, plus either a meal or a bowl of husked rice. For

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the many rites which take a number of hours he will be given a meal, and drink, millet or maize and a little rice worth about Rs 3., a piece of the sacrificial animal worth about the same, and Rs.3-5. Thus a major rite will cost a person about Rs 10- 15. Probably a similar sum will be spent on feeding neighbours, but this is merely an exchange, for the, giver will later be entertained free on a number of similar occasions. Since a person also has to pay for the initial divination, and may well go on to do other rites, it is likely that for -the treatment of a serious illness up to Rs 30 may be spent (in cash and kind). This obviously compares favourably with treatment in Pokhara. When an old man in the second richest

family in the village was very ill, the poju did a big rite for him and several smaller rites. The total cost was about Rs 30. Later he was taken to the Shining Hospital where he and those accompanying him stayed for several days, at a total cost of up to Rs 100. After being discharged from the hospital, he died in the village. Neither treatment had been effective, but the former was cheaper, more dramatic and emotionally satisfying.

In the treatment by the poju, the cause of the disease was located in an evil supernatural power, and this may have given those concerned satisfaction since they now knew why he was ill. Then the bringer of disease was dramatically expelled and destroyed. This dramatization, combined with the near presence of family and kin (who are required in most rituals to be present and to participate, especially in blessing the invalid) would give comfort. Even if the physical aspects of the disease were not dealt with, and it is clear that only psycho-somatic illness could be effectively attacked by such methods, the ritual would help dispel the depression and anxiety which accompanies illness. At least other people could be seen to care, and something active was being done. The poju himself was an

enthusiastic and dedicated practitioner and had an extremely gentle and reassuring 'bedside manner'. During our departure from the village, when we were both in a highly wrought-up state, he performed a small ritual over us, blowing, blessing and putting a small jantra or charm round our necks. His manner was so calm and reassuring that we were immediately soothed and refreshed: it was easy to see his likely effect on sick and worried people.

Naturally enough, in many cases both western and ritual healing methods fail to cure a person. Such failures do not, however, mean that people question the general efficacy of such

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methods. As anthropologists have shown, (43) there are many ways of explaining such failures within the current system of thought. In the case of ritual healing, the original diagnosis may have been at fault, so that the wrong rite was enacted. Or it may have been that the rite was marred by some technical error, either on the part of the ritual expert, assistant, audience or patient. The Gurungs do not, however, appear to have the idea that the mental and emotional state of the patient is important here; he need not feel penitent, and the rite will not be spoilt by hidden hostilities among the participants. Even if it is the correct rite, perfectly performed, it may be too late, or the evil power against whom it is directed may be too powerful to dislodge.

The many difficulties, and the doubtful resolution of the conflict against sickness, are given dramatic expression in an action which takes place near the end of most of them. The poju examines a particular item, often a part of the sacrificed animal such as the liver, to see whether the rite has been successful and the patient will recover. Often the omen is not entirely good or entirely bad, and a wide margin of error in prediction is allowed for. What seems strange to an observer is that the patient never seems angry when, immediately after an expensive rite, the poju pronounces that it has all been vain, the omens are bad. It seems to be felt that it was worth making the attempt and, probably, that omens are fallible and may turn out to be wrong. The result of all these mechanisms explaining failures is that the ritual expert never appears to be blamed if a person does not recover; nor do people lose faith in his methods. Indeed, they are likely to come back for more: failure reinforces the system just as much as success and merely requires that it be tightened up, rather than destroyed. We have already seen how, if one rite does not work, one should try another.

The same types of explanation are probably also given by villagers when western medicine is not successful. It may have been a wrong diagnosis, leading to the wrong medicine being used. The medicine may have been wrongly applied. The disease may already have become too ingrained, or be too powerful for any type of medicine. The doctor is not to blame, nor is the system of western medicine. When, finally, a person dies, there is no point in blaming anyone. A person's death is foreshadowed in the moment of his birth; the hour is written on his forehead, and no medicine or ritual can avert it. Gurungs often used the phrase

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kal kaba (*kal* [Nep. death fate, *kaba* [Gg.] to come) to describe the reason for death occurring. There is no point in feeling guilt or anger.

It will be seen that the amount of success/failure in the two methods of healing is not necessarily the important factor in selecting between methods of treatment. Efficiency is hidden by the fact that people may select explanations of success and failure to support the system which they find preferable on other grounds. Thus, if western medicine fails in a particular case they can notice and stress this, or they may say that it is explained by one of the factors described above. If a person is cured they may select out a previous injection, or a previous ritual, as responsible for this, since almost all seriously ill people receive both types of treatment simultaneously. Thus choice between the two is largely a matter of faith; no one understands how either actually operates, so that the scientific truth or falsehood of the two systems cannot be compared. The factors which lead a person to use one or the other system are the relative cost, the relative availability, the relative enjoyment, and the relative prestige of the practitioners. A villager will probably have heard that certain treatments are especially well performed at the hospital—sore teeth extracted, bad burns healed, TB cured, for example—while the *poju* is known to be especially good in cases of shivering, listlessness, headache, and other symptoms which are believed to be caused by evil spirits or witches. Since the *poju* is himself consulted in almost all serious cases of illness, he, more than anyone else in the village, will have an idea of the types of disease which he can cure and those types which will need western medicines. Like the General Practitioners in the West, he refers certain types of case on to the hospital, suggesting the rite of the jabbing needle if his own rites do not help.

The Gurung reaction to the various discomforts and pains which formed the constant background to their lives was varied. They appeared to take as part of the natural order much illness against which westerners would try to fight, especially dysentery, sores and bad coughs. This was obviously because there had been little opportunity to fight them in the past. When we supplied medicines for all these ailments, villagers were eager to procure them. Sudden accidents, burns, cuts, sprains, seemed to upset them disproportionately. Their normally gentle, calm, behaviour would be immediately transformed into alarm, excitement,

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anxiety. We saw this happen on several occasions. Children suffered accidents and there was then much hysterical fussing by the relatives. How far this was due to the fact that the sufferers were children it is difficult to say. The only parallel in daily life was the panic and fluster when large animals threatened to cause an accident by the water tap in the centre of the village. Certain other ailments, particularly the Asian 'flu which spread round the village during our stay, caused great depression among the sufferers. They would lie moaning gently to themselves, some times rocking slightly backwards and forwards. But the sore throat, headache, stiffness of joints and temperature which accompanied the disease may have also included physiological pressures inevitably leading to depression. Often sick people were as cheerful as healthy persons. Both adults and children were very stoical when we applied painful medicines or took off dressings, and babies seemed to cry less than those of comparable age in the west. Another feature was that there

seemed to be a tendency for illness to run in families. Often all the members of a family asked for medicine in one day. It is hard to say how much this was the genuine result of infection and contagion in a situation of extremely intimate living, and how far it was because one member of a family reported back about our medicines and the rest came out of curiosity. Certainly there was some hypochondria and attention seeking in a number of cases.

One basic attitude to sickness was that it was a communal affair. The sick person should not be isolated, even if he had TB or what we would consider to be infectious or contagious disease. If anything, the patient should be surrounded even more closely, given group support during his or her temporary weakness. This feeling is shown most clearly in healing rituals, which can be seen mainly as a means of crowding together as many concerned neighbours and friends as possible into a small room with the sufferer. The western concept of isolation is therefore alien to the Gurungs; illness is an attack on society, and like animals in a field when threatened, people must huddle closer together for protection and support. While the patient lies passively in the centre, his friends and relatives need to be actively struggling against the evil that has brought the disease, forming a ring round him. Disease is only partly controllable, success is by no means automatic, but it is worth trying all possible remedies, ritual and western, in order to ensure relief; just as it is worth combining

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Hinduism, Buddhism, and local religious methods in order to tap as much spiritual power as possible, even though they may appear (to the outside observer) to be based on entirely contradictory premises.

The future medical prospects for the Gurungs depend entirely on the economic and social prospects for Nepal as a whole. If one believed that Nepal's wealth will increase, that foreign aid will continue to pour in, that expenditure on health campaigns and medical services will grow, it could be argued that the availability of western medicine will be increased and the incidence of disease will lessen. How long such benefits can continue in the face of increased crowding, worsening diet growing pressure on natural resources, and a general lowering of the standard of living consequent on continued very high population growth, it is impossible to say. If the economic situation deteriorates, and particularly foreign aid-instigated health facilities decline, then the Gurungs will probably retreat to their own stand-by system of ritual healing a herbal cures which have so many centuries.

NOTES

1. The London-Cornell Project for South-East Asian Studies and the School of Oriental and African Studies, London, provided financial support for this research. Professor C.von Furer-Haimendorf supervised the research. H.M. Government, Nepal, allowed the research to be undertaken. Dr. Gerald Turner then of the 'Shining Hospital', Pokhara, helped in numerous ways described below. The inhabitants of the village 'Where we stayed made us welcome. To all these institutions and individuals I am most grateful. I am also grateful to the Syndics of the Cambridge University Press for permission to use material which first appeared in *Resources and Population: A study of the Gurungs of Nepal* (Cambridge, 1976).

2. During the period 1970-5 there has been a national plan to set up health posts, each covering a population of approximately 15-20,000 persons. There are eleven of these in Kaski district, for example. Each is staffed by a Health Assistant who deals with routine referrals. Since 1975 a Leprosy Control Programme has also been in operation, locating and treating this disease. I owe this information to Mrs. M. Pearson of Liverpool University.

3. Macfarlane, *Resources and Population*; Donald A. Messerschmidt, *The Gurungs of Nepal; Conflict and Change in Village Society* (Warminster, England 1976); B. Pignede, *Les Gurungs: une population himalayenne du Nepal* (Paris, 1966).

4. The most detailed study of the incidence of disease in Nepal is contained in chapters 5-10 of R.M. Worth and N.K. Shah, *Nepal Health Survey* (Honolulu, 19-69). For some interesting comparative material for other central Nepalese

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villages, see *Contributions to Nepalese Studies* (Jnl. of Nepal and Asian Studies, Tribhuvan University), vol. 3, June 1976, a special volume devoted to 'Anthropology, health and development'.

5. Cited in G. Myrdal, *Asian Drama* (1968), ii, p. 1416.

6. C.E. Taylor, 'A medical survey of the Kali Gandaki and Pokhara Valley of Central Nepal', *Geographical Review*, 41 (July-Oct. 1951), pp. 428-3

7. John Aspin, 'Tuberculosis among the Gurkhas' *Tubercle*, July 1947, 'xxviii, no. 7, and no.,8. According to J. Morris' *Social Life in Central Nepal* (Cambridge Univ. M.Sc. thesis, 1935), pp.44-5, 'the physical condition of nearly all Gurkhas improves most markedly during the first year after their enlistment'.

8. Taylor, 'Medical Survey', pp.430-1

9. This figure was suggested to me, from memory, the then British recruiting officer, Colonel Langland. There is a list of types of disability for which recruits were rejected in 1932 in Morris, 'Social life', p.46. Out of a total of 22,888, over one quarter were finally rejected as unfit.

10. Taylor, 'Medical Survey', p.429

11. J.Morris, *A Winter in Nepal* (1963),p.97. Dr. Gerald Turner, then a mission doctor at Pokhara, commented that 'this suggested explanation is clearly not true. The heart disease found here is often rheumatic in nature or from other causes, but not due to this cause' (private communication).

12. D.C.Morley, 'Ghurka Bronchitis', *Jnl. Roy. Med. Corps*, xcv (1950), pp.185-95; ceited in H.B.Gurung, 'Pokhara Valley, Nepal Himalaya' (Edinburgh Univ. Ph.D. thesis, 1965).

13. Worth, *Nepal Health Survey*, p.99

14. Idem.

15. *Nepal and the Gurkhas* (H.M.S.O., 1965), p. 36; B.P.Shreshta, *The Economy of Nepal* (Bombay, 1967), p.35.
16. Worth, *Nepal Health Survey*, pp.87-8
17. Ibid., pp.69-70
18. Ibid, p.71
19. Taylor, *Medical Survey of Kali Gandak*, p.427
20. The carjat in Thak tend to be the wealthier strata; for a more detailed account of this ranking system see Macfarlane, *Resources and Population*, pp.17-8
21. Worth, *Nepal Health Survey*, p.49
22. Ibid., p.97 Dr. Turner commented that the 'incidence of tooth caries is fairly high'
23. Ibid, p.429
24. Ibid., p.93
25. Ibid., p.49ff
26. Ibid., pp.59-60
27. Taylor 'Medical Survey', p.429. The Biratnagar figures came from a private communication from Dr. P.J.Cunningham.
28. See the table in M.Nag, *Factors Affecting Human Fertility in Non-Industrial Societies* (New Haven, 1962), p.184. The rates may drop as low as 2 %, or rise up to 20%.
29. Gurungs, p.246.
30. Macfarlane, *Resources and Population*, p.277
31. According to Dr. Turner, writing of the patients at Pokhara mission hospital, 'worm infestations are exceedingly common. Few escape this, and our laboratory, which has been functioning for two years, now often picks up triple infestations, including hookworm which is widespread'.
32. Worth, *Nepal Health Survey*, p. 73.
33. Dr. Turner commented that "this must cause backache, lumbago, at times sciatica. There is firm evidence of this in coolies in India."
34. Worth, *Nepal Health Survey*, p. 105.
35. A description of an attempt to carry this out, utilizing school teachers as health workers, was made among the Sherpas and described in S.D.R. & A. Lang, 'Kunde Hospital and a demographic survey of the Upper Khumbu, Nepal', *New Zealand Medical Jnl.*, 74, no. 470 (July 1971).
36. There is a summary of such fears in Margaret Mead (ed.), *Cultural Patterns and Technical Change* (New York, 1955)P, pp. 205-8.

37. *Gurungs*, pp. 105-6.

38. V. W. Turner, *Lunda Medicine and the Treatment of Disease* (Papers of the Rhodes-Livingstone Museum, 15, 1964).

39. Here we await the findings of Mr. Simon Strickland, attached to the Department of Social Anthropology at Cambridge, who is currently studying ritual and myth among the Gurungs in a village a few miles to the north of Thak, as part of a wider study of Gurung society.

40. The term 'godling' is used by John T. Hitchcock, *The Magars of Banyan Hill* (New York, 196), chapter 3. It seems more appropriate for these small deities than the grander term 'gods'.

41. *Gurungs*, p.58.

42. These are Nepalese 'rupees. In 1969 there were approximately 25 rupees to the pound sterling, and 10 rs. to the dollar.

43. Keith Thomas, *Religion and the Decline of Magic* (1971), pp. 641-2 summarizes the work of Tylor, Frazer, Evans-Pritchard and other anthropologists on this subject.