

DISTRIBUTION OF JATS ACCORDING TO SETTLEMENT ALTITUDES IN
MIDDLE-NEPAL

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I.

Nepal is a country of extreme diversities. The altitudes range from a mere 70 m above sea level in her southern plains up to the highest peak of the world with almost 9.000 m. The distance between these two levels is only 120 km, and within this short distance all the climatical zones of the earth can be found, with their corresponding flora and fauna. Whilst the general direction of the mountain ranges is roughly east to west, all the great rivers flow transversally north to south. The population is multi-ethnic and even multi-racial. To complicate the matter further, ethnic groups have no separate settlement areas, but the settlement pattern is a thoroughly mixed one, with ethnic majorities here and there. Since 1969 I attempt to work out an ethnical demography of the country. The first results, concerning the middle part of the country, were published in 1974. They cover an area of about $1/4$ of the country and approximately $1/3$ of her population. (Plate I)

II.

One of the points of interest in this investigation was, whether certain strata can be found within the population, according to jat (ethnic group) and settlement altitudes - an assumption, which can be found in many publications about Nepal. Therefore, together with the population data, we collected the altitudes of all the investigated village communities (gaon panchayats). As we worked on the files of local authorities, our investigation follows systematically the panchayat system, which is the admin-

istrative and political system of the country. According to this system, districts and gaon panchayats (village communities) are the lowest two levels. Thus, they are the basic levels in our investigation, and all data refer to the districts or gaon panchayats. For publication, anyhow, only the district level was practical, for reason of the huge mass of data collected on the gaon level.

Our results showed a comparatively clear distinction of ethnic cleavage only, attached to the step-like north-south-profile of the country. Roughly, three strata can be distinguished: the range of the Great Himalayas, inhabited by people of the Tibetan stock, the broad belt of the Pahar (middle hill area), where the situation is very complicated, and the southern lowland plains of the Terai, where the population is mainly similar with the neighbouring Indian areas, admixed with a minority of people from the Pahar. East-westwards the things are much more differentiated, but for lack of space we can not go into details here. We have to take a closer look at the Pahar, nevertheless, since there the majority of Nepal's people are living: Two big clusters of jats can be distinguished here, the one of Caucasoid features, and Indoaryan languages, the other more or less Mongoloid, with languages of the Tibeto-Birman family. Each of them is composed of quite a number of different jats. Whilst the Indoaryan cluster speaks generally Nepali, within the Tibeto-Birman almost as many different languages can be found, as there are ethnical group differences, and there are quite a number. Again, we can not go into detail further, as these details are of less relevance for our subject; thus I hope, these few basic informations may be sufficient for dealing with our actual problem. (Plate II and III)

As the north-south division is identical with an elevational scale from high to low, i.e. settlement altitudes from about 4000 - 70 m, such an ethnical cleavage according to elevation should also be expected within the Pahar, since here the ridges are about 1000 - 2500 m high, whilst

the river valleys are deeply cut into them, with altitudes from 300 - 900 m. In literature we can find this opinion, stating, that generally the Indoaryans settle on the lower slopes, and amongst them the Brahmans lowest, whilst the Tibeto-Birman peoples prefer the higher altitudes for living environment, and indeed in certain localities such an ethnical-elevational stratification can be found. In order to find out, how things look at a larger scale, we computed our data, and here our results were somewhat surprising. (Plate IV)

I worked out a system, to show graphically the distribution of jats according to altitude. On first sight, this table makes clear, that on the top and at the bottom of the scale our assumptions are correct: Bhote (i.e. people of Tibetan culture and tongue) occupy the highest strata, between 2600 and 4000 m, and almost as clear is the situation between 70 and 200 m in the Terai areas. But in the Pahar (middle hill area) the things are quite different: hardly any differences in preferred settlement altitudes can be identified amongst the different jats or even clusters of jats, they all prefer a medium altitude between 1300 and 1500 m, irrespective even of their settlement areas. Anyhow, some explanations are necessary here: The Tamangs right on top of Plate IV (3800 m) are no Tamangs, although they figure as such in all official files, but in fact they are Sherpas, living in the very remote Langtang Valley. And as Sherpas they belong to the Tibetan stock. Furthermore, the low number of Tibetan people is a selection effect, since their majority lives outside the area investigated, thus only a minority of them is contained in our materials. The Kathmandu Valley, a huge flat basin of 600 sqkm in the middle of the Pahar, is the most densely populated area within the country. At an altitude of 1300 m, here is the main area of the Newar, a jat of the Tibeto-Birman cluster. As the bar would be too long graphically, they are given in absolute number. Same applies to the Terai castes (Terai-K.) in the lowest line, who are identical with the population

of Indian stock, as mentioned above. (Plate IV)

It might be criticized, that the stratification of settlement altitudes in a 100-m scale is too rough for precise computation. But in fact, it is rather too fine, than too rough, owing to the geographical conditions in Nepal and the system of gaon panchayats. Each panchayat consists of 9 wards. Although every known form of settlement can be found in Nepal, the scattered form of villages is predominating. Since the Himalayas and their foremountains are the youngest ranges in earth's history, their slopes are still fairly steep in average. This results in perhaps more than 100-m altitude differences even within 1 ward of only a few farms. The 9 wards of a gaon panchayat may be scattered over a wide range on the slope of a ridge, thus differences in altitude may measure several hundred, sometimes even a thousand meters. For our investigation, we always took the altitude of the ward, where the panchayat is situated, which is usually the largest or most important within the 9 wards. By considering all possible biasing factors carefully, we could obtain statistically reliable results. With almost 1000 gaon panchayats, possible errors were levelled statistically, whilst at the same time no levelling effect could work on the results. In the contrary: if there was indeed a clear stratification according to altitude amongst ethnic groups, our method rather would have provoked an enforcement of the differences rather, than a levelling, because the majorities within the population would cluster more strongly around the preferred settlement altitudes of their respective ethnic group, at least statistically. That the results show hardly any differences in the preferred settlement altitudes of the various groups (jats) within the Pahar area, means, that such differences actually do not exist on a larger scale. (Plate IV)

It does not mean, that they may not exist on a smaller, more local scale. We ourselves found, in some areas, within a village community (gaon panchayat), a vertical stratification of jats, sometimes even of the kind, as classical-

ly assumed. Nevertheless, more often we found a stratification rather according to the Hindu caste system of the Aryans, than to ethnical differentiation. In other words, the higher castes usually settle above the lower, manual castes. But even this is not a rule. If, for instance, deposits of iron ore are found above the village center, the Kami (blacksmiths) may have their huts as well above the houses of Brahmans (priests, money lenders, landlords, etc.) and the Chhetri (former warriors, now landlords and farmers). On one slope only we found the classical stratification, on the eastern slope of the Likhu Khola valley. Here, Indoaryan jats (Brahman, Chhetri, etc.) settle on the lower part, Tibeto-Birmans (Sunwar, few Gurung and Magar) on the higher part of the slope, and above them on the ridge, some Tamang and Sherpa, the former Tibeto-Birman, the latter Tibetan of culture and language. In Laduk, on the southern slope above the junction of Bhote Kosi and Tamba Kosi, the contrary is the case: here, the Chhetri settle well above the Tamang.

How then, the opinion about vertical ethnical stratification could possibly have arisen? Naturally, we are bound to mere assumptions in this point, but psychological factors may well have played their role. It is a special function of human mind, to register 'orderly' structures more intensely, than more or less irregular. Thus it appears probable that travellers, even if they were scientists, perceived and remembered the few regularly stratified samples more thoroughly, than the usual, more mixed settlement patterns, which gave no distinct impression on their mind. Only statistics show up the actual situation.

But even ethnic stratifications on the smaller, local scale here and there are only relatively attached to certain heights. The Himalayan ranges did not rise steadily, but in several lifting phases, with intervalls of 'rest'. Thus, the valleys here are not V-shaped, but more or less Y-shaped. The prevailing profile is steep on the top, comparatively less steep in the middle part, and steep again

at the bottom down to the river bed. Suitable for human settlement is mainly the middle part. Here, the slope is not only less steep, than above and below, but also the soil is of better quality. That means, a priori only a limited range of the vertical stratifications favour human settlement within medium altitudes, whilst below and above this range the conditions are unfavourable. Plate IV shows clearly the concentration of settlements within these medium strata of altitude, plate V and VI a sketch of the actual situation. Naturally, the elevations of the suitable grounds are not precisely the same throughout, but are found in different altitudes from valley to valley, and sometimes even on either side of the same range; as a rule they will further be higher up in the upper parts of the valleys, than in the lower. So, if there really existed ethnical stratifications according to altitudes as a rule, they should show up in the statistical results. On the other hand, if there are only local ones in limited areas, then they may be levelled by the fact, that their median will be on different altitudes in the various places. Consequently, such local stratifications can not be generalized.

To sum up finally, the following conclusions may be emphasized:

1. Roughly, three steps of different populations can be differentiated in middle Nepal. In the north, the Himalayan ranges and their high alpine valley are inhabited by people of Tibetan languages and culture; in the southern plains, the majority of the population is of Indian stock; only in the broad belt of the Pahar (middle hill area) a discrimination according to settlement altitudes is relevant.
2. A stratification according to jat (ethnic group) and settlement altitude may occur locally in limited areas, but it is no common rule.
3. Owing to the predominating Y-shape of valleys, only a limited range of altitudes are suitable for human settle-

ments. Roughly, these altitudes range between 1000 and 2000 m, with concentrations between 1300 and 1500 m, and within this range of altitudes, the majority of settlements of far the most jats (ethnic groups) can be found.

4. Generally, and over the whole of the investigation area, no characteristic stratification amongst jats (ethnic groups) according to settlement altitudes can be found.



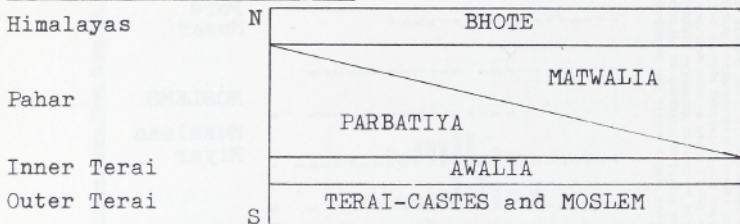
Statistical distribution of settlements
Himalayas
Lower Terai
Outer Terai
Distribution of settlements
with profile of hills and valleys. The map shows a rough sketch of the topography of the Himalayan region. The actual distribution of settlements is shown by the dots scattered across the map. The map shows that settlements are concentrated in the lower and outer terai areas, but the distribution is irregular towards the mountains. The map also shows that settlements are increasing towards the mountains, which is the trend towards the mountains. The map is not detailed in this paper, as are the other maps, but the settlements are shown in the map.

PLATE II

Structure of Population in Nepal

CLUSTER:	LANGUAGE:	RELIGION:	SETTLEMENT AREA:
Matwalia	Tibeto-Birman	Lamaism, with Bon-elements, partly Hinduised	Pahar, Mahabharat and Inner Terai
Bhote	Tibetan	Lamaism	Himalayas and arid highland
Awalia	autochthonous, with Austric (?) elements	animistic, strong Hindu influences recently	Inner Terai, few in the Pahar, in Outer Terai
Parbatiya	Indo-Aryan (Nepali, Parbatiya, Khas-kura, Gorkhali, etc.)	Hindu	Pahar, Mahabharat, Inner Terai, few in Outer Terai
Terai Castes	Indo-Aryan (Hindi, Bhojpuri, Maithili, Bengali, etc.)	Hindu	Outer Terai
Moslem	originally mainly Urdu, nowadays also Indo-Aryan (Nepali, Terai-tongues, etc.)	Moslem	Outer Terai, few also in Mahabharat and Terai

Geographical distribution (schematically):



Distribution of jats (ethnic groups) according to the north-south profile of Nepal and ethnical relationships. The top table shows a rough scheme of the structure and distribution of the population descriptively, the lower graphically. The actual situation in the Pahar is more complicated as shown, since Matwalia and Parbatiya live mainly in mixed areas, but the distribution is marked correctly, since the Indoaryan elements are increasing towards southwest, whilst the Tibeto-birman augment towards northeast. The Awalia group is not mentioned in this paper, as are the Terai groups, since their settlement areas are irrelevant concerning altitude stratifications.

PLATE III

LIST OF ETHNIC GROUPS

in Order of Clusters

(see also PLATE II)

MATWALIA*

Tamang
Newar
Magar
Gurung
Thami
Sunwar
Rai
Limbu

Pahari
Jirel/Surel
Durah
Chepang

BHOTE

Thakali
Sherpa
Bhotiya
Tibetans

AWALIA

Tharu
Danuwar
Majhi
Darai
Kumhal
Barhamu

PARBATIYA

Brahman
Chhetri
Thakuri

Giri
Yogi
Gharti
Hayu
Bhujel

Sunar
Kami
Damai
Sarki
Badi
Gaine

TERAI CASTES

Maithili Brahman
Bhumihar Brahman
Kankubja Brahman
Raj ut

Kayastha

Barai
Badahi
Bhaat
Mali
Haluwai
Goala
Tamoli
Biin
Koiri
Kudjara
Dhanuk
Khatwe
Dusadh
Teli
Suri

Dom
Halkhor
Pore
Musar

MOSLEMS

Musalman
Miyar

* Formerly PAHARIA

The bulk of the ethnic groups, ordered into clusters of common anthropological, linguistical, and cultural features.

PLATE IV

Distribution of jats according to settlement altitudes.

MEER: Tausend	Bevölkerung	Mogel Gurung	Thamd	Senwar	Rai	Lambu	Pahel	Jirsa	Durch	Chapang	Ghale	Thakali	Sherna	Bochlya	Thara	Banwar	Mahil	Daral	MEER:
3,800	I																		3,800
3,700																			3,700
3,600																			3,600
3,500																			3,500
3,400																			3,400
3,300																			3,300
3,200																			3,200
3,100																			3,100
3,000																			3,000
2,900																			2,900
2,800																			2,800
2,700																			2,700
2,600	MI																		2,600
2,500	I																		2,500
2,400	MI																		2,400
2,300	I																		2,300
2,200	I																		2,200
2,100	MI																		2,100
2,000	MI																		2,000
1,900	MI																		1,900
1,800	MI																		1,800
1,700	MI																		1,700
1,600	MI																		1,600
1,500	MI																		1,500
1,400	MI																		1,400
1,300	MI																		1,300
1,200	MI																		1,200
1,100	MI																		1,100
1,000	MI																		1,000
900	MI																		900
800	MI																		800
700	MI																		700
600	MI																		600
500	I																		500
400	I																		400
300	MI																		300
200	MI																		200
100	MI																		100
70	I																		70

ANMERKUNG: Wegen der z.T. bedeutend höheren Zahlen musste das Symbol-System leicht abgeändert werden. Auch hier logarithisch zu verfahren hätte praktische Nachteile erbracht; die Säulen wären zu kurz geworden und hätten die Verteilung optisch nur noch sehr ungenau dargestellt. Deshalb wurde sehr abgemessener Gebraucht und durch M-Symbolleiste.

*) Einschließlich Sural. **) 70 - ca. 85 m. Zahlen ab 100.000 werten aus Platzgründen ausgeschrieben dargestellt!

PLATE IV (2nd part)

METER:	Kumbal Barhamu Brahman	Chhetri	Thakuri Gizi Yogi Gharti Hays	Bhutei Sunar Kasi Damai Sargi Bedi Ghahar Topal-K.	Muselman Myer Musar MITER:
3,800	I	I	I	I	3,800
3,700	I	I	I	I	3,700
3,600	I	I	I	I	3,600
3,500	I	I	I	I	3,500
3,400	I	I	I	I	3,400
3,300	I	I	I	I	3,300
3,200	I	I	I	I	3,200
3,100	I	I	I	I	3,100
3,000	I	I	I	I	3,000
2,900	I	I	I	I	2,900
2,800	I	I	I	I	2,800
2,700	I	I	I	I	2,700
2,600	I	I	I	I	2,600
2,500	I	I	I	I	2,500
2,400	I	I	I	I	2,400
2,300	I	I	I	I	2,300
2,200	I	I	I	I	2,200
2,100	I	I	I	I	2,100
2,000	I	I	I	I	2,000
1,900	I	I	I	I	1,900
1,800	I	I	I	I	1,800
1,700	I	I	I	I	1,700
1,600	I	I	I	I	1,600
1,500	I	I	I	I	1,500
1,400	I	I	I	I	1,400
1,300	I	I	I	I	1,300
1,200	I	I	I	I	1,200
1,100	I	I	I	I	1,100
1,000	I	I	I	I	1,000
900	I	I	I	I	900
800	I	I	I	I	800
700	I	I	I	I	700
600	I	I	I	I	600
500	I	I	I	I	500
400	I	I	I	I	400
300	I	I	I	I	300
200	I	I	I	I	200
100	I	I	I	I	100
70	I	I	I	I	0

Plate V

1 Gaon Panchayat=9 Wards

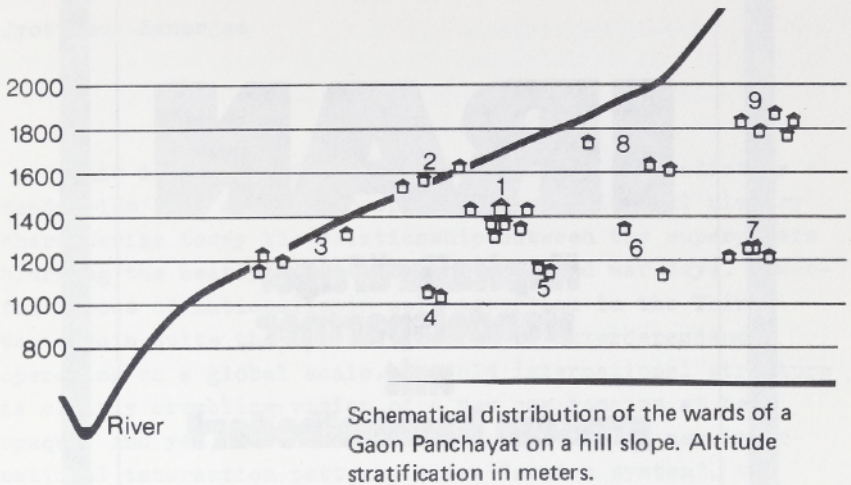
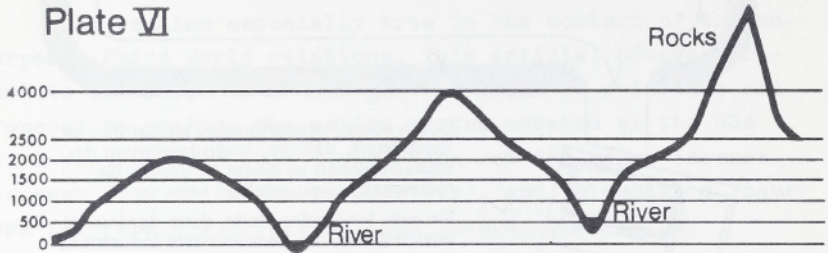


Plate VI



Schematical cross section of Nepalese hill ranges, showing the Y-shape of valleys and the less steep middle parts of slopes, which are best favourable for settlement. Altitude stratification in meters.