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## SOME ASPECTS OF CASTE IN BENGAL

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**C**ASTE has always been of interest to students of Indian history and civilization. While the interest was formerly more in the direction of origin, the emphasis has apparently shifted in modern times to a study of its contemporary functions. In the presidential address to the Section on Anthropology and Archaeology of the Indian Science Congress in 1957, Dr. M. N. Srinivas has shown how caste has not only not been weakened by forces of modernization in India, but has on the contrary been fortified, so that it plays a significant role even in the determination of the character of democratic institutions in the country.

Whether one should limit one's field of observation to one particular field or allow comparisons to be made in other fields also, is a question which can be legitimately raised in this connection. For, it is well known that caste derives its strength not merely from the power structure of society, but also from its association with a particular form of organization in the economic as well as the religious life of the country. Occupations are ranked into high and low, and so are various

forms of religious beliefs and practices. And thus various shades of philosophy and ways of life have been allowed to co-exist in apparent avoidance of conflict with one another. The question may legitimately be raised as to what is happening in the other aspects of caste's many-sided organization.

With this end in view, it may be profitable for us to examine the case of a state like Bengal where the ancient ways of life have been subjected to more profound alteration than in many other parts of India. The causes which have led to this special development have been both accidental and intentional. British commerce found a favourable roosting place in Bengal in the end of the seventeenth century ; while about a century or more afterwards, her awakened and indigenous leadership recognized the imperative necessity of 'modernization' ; as a result of which, wave after wave of social reform arose and brought about significant changes in the cultural as well as the social life of the province. If the forces of change have affected Bengal's life in one particular manner, or have also set up contrary forces of diminishing strength in their train, it may not be unreasonable to expect that similar forces may bring about comparable results in other linguistic or cultural provinces of India, if the forces happen to be similar to those encountered in the case chosen for our present study.

Birbhum is a district in West Bengal which has retained its predominantly rural character. In the heart of this rice-growing country lies the village of Jajigram with a population of 2,160 individuals. The name of the village is derived from *yajana*, *yajna*, Vedic fire-sacrifice, and *gram*, village ; and the fact that there is a large Brahmin population within it, is probably the result of its ancient historical origin when a colony of Brahmins took up residence in this place. There are altogether twenty-eight castes in residence here, and the following table presents the number, traditional occupation, as well as actual occupation followed by each of these castes. It may be pointed out that the census presented below was the result of a local social worker's survey undertaken in the year 1947 ( Bose 1949, 124 ).

*Census figures from Bose, 1949 (page 124)***Group A : Castes from whom water is not accepted by Brahmins.**

<i>Name.</i>	<i>No. of families.</i>	<i>Individuals.</i>	<i>Traditional occupation.</i>	<i>Actual occupation.</i>
Muchi	65	325	Tanning, shoemaking	Landless labour
Bhuinmali	40	150	Sweeping, cleaning	T. O.* ; landless labour ; 2 peasant proprietors
Fhulmali	7	25	Gardening, supplying flowers for religious offering	Landless labour
Rajbangshi	10	35	Boatmen and agricultural labour	Landless labour
Bhar	12	35	Mfg. of chapped rice, labour	T. O.
Mal	80	400	Agricultural labour	T. O.
Konai	15	350	do	T. O.
Bauri	1	5	do	T. O.
Dom	5	20	Working in bamboo (basket weaving).	T. O.
Kora Santal	25	65	Digging earth, labour	T. O.
Jele	11	55	Fishing	T. O., 2 peasant proprietors
Dhopa	2	10	Washing clothes	T. O.

**Group B : Castes from whom water is accepted by Brahmins.**

<i>Name.</i>	<i>No. of families.</i>	<i>Individuals.</i>	<i>Traditional occupation.</i>	<i>Actual occupation.</i>
Goala	8	25	Milk trade and cow-keeping	T. O. and farming
Sadgop	5	10	Farming	Landless labour
Kumor	4	10	Mfg. of pottery	T. O.
Kamar	6	20	Blacksmithery	T. O.
Chhutar	1	5	Carpentry	T. O.
Napit	7	30	Shaving and hair-cutting	T. O.

\* T. O. stands for 'traditional occupation'.

*Continued from previous page.*

<i>Name.</i>	<i>No. of families</i>	<i>Individuals.</i>	<i>Traditional occupation.</i>	<i>Actual occupation</i>
Bene	2	5	Trading in spices	Trade and farming
Barai	40	200	Cultivation of betel vine	T. O. ; 2 grocers, 3 unskilled physicians
Bhat	2	10	?	Clerical jobs
Kayastha	28	120	Clerical work	Farming, clerical job, 2 physicians, some unemployed

**Group C : High Castes.**

<i>Name.</i>	<i>No. of families.</i>	<i>Individuals.</i>	<i>Traditional occupation.</i>	<i>Actual occupation.</i>
Rajput	4	15	Soldiers	Landless labour
Chhatri	6	15	Soldiers	Farming, clerical work
Brahmin	30	150	Priestcraft, teaching, etc.	Farming, clerical job, 1 physician, some unemployed
Graha-charya (Brahmin)	1	5	Astrology	T. O.
Vaidya	12	50	Physician	Farming, physicians, clerical job, also unemployed
Bairagi (Vaishnaba mendicant)	5	15	Religious mendicancy	T. O., 1 in farming

It is observed in the Table that 68% of the population belongs to the section from whom water is found unacceptable by 'upper' castes like Brahmin or Vaidya. Leather-workers have mostly lost their hereditary occupation, because hides and skins have, for many years past, formed an important collection from the villages of India for purposes of export. They have gradually drifted towards agriculture, and form a fair proportion of the landless labour corps of the village. Bamboo-workers, *i.e.* basket-weavers, and fishermen alone have been able to retain their own profession ; among the last, two have become peasants owning land.

Among the 'clean Sudras', *i.e.* those farming and artisan castes from whom water is acceptable to Brahmins, the change from traditional occupation has been less marked in character. These Sudras constitute altogether 22·6% of the total population. We find that milkmen have also taken to agriculture, while one member of the blacksmith caste has joined clerical service. The comparatively more prosperous cultivators of betel vine, namely Barai, are by and large farmers ; while two of them trade in grocery, three are physicians, and some are unemployed. The Kayasthas form, in this group, an educated and professional class ; while there is also some dependence among them upon cultivation through hired labourers. The Brahmin (including Grahacharya, astrologer) and Vaidya, who claim equal status with the Brahmin in society, are both dependent on farming through hired labourers, or earn their livelihood through professions like clerical service, teaching, etc., or are unemployed. They altogether constitute about 9% of the total.

The inhabitants of the village, therefore, depend largely on agriculture, even though the more favoured ones educationally may supplement their income through one or other of the higher professions.

Although the village has succeeded in retaining its predominantly rural character, yet there has taken place a considerable alteration in the economic relationship which binds together its permanent and floating population. At one time, part of the payment due to the annual services of artisans like carpenters, potters, etc. used to be in terms of a share of the annual harvest ; while services like those of barbers or washermen were recompensed by the grant of small areas of service land. These have now been largely replaced in the village by cash payments. One of the reasons is that the village offers today an open market for artisans from other villages, just as it does, during the harvest season, to a large number of Santal labourers from the neighbouring district of Santal Parganas.

It is also significant that although many of the castes are in the same profession, yet there is no intermarriage between

them, whether they belong to the landless or the land-owning section of the population. Ranking has remained the same, except for the fact that due to reform movements in recent times, the untouchables have straightened their back, and adult franchise has also made it imperative upon all castes to court the favour of the latter for purposes of patronage during elections.

In Bengal, there have always been several kinds of villages. Some have been predominantly agricultural, with or without a fair proportion of artisan and upper castes; while others have owed their origin to trade, industry, or been centres of administration or learning. A village like Jhalakathi in East Bengal is essentially a centre of trade and commerce. In West Bengal, too, villages like Katwa, lying at the junction of two rivers, or like Ilambazar which was once a river-port from which roads radiated into the surrounding country, have been villages of the same character. In addition, they have sometimes attracted industries to their neighbourhood. Weavers, in particular, find such market villages suitable for buying yarn and also for disposing of their manufactures to wholesale dealers. There has been, besides villages of the above kind, also centres of religious pilgrimage, or seats of Sanskrit learning, or perhaps a place which served as the administrative headquarters of some local dignitary; which in consequence succeeded in attracting people of various interests round the neighbourhood.

Santipur is a town in West Bengal which bears many of these characteristics. Its description, as presented below, is based entirely on the research conducted by Miss Ilika Chatterjee, a student of the Geography Department of the University of Calcutta in 1956-57.

The town has been an important centre of learning and a focal point of Vaishnava revival since the late 15th century. It was also the headquarters of Muslim conquerors in Bengal at an earlier date, when perhaps two small forts were established on its eastern and western flanks. Textile weaving and also the indigo industry, were so important at one time that the East India Company established one of their trading posts at this point; while another was founded at Kalna on the other

side of the river Ganga. It is interesting that as the weavers, *Tanti*, of Santipur grew in prosperity, some of them built temples at great expense in the quarter of the town where they principally resided.

As the town thus progressively added one function to another, it also increased proportionately in size. Small villages or *mouzas* which lay in the neighbourhood became so overgrown that eventually several of them became fused to give rise to the municipal town which bears its present name. Yet, in spite of this fusion, the original preponderance of various castes in different localities has remained a distinct feature of the municipal town. Although a very strict delimitation is not possible, yet many areas bear distinctive caste-names; and are inhabited by a preponderance of one particular caste, except where poverty or migration for better prospects elsewhere have altered the character of the population.

The eastern and western flanks of the town, near its southern border bounded by the river, are predominantly inhabited by Mohammedans. Perhaps two forts were situated here at one time, for they have given the names Sutragarh (fort in the beginning) and Saragarh (fort at the end) to the respective localities. The southern low-lying land, which actually forms a part of the river bed, is inhabited by the Kurmi, a caste of sturdy cultivators who originally migrated from Bihar and until recently still retained some of their distinctive social customs. At one point in the west, contiguous to the area inhabited by the Mohammedans, there is a small settlement of Rajputs and also of Pathans, the latter being naturally Muslim by religion. The last two claim to have arrived here in company with the Muslim conqueror, Bakhtiar Khalji. Both these groups have likewise preserved their separateness in ways of life from the neighbouring people.

Within the most congested part of the town, there are several localities bearing the names of the commercial Tili, weaving Tanti, and priestly Brahmin castes. There is also a locality which bears the name of the Kansari, or brass and bell-metal working artisan caste. The fishing Jele, pottery-making Kumor, banking Subarnabanik, and the Goala who deal in

milk, are concentrated in some areas, although they have not succeeded, perhaps because of paucity of numbers, in adding their names to particular localities.

A map indicating the distribution of occupations can be superimposed on the previous one relating to caste, and then a series of interesting facts begins to reveal itself. The Brahmin locality shows a predominance of occupations connected with clerical job, education, law, medicine, etc. Pathans and Rajputs have been converted into small traders or labourers; while Mohammedans residing in the neighbourhood of the forts which have disappeared, are by and large labourers or drivers of bullock-carts and horse-drawn carriages. Potters have retained their profession to a large extent, while the brass and bell-metal working Kansari have lost it considerably. This might be due to the increasing use of aluminium ware made by machine, which is cheaper than brass or bell-metal ware. The Moira, sweet-meat and sugar manufacturer, and many of the Goala, milkmen, have taken to weaving. Coarse, country-made sugar is no longer as popular as cheap cane-sugar made in factories. Much of the *gur* which was refined in Santipur used to be imported from districts which are now in East Pakistan. That supply has been virtually cut off; and may account for part of the change in the occupation of the Moira. The Goala have, on the other hand, been affected by the importation of powdered milk from abroad. The Moira of Santipur supply this type of dried milk to the Goala, who take it home and bring it back in the form of curds used in the preparation of sweet-meats, so that Goala earns no more than by mere processing. He has like many of the Moira taken to weaving, as that industry still retains a high standard of reputation in the rest of Bengal. It is noteworthy that Brahmins have completely avoided the profession of weaving; but have shifted from their former Sanskrit learning and priestcraft to professions which have arisen in the wake of English education.

One might enter into a statistical analysis of the number of persons within each caste who have shifted from their hereditary, traditional occupation, and thus try to discover if there



are any avoidances or preferences in the choice of new occupations evinced by castes occupying varying ranks. That would be unnecessary for our present purpose, which is no more than to show that even people do not leave their ancient homes, and retain territorial or geographical separateness to an appreciable extent, changes in occupation may be proportionately more extensive than the physical movements involved. In the case of Santipur, such changes have not been due to the growth of industries ; but due to an alteration in the character of occupations due to small economic or administrative and political changes ; so that the latter have not been attended by widespread demographic alterations.

Perhaps this may account for the fact that, as old society with its established code of conduct thus remained intact, the rules of castes also largely persisted. Although the Moira, Goala and some others have adopted the same profession as that of the Tanti, weaver, yet each of these castes continues to remain as strictly endogamous as before. There are co-operative societies which bring all weavers living in one neighbourhood under the fold of one marketing organization ; yet identity of interest in trade has not succeeded in breaking through the barriers of caste endogamy.

A study of occupational changes along somewhat different lines was undertaken by Miss Priti Mitra, a research student in the Department of Anthropology, Calcutta University in 1941-43. Miss Mitra carefully compared the number of those who still retained their traditional occupation in different census years and those who had forsaken it for other profitable occupations. Some of the results of her enquiry were published by the present author in 1949 (Bose 1949, 125 ff.), and a part of this is being presented below. The Census reports of 1901, 1911, 1921 and 1931 yielded necessary figures in regard to fourteen castes only, while in the case of others figures were available in some Censuses, but not in all. Figures after 1931 become very unreliable as caste was not often recorded by informants, and this condition was aggravated in the Censuses of 1941 and 1951.

*Census figures from Bose, 1949 (pages 126 to 132)*

**Kumor : Mfg. of Pottery**

	1901	1911	1921	1931
Population	1,95,533	2,78,206	2,84,514	2,89,654
Earning members		92,659	75,326	58,506
Percentage of literates	6.56	8.04	10.18	9.66
Percentage in : traditional occupation	75.16	73.80	61.69	58.87
Agriculture	16.60	13.40	19.76	19.89
Industries		78.14	64.50	65.66
Higher professions		0.86	1.29	4.26

**Kamar : Blacksmithery**

	1901	1911	1921	1931
Population	1,76,873	2,38,595	2,56,853	2,65,526
Earning members		86,902	89,633	81,710
Percentage of literates	10.34	14.98	17.88	14.91
Percentage in : traditional occupation	47.35	57.48	34.11	43.76
Agriculture		19.30	26.02	21.81
Industries		67.53	52.04	56.11
Higher professions		1.75	1.29	5.32

**Chamar and Muchi : Leather working**

	1901	1911	1921	1931
Population	96,391 (only Chamar)	5,33,131	5,64,879	5,64,682
Earning members		2,38,058	2,44,145	2,17,366
Percentage of literates	3.19	2.97	3.11	4.52
Percentage in : traditional occupation	23.26	33.77	23.94	24.59
Agriculture	33.47	32.33	28.60	32.88
Industries		37.06	42.84	43.93
Higher professions		0.25	0.45	1.07

**Bagdi or Byagra Kshatriya : Agriculture and fishing**

	1901	1911	1921	1931
Population	7,63,147	8,47,228	8,86,821	9,87,315
Earning members		3,92,472	3,71,477	3,66,455
Percentage of literacy	1'57	1'91	2'13	1'92
Percentage in : traditional occupation	70'13	71'28	42'28 (?)	69'79
Agriculture		73'41	68'66	81'74
Industries		10'05	9'23	5'03
Higher professions		0'25	0'36 (?)	1'17

**Goala : Cow-keeping and milk trade**

	1901	1911	1921	1931
Population	4,94,699	5,83,790	5,82,597	5,99,281
Earning members		2,51,829	2,39,429	2,17,438
Percentage of literacy	6'33	7'68	10'57	10'17
Percentage in : traditional occupation	41'45	31'39	21'30	24'77
Agriculture		41'00	42'21	37'49
Industries		6'47	7'43	7'28
Higher professions		1'65	1'87	5'42

**Vaidya : Medicine**

	1901	1911	1921	1931
Population	31,357	88,298	1,02,870	1,10,739
Earning members		21,133	24,114	26,292
Percentage of literacy	45'62	53'21	57'52	51'79
Percentage in : traditional occupation	36'10	20'11	15'02	18'80
Agriculture		7'16	12'42	6'04
Industries		2'13	1'22	1'85
Higher professions		54'66	46'81	49'40

**Brahmin : Priestcraft, teaching etc.**

	1901	1911	1921	1931
Population	10,19,348	11,91,867	13,14,430	14,56,180
Earning members		4,00,064	4,25,173	4,17,157
Percentage of literacy	35·84	39·85	43·15	37·28
Percentage in : traditional occupation	33·54	21·79	14·57	16·57
Agriculture		19·39	22·63	15·38
Industries		2·92	3·57	4·50
Higher professions		43·71	34·96	30·76

A comparison of the Tables will indicate that, on the whole, changes have taken place in two directions among various castes. Artisan castes like Kumor (potter), Kamar (blacksmith), or Chamar-Muchi (tanner and leather worker) have drifted either towards agricultural labour, or skilled labour in industries other than their traditional one. The percentage of literacy among them has tended to remain low, at a lower level than the average for all castes in Bengal. Castes like the Byagra Kshatriya (formerly recorded as Bagdi), whose traditional occupation was labour in the fields, have retained it to an appreciable extent; and their percentage of literacy has also tended to remain at a considerably low level, lower than that of the average for artisan castes, for example. In the case of castes like Brahmin or Vaidya, the departure from traditional occupation has been very high indeed; while there has been a corresponding concentration, not in agriculture or industries, but in 'higher professions', like medicine, law, office work of various kinds or land-owning or land management. Percentages of literacy are naturally higher in comparison with the country's average.

Furthermore, it is of interest to note that figures for employment in traditional occupations have been steadily reduced in the case of those castes referred to in the last portion of the above paragraph. Thus, the decline has been as follows :

Percentage of earning members engaged in traditional occupations	1901	1911	1921	1931
Brahmin	33.54	21.79	14.57	16.57
Vaidya	36.10	20.11	15.02	18.80

It is interesting that here too, castes have remained endogamous ; or, in other words, sameness of occupation, whether in the learned professions or agriculture has not tended in any way to break down the barriers of endogamy. Some investigation along this line has recently been conducted among two 'upper' and two 'lower' castes in West Bengal under the direction of Dr. Iravati Karve, which tends to show that rules of marriage have remained practically unaltered in course of at least three generations. One will naturally await with interest the publication of the results of this very significant piece of investigation.

There is thus some amount of evidence to indicate that changes in occupation have been widespread in the state of West Bengal, but this has not been attended by an alteration of the rules of endogamy to any appreciable extent. Would that be taken to mean that there has been no change in the internal affairs of caste at all ?

For this purpose, let us turn once more to the work of Miss Priti Mitra referred to above. After an analysis of census figures, Miss Mitra proceeded to investigate some of the caste organizations separately. It appears that from about the beginning of the present century, when castes and their ranks began to be recorded in census returns, many organizations along modern lines have also been established in India to take charge of a few of the interests associated with caste. Dr. Srinivas noted in his presidential address referred to above that some of these go back to about the middle of the last century ; but, by and large, many were established, or became particularly active, from the Census of 1901 onwards.

At least, this has been so in the case of West Bengal, where associations were formed at or near about the latter event by castes like the Yogi, Sadgop, Gandhabanik, Subarnabanik, Namashudra, Kayastha, Vaidya or Brahmin. These organiza-

tions appear to possess very few functions in the ordinary life of its members. But when there is some question of rank involved, popular enthusiasm can be raised high, and even made to serve some purposes of internal social reform. In the case of castes enjoying a high rank, like the Brahmin, Vaidya or Kayastha, the specific organizations do not ever seem to have reached any high point of activity.

The organizations of the Yogi, a 'clean' caste of weavers, and of the Namashudras, who are considered very low in the social scale, and whose traditional occupation happens to be agriculture and the plying of boats, can be taken up for consideration, on the basis of Miss Priti Mitra's work (Bose 1949, 135 ff.),

An author named Radhagovinda Nath presented a newly published book entitled *Bangiya Yogi Jati* (The Yogi caste of Bengal) to the Census Commissioner before the Census of 1911. In the journal founded by the caste organization, entitled *Yogi Sakha* (Friend of the Yogi) some of the articles published were, as follows: '(Our) historical past,' 'The historical position of the Yogi caste,' 'Ray of light', 'Who are we?', 'Downfall and its prevention'.

During the Census of 1921, a claim was made by members of the priestly section of the Yogi, that they should be enumerated as Brahmins. It should be noted that the Yogis had priests belonging to their own caste. In 1931, the entire Yogi caste claimed the status of Brahminhood. At an annual conference, a resolution was adopted that the Yogi should wear the sacred thread characteristic of Brahmins in Bengal. Articles on the subject were published in the *Yogi Sakha* of 1318, 1320, 1321, 1328, B.S., corresponding to 1911 onwards. These bore titles like 'The ritual of wearing the sacred thread', 'Popularity of the sacred thread', etc. It was also suggested in one of these articles that the priestly section of the caste should educate themselves in the proper manner, so that they could be truly worthy of their profession.

It is significant that some articles published in the same journal advocated the liquidation of endogamous subdivisions within the caste. Child marriage was condemned, and articles

were published in order to promote women's interests ; for in the matter of literacy, women lagged far behind men belonging to the caste. Such articles bore titles like the following : 'Our duty towards women', 'Female education', 'An appeal to our sisters', 'Will not women grow up?', 'Women's problems'. The caste seems to have been divided in its mind on the question of the marriage of widows ; yet a few marriages were performed in spite of the opposition of the older, more conservative section.

The question of occupation was also important. The Yogi are, by tradition, weavers ; and the handloom industry has received fitful encouragement in Bengal, as a result of the boycott of British piecegoods since the Swadeshi movement of 1905. The caste has consequently not suffered very much from lack of employment. Yet questions like the following were raised and discussed in the *Yogi Sakha* of 1321 B. S. (1914 A. D.). Can Yogis who have worn the sacred thread employ themselves in agriculture ? The answer was, Yes. It was also recommended that the Yogi should adopt any industry which was likely to yield profit.

In contrast to the Yogi, who tried no more than to gain recognition as equal to Brahmins, and this without much bitterness, or to effect certain internal reforms, the organization of the Namashudra appears to be charged with a more urgent demand for recognition to a socially elevated rank. This populous and hard-working agricultural caste has suffered from a social stigma whose origin is difficult to ascertain ; and it is justifiable therefore that there should be a considerable element of bitterness displayed by the educated members of the caste against the 'upper' castes in general.

This caste has its own organizations which publish journals like the *Pataka* (Banner) or the *Namashudra Suhrid* (Friend of the Namashudra). In an article published in 1908, a writer named Raicharan Biswas stated : 'We are Brahmin by caste. Prompted by envy or anger, people may dislike us ; but if one observes our clean Brahminical way of life as practised generation after generation, they will have to admit unanimously that the Namashudra caste is descended from the ancient sages

and *Rishis*, i.e. from pure Brahmins. Secondly, our occupation is the *arya* or noble one of agriculture ; and this has always been considered a very lofty profession indeed.' A book was also published in order to substantiate the claim thus made. It was entitled *Jatitattwa O Namashya Kuladarpana* (The history of caste and a mirror of the lineage of the Namashyas).

Widow remarriage was in vogue among the Namashudra community. But as the claim to recognition of Brahminhood became more insistent, widow remarriage was correspondingly discouraged.

In 1916, an editorial was published in the *Pataka*, in which it was stated : 'It has been due to education received through the favours of the British government that we have now realized what we are, and how great is our strength. A caste with a population of 25 lacs cannot remain asleep for ever. We had been put to sleep by the blind Hindu kings who ruled over Hindu society. Today we have woken up from that slumber through the grace of the mighty British, who believe in the equality of men and not in caste. Laws framed by narrow Brahmins prevented us from reaching within the boundaries of the temple of learning. But why should we worry any longer ? The British government itself has now come to the aid of the uneducated ; they have ever been the help of the poor, and the hope of the downtrodden castes.'

The gazetteer of the Dacca district records that, by and large, the Namashudra caste abstained from participation in the Anti-Partition agitation of Bengal in 1905. Nagarbashi Majumdar and Raghunath Sarkar, two prominent Namashudra citizens of Vikrampur in Dacca, fervently expressed their loyalty to the Lieutenant Governor of Bengal and claimed special favours from the government in matters affecting education and employment. In 1907, when the Swadeshi movement was at its height, a deputation of representative Namashudra citizens waited upon the Lieutenant Governor and prayed for the perpetuation of British rule.

The pattern of production associated with caste seems to have been so successful at one time that some Mohammedans of rural India followed the rule of ranking of occupations, and



even of endogamy, in clear contravention of the dictates of Islam. As late as 1927 A.D., Mohammed Yaqub Ali, Headmaster of Rajarampur High School, published a book in Bengali entitled *Mushalmaner Jatibhed* (Caste among the Mushalmans), in which he bitterly complained that ignorant Muslims had been corrupted by contact with Hindus, and looked upon the professions of fishing, oil-pressing, etc. as lowly. The so-called upper class Mohammedans even hesitated to intermarry with groups of Muslims following these professions along the family line ; and this was clearly against the tenets of Islam (Bose 1949, 142 ff.)

When it became impossible to earn one's living in Bengal by means of the traditional, hereditary occupation, and a more or less urbanized middle class began to emerge from among all castes of Hindus, as well as Mohammedans, one of the roots which held caste firmly received a rude shock. Changes in occupation have not, however, become completely free and universal. Movements of people from and into the villages have also been slow. So that, altogether, the impact of changed occupation, and of the rise of an urbanized, educated, professional class, has not, up till now, helped in liquidating the bonds which gave permanence to caste. Yet, it cannot be questioned that the bonds of the latter have been considerably weakened in so far as choice of occupations is concerned. A Brahmin today might own a shoe-making factory, and yet not raise social disapprobation in express form. The backbone of orthodoxy seems to have been broken, at least on this plane in Bengal. Among the former 'lower' castes, again, the claim to higher rank does not today evoke the same amount of resistance as it perhaps did fifty years ago. Moreover, the claim, *i.e.* the revolt against relegation to a suppressed rank, has been accompanied by a conscious endeavour of approximation to the social practices of the upper castes. This has been both in the direction of orthodoxy and of reformed practices. In any case, caste has not remained unchanged, but shows some amount of alteration in regard to features connected with economic pursuits as well as ranking in society, on the basis of occupations.

There is another direction in which caste continues to receive a strong, though perhaps milder and less perceived shock, than the one noted above. But that promises to have more far-reaching effects as the process becomes more consolidated. Hindu religion has always believed in a pluralism of faiths, each suited to the particular spiritual requirements of the community or the individual in question. Provided there is common agreement on a very limited number of points, faiths of widely divergent character have passed as lying well within the federation of faiths known as Hinduism. According to Marxian historians, such a religious organization would be considered to be the logical superstructure of a productive system in which castes were graded into high and low, and occupations fixed in perpetuity along hereditary lines, so that they formed an interlocking mesh, with privileges permanently guaranteed to some and service perpetually to others. Whether such a view is justified or not is beyond our present concern. What is important in the present context is that in the caste system, different elements are encouraged to persist in their local, communal culture. So that cultural pluralism happens to be stabilized so long as various castes are bound to one another in mutual interdependence by traditionally fixed exchanges of goods and services.

Not only Marxians, but political thinkers of various schools have long looked upon this aspect of caste with varying degrees of misgiving. Many have described the system of hereditary occupations and of the pluralism of faiths as a bar to the growth of national unity in India, and of progress. Great reformers, who have however favoured the pluralistic character of faiths encouraged by Hinduism, have occasionally tried to distinguish the grain from the chaff; and they have recommended that while there should be no bar to a man's choice of occupations, there should be no ranking if all such occupations are necessary for the existence of society. One need not discourage pluralism in faiths, for that might turn out to be one of India's great gifts to human civilization. Vivekananda and Gaudhi were both ardent social reformers; and while both subscribed to the highest faiths of Hinduism,

they did not see any reason why unity should only be achievable through uniformity.

Others in India have been less clear on the subject. Every urgency of demand for national integration, when political unity has been threatened, has been attended by demands of uniformity. There can be a natural, as well as a forced growth of uniformity. It may be hard to distinguish between the two, yet it is not an impossible task.

If the threat to national integration in India becomes more insurgent through the growth of sectional interests, as during the reorganization of the provinces, or if India is threatened by involvement in war, it is more than likely that the exigencies of political organization may encourage a standardization of culture much sooner than slow, conscious educative endeavour may succeed in bringing about. But the question may well be raised, may we not, in that very process, when the needs of war become more clamorous than those of peace, do away in our haste with an element of Indian culture which may have an abiding value for mankind? Historically, one need not forget that nationalism arose in Europe partly as a result of the needs of war, whether that was waged in the political or the commercial field. Its contribution to progress need not be minimized; it liquidated smaller barriers which divided man from man within the nation states. But nationalism can also become a danger when it usurps to itself a superiority that every narrow-minded individual can also assign to himself or his small tribe.

In any case, let us at the moment do no more than draw attention to the fact that just as caste has been changing undoubtedly in Bengal in the field of men's economic activity, there is an indication that, on the level of its cultural superstructure, there are forces at work which tend to weaken its hold upon the mind of urbanized, politically conscious people, eager for change along the lines of the West. It is not enough to say that much is left over from the past, much remains to be done; it is also necessary to observe how much has been achieved even within the last fifty years in an

organization which served India economically and culturally for many centuries in the past.

A possible and perhaps significant line of enquiry might be to investigate what proportion of marriages among politically active persons follow the traditional and the reformed patterns; and if again there is any significant difference between parties belonging to different age groups. How again do parties fare if they are committed to programmes of social reform or otherwise?

Dr. Srinivas has indicated in his presidential address that the success of candidates in election was often due to the support which was given to them on considerations of caste. Caste rivalries had also their due share in determining the fate of candidates. While there is some reason to share the fear raised by Dr. Srinivas in his address, there is no reason to believe that, at least, in the sphere of politics, one need give way to despair. At least, in West Bengal, caste has played a more negligible role than in the neighbouring state of Bihar. One has to remember that both in Bengal as well as in Bihar political parties bearing an all-India character, like the Congress, the Socialist and the Communist parties, or the Jan Sangh and the Hindu Mahasabha have been guided by considerations other than caste in the choice of the majority of their representatives. Personal qualifications have been counted to be of more importance, even where caste has shaped choices to a certain extent. The steady growth of socially revolutionary ideology in India, which has been carried farther in the field of ideas than in the plane of action, has tended to welcome change than create further resistance to its advance.

Attention should be drawn here to a significant fact which also tends to prove that the social climate has been subject to serious alteration in recent times. If we pursue the history of non-conformist reformatory sects of the past, like those associated with the names of Chaitanya—Nityananda, or of Kabir or Nanak (and this may even be stretched back to the time of the Buddha and the Jaina Tirthankaras), whenever there was a revolt against caste, and men were drawn into a new brother-

hood on the basis of individual merits instead of birth, such groups slowly became converted, first into a sect, and eventually into a caste in which marriage was restricted to people of the same faith. So that, instead of weakening the bonds of caste, such revolts only succeeded in the end in adding one more to the number of castes which already existed.

This phenomenon had its parallel in the economic field also. Brahmins in southern Orissa, near Berhampore, are popularly divided into Danua, Sarua and Halua sections. The first word comes from *dana*, gift ; and those Brahmins who live purely on the gift of others, because they are scholars or priests, belong to this group, and are considered highest in rank. *Saru* in Oriya stands for taro. Many Brahmins have taken to its cultivation, do all the farm labour personally, with the hoe and other implements, but do not actually set their hand to the plough ; they belong to this class. The ploughing is done by hired labour. Sarua Brahmins raise large crops of taro in irrigated fields and are prosperous farmers ; they are however considered to be a kind of degraded group. Yet, there is a third class who use the plough with their own hand, and are known as Halua ; the word being derived from *hala*, plough. As far as is known, these groups separated by occupation and rank, do not intermarry.

The difference that we notice in the present century and a half is that deviations do not give rise now to an endogamous division as in the past. In the field of religious reformation, the Brahmo Samaj very nearly did ; but it was saved from that fate because, as some state, the urbanized Hindu in Bengal has to all intents and purposes become like a Brahmo, while there has been no bar to intermarriage between the reformed and orthodox sections. Economically, adaptations to modern conditions are now so much on a personal, individual basis, that this does not lead to the formation of a new caste as in former times, when adjustments were quite often on a group basis.

It may be claimed that the speed with which demographic movements take place today, or the fact that those accused of deviation from standard caste practices may easily find refuge

by migration to cities or plantations in distant states has been chiefly responsible in preventing the growth of new castes as in the case of mediaeval or ancient India. But a different explanation can also be suggested.

Buddhism, in its later developments, took the shape of a revolt against caste. So did the reformatory movements of the 15th and 16th centuries. But none of them had an alternative plan for the economic reorganization of the country. The hereditary guild organization of caste continued to function as before ; so that its prestige and success in everyday life led to its perpetuation elsewhere also. Any deviation in the superstructure was trapped by being made to contribute an additional member to the already elaborate panel.

It is here suggested that, just because the impact of the modern world came to India chiefly in the form of an alternative system of production (no matter that it was colonial in character to the dominant interests of British imperialism), that the chief basis of loyalty to the caste system was knocked down very nearly to completeness. In an atmosphere where caste assemblies, or the village communities formed of members of many castes have lost all power to regulate the economic life of its members, and when movements have become freer and easier on account of modern means of transportation, deviant practices do not lead today to the formation of new castes, *i.e.* of endogamous groups marked by commonnesses of social and ceremonial practice. This fact alone, of all others, may tend to prove that caste is not just the same as before ; and that economic associates did form a significant and vital part of the system as a whole.

Some have suggested that the weakening of caste has been due to the spread of Western education. This seems to be a wrong reading of the case. Islam operated in India for nearly a thousand years with its message of human equality, both in the cities as well as the villages. But the success of caste's economic substructure was so marked that even Mohammedan converts in rural India continued to pay homage to it by a virtual allegiance to the hereditary pattern of endogamous guilds. It might be argued that Western education alone would not have

succeeded in weakening the system if it were not accompanied by a nearly total reorganization of the economic life of the country. It has been the success of the alternative form in the productive field, even though it was bolstered up by political power, that has helped in dealing a fatal blow to caste ; and the consequent narrowing down of its field of operation, as in the state of West Bengal.

The situation is undoubtedly unequal in other states of India ; but if things have changed in ample measure even in rural Bengal, then with parallel technological and educational processes affecting other states, the social situation may reveal parallel favourable trends in the future. And here we come to the sociologist's responsibility in regard to questions of vital interest in the society in which he himself lives. When one is assailed by the urgency of desirable reform, the apparent slowness of change may reasonably give rise to a feeling of despair. But a sociologist may test against the objective character of observed facts how far his despairs, or even his hopes, are justified. And it is exactly in this field that the need of caution and of scientific rigour should be recognized to be of more value than any other qualification.

In West Bengal, as in every other state in India, the extension of Community Development Schemes and of National Extension Services has been throwing up newer and newer challenges to students of social science. India has been passing through unplanned and planned economic changes across all the time of which we have any dependable record. Some of these have been induced by growth of population and consequent fragmentation of land under existing laws of proprietorship ; some by the extension of modern means of transport ; some by movements of population under the attraction of gain elsewhere ; and some lastly have been the result of consciously directed processes of education and purposeful changes in the fields of technology and of law. Claims have been made by the sponsors of the last, planned processes that the accompanying results have been, more or less, satisfactory. It is in this field that social scientists can bring their technique of investigation into operation, and help planners, whether

official or non-official, in an assessment of the results of their undertakings.

Of late, studies of villages, or of the interlacing pattern into which India's rural inhabitants are tied to groups outside the village through the operation of markets or of caste organizations, have been increasing in frequency. These have often attained high levels of objectivity, and yielded valuable pictures of structural relationship in various fields of life. But the field of operation can be, and also needs to be, extended a little further.

Some villages lie within the operational area of Community Development Projects or of National Extension Services. If couples of villages are chosen in which population, facilities of transport, and occupational structure are more less the same, and if one of them lies within the Community Development block, and another near enough, but outside, and if records are kept of various social, economic and even land-use data in both, so that the two villages can be re-surveyed after the lapse of, say five years, then we will have at our disposal a better means of assessment of the achievements of planned organized endeavour. For, the difference in change between the results obtained from comparable pairs of villages may be assigned to the credit of the planned operation.

It is necessary to exercise an element of caution in the choice of villages for control. For a village inhabited by hitherto socially neglected untouchable castes, or of aboriginal tribes, may show a much more favourable response to governmental attention, or to a social reformer's zeal, than a village with a more sophisticated population. The ideal conditions of comparison and control may be hard to attain. But, within certain reasonable limits, it may be possible to obtain favourable sets of the above kind. The use of scientific method in the assessment of social change, whether in the field of economic life in India, or of social reform connected with the ranking of occupations or of intermarriage even, may provide opportunities to our anthropologists and sociologists when they can be of real use and service to the society from which they draw their sustenance.



Even social sciences are operated by men who may be moved by strong emotions of sympathy or of antipathy towards particular values. But it is the gift of science that even while one may burn with the desire for reform, one can be objective, and make objective knowledge, gained through a growing perfection of observational technique, to serve the ends of hope rather than despair. A skilled physician may have an intense desire to help his sinking patient to recovery. Yet, it is his scientific training which prevents him from being either elated or depressed by the temporary character of his patient's response, so that the results of his strictly scientific investigation may give him the courage and ability to achieve the result on which his mind is set. It is this mental attitude of the skilled physician which can help us in raising the level of social sciences in India so that eventually they begin to shape national policies as well as help education, so that those policies, whether official or non-official, may in the end raise the nation from the miserable condition under which we are all living today.

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# FURTHER STUDIES ON THE FREQUENCY OF MULTIPLE BIRTHS IN INDIA\*

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## *Introduction*

IN an earlier publication (Sarkar, 1943-44) it was shown on the basis of statistics from 45 hospitals from various parts of India that twin births occurred in the ratio of 1 : 79.0 (1.27%) while triplets in the ratio of 1 : (82.5)<sup>2</sup>. The total number of twins and triplets born was 3,967 and 46 respectively in a total number of 313,313 pregnancies. The latter figure included some total births also, since some hospitals could not give the abortion figures and as such their total pregnancies could not be worked out. The period involved in the above enquiry was, in the majority, between the years 1936-42. Five Bengal hospitals were able to provide data for a longer period ranging between 10 to 16 years.

It was also pointed out in the above publication that there was a considerable lack of uniformity in the hospital statistics regarding multiple births. Total births sometimes included abortions and sometimes did not. Multiple births were sometimes counted as a single birth since only one mother was involved and sometimes more than one according to the number of babies born to the mother.

With a view to enlarge the above statistics and also to examine the variation in multiple births if any, further data were collected from 49 hospitals from various parts of India for the period 1942-47. It appears, however, that the hospitals have not yet arrived at a uniform method of recording the multiple births.

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\*Read before Indian Science Congress, Madras, 1958, Anthropology section.

*The Data*

In order to enlarge the previous data on multiple births a questionnaire was sent to 71 hospitals in the various parts of India. The questionnaire desired information regarding births, still births, abortions, number of twins, triplets and quadruplets along with their sex combinations, for each year during the period 1942-47. Out of the 71 hospitals only 49 responded to our query. The year 1942 was again included in the present study on two grounds. Firstly, in the previous study a homogeneity in the period of years could not be obtained. Even in the present study this has not been fully achieved since out of 49 hospitals, 5 have reported for a lesser period. Secondly, the year 1942 was also employed as a check against the hospital statistics. The earlier study contained 1942 statistics for 22 hospitals out of the 49 hospitals represented in the present study. Figures, for at least 6 out of the 22 hospitals, who have reported to us twice their data for 1942, appear to differ.

TABLE 1  
*Multiple Births from Hospitals.*

Sr. No.	Hospitals.	Period.	Total Preg-nancies.	Twins	%	Tri-plets	%
1.	Chittaranjan Seva Sadan, Calcutta	1942-47	21,879	284	1·56† 1·30	8	0·04
2.	Chetla Maternity, „	„	7,234	70	0·97	—	—
3.	Lady Dufferin, „	„	12,168	151	1·16† 1·24	—	—
4.	Ramakrishna S. S. Pratistan, „	1943-47	12,311	111	0·99† 0·90	—	—
5.	Baldeodas Maternity, „	„	20,221	212	1·27† 1·05	4	0·02
6.	Nilratan Med. Coll., „	1942-47	8,197	43	0·57† 0·52	—	—
7.	Howrah General, W. Bengal	„	4,078	18	0·44	2	0·05
8.	Imambara, Hooghly, „	„	1,785	7	0·39	—	—

† % from earlier study.

Sr. No.	Hospitals.	Period.	Total Preg-nancies.	Twins.	%	Tri-plet.	%
9.	C. M. S. Med. Mission, Nadia, W Bengal	1942-47	2,415	29	1'46†	1'20	1 0'04
10.	Suri, Birbhum, „	„	347	2	0'58	—	—
11.	Jackson Med. School, Jalpaiguri, „	„	823	16	1'94	—	—
12.	Khulna, East Pakistan,	„	905	5	0'55	—	—
13.	Ganesh Das, Shillong, Assam	„	1,171	10	0'26†	0'85	—
14.	B. W. Med. School, Dibrugarh, Assam	„	1,526	31	2'03	—	—
15.	Duchess of Teck, Patna, Bihar	„	3,415	49	1'37†	1'43	—
16.	Marwari Hindu, Banaras, U. P.	„	1,213	7	0'58	—	—
17.	Lady Dufferin, Allahabad, U. P.	„	4,016	45	1'12	—	—
18.	Lady Dufferin, Lucknow, U. P.	„	5,187	69	1'26†	1'33	—
19.	Lady Lyall, Agra, U. P.	„	12,348	156	1'56†	1'26	1 0'008
20.	Sarojini Naidu, Agra, U. P.	1946-47	1,381	19	1'37	—	—
21.	St. Stephens, Delhi	1942-47	8,634	95	1'10	—	—
22.	Victoria Zenana, Delhi	„	7,047	88	1'28†	1'25	1 0'01
23.	D. J. Z., Srinagar, Kashmir	1945-47	2,292	37	2'17†	1'61	1 0'04
24.	Zenana, Jaipur, Rajasthan	1942-47	5,771	65	1'13	1	0'02
25.	Umaid, Jodhpur, „	„	4,007	63	1'71†	1'57	—
26.	Women's Mission, Ajmer, „	„	2,689	27	1'00	—	—
27.	S. M. V., Surat	„	2,170	26	1'53†	1'20	—
28.	S. M. S. Trust, Baroda	„	15,791	111	0'70	2	0'01
29.	Lady Lansdowne, Bhopal, M. P.	„	4,425	65	1'47	1	0'02

† % from earlier study.

Sr. No.	Hospitals.	Period	Total Preg-nancies.	Twins	%	Tri-plets	%
30.	Jubilee Mem., Khamgaon, M. P.	1942-47	1,492	17	1·78†	1·14	1 0·07
31.	Nimar, Khandwa, „	„	2,357	26	1·19†	1·10	— —
32.	Lady Dufferin, Amraoti, „	„	3,154	42	1·33	—	—
33.	Lady Hardinge, Akola, „	„	3,848	41	1·11†	1·07	— —
34.	Mure Mem., Nagpur, „	„	5,313	87	1·50†	1·64	— —
35.	Lady Elgin, Jabalpur, „	„	2,890	40	1·38	—	—
36.	Daga Mem., Nagpur, „	„	5,091	73	1·88†	1·43	2 0·04
37.	Women's, Chhindwara, „	„	1,011	11	2·02†	1·09	— —
38.	St. Margaret's, Poona	„	6,367	48	1·23	1	0·02
39.	Cama & Aibless, Bombay	1944—48	19,319	187	1·21†	0·97	1 0·005
40.	Nowrosjee Wadia, „	1942—47	41,968	422	1·36†	1·01	2 0·005
41.	Kasturba, Madras	„	27,590	296	0·86†	1·07	2 0·007
42.	Rainy, „	„	7,804	76	1·29†	0·97	2 0·03
43.	Christian Med. Coll., Vellore	„	6,190	39	0·63	—	—
44.	Women & Children's, Madura	„	6,006	50	0·83	1	0·02
45.	Holdsworth Mem., Mysore	„	4,212	26	1·16†	0·62	1 0·02
46.	Vani Vilas Mat., Bangalore	„	38,276	451	1·01†	1·18	4 0·01
47.	Women & Children, Trivandrum	„	18,724	199	1·06	1	0·005
48.	Victoria, Visakapatnam, Andhra	„	2,410	21	0·87	—	—
49.	R. B. Med. Coll., Cuttack, Orissa	„	2,548	29	1·14	—	—
Total			382,016	4,122	1·08	41	0·01

† % from earlier study

Table I shows the multiple births reported to us by the different hospitals. Abortion figures have been added to the total births to arrive at the figure of total pregnancies. Six out of 49 hospitals could not furnish their figures for abortion.

TABLE II  
*Sex Combinations in Twins and Triplets*

Sr. No.	Hospitals	T W I N S					T R I P L E T S						
		2 males	1 male, 1 female	2 females	Sex ?	Total	3 males	2 males, 1 female	1 male, 2 females	3 females	Sex ?	Total	
1.	Chittaranjan, Sevasadan, Calcutta	135	42	107	—	284	—	—	2	5	1	—	8
2.	Chetla Maternity, Calcutta	20	36	14	—	70	—	—	—	—	—	—	—
3.	Lady Dufferin, „	49	50	52	—	151	—	—	—	—	—	—	—
4.	Ramakrishna S. S. Pratistan, „	41	38	32	—	111	—	—	—	—	—	—	—
5.	Baldeodas Maternity, „	78	65	64	5	212	—	—	2	1	1	—	4
6.	Howrah General, W, Bengal	10	6	2	—	18	—	1	—	1	—	—	2
7.	Imambara, Hooghly, „	3	4	—	—	7	—	—	—	—	—	—	—
8.	C.M.S. Med. Mission, Nadia, „	8	10	9	2	29	1	—	—	—	—	—	1
9.	Suri, Birbhum, W. Bengal	—	1	1	—	2	—	—	—	—	—	—	—
10.	Jackson Med. School, Jalpaiguri,	6	4	6	—	16	—	—	—	—	—	—	—
11.	Khulna, East Pakistan	2	1	2	—	5	—	—	—	—	—	—	—
12.	B. W. Med, School, Dibrugarh, Assam	10	9	12	—	31	—	—	—	—	—	—	—
13.	Duchess of Teck, Patna, Bihar	14	16	22	—	49	—	—	—	—	—	—	—
14.	Marwari Hindu, Banaras, U. P.	3	3	1	—	7	—	—	—	—	—	—	—
15.	Lady Lyall, Agra, „	52	48	56	—	156	—	—	—	—	—	—	—
16.	„ Dufferin, Lucknow, „	28	14	27	—	69	—	—	—	—	—	—	—
17.	Victoria Zenana, Delhi	29	14	23	2	88	—	1	—	—	—	2	3
18.	St. Stephens, Delhi	27	38	30	—	95	—	—	—	—	—	—	—
19.	Zenana, Jaipur, Rajasthan	17	25	23	—	65	1	—	—	—	—	—	1
20.	Umaid, Jodhpur, „	20	25	18	—	63	—	—	—	—	—	—	—
21.	Women's Mission, Ajmer, „	1	6	20	—	27	—	—	—	—	—	—	—
22.	S. M. V., Surat	12	7	7	—	26	—	—	—	—	—	—	—
23.	S. M. S. Trust, Baroda	42	35	31	3	111	—	—	—	2	—	—	2

Sr. No.	Hospitals	T W I N S				Total	T R I P L E T S				Total
		2 males	1 male, 1 female	2 females	Sex ?		3 males	2 males, 1 female	1 male, 2 females	3 females	
24.	Lady Lansdowne, Bhopal, M.P.	21	19	25	—	65	—	—	1	—	1
25.	Nimar, Khandwa, „	13	8	5	—	26	—	—	—	—	—
26.	Jubilee Mem, Khamgaon, „	3	9	5	—	17	—	—	1	—	1
27.	Mure Mem. Nagpur, „	26	35	26	—	87	—	—	—	—	—
28.	Lady Elgin, Jabalpur „	16	14	10	—	40	—	—	—	—	—
29.	Women's, Chhindwara, „	3	3	5	—	11	—	—	—	—	—
30.	St. Margarets, Poona	30	20	28	—	78	—	—	1	—	1
31.	Cama & Albless, Bombay	62	47	78	—	187	1	—	—	—	1
32.	Nowrosjee Wadia, „	129	135	153	5	422	—	1	—	1	2
33.	Kasturba, Madras	101	94	101	—	296	—	—	—	—	2 2
34.	Rainy, Madras	25	26	25	—	76*	—	1	—	1	2
35.	Christian Med. Coll., Vellore	11	13	15	—	39	—	—	—	—	—
36.	Women & Children's, Madura	26	12	12	—	50	—	—	1	—	1
37.	Holdsworth Memorial, Mysore	9	10	7	—	26	—	1	—	—	1
38.	Vani Vilas Mat., Bangalore	138	116	125	72	451	—	—	1	1	2 4
39.	Women & Children, Trivandrum	64	62	73	—	199	1	—	—	—	1
40.	Victoria, Visakapatnam	5	8	8	—	21	—	—	—	—	—
Total :		1236	1128	1260	109	3783	4	7	10	10	7 38

It will be seen from the above table that 49 hospitals show 382,016 total pregnancies with 4,122 twins, 41 triplets and 1 quadruplet. This gives a twin frequency of 1.08% (1 : 92.7) and a triplet frequency of 0.01% (1 : 9318). The quadruplet birth occurs in 1 : 382,016 (0.0003%).

The above ratios do not change when the 1942 statistics, mentioned above, are excluded, in order to compare the present data with those of our earlier study, wherein 1942 data for 22 hospitals were already included. The figures are :

3,835 twins in 355,514 pregnancies—1.08%  
 38 triplets " " —0.01%  
 1 quadruplet " " —0.0003%

The earlier (1943-44) ratios were 1.27% for twins, 0.01% for triplets and 0.0003% for quadruplets. It appears that twin births have decreased from the period 1936-42 to the same of 1943-47. It will be apparent from Table I where the comparative ratios for the above two periods are available for 26 hospitals. Of these, 19 show a decrease in frequency while 7 show an increase.

The decrease and increase are also borne out by the application of Weinberg's differential rule on the three types of sex combinations of twins given in Table II. The number of twins for each of the sex combinations is :

		Actual ratio
Two males	1,286	1.14
One male, one female	1,128	1
Two females	1,260	1.12
	3,674	

The actual sex ratio, of nearly 1 : 1 : 1, is similar to that found in the earlier study. The differential rule yields 38.6% monozygotic twins and 61.6% dizygotic twins. In the earlier study, based on 2,495 twins, the percentages of monozygotic and dizygotic twins were found to be 35.3 and 64.7 respectively. It appears that during the two periods there has been an increase in the frequency of monozygotic twins and a corresponding decrease in that of the dizygotic twins.

Whether the above decrease in twin births is real or not needs confirmation by larger statistics. Some fluctuation in the twin births is, however, evident. In the earlier study, it was pointed out that a satisfactory ratio of twin birth cannot be derived unless the total pregnancies are raised to at least a million births. This might have been possible, if all the 71 hospitals approached, had given their statistics. We require more data to know the actual state of affairs.

Thanks are due to Mrs. Tulika Sen for her kind help in preparation of this paper.

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# PHYSICAL ANTHROPOLOGY OF THE NAGAS OF ASSAM

by GEORGES OLIVIER (PARIS),

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*(Received on 3rd January, 1958)*

**I**N 1956 a German ethnologist, Dr. H. E. Kaufmann carried out under difficult conditions anthropometric measurements of the Nagas of Assam. Owing to his specialisation in Ethnology, he did not publish them, but gave them to Prof. Vallois of Paris, who handed them over to me for study. The analysis of these documents came out in the Bulletin of Anthropological Society of Paris in 1955 and could not perhaps reach the anthropologists in India who are still interested in this subject.

It, therefore, seemed proper to me to publish this study, in a condensed form, in an Indian Journal.

## *Nature of the documents*

Dr. Kaufmann studied 194 Nagas, 166 men and 28 women.

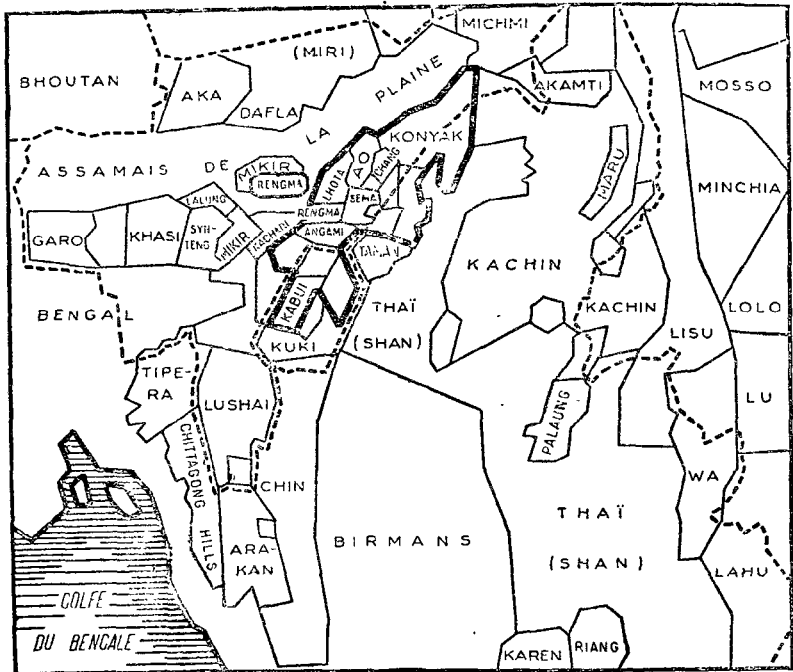
The latter, being too small in number, have not been taken into account.

The men are composed of 94 Koniak, 38 Sema, 26 Ao and 8 Angami. These tribes differ from one another as previous works have shown. Yet the global results of these 166 men only will be reported below (The details can be found in the article published in French.)

## *The peoples of Assam*

The documents studied have a meaning only when they are compared with mensurations of the other populations of Assam. For this, the peopling of this country through History and

Proto-History has to be taken into account first of all. It seems to have been brought about in the following way :



Ethnographic map of the principal populations of Assam,

1. The first inhabitants appear to be the Khasis and the Syntengs belonging to the Mon-Khmer linguistic group.

2. Then came the invasion of the Bodo-group (Garo, Kachari, Tippera, Lalung, Rabha, Mech, "hunters of heads" like the Nagas, from the Western mountains (Bod : Tibet).

3. The Nagas came afterwards ; they were also natives of North-Eastern Tibet, but seemed to have reached Assam by the South, driven back by the Kuki-Luschai-Chin populations who followed them (and this movement follows its course even to this day).

To explain this curious circuit, one can imagine that an emigration North to South has been followed by the actual moving from South to North.

4. In the beginning of the Christian era, small groups of Bengalees spread into the plains of Assam at several times.

Let us bear in mind the hypothesis one has uttered that "Pre-Vedic Aryans" (a paradoxical term?) had crossed the North of India and Assam to send out a swarm to Western China and to the Indochinese peninsula.

5. Lastly, at the beginning of the XII century, a tribe Thai (or Shan), the Ahom, invaded Assam coming from Burma, became the ruler of the whole country and gave its name (Ahom = Assam).

There are a number of tribes who do not enter into the above account and whose anthropological position is not well defined.

In fact it must be distinguished :

(a) The Assamese of the plain, who form mixed population of Bengalees and Thais.

(b) The mountainous tribes, who alone interest us here, but whose anthropological study is too fragmentary to enable one a reconstruction.

The documents of Dr. Kaufmann are deficient and an useful comparison between the physical anthropology of the Nagas, the Eastern Tibetans and the other mountaineers of Assam is rather difficult.

### *Analysis of the Documents*

The results arrived at from the analysis of the measurements are condensed in the Table below which give rise to the following considerations.

1. The stature is at the limit between the medium and short height and is the same for the majority of mountaineers of Assam. The stature is a little lower among the Koniak Nagas (158.3 cm.) but not so low as among the Khasi (Gupte) and the Mifi (Risley) (156.4 cm.)

2. The cephalic index is mesocephalic ; it is almost brachycephalic among the Ao (80.9). This mesocephaly is common to all the Assamese, excepting the Thais (Waddel) who are brachycephalic (82.3) and the Synteng (Risley) who are dolichocephalic (72.9).

3. The facial index shows a low and almost large face. It is the lowest facial index found in the whole South East Asia and one must look at it as a characteristic of primitivity.

This index is above all low among the Koniak (78·5). Unfortunately one cannot compare with other mountaineers of Assam, because these measurements are, very often, not measured by the authors.

4. The nasal index corresponds to a medium nose (mesorrhine) and this is a rule among the mountaineers of Assam (excepting Bodo). It is important to note that the Koniaks are platyrrhines (index 84·1), but the Angamis are not (on an average of course). The bridge of the nose is often convex (21·5%) more often than that in the other populations of South East Asia.

5. The Cormic index (ratio of sitting height to stature) is high and corresponds to a long trunk, as in all populations of the Yellow face.

6. The hairs are often straight, seldom wavy; curly hair is exceptional; therefore in this respect there is no betrayal of negritoid influence.

7. The mongolian form of the eyes have not been noted by Dr. Kaufmann because they are constant with a variable intensity. The skin is brownish-yellow in the average.

*Measurements and Indices of the Nagas.*

Measurements,	No.	Average.	S. D.	V.
Stature	166	1,590·9 ± 4·45	57·4	3·6
Sitting height	166	846·9 ± 2·65	34·1	4·02
Head breadth	165	146·9 ± 3·65	4·59	3·13
Head length	164	187·5 ± 0·446	5·71	3·05
Cephalic perimeter	166	541·8 ± 1·077	13·9	2·56
Morph. Face height	165	112·2 ± 0·171	2·20	1·96
Sup. Face height	163	71·2 ± 0·308	3·94	5·54

*Measurements and Indices of the Nagas*

Measurements	No.	Average.	S. D.	V.
Physiog. Face height	162	179·7 ± 0·721	9·18	5 10
Nose height	166	48·6 ± 0·213	3·50	8 8
Bizygomatic breadth	166	140·45 ± 0·343	4·42	3·15
Min. frontal breadth	164	101·2 ± 0·348	4·46	4·41
Bigonial breadth	166	102·6 ± 0·467	6·02	5·87
Nose breadth	166	39·8 ± 0·213	2·75	6·92
Mouth breadth	166	51·9 ± 0·318	4·10	7·90
<i>Indices</i>				
Cornic index	166	53·3 ± 0 1205	1·55	2 91
Cephalic index	165	78·25 ± 0·238	3·06	3·91
Morphol. facial index	165	79·65 ± 0·327	4·20	5·27
Sup. facial index	163	50·6 ± 0·226*	2·88	5·69
Physiog. facial index	162	128·1 ± 0·518	6·60	5·15
Trans. cephalo-facial index	164	95·7 ± 0·265	3·40	3·55
Gonio-facial index	165	72·9 ± 0·319	4·10	5·63
Fronto-facial index	164	68·8 ± 0·255	3·27	4·75
Fronto-zygomatic index	164	71·9 ± 0 247	3·16	4·40
Nasal index	166	81·9 ± 0·605	7·81	9·55
Naso-labial index	166	76·05 ± 0·482	6·21	8·17

*Conclusion*

The Nagas of Assam are a population belonging to the Yellow race whose characteristics are :

- Sub-medium height,
- Mesocephalic head,
- Euryprosopic face,
- Mesorrhine nose.
- Brownish yellow skin,
- Neat mongolian form of the eyes.

None of the subjects showed any negritoid characteristics. All seem to be primitive yellows who can be connected (accord.

ing to the admitted classification) either to the Indonesians (attenuated yellows) or to the dolicho-mongol type, or to the Proto-Mongols.

In fact, the anthropological problem, put forward by the present study lie in their parenthood either to the Tibetans or to the other mountaineers of Assam or to the whole Indo-Chinese peninsula (Mois of Annam, for example); indeed one classical hypothesis, relative to the peopling of this peninsula, bring one part of the inhabitants (the ancestors of the Khmers in particular) from the lower ranges of Tibet and a part of the tribes of India (the Mundas, for example) appear to be of the same origin).

There is not enough data for comparison which can confirm this view.

Moreover, the isolation of these populations may bring about external morphological changes. A genetic inquiry should be carried out in parallel with classical physical anthropology.

# TRAINING OF A BHUMIJ MEDICINE-MAN

by SURAJIT SINHA,

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( Received on 18th March, 1958 )

**S**AHEBA Bhumij, aged about thirty years, of Pathardih, a village at the foot of the Dalma Hills in Chandil P. S., Singhbhum (Bihar) was in a communicative mood in the evening of fifth November, 1950 and told me in some details about how he got his training as a medicine-man from his Guru (teacher) and, also, about what he had learnt from him.

When he was nearly twenty years old, along with a few others of his age group in his village, Saheba decided to learn some magical spells (*mantras*) from the veteran medicine-man of the village named Jhanpura who belonged to the Bauri caste. As is customary in these areas, the training of the neophytes began on the sacred day of *Rohin*, that is, the thirteenth day of *Jaistha* (May-June). Along with fifteen other persons (all male) belonging to the Bhumij, Sunri and Napit castes, Saheba went to the courtyard of the Guru in the evening. At the instruction of the Guru the trainees (*chhyalas*) sat encircling the mud platform with the sacred *tulsi* plant planted on it (*tulsa than*), situated near the centre of the courtyard. Each of them held a stick vertically and loosely between the two palms. Then the Guru began singing magically potent songs, known as *Ramoj Gan*, so that the trainees might get the favour of some guardian spirit who would possess them on the spot. Some of those songs run as follows :

*akra Jage Duari Jage*

*Age Jage Gnan Goram*

*Tarpar Jage Tulsa Than*

*Jhantilere Debta Dambura Baje*

*Chhyala Lorishna Chorishna*

*Bauhashiner Shangey Shuishna*

*Ladi Dharey Shan Khairi Hiley Na Doley Na*

*Sat Bahin Hasen Khalar Khalar.*

In free translation :

[The *akra*<sup>1</sup> keeps awake, the entrance door awakens,  
*Gnan Goram*<sup>2</sup> is the first to rise

Then awakens *tulsa than*

You clean with a broomstick and the rattle of the gods  
will be heard.

Oh disciple, do not move and do not stir

Do not sleep with your younger brother's wife.

The *shan kharika* weeds by the river side

They do not move they do not stir

The *Sat Bohins*<sup>3</sup> gingle with *khalar khalar* sound].

When the atmosphere of the courtyard got surcharged with the monotonous tune of the chants the Guru began mentioning the different potential presiding spirits, one after another, in the form of chants as follows :

*Kurchi Phuler Debta Rasana Rasika*

*Jadi Dalma Pat Haito Tabe*

*Akhani Chalare Phalaito*

*Tenhire Bidhua Deota.*

[ In the name of the spirits of *Rasana Rasika*

Living in Kurchi flower ( I swear )

Had it been the spirit of *Dalma Pat* ( hill )

Then the disciple would be possessed

I swear on your name, you wicked spirit ].

As the Guru went on naming the various spirits, one after another, the trainees became possessed with them in succession. Those who became possessed, violently shook their heads and their sticks and some of them also jumped hither and thither in an erratic manner. Those possessed by *Hanuman Bir*, in particular, jumped like monkeys. The synchronisation of these signs of possession along with the invoking of a particular spirit by

<sup>1</sup> *Akra* : The courtyard of the Guru where the disciples take their training.

<sup>2</sup> *Gnan Goram* : Presiding deity of the village.

<sup>3</sup> *Sat Bohin* : The mischievous female spirit known as 'Seven sisters'.



the Guru, indicated that the disciple was possessed by that particular god. Our informant Saheba, for example, got possessed by the following spirits in succession namely, *Dalma Pat*, *Marang Buru*, *Ma Manasa*, *Ma Kali* and *Baghut Bir*. For five days from the above date, the trainees assembled at the Guru's courtyard every evening, where *Ramoj Gan* and possessions by spirits continued to be the main features. On the evening of the sixth day, the critical rite of *Kansa Thala* was performed. The trainees sat encircling the *Tulsa Than* platform and the Guru sat at the middle facing east. He placed a bell-metal cup, containing a copper coin in it, in front of him. He began singing *Ramoj* songs and, one by one, each of the trainees came to him possessed by his guardian spirit and began to shake his head violently. Saheba Bhumij too had his turn. He sat in front of the Guru severely shaking his head while the latter stretched his two hands keeping the palms close together. Saheba held the metal cup on the ground between his teeth and placed it on the palm of his Guru. This process was repeated three times. After this the Guru ordered : "Now present your spirits to me". Saheba uttered a typical sound—"Shu-u-u-uk" and said : "Lo there I see Dalma Pat." It appeared before him in the form of the Dalma Hills. The Guru then said : "Let others also appear if you have met them". Then Saheba announced in the same manner that he could see the spirits of Marang Buru (appeared in the form of a hill), Ma Manasa (in the conventional form of clay image), Ma Kali (in the conventional form of clay image) and Baghut Bir (in the form of a tiger). After this the Guru said : "*Taholey Shaley Ghora Bandhun*" (so tie the horse in the stable). At this pronouncement, which indicated that the association of the neophyte with the respective presiding deities, got the magical sanction of the Guru, Saheba fell unconscious for some time. This happened in the cases of other trainees also.

From the following evening the trainees assembled at the courtyard of the Guru to learn *mantras* (magical incantation of spells). First of all the *mantras* of *Saraswati* and *Ma Manasa* were taught :

*Saraswati :*

*Saraswati Saraswati Libbor Barane  
 Galey Gajamti Muktar Har  
 Tumi Lao Ma Phul Pushper Bhar  
 Amakey Dao Ma Bidyar Bhar  
 Ei Bidya Thakuk Mukhey Sabakar.*

## In free translation :

[ Saraswati, Saraswati – you are deep blue  
 The necklace of *gajamati* adorns your neck  
 You take the burden of flowers that I give you  
 Give me the burden of your knowledge  
 Let this learning remain in the mouth of all ].

*Manasa :*

*Astikashya Munirmata Bhagini Vasuki Statha  
 Jaratkaru Munirpatni Manasa Debi Namaste<sup>1</sup>*

## In free translation :

[ You are mother of sage Astika  
 Vasuki is your sister  
 You are the wife of sage Jaratkaru  
 Oh Manasa Debi, I salute you ].

Saheba was asked to get the above two *mantras* by heart before learning anything more. A few days later when he went to the Guru to give the test of his first phase of learning by recounting the chants, his recitations were found to be incorrect by the Guru. The Guru, as is the convention, chastised Saheba severely and said that he would repeat the same *mantras* only once more and if the trainee could not learn even then, he should give up the thought of becoming a medicine-man. Saheba took the warning to heart and took special care to memorise the chants and he was successful in his next interview with the Guru.

In course of time Saheba learnt the following *mantras* given below along with their free translations :

<sup>1</sup> It is a typical Sanskrit *sloka* known all over Brahminical India.

(1) *Ga-Bandhar Mantra* ( Spells for the safety of the body from evil influences ) :

- (a) *Chit Chit Gache Chat Chat Lom Re Go*  
*Amuker Ga Hrashwa Hay Na*  
*Amuker Ga Bandchhin*  
*Ajika Rat Dupahar*  
*Kalika Rat Tin Pahar*  
*Larbi Nai Charbi Nai*  
*Shil Pathar Buke Bajjra Haiye Thak*  
*Sil Chandan Dhanra Pinra*  
*Bin Gnasthay Kar Bandhi*  
*Mara Palay Gobgobaye*  
*Bhut Palay Kichkichaye*  
*Sahebar Ga Bandchhin*  
*Ajika Rat Dupaharey*  
*Kalika Rat Tin Pahar*  
*Larbi Nai Charbi Nai*  
*Shil Pathar Buke Bajjra Haiye Thak.*

[*Chat chat* hair hangs from *chit-chit* plant  
 The body of "so and so" does not diminish  
 I encircle the body of "so and so" with magic  
 To-day at midnight  
 And to-morrow at the third quarter of the night.  
 You don't move, you don't stir  
 You remain still as a stone pebble.  
*Sil chandan* and *dhanra pinra*  
 I tie the magic arrow without knot  
 The witch escapes with *kichkich* sound  
 The ghosts run away with *gabgab* sound  
 I encircle the body of Saheba with safety magic  
 To-day at mid-night  
 To-morrow at the third quarter of the night.  
 You do not move, you do not stir  
 You remain still as the stone pebble].

- (b) *Gharer Ley Bahira Anginar Par*  
*Ei Ange Jey Korbek Gha*  
*Khaisey Parbey Hat Pa*  
*Rakhsha Kara Ma Manasa Kali.*

[ You come out of the room into the courtyard  
 He that dares to injure this body  
 His hands and feet will fall apart  
 You save me oh, *Ma Manasa Kali* ].

(c) *Am Gachhe Am Bandha*  
*Am Jhar Jhar Karey*  
*Apar Bidyar Ganth Banchhin*  
*Shey Ki Kortey Parey*  
*Nim Gachhe Nim Bandha*  
*Nim Jhur Jhur Karey*  
*Dahin Bidyar Gainth Badhchhin*  
*Shey Ki Kortey Parey.*

[ Mango fruits are tied to a mango tree  
 Mango fruits sound *jhar jhar*  
 I tied the magic of all other spells  
 Let me see what he can do.  
*Nim* fruits are tied to a *nim* tree  
*Nim* fruits sound *jhur jhur*  
 I tie the evil magic of the witch  
 Let me see what he can do ].

2. *Chok-Shul Jharar Mantra* (Spells for curing eye-sore) :

(a) *Chok Shul Chok Shul Chandan Putli*  
*E Chok Shul Key Jharey*  
*Guru Jharey*  
*Gurur Shikkhay Ey Chok Shul Jhairechhi*  
*Kahar Dohai*  
*Bap Bir Bara Bir Narsing Gurur Dohai*  
*E Chok Shul Jhairechhin Urayechhin*  
*Uirey Ja Sat Samundra Lankar Par*  
*Ichli Machher Pithey Kunj*  
*Nai Rakat Nai Punj*  
*Dilam Phunkley Dukh Pira.*

[ Eye-sore, eye-sore a bundle of sandal wood paste  
 Who drives away this eye-sore ?

The Guru drives away the eye-sore  
 I have driven away the eye-sore with the training  
 from my Guru

On Whom do I swear ?

I swear on Bap Bir, Bara Bir and Narsing Guru

I have driven away this eye-sore

I have blown away this eye-sore

You go away beyond the seven seas to Lanka.

There are scales on the back of *ichli* fish

There is no blood nor any pus

The pain and troubles have been blown away ].

(b) *Chair Koina Pukurti*

*Moidhyete Bhelagachh*

*Aishey Boishlo Suga*

*Sugar Kathay Sugi Hashey*

*Sugir Kathay Suga Hashey*

*Ei Chok Shul Jhairechhin Urayechhin*

*Uirey Ja Sat Samundra Lankar Par*

*Ankh Phuinklam Kuli Phuinklan*

*Ei Ankh key Phunkey*

*Guru Phnkey*

*Guru Shikhhay Ami Phuinklam*

*Ei Chok Shulke Jhairechhin Urayechhin*

*Uirey Ja*

*Uirey Ja Sat Samundra Lankar Par-*

[ The tank is four sided

A *bhela* tree stands at its centre

The *shugi* bird laughs at the talks of *shuga*

And the *shuga* laughs at the talks of *shugi*

I have driven away this eye-sore

I have blow it away

You go away beyond the seven seas to Lanka

I blow on the eye, I blow on a cuckoo

Who is it that blows ?

The Guru is blowing.

I blow as taught by the Guru

I have blown away this eye-sore  
 I have driven away this eye-sore  
 You fly away  
 Fly away beyond the seven seas to Lanka ] .

3. Spell for curing pain in the stomach ; to be uttered along with the blowing of breath on common salt<sup>1</sup> :

*Nun Nun Nun Purber Nun*  
*Nun Nun Nun Uttarer Nun*  
*Nun Nun Nun Pachhimer Nun*  
*Nun Nun Nun Dakhsiner Nun*  
*E Nun Anlo Key ?*  
*Iswar Mahadeb*  
*E Nun Pora Kakey Debo ?*  
*Amuk key*  
*Amuker Gaiye Haiyechhe ki ?*  
*Irshya, Bam, Baghri, Dehta Najar, Dahin,*  
*Churkin, Mara, Nashan.*  
*E Nun Pora Amuker Name Pairechhin*  
*Sita Sri Ramer Dohai*  
*E Nun Pora Amukke Diyechhin*  
*Nere Brishti Bhasma Uirey ja.*

[ Salt, salt, salt of the east  
 Salt, salt, salt of the north  
 Salt, salt, salt of the west  
 Salt, salt, salt of the south,  
 Who is he that brought this salt ?  
 He is Iswar Mahadeb.  
 Who is he, for whom I am blowing  
     *mantra* on the salt ?  
 He is "so and so".  
 What has happened inside his body ?  
 He is under the evil influence of the spirits of  
*Irshya, Bam, Baghri, Dahin,*  
*Churkin, Mara and Nashan*<sup>2</sup>.

<sup>1</sup> This practise is locally known as 'Nun Para'.

<sup>2</sup> These are names of various evil spirits.

I utter these spells on the salt in the name of  
 "so and so"

I swear in the name of Sita and Sri Ram  
 I offer this blowing of spells on salt to 'so and so'  
 Let the rains come and blow away the ashes ]

(b) *Nun Nun Karcha Nun*  
*Nun Nun Panga Nun*  
*Nun Nun Sidhha Nun*  
*E Nun Key Parey ?*  
*Guru Paren*  
*Gurur Shikhhay Ami Pairechhin*  
*Nere Brishti Bhashma Uirey Ja.*

[Salt, salt, *karcha* salt  
 Salt, salt, *panga* salt  
 Salt, salt, boiled salt  
 Who is he that blows on the salt ?  
 Guru blows on the salt  
 I have blown as taught by the Guru  
 Let the rains come and blow away the ashes].

4. Spell for the curing of stomach pain by uttering spell on water (*Jal Para*)<sup>1</sup> :

*Jal Jal Sarger Jal*  
*Porlo Pate*  
*Paterle Porlo Dale*  
*Daler Jal Parlo Mule*  
*Muler Jal Porlo Hawrite*  
*Hawrir Jal Parlo Batite*  
*Batir Jal Porlo Ghatite*  
*Ei Jal key Parey*  
*Guru Parey*  
*Gurur Shikhhay Ami Pairechhin*  
*Amukke Diyechhin Jal Pora*  
*Nere Brishti Bhasma Uirey Ja.*

<sup>1</sup> First of all some salt is kept in a leaf cup and is stirred with the finger while uttering *Nun Para Mantras* mentioned above. Then the same salt is dropped into water kept in a leaf cup. The *Ojha* or medicine man stirs this solution with his finger as he utters *Jal Para Mantra* and the patient is later on given this solution as drink.

[Water, water, water of heaven  
 It falls on a leaf  
 From the leaf it drops on the branch  
 From the branch it trickles down to the stem  
 Water of the stem pours into a ditch  
 Water from the ditch goes into an earthen pitcher  
 From the pitcher it gets into a cup  
 From the cup it goes into a bell-metal pot.  
 Who utters spells on the water ?  
 The Guru utters spell on the water.  
 I offer this *jal para* spell for "so and so"  
 Let the rains come and blow away the ashes].

5. Spells for making the babies cry and also for stopping the babies cry :

(a) *Kulhir Mura Bar Tala Satsho Dahiner Mela*  
*Tuin Shikhali Badhate Ami Shikhalam Kandate*  
*Kand Kand Re Chhayla*  
*Jadi Na Kandish*  
*Ishwar Mahadeber Matha Khabi.*

[Under the banyan tree at the beginning of the road  
 Seven hundred witches have gathered  
 You made it stop the cry  
 I make the child cry  
 Cry, cry, you child  
 If you don't cry  
 You eat the head of Iswar Mahadev].

Against the above spell the following one is uttered :

(b) *Kulhir Mura Bar Tala Satsho Dahiner Mela*  
*Tuin Bhai Shikhali Kandate*  
*Ami Shikhalam Badhate*  
*Badh Re Badh Chhayla*  
*Jadi Re Chhayla Na Badhish*  
*Iswar Mahadeber Matha Khas.*

[At the junction of lanes under *bar* tree  
 Seven hundred witches have gathered



You make the child weep  
 I stop its cry  
 Stop your cry, oh child stop it  
 If you do not stop the cry  
 You eat the head of Iswar Mahadeb].

6. *Bhut Chharanar Mantra* (Spell for driving away the ghosts) :

*Baghe Baladay Jurilam Hal*  
*Shonar Langal Rupar Phal*  
*Tai Uthlo Kalidal Mati*  
*Tai Bunlam Sorishar Muth*  
*Shey Shorishar Gachh Hoilo Tal Praman*  
*Pat Hailo Kula Praman*  
*Phul Hailo Halud Baran*  
*Phal Hailo Bael Praman*  
*Shorisha Poray Ki Ki Lage*  
*Bhut Lage Bhut Mari*  
*Dahin Lage Dahin Mari*  
*Jugin Lage Jugin Mari*  
*Binash Lage Binash Mari*  
*Penchri Lage Penchri Mari*  
*Aro Thake Ghare Ghare Debi Tader Mari*  
*Ke Mare Guru Mare*  
*Gurur Shikhhay Ami Mairechhin*  
*Chhar Chhar Be Bhut Shiggir*  
*Jadi Be Bhut Na Chharish Shiggir*  
*Tor Bap Akhon Pouchhechhe.*

[I put the yoke on a bullock and a tiger  
 The plough is of gold and the share is of silver  
 They turned up the black muddy soil  
 I sowed mustard seeds in the same soil  
 The mustard plants grew like palm trees  
 The leaves were big as winnowing fans  
 The flowers were like *bael*  
 Do you know what these mustard seeds can  
 drive away ?

If *Bhut* comes it drives away *Bhut*  
 If witches come it drives away the witches  
 If *Jugin* comes it drives away the *Jugin*  
 If *Mara* comes it drives away the *Mara*  
 If *Nash* comes it drives away the *Nash*  
 If *Binash* comes it drives away the *Binash*  
 If *Penchri* comes it drives away *Penchri*  
 And all other spirits that are found in different houses  
 All those are driven away.  
 Who is he that drives these away ?  
 Guru drives these away  
 I drive away as taught by the Guru  
 Go away you *Bhut* go away  
 If you do not fly away right now  
 You must remember that your father has come here].

The above spell is uttered with blowing of breath on mustard seeds kept in a potsherd in front of the person possessed by the *Bhut* or ghost. Then the seeds are put on fire and the smoke is held near the nose of the patient so that the ghost may fly away being unable to withstand the smell. Similar spells along with the blowing of breath on mustard seeds are uttered for driving away influences of *Dahin* or witches.

7. *Chalan Katar Mantra* (Spell for averting the evil magic, *chalan*, of a mischievous magician) :

*Ari Kaita Kaita Ailam Bade*  
*Chhota Chhota Guni Pariya Abasta*  
*Gunir Chalaney Chalan Kati*  
*E Chalan Key Kate*  
*Guru Kate*  
*Gurur Shikhhay Ami Kati*  
*Chalan Chalan Mathay Ja*  
*Ganthey Gainthey Chalan Katay Ja*  
*Ram Lakshmaner Dohai*  
*Chalan Kaitey Ja Gainthey Gainthey*  
*Khar Bekar Re Kaitlam Bade*  
*Chhota Chhota Guni Pariya Abasta*

*Dahin Phunki Dahin Mari*  
*Shera Gunir Chalan Kati*  
*Kahar Dohai ?*  
*Sita Sriramer Dohai Diye E Chalan Kaithchhin*  
*Chalan Kaitey Ja Gainthey Gainthey.*

[I came to the *baid* land cutting dykes  
 Small sorcerers fall to the ground  
 I cut (counteract) the spell of the sorcerer  
 Who cuts this magic spell ?  
 Guru cuts this magic spell  
 I cut it as directed by the Guru  
 Let the magic spell, the magic spell die out  
 Let it be cut at each knot  
 I take oath in the names of Ram and Lakshman  
 Let the magic spell be cut at each knot  
 I cut the *khar* grass and the weed in *baid* land  
 The small magicians fall to the ground  
 I blow on the witch, I strike at the witch  
 I cut the magic spell of the big sorcerer too  
 On whom do I swear ?  
 In the name of Sita Sriram I swear  
 I have cut the magic spell  
 Let the spell be cut at each knot].

8. *Sap Jharar Mantra* (Spell for counteracting the poison of snak-bite) :

*Aijo Tuilam Lohar Basar*  
*Khaitey Dongshilo Sutar Chanchal Haiye*  
*Tor Nam Kire Sapa ?*  
*Kishto Abatarer Dohai*  
*Badhabi Na Na Korbi Gha*  
*Mayer Aignate Bish Korlam Pani*  
*Shebale Shubale Bali Durga*  
*Kanete Kon Goali*  
*Rakat Parey Punj Parey*  
*Mayer Aignate Bish Korlam Pani.*

[I raised the steel-framed room to-day too  
 It bit in the cot in form of a thread  
 What is your name, oh snake ?

I swear in the name of Kishto Abatar  
 You do not dare to kill or to make a sore  
 By the order of Holy Mother I turn the poison  
 into water

I take the name of Sree Durga  
 The *goali* (shepherdess) whispers into my ears  
 Blood oozes out and pus comes out  
 By the order of Holy Mother I turn the poison  
 into water].

9. *Rasta Chalar Mantra* (Spells for avoiding snake-bite while walking at night) :

(a) *Megh Andhari Gura Rati*  
*Kon Kon Jati*  
*Titi Chiti Choumalanti*  
*Anginay Barhaley Pa*  
*Hari Hari Mathay Liya Bish Panchame*  
*Payer Talai Khaiye Ja.*

[*Megh andhari gura rati*  
*Jati, titi, chiti* and *chaumalanti* snakes  
 I set the footstep in the courtyard  
 Oh Hari, in your name I take the five venoms  
 on the head  
 Let all poisons go away from below the foot].

(b) *Bhim Dhorlo Kodai*  
*Arjun Chhante Path*  
*Janha Ichha Tanha Jao*  
*Saper Mastakay Diye Pa*  
*Garur Chalanti Path*  
*Rakkha Karen Ma Manasa Kali.*

[Bhim holds the hoe  
 Arjun cleans the road  
 Go away wherever you wish  
 Stepping on the hood of the snake  
 There goes Garur along the road  
 Ma Manasa Kali save you].

10. *Debta Chharar Mantra* (Spell for averting possession by an evil spirit) :

*Kulhi Kulhi Bule To  
Kon Debta Aishey  
Mairbo Ma Manasar Lath  
Baijbek Kapaley  
Apnar Guney Apni Tari.*

[It roams about the village lanes  
Who is this evil spirit ?  
I shall strike him with the stick of Ma Manasa  
It would hit him in the forehead  
I break him with my own power].

11. *Ku-Katar Mantra* (Spell for averting mischievous spells of others) :

*Ku Kati Gun Kati  
Ei Ku Key Kate  
Guru Katey  
Gurur Shikhhsay Ami Kaitechhi  
Ku Katai Ja.*

[I cut the evil spell I cut its power  
Who cuts this evil spell ?  
Guru cuts it  
I cut it as trained by the Guru  
Let the spell go away].

12. *Ban Jharar Mantra* (Spell for counteracting invisible magic arrows) :

*Ban Ban Ban Sarishar Ban  
Ban Ban Ban Til Ban  
Ban Ban Ban Birhi Ban  
Ban Ban Ban Mug Ban  
Ban Ban Ban Kurti Ban  
Ban Ban Ban Jonhar Ban  
Ban Ban Ban Kheri Ban  
Ban Ban Ban Gundli Ban  
Ban Ban Ban Marua Ban  
Ban Ban Ban Bheja Ban*

*Ban Ban Ban Jalan Ban*  
*Ban Ban Ban Pocha Ban*  
*Ban Ban Ban Khar Ban*  
*Ban Ban Ban Hin Hin Ban*  
*Ban Ban Ban Jhem Jhemi Ban*  
*Ban Ban Ban Chandol Ban*  
*Ei Ban Key Jharey*  
*Guru Jharey.*  
*Guru Shikhhay Ami Jhari*  
*Ei Ban Jhaireschhin Phuinkeschhin Uraiyechhin*  
*Uirey Ja.*

[The arrow, the arrow, the arrow of mustard seed  
 The arrow, the arrow, the arrow of *gunja* seed  
 The arrow, the arrow, the arrow of *til* seed  
 The arrow, the arrow, the arrow of *birhi* seed  
 The arrow, the arrow, the arrow of *mug* seed  
 The arrow, the arrow, the arrow of *kurti* seed  
 The arrow, the arrow, the arrow of *kheri* seed  
 The arrow, the arrow, the arrow of *gundli* seed  
 The arrow, the arrow, the arrow of *marua* seed  
 The arrow, the arrow, the arrow of *bheja* seed  
 The arrow, the arrow, the arrow of *pocha* seed  
 The arrow, the arrow, the arrow of *khar* seed  
 The arrow, the arrow, the arrow of *hin hin* seed  
 The arrow, the arrow, the arrow of *jhem jhemi* seed  
 The arrow, the arrow, the arrow of *chandol* seed  
 Who is he that drives away these arrows ?  
 Guru drives away the arrows.  
 I drive them away as taught by the Guru  
 I have driven away and have blown away these arrows  
 Let them now fly away].

13. *Than Byatha Jharar Mantra* (Spell for healing pain in the nipples) :

*Byatha Byatha Than Byatha*  
*Ei Than Byatha Key Jharey ?*  
*Guru Jharey*  
*Gurur Shikhhay Ami Jahaireschhin*

*Uraiyechhin*

*Kahar Dohai*

*Bap Bir Bara Bir Narsing Gurur Dohaiy Diye*

*Ei Than Byathan Jhairechin Urayechhin*

*Uirey Ja Sat Samundra Lakar Par.*

[The pain, the pain in the nipples  
 Who is he that drives away the pain ?  
 Guru drives it away  
 I drive it away as taught by the Guru  
 I blow it away  
 On whom do I swear ?  
 On Bap Bir and Bara Bir  
 And also in the name of Narsing Guru  
 I have driven away this pain in the nipples  
 I have blown it away  
 Let it fly away beyond the seven seas to Lanka].

On the completion of his training, Saheba, Bhumij gave his Guru only a bottle of *mahul* liquor as his training fee. Saheba's relation with his Guru, however, did not end with this. Every year, in the month of *Bhadra* (July-August), *puja* (worship) of Ma Manasa, presiding goddess of snakes and also of magical spells, is done at the house of Guru. Along with other disciples of the Guru, Saheba contributes to this *puja* every year by paying a subscription of two rupees.

Going back to the various spells mentioned in the previous pages, we shall note that all of them are phrased in the regional dialect of 'Manbhumiya Bengali'. The main principles underlying the compositions of these spells are firstly, that forceful expression of the wish of the medicine-man brings about the desired effect through sympathetic magic and secondly that repetition enhances the magical potency of a spell. The spells contain only words of threat against the evil spirits ; no sign of supplication, or even of friendly negotiation, is marked with reference to these spirits. The medicine-man attains the required self-confidence to face the evil spirits by invoking the aid of his Guru who is magically more powerful than the disciples. The aids of some powerful deities such as Ishwar Mahadeb, Ram-Lakshman, Ma Manasa, Bap Bir, Narsing Bir

etc., are also sought by him. From the spells it appears that evil spirits are mainly those of *Bhut*, *Dahin*, *Jugin*, *Mara*, *Nash*, *Binash* and *Pechri*. They may attack human being by themselves or through the intermediary of a sorcerer or a witch.

Finally, it is important to point out that although the writer has come to know about these spells through his efforts at knowing the changing pattern of culture of the Bhumij tribe it is evident that the same elements of tradition are characteristic of the region rather than specifically of the Bhumij tribe. The social organisation of the training of the medicine-men and the clinetel relations of the practising medicine-men invariably include members of all or most of ethnic groups living in a village or in a group of adjacent villages.



# AN ANTHROPOMETRIC STUDY OF THE PAHIRAS OF MANBHUM, BIHAR

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## *Introduction*

THE Pahiras, (Ray, 1954) a little known tribe, inhabit the foothills and the slopes of the Dalma hills, which forms the boundary between the districts of Manbhum and Singhbhum. They are distributed in the villages of Khokro, Kuiani, Dhoboni, Chinti, Botai, Kadambera, Machabera, etc. of Manbhum district. They numbered 444 (males, 284 ; females, 160) according to the Census of 1941. Anthropometric data were collected by the author during the months of April-June, 1953 from Khokro, Kuiani, Dhoboni, Kadambera and Machabera. The following anthropometric measurements were taken on 80 male and 32 female adult Pahiras :

Stature, head length, head breadth, head height, bizygomatic breadth, bigonial breadth, nasal height, nasal breadth, nasal depth, least frontal breadth, upper facial height and total facial height.

The following indices have been worked out : cephalic index, breadth-height index, length-height index, upper facial index, total facial index, and nasal index.

All measurements were taken according to the technique described by Wilder. Martin's classification has been followed in the analysis of the data.

## *The Data*

The statistical constants for the two sexes are given in Tables I—IV.

TABLE I

*Statistical Constants of measurements in cm. (males)*

Measurements.	Max.	Min	Mean	Standard deviation.	Co-efficient of variation.
Stature	163·6	132·2	152·23 ± ·73	5·71 ± ·45	3·75 ± ·29
Head length	19·2	16·4	18·02 ± ·08	0·69 ± ·05	3·82 ± ·30
Head breadth	14·8	12·6	13·53 ± ·04	·42 ± ·03	3·10 ± ·24
Head height	13·5	10·2	11·89 ± ·09	·88 ± ·07	7·86 ± ·58
Nasal height	5·3	3·6	4·47 ± ·52	·47 ± ·04	10·51 ± ·83
Nasal breadth	4·3	3·3	3·76 ± ·03	·28 ± ·02	7·44 ± ·58
Nasal depth	1·9	1·2	1·56 ± ·02	·16 ± ·01	10·25 ± ·81
Least frontal breadth	9·0	11·1	9·91 ± ·63	·57 ± ·01	5·75 ± ·45
Bizygomatic breadth	13·9	11·1	12·73 ± ·09	84 ± ·07	6·59 ± ·52
Bigonial breadth	10·9	8·0	9·43 ± ·08	·76 ± ·06	8·06 ± ·64
Upper facial height	7·1	4·6	5·75 ± ·07	·66 ± ·05	11·47 ± ·90
Total facial height	12·1	9·1	10·31 ± ·08	·72 ± ·05	6·98 ± ·55

TABLE II

*Statistical Constants of indices (males)*

Indices.	Max.	Min.	Mean.	Standard deviation.	Co-efficient of variation.
Cephalic index	84·1	66·1	75·26 ± ·51	4·61 ± ·36	6·12 ± ·48
Length-height index	78·1	56·4	66·71 ± ·61	5·42 ± ·42	8·14 ± ·64
Breadth-height index	100·8	60·3	89·43 ± ·55	4·94 ± ·39	5·52 ± ·43
Nasal index	108·1	69·4	85·11 ± 1·0	9·01 ± ·71	10·58 ± ·83
Upper facial index	59·5	37·7	45·77 ± ·50	4·47 ± ·35	9·77 ± ·77
Total facial index	99·1	71·3	81·59 ± ·63	5·68 ± ·44	5·96 ± ·55

TABLE III

*Statistical Constants of measurements in cm. (females)*

Measurements.	Max.	Min.	Mean.	Standard deviation.	Co-efficient of variation.
Stature	151.2	135.2	142.42 ± .64	3.57 ± .45	2.43 ± .30
Head length	17.9	15.8	16.96 ± .09	.50 ± .08	2.93 ± .37
Head breadth	14.2	12.2	13.15 ± .09	.53 ± .07	3.91 ± .49
Head height	13.0	10.1	11.57 ± .12	.67 ± .08	5.82 ± .73
Nasal height	5.0	3.9	4.36 ± .04	.26 ± .03	6.05 ± .75
Nasal breadth	3.9	3.1	3.44 ± .04	.23 ± .03	6.69 ± .84
Nasal depth	1.7	1.0	1.34 ± .03	.14 ± .02	10.72 ± 1.34
Least frontal breadth	10.2	9.1	9.60 ± .05	.27 ± .03	2.82 ± .34
Bizygomatic breadth	12.8	11.4	12.03 ± .07	.37 ± .05	3.05 ± .38
Bigonial breadth	9.6	7.1	8.61 ± .09	.48 ± .06	5.61 ± .70
Upper facial height	6.4	5.0	5.73 ± .07	.39 ± .05	6.84 ± .86
Total facial height	10.8	8.7	9.80 ± .09	.52 ± .06	5.29 ± .66

TABLE IV

*Statistical Constants of Indices (females)*

Indices.	Max.	Min.	Mean.	Standard deviation.	Co-efficient of variation.
Cephalic index	88.0	72.2	77.78 ± .57	3.23 ± .40	4.16 ± .52
Length-height index	78.3	59.7	69.85 ± 1.27	7.20 ± .90	10.31 ± 1.29
Breadth-height index	99.2	74.8	88.07 ± 1.20	6.79 ± .85	7.71 ± .96
Nasal index	95.1	65.8	79.53 ± 1.27	7.31 ± .91	9.19 ± 1.15
Upper facial index	53.1	41.3	47.33 ± .53	3.01 ± .38	6.35 ± .79
Total facial index	90.6	61.3	80.54 ± .96	5.47 ± .68	6.78 ± .85

### Stature

It will be seen from Table V that 26.2% males and 96.8% females are very short in stature, while 68.7% males and 3.1% females are of short stature, 5.0% males are of the below medium

group. The mean stature of the male Pahira is  $152.23 \pm .73$  with the maximum of 163.6 cm. and the minimum of 132.2 cm. The female mean is  $142.42 \pm .64$  cm., the maximum and the minimum varying between 151.2 cm. and 135.2 cm. respectively. The male Pahiras are, therefore, 9.81 cm. taller than the females.

TABLE V  
*Classification of Stature.*

	Male (80)		Female (32)	
	No.	Percent.	No.	percent.
Very short (130.0-149.9)	21	26.2	31	96.8
Short (150.0-159.9)	55	68.7	1	3.1
Below medium (160.0-163.9)	4	5.0	—	—

### *Cephalic Index*

The mean cephalic index of male Pahira is  $75.26 \pm .51$  with the maximum of 84.1 and minimum of 66.1. The female mean value is  $77.78 \pm .57$ , the range of variation being between 72.2 and 88.0. Table VI shows that 56.2% males and 37.5% females are dolichocephalic, 32.5% males and 40.6% females are mesocephalic, while 8.7% males and 18.4% females are brachycephalic. The hyper-dolichocephalic (2.5%) and the hyper-brachycephalic (3.1%) head forms are found in low percentages among the males and the females respectively.

The mean head length of the male Pahira is  $18.02 \pm .08$  cm. with the maximum of 19.2 cm and the minimum of 16.4 cm., while the same in case of female is  $16.96 \pm .09$  cm. with the range varying between 15.8 cm. and 17.9 cm. The mean head breadth of the males is  $13.53 \pm .04$  cm. with the range of variation between 12.6 cm. and 14.8 cm. The mean female head breadth is  $13.15 \pm .09$  cm. with the maximum of 14.2 cm. and the minimum of 12.2 cm. The male head is, therefore, 1.06 cm. longer and 0.38 cm. broader in the average than the female. The female Pahira shows a much higher frequency of broad heads (21.5%) than the males (8.7%).

TABLE VI

*Classification of Cephalic Index.*

	Male (80)		Female (32)	
	No.	Percent.	No.	Percent.
Hyper-dolichocephalic ( -69.9)	2	2.5	—	—
Dolichocephalic (70.0-75.9)	45	56.2	12	37.5
Mesocephalic (76.0-80.9)	26	32.5	13	40.6
Brachycephalic (81.0-85.4)	7	8.7	6	18.4
Hyper-brachycephalic (85.5+ over)	—	—	1	3.1

*Length-height Index*

The mean length-height index of the male Pahira is  $66.71 \pm .61$  while that of the females,  $69.85 \pm 1.27$ . The range varies between 56.4 and 78.1 in the males and between 59.7 and 78.3 in the females. It will be apparent from the table that both male and female Pahiras are hypsicephalic in the majority, the percentages being 80.0 and 90.6 respectively. The orthocephalic element is found in 18.7% in the males and 9.4% in the females. The chamaecephalic element is present only in the males in low percentage.

The mean head height of the males is  $11.89 \pm .09$  cm. with the range varying between 10.2 cm. and 13.5 cm., while the same in case of female is  $11.57 \pm .12$  cm. the range falling between 10.1 cm. and 13.0 cm.

Although the male head height is 0.32 cm. higher than the female, the sexual difference is not so much marked as in the case of cephalic index.

TABLE VII

*Classification of Length-Height Index.*

	Male (80)		Female (32)	
	No.	Percent.	No.	Percent.
Chamaecephalic ( -57.6)	1	1.2	—	—
Orthocephalic (57.7-62.5)	15	18.7	3	9.4
Hypsicephalic (62.6- )	64	80.0	29	90.6

### *Breadth-height Index*

The mean breadth-height index of the male Pahira is  $89.43 \pm .55$  with the maximum of 100.8 and the minimum of 60.3. The female mean is  $88.07 \pm 1.20$ , the range varying between 74.8 and 99.2. In breadth-height index the majority of the Pahira, both male and female, is acrocephalic; their percentages being 73.7 and 50.9 respectively. Next to it comes metriocephaly which is found in 22.5% in the males and in 28.1% in the females. The tapeinocephalic element appears to be higher among the females (12.5%) than the males (3.7%).

The sexual difference in this index is not so much apparent as in the case of cephalic index.

TABLE VIII  
*Classification of Breadth-Height Index.*

		Male.		Female.	
		No.	Percent.	No.	Percent.
Tapeinocephalic	( -78.9)	3	3.7	4	12.5
Metriocephalic	(79.0 - 84.9)	18	22.5	9	28.1
Acrocephalic	(85.0 - )	59	73.7	19	50.9

### *Nasal Index*

The mean nasal index of the male Pahira is  $85.11 \pm .100$  while that of the female,  $79.53 \pm 1.27$ . The range varies between 96.4 and 108.1 in the males and between 65.8 and 95.1 in the females. It appears that majority of the Pahiras, both male and female are mesorrhine, the percentages being 53.1 and 68.8 respectively. Though mesorrhine nose occurs in the highest frequency, platyrrhine noses are also present in high frequency among the males (37.5%) and females (25.0%). Leptorrhine type of nose occurs in low percentages and it is met with more in females than males.

The mean nasal height of the male Pahira is  $4.47 \pm .52$  cm. the minimum being 3.6 cm. and the maximum 5.3 cm. The same for the female is  $4.36 \pm .04$  cm., the minimum being 3.9 cm. and the maximum 5.0 cm. The mean nasal breadth of

males is  $3.76 \pm .03$  cm. with the range varying between 3.3 cm. and 4.3 cm., while the same in case of females is  $3.44 \pm .04$  cm. which varies between 3.1 cm. and 3.9 cm.

The sexual difference is apparent in the high frequency of platyrrhiny (37.5%) among the males in comparison to 25.0% in the female. The higher frequency of leptorrhiny among the latter is also noteworthy.

TABLE IX

*Classification of Nasal Index.*

		Male (80)		Female (32)	
		No.	Percent.	No.	Percent.
Leptorrhine	(55.0-69.9)	1	1.2	2	6.2
Mesorrhine	(70.0-84.9)	43	53.8	22	68.8
Platyrrhine	(85.0-99.9)	30	37.5	8	25.0
Hyper-platyrrhine	(100 - )	6	7.5	—	—

*Upper facial Index*

The mean upper facial Index of the male Pahira is  $45.77 \pm .50$  with the maximum of 59.5 and the minimum of 37.7. The female mean value is  $47.3 \pm .53$ , the range varying between 41.3 and 53.1. In upper facial index 47.5% males and 43.8% females are euryne, 21.2% males and 46.8% females are mesene, while 27.5% males and 9.3% females are hypereuryne. Leptene and hyperleptene types occur only in the males with 2.5% and 1.2% respectively.

The mean upper facial height of the male Pahira is  $5.75 \pm .07$  cm with the maximum of 7.1 cm. and the minimum of 4.6 cm. The female mean value is  $5.73 \pm .07$  cm., the range varying between 5.0 cm and 6.4 cm.

The mean bizygomatic breadth of the male Pahira is  $12.73 \pm .09$  cm. with the maximum of 13.9 cm. and the minimum of 11.1 cm. While the same in case of female is  $12.03 \pm .07$  cm. with the range varying between 11.4 cm. and 12.8 cm.

In both length and breadth, the male upper face appears to be slightly longer (0.02 cm.) and boarder (0.70 cm.) than the female, which has caused a higher index (47.33) in the latter than the former (45.77). This is not, however, borne out by the total facial index.

TABLE X

*Classification of Upper Facial Index.*

		Male.		Female.	
		No.	Percent.	No.	Percent.
Hypereuryne	( - 42.9)	22	27.5	3	9.3
Euryne	(43.0 - 47.9)	38	47.5	14	43.8
Mesene	(48.0 - 52.9)	17	21.2	15	46.8
Leptene	(53.0 - 56.9)	2	2.5	—	—
Hyperleptene	(57.0 - )	1	1.2	—	—

### *Total Facial Index*

The mean total facial index of the male Pahira is  $81.59 \pm .63$  with the maximum of 99.1 and the minimum of 71.3. The mean female value is  $80.54 \pm .96$ , the range of variation falling between 61.3 and 90.6. It appears from Table XI that 46.2% males and 37.5% females are euryprosopic, 26.2% male and 25.0% females are hyper-euryprosopic while 18.7% males and 31.2% females are mesoprosopic. The leptoprosopic type occurs in low percentage among both the sexes.

The mean total facial height is  $10.31 \pm .08$  cm. in the males with the range falling between 9.1 cm. and 12.1 cm. The female value is  $9.80 \pm .09$  cm. with the maximum of 10.8 cm. and the minimum of 8.7.

In total facial height, the male face appears to be 0.51 cm. longer than the female, which is also the case in respect of the index.



TABLE XI

*Classification of Total Facial Index.*

		Male.		Female.	
		No.	Percent.	No.	Percent.
Hyper-uryprosopic	( -78·9)	21	26·2	8	25·0
Euryprosopic	(79·0-83·9)	37	46·2	12	37·5
Mesoprosopic	(84·0-87·9)	15	18·7	10	31·2
Leptoprosopic	(88·0-92·9)	7	8·7	2	6·2

### Conclusion

It appears from the above anthropometric data that the Pahira males are on the average short statured with dolichocephalic, hypsicephalic and acrocephalic head, mesorrhine/platyrhine nose and a broad face, while the females are very short in stature, the head form predominantly mesocephalic with a high element of brachycephaly, hypsicephalic and acrocephalic, nose predominantly mesorrhine with a higher element of leptorrhiny than males and the face medium to broad in type.

The two sexes appear to differ largely in stature and cephalic index. In the form of the nose the females appear to show a larger element of fine noses than males. In facial form the two sexes appear to differ more in the upper face than the face as a whole.

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## OBITUARY

PROF. HARAN CHANDRA CHAKLADAR,  
(1874-1958)

THE announcement that Prof. Haran Chandra Chakladar passed away on the 19th January, 1958, was received with sincere regret by everyone who had occasion to come in contact with him. Absolutely straight-forward with a seriousness of purpose and austerity in habit, he could win the unbounded devotion of those who worked with him. A great scholar, linguist, historian and anthropologist, burning with a zeal of patriotic fervour, Prof. Chakladar was one of those in whom was to be found the ancient ideal of plain living and high thinking.

Born in a small village, Dakshinpara, in the district of Faridpur (now in East Pakistan) in 1874, he graduated in 1896 and secured M. A. degree in the following year.

In the prime of his youth Prof. Chakladar came in contact with Sri Satish Chandra Mukherjee of Swadeshi fame and the saint Sri Sri Vijaykrishna Goswami. The two played a great role in shaping his future life and activity. It was at a time when Bengal, nay the whole of India, was feeling the pulsation of a great awakening: Swami Vivekananda was preaching his gospel of truth in the West and Sri Aravinda was stressing on the necessity of the purification of the soul. Sri Mukherjee wanted to give it a practical shape. His first step was to awaken in all a consciousness of the cultural heritage of the past and then to introduce a system of education which must be national in character and modern in outlook. With this object in view he founded "The Bhagabat Chatuspati" with Pandit Durgacharan Sankhya Vedantatirtha and a monthly organ the 'Dawn'. In all these, Prof. Chakaladar was his worthy lieutenant and the keen interest which he showed brought him a unique position in oriental scholarship in later days. Through the medium of the Dawn, he brought home to the reading public a

sense of appreciation of the cultural heritage of Ancient India and the condition of Bengal especially that of the peasantry in Bengal under foreign domination. A man of manifold interests, wide experience, remarkable linguistic equipment (Sanskrit, English, German, French, Italian and a number of local languages) and a meticulously careful worker, he was particularly well qualified to deal with the great task entrusted to him. His style was clear and incisive and he showed in everything he wrote, his command of the literature of the subject.

Besides being an active member of the literary section of the Dawn Society (founded in 1902), he worked hard for its industrial section and ran a store with a view to develop cottage industry and to popularise its output among the student community. And when the call for his wholetime cooperation came, he gave up his service in the Postal Department and joined the National Council of Education as one of its organisers and teachers in 1906. But in 1910 he severed his connection with the Council when he saw that his continuance would mean sacrificing his ideal which was so dear to him. Then he joined in succession as teacher, the Ripon College (1913-15), Bihar National College (1915-17) and again the Ripon College (1917-18), when he was invited to organise the department of Ancient Indian History and Culture of the University of Calcutta. On the opening of the department of Anthropology, Calcutta University in 1920, his services were requisitioned as one of the seniormost teachers of the Department. In these double capacities he made many valuable contributions which would be apparent from the list of articles appended herewith. He served the University of Calcutta for about two decades and worked for sometime as the Head of the Department of Anthropology. He retired from active service in 1937.

As an ideal Hindu of old he spent the later part of his life in studies and meditation. During this period he was for sometime in charge of an 'ashram' in Puri and retired from it only when his health did not permit him to continue any longer. May his soul rest in peace.

15th March, 1958  
Calcutta University.

T. C. Raychaudhuri.

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 PROF. H. C. CHAKLADAR

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## MISCELLANEOUS NOTES

### 1. A FIELD APPROACH TO PRIMITIVE TECHNOLOGY

The culture of a people may be defined as the sum total of the material and intellectual equipment, whereby they satisfy their biological and social needs and adapt themselves to the environment. The culture of any group of people involves two sets of phenomena. First of all, there are material objects which they manufacture in order to satisfy their wants, such as tools or implements, weapons, utensils, clothings, ornaments, houses and canoes as well as temples, idols, amulets and other objects, used for magico-religious purposes. The smaller objects of material culture are referred to as artefacts. Logically we should apply this term to all modifications of the material environment by the hands of man, including houses, temples, canoes, bridges and such alterations to the landscape as fortifications and systems of irrigation. But by convention the use of the term 'artefact' is usually restricted to the smaller objects of material culture which may be carried or handled by an individual. The study of the techniques by which objects of material culture are made, is known as Technology.

For procuring food, man employs such artefacts as hunting weapons, snares, traps, nets, fishhooks and lines, and agricultural implements, while he protects himself from the weather by erecting houses or tents or other shelters as well as by making clothings. The manufacture and use of the objects cannot be understood without reference to the matrix of social culture in which they occur—system of land tenure, the economic organisation of production, distribution and exchange, the exercise of authority and finally the religious and magical beliefs. On the other hand these elements of social culture are only comprehensible in their material setting of geographical environment and in relation to the objects of material needs of man are satisfied.

The study of primitive culture requires a specialised technique which lays emphasis upon the inter-relation of all

cultural facts. Primitive culture is not divided into discrete spheres of human activity such as economic, legal and technological, to the same extent as our own. It follows that such spheres as economics, law and technology cannot be studied in primitive society without reference to their relation to other aspects of culture. The work of primitive hands is but a tangible expression of primitive thought. Without running the risk of over-emphasising the importance of material things, it can safely be said that their study helps to illustrate the history of man's endeavour to adapt himself to or to utilise his environment, and the increasing complexity, specialisation and efficiency of his material aids may be regarded as indications, to some extent of his general progress, and of a trend towards his greater individual freedom. In studying any particular artefact we must try to understand the particular process of thought that led to its invention and manufacture and that was involved in its use, and also the degree to which it enables its maker to adjust himself to his environment. Implements are but the outward signs or symbols of particular ideas in the mind ; and the sequence, if any, which we observe to correct them together is but the outward sign of the succession of ideas in the brain. It is the mind that we study by means of these symbols.

There are yet other contributions which the subject can make, specially the light it may throw upon the history and the movement of peoples. Some peoples such as those of prehistoric times, are known to us, apart from skeletal materials, by the material objects which they have left. From these we can deduce much of their culture and of their wanderings. Even at present there are many tribes who have no written history. Yet something of their past may be revealed by an examination of their present methods of hunting or agricultural operations, dress, habitations, weapons, etc.

Man depends on various objects for his livelihood, comfort and luxury. These objects which have got material existence together with the tools or appliances, each necessary for producing these objects, are the subject matter of Technology.

Man requires food above everything else and production, preparation and preservation of food form the most important topic of Practical Technology.

General technological work may be taken into consideration in the field under the following headings :—

**I. Aim**—To learn how to observe things correctly.

**II. Ideal**—To describe in a manner so that a man who has never seen the object will be able to reconstruct the same from the given specimen.

**III. Realisation of the ideal**—

- (1) Divide the object into component parts.
- (2) State the material used in each part.
- (3) Give the dimensions of each part.
- (4) Note the junctions.
- (5) Sketch with scale or draw proportionately the object as a whole and if necessary different parts too. Drawing must be neat and not artistic.
- (6) Describe the decoration if any, where it is found.
- (7) Note the native preservative where the material is easily perishable.

**IV. Manipulation**—Give the manipulation of the object stating whether you depend for it upon the worker's knowledge or information.

**V. Function**—Indicate the function of the specimen as a whole and its component parts pointing out the source of knowledge or information as in the previous case.

But for a detailed study of the tools or appliances of the material culture of a people in the field the following informations about each and every specimen are advised to be recorded. From these not only the social and cultural status of the people but also the economic level of the people can be drawn up by the field-worker.

**1. Name of the specimen**—Under the heading the local term of the specimen is to be given together with

the English equivalent. It should also include an analysis of its parts in English with the commentary note on its derivations when needed. The names for the different parts are also to be recorded.

2. **Locality**—The place where the specimen is in use.
3. **People**—The type or group of people using it.
4. **Appearance**—One or more sketches of the specimen (proportionate drawing) should be given.
5. **Manufacture**—This section should be devoted to the data which contribute to ones understanding of the manufacture of the specimen as opposed to its use. Informations are to be classified under the following categories in this section :
  - (a) **Material**—out of which the specimen is constructed.
  - (b) **Construction**—This section should contain the technical details of the manufacture including a description of the physical movements involved on the part of the maker. The time requires for constructing the specimen should also be noted, if possible.
  - (c) **Variation**—under this heading are given the data on variations in materials, size and method of construction.
6. **Where made** (Place of making)—This category determines the place where the specimen is constructed. The principal distinction lies whether the work of construction goes in the open or in certain types of huts. When it is constructed in the house, the nature of the house is to be recorded.
7. **When made** (Time of making)—Under this heading the field-worker is to specify the appropriate weather, time of day and season for constructing the specimen.
8. **Maker**—This category primarily indicates the sex of one who manufactures the specimen. Age of



the person should be noted where it is particularly significant, so also any particular social qualification of the individual as maker should be noted.

9. **Use**—This section should be devoted to the data which contribute to ones understanding of the use of the specimen in contrast to its manufacture.
- (a) **Utility**—Under this heading a synoptic statement of the function or the use of the specimen is to be given.
  - (b) **Method of use**—Under this heading physical actions manifested by the user of the specimen as well as the physical results of using are to be noted.
  - (c) **Variation in use**—Various functions and uses of the specimens as well as variation in method of use are to be noted here.
  - (d) **Where used (Place of use)**—This category includes information about the nature of place where it is used.
  - (e) **When used (Time of use)**—Under this heading the field-worker is to record the appropriate weather, time of day and season for using the specimen.
10. **User**—Primarily the sex of the user of the specimen is to be noted.
11. **Length of Life**—Under this heading the approximate length of life of the specimen is to be noted i.e. its durability.
12. **Ownership**—Under this heading any proprietary rights which of a particular sex may have over a particular specimen ; where possible, the method of inheritance should be noted.
13. **Economic value**—In this section the actual market price of the specimen is to be noted.

28th February, 1958  
Calcutta University.

M. N. Basu.

## 2. THE FIFTY-SIXTH ANNUAL MEETING OF THE AMERICAN ANTHROPOLOGICAL ASSOCIATION A BRIEF REPORT :

The fifty-sixth annual meeting of the American Anthropological Association was held in Chicago in the last week of December, 1957. In point of its organisation, number of participants and the coverage of wide field of anthropology, the Chicago meeting is distinguished to be an outstanding one in the history of the association. The meeting was attended by about 1000 registered members, out of which 325 persons were on the programmes either giving papers, or participating as official discussants or presiding over different sessions.

Twenty-three symposia and forty-six sessions, organised in the four-day sessions, were devoted to area-studies—Africa, America, Mexico, New Guinea, India etc., and also to wide fields of theoretical interests—culture and mental health, culture and acculturation, culture area, religion, law, magic and folk medicines, kinship and social structure, evolution of man's capacity for culture, socialisation, ethnomusicology, value, applied and action anthropology, anthropology tomorrow etc. Even for fastidious as well as for specialised anthropologists, the meeting provided a huge cafeteria with a wide variety of choice. To an anthropologist from India, in addition to general interests, two types of sessions, one dealing with Indian anthropology and the other with the developmental or action programmes were evidently of absorbing interests.

The Chicago meeting marked the inauguration of a separate session on India which was presided over by Professor Nirmal Kumar Bose of Calcutta University. The meeting opened with a paper by the present author in which he brought out how the study of a sacred-complex of a traditional city can help the understanding of Indian civilisation, if studied in its extensions and cultural contents. Drawing illustrative materials from his field-work at Gaya, he brought out how the sacred specialists of Gaya were in structural relationship with the Hindu universe. Kathleen Gough, the official discussant of the paper, found the analysis of 'sacred network' extremely

useful for understanding the holistic nature of an indigenous civilisation. Jack Planalp, however, wanted a dynamic picture of the relationship of the sacred specialists with the Hindu universe. In his presidential comment, Professor Bose, supporting the findings contained in the paper, gave some other examples to illustrate the roles of the priests in developing the sacred unity in India.

In the second paper read, McKim Marriott proposed a technique for the study of caste ranking in India. Very succinctly he reviewed the complexity of the problems of caste—ranking which is reflected in the 'impasse' reached in all attempts made by Indian and American scholars in this direction. He indicated that a technical way out of this impasse may be found if one admits that disagreement may itself be an essential dimension of caste ranking. The way out, then, he suggested, would be through a systematic sampling of the varieties of community opinion. Such a community opinion might be gathered by interviewing and presenting moveable cards (each bearing the name of a caste) to a representative sample drawn from a village, or a city or a region. He demonstrated the applicability of this technique in assessing the caste ranking in Kishangari village (U. P.) and Wai town (Bombay), which could be represented graphically and statistically.

The technique helps elicit quickly a large amount of complex evidence in a fairly precise, yet holistic and naturally structured manner. The technique helps to project the diversity of views held by people who live within a caste hierarchy ; and at the same time provides some objective data which can be made the basis of increasingly exact analyses and comparisons in the field of social structure and value. Peter Rossi expressed his appreciation for the successful applicability of 'card method' in a complex situation like India. James Silverberg, however, felt the need for larger sample for making generalisation even on a regional scale.

Henry Orenstein reported about the traditional economic system existing in a Marathi village of Bombay state. It is a system of mixed relations among the castes of the community,

by which goods and services are regularly exchanged for agricultural products. The people call it the *baluta* system, which Victor Barnouw, in course of his discussion, suggested to call it *Jajamani* system with a view to compare it with the similar system in the North India.

In his interesting paper on rural-urban migration from an Indian village, Edwin Eames brought out the pattern of migration, some effects of migration on the village, and the commitment of individual migrants to both urban and rural residence. His materials were drawn from the study of Senapur village in Uttar Pradesh. Bernard S. Cohn in course of his discussion suggested the methodological need for studying the the village-migrants in urban situations as well.

The fifth and the last paper by Francis L. K. Hsu on Family and Religion : Two Basic Cultural Differences, was a subject of critical discussion. Attacking the broad generalisation of Kipling and Northrop who put India and China together as the 'oriental way of life, Hsu brought out facts especially from family organisation of the two nations to establish the diversities between the two. Gitel P. Steed pointed out several factual faults, and suggested not to make sweeping generalisations about India as a whole. Mandelbaum brought out the significance of generalisation and abstractions at various levels what students of civilisation have made. However, he found the paper lacking from the point of anthropological methodology. Professor Bose found the paper based on facts derived from the groups which do not represent all the complexities of India.

The other exclusive session on India was organised under the chairmanship of Professor Norman Brown, a scholar of Sanskrit from the University of Pennsylvania. The discussions were focussed on the analysis and understanding of certain linguistic and non-linguistic aspects of languages of India and Pakistan. Five papers were presented which were broadly related to three important questions : (1) the standardization and extension of regional and national languages, (2) the gaps between literary and colloquial standard language, (3) the relation between caste and language. Related to the last

category William Bright in his paper, Caste and Dialect in Mysore, attempted to establish a correlation between the amount of linguistic change manifested in a dialect and the social status of the people who speak it. William McCormack's paper, Social styles in Dharwar Kannada, attempted to present some of the methodological differences in the speech styles of Dharwar Brahmans, Lingayats, and members of the backward classes. These two papers were pointers to the interrelatedness of language and culture.

In addition to the above two sessions exclusively devoted to Indian anthropology, papers on India were discussed in other three symposia dealing with general theoretical and methodological problems in anthropology. In a symposium on Culture and Mental health, Morris Opler talked about Indian materials. On another symposium on Law and Social Change, Bernard Cohn reported about his findings on the problems of change as related to law in India. In another symposium on Regional and Integrative patterns in Asian societies, McKim Marriott and Bernard Cohn presented a joint paper on Networks and Centers in the Integration of Indian civilisation. The last paper, both substantive and theoretical, presented a methodological frame-work to look at the integrative functioning of networks and centers in traditional India at four generalised levels—all-India, region, sub-regions and local. Networks of economic, political, social and religious complexities can be understood in bringing about integration on different levels in a civilisation. Centers perform specialised functions and are typically the abodes of specialists. Field data derived from the sacred cities of Gaya in North India and Wai in South India were brought to bear upon the significance of sacred centers in Indian civilisation.

• The symposium held under the chairmanship of Melvin M. Tumin brought together two sets of anthropologists—applied or action anthropologists and 'purely scientific' anthropologists to discuss the development of interventionalism and applied sciences in anthropology. Surveying their developments, the first speaker, Lisa Peattie examined applied and action anthropology as having two roots. One is the element of concern and

of special knowledge arising out of the peculiar position of the anthropologist as a member of advanced civilisation studying a 'primitive' way of life. The other root may be seen as part of a general movement of 'social sciences away from the humanistic studies, and towards the model of the physical and biological sciences. Under the second model the applied anthropologist may be imagined as curing the ills of society through science, as a doctor of medicine uses science to cure the ills of the body. She pointed out : action anthropology is in part an attempt to treat interests disinterestedly. Applied anthropology tries to move back and forth between value-interest and disinterested consideration of relevant fact. Anthropology in action is suspended between these two poles and swings between them.

The other three papers that followed, presented reports of three welfare-research schemes as also three types of relationship, in terms of power-position between the government, people, and the anthropologists, and their respective roles.

Reporting on his experiences in Micronesia, Homer Barnett represented a type in which anthropologists are hired by the Government to advise the administrative officers on tribal matters. It is an example of colonial pattern of anthropology which has its root in colonial interests for administering the people. The other extreme type reported by Sol Tax works out such thing for the Indians largely as the Indians come to think of doing these things. He stands for 'complete self-determination', for the tribal people, the least interference by the administration on the anthropologists, and instead of imposing anything on any group, he believes in throwing alternatives to the people. He demonstrated, how these principles worked among the Fox Indian of Iowa, Holmberg with power in his hands, takes firmer hold of progress, material and ethical, and initiates steps that move Vicos (in Peru) in the direction of the good which he and many other people have defined.

In course of his comments, Robert Redfield admired a recent development in anthropology to reconcile or combine the scientific and the humane aspects of the anthropologist's nature

into a single operation contributing to both scientific knowledge and human welfare. He brought out two important questions of general anthropological interest. First, he found this development adding to anthropology a greater interest in process in small group dynamics, in what has been called 'mood' in relation to the relations between social groups, and in phenomena such as leadership and factionalism. But he found the papers lacking in making any observation about what has been learnt. They tell about a particular situation in which the intervener-anthropologist was engaged, there is not much in them that could be lifted out in form of general propositions as to the nature of things to be contributed to the inventory of social science knowledge.

The second question that he raised was about the value-position of an intervener-anthropologist. He agreed with Lisa Peattie that anthropologists do in fact draw value deductions from their science – even when they claim the impossibility of doing so on a logical basis. He was of the opinion that value-positions are necessary to take any action at all. However he accepted its negation as a good, sound, working principle for a man of action. Robert Redfield concluded his comments with the following words :

"I look at these new intervening anthropologists as fellow-men who have undertaken new difficulties and new responsibilities. So seeing them, I admire them. They have indeed shouldered a heavy double load.... but they know as we all do, that progress is a thorny and uncertain road".

22th January, 1958

University of Chicago,  
Chicago, U. S. A.

Lalita P. Vidyarthi.

### 3. SOME PLAEOLITHIC FINDS IN OLD DELHI

On the morning of 8th April, 1958 while taking a stroll in the Delhi 'Ridge Area' in front of the ruins of *Char Burja* mosque, lying within a mile of the campus of the University of Delhi, the writer's attention was attracted to a scraper,

made on a core of quartzite, lying on the ground, on the surface. This led the writer to quickly reconnoitre the area, in the course of which, three more palaeolithic types of implements,

Fig. 1

Fig. 2

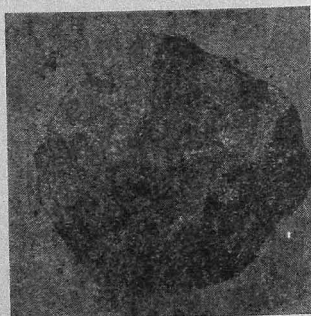
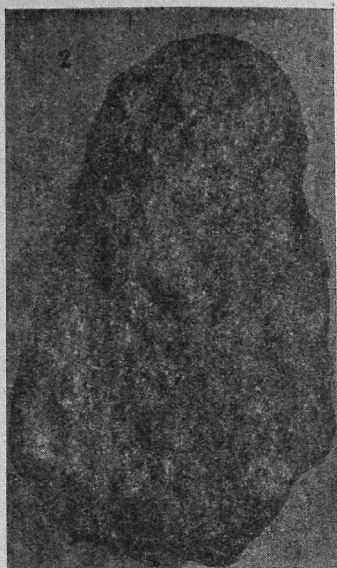


Fig. 3

Fig. 4

all made on quartzite, were discovered as surface finds. A brief description of the same implements is given below :



1. *Hand-axe* : Fig. 1 : Crude oval biface.  
Length (broken at the working end) 11.4 c.m.  
Breadth—7.8 c.m.  
Thickness—11.4 c.m.

The implement is considerably weathered and rolled.

2. *Cleaver* : Fig. 2 : U-shaped butt with broad convex working end : dorsal surface is convex and ventral surface is nearly flat.  
Length—13.8 c.m.  
Breadth (at the working edge)—8.5 c.m.  
Thickness—3.4 c.m.

The implement is considerably weathered and patinated.

3. *Round scraper (or chopper?)* : Fig. 3 : Bifacial ; dorsal surface is convex and ventral surface is nearly flat.  
Length—9.65 c.m.  
Breadth—9.2 c.m.  
Thickness—4.9 c.m.

The implement is considerably weathered.

4. *Disc* : Fig. 4 : Bifacial ; dorsal surface is convex and ventral surface is nearly flat.  
Length—7.5 c.m.  
Breadth—6.6 c.m.  
Thickness—3.2 c.m.

Thus all the above implements are core-tools and are bifacially worked. The importance of these surface finds is that they show the extension of the Peninsular Indian Hand-axe culture as far north as Delhi.

Systematic survey and digging of the above Ridge area in future seems to promise us interesting results. The tools have been handed over to the Prehistory Museum, Department of Anthropology, Calcutta University for detailed examination.

15th April, 1958  
Dept. of Anthropology,  
Govt. of India,  
Calcutta.

Surajit Sinha.

## BOOK REVIEWS

*The All-Knowing God*, By Prof. R. Pettazzoni, Methuen & Co Ltd., London, 1956, pp. 475. Price 60 sh.

The thesis of this study is that the attribute of omniscience is not originally implicit in the idea of deity generally, but organically connected with the peculiar nature of all-knowing gods, who are mostly sky-gods and astral gods. These gods are all-knowing because all-seeing, and all-seeing because they are luminous. An immense array of erudition is arranged to prove this theory. The complex idea of divine omniscience is examined in the multiplicity of its formulations among most peoples and races ; the chapters follow a geographical line starting from south central Africa, crossing over to the near East and Europe ; from there to the main part of Asia and ending at the extremity of South America. For us here in India, it is very striking that barring the aboriginals of Assam no reference has been made to the millions of aboriginal tribes in various stages of culture. The work of S. C. Roy is not even mentioned, nor are the many monographs referring to a great number of these races, including the low-caste Hindus, with their peculiar beliefs.

The author admits that the special field of divine omniscience is man and his conduct, especially his bad actions. So much so that besides seeing, God also hears everything and knows even the thoughts of men. If no preconceived theories were in the way, the conclusion might easily have been reached that it is the moral conscience of man which prompts him to the belief that God knows his inner thoughts and all about him, especially about his bad actions. According to the author the gods are all-knowing because all-seeing ; but we are just as much entitled to believe that the process starts with man being convinced that his god knows all ; the origin is therefore religious. In his primitive way of thinking, man expresses this by saying that god sees all, and hears all. And consequently he imagines god to have many eyes and ears.

C. Bulcke.

**The Nature and Function of Priesthood**, By E. O. James, *Thames and Hudson*. London, 1955, pp. 366. Price 25 sh.

Prof. E. O. James has given us in this book an objective and sympathetic study of the priesthood, from the comparative and anthropological point of view, and has endeavoured to analyse its function as an integral element in social structure. His conclusion is very flattering for the priesthood: its function "has always been that of consolidating and stabilizing the social and religious structures"; the priesthoods "have fulfilled a significant role as the guardians of sacred tradition and learning, the producers and preservers of archives and documentary records, the promoters of education, of literary and linguistic activities.....". Besides that the priesthood has been a socially cohesive force and has afforded a means of personal adjustment with the higher powers. The book ends with this eulogy: "In short, in a precarious, unpredictable and hazardous environment, the institution of the priesthood has enabled struggling humanity to advance on life's pilgrimage with hope and confidence and with a sense of security supplying a power to help and to heal, to renew and to reassure, to cohere and to conserve."

The chapter which analyses the function of the priesthood in primitive society and distinguishes between the Shaman, the Magician and the priest is of necessity very sketchy and leaves out primitive society in India altogether.

C. Bulcke.

**Aperçu d'un demi-siècle de travaux scientifiques à l'école Française d'Extrême-Orient**, By L. Malleret. *France-Asie, Saigon, Viet-nam*.

This little volume of 42 pages surveys the scientific activity of the Ecole Française d'Extrême-Orient during the last 57 years. During this time the school has published 140 volumes, 25 of which since 1950. This survey deals successively with Cambodia, Laos, Viet-Nam, the hill-tracks of Indo-China, Japan, China, Tibet, India, Siam, Burma and Indonesia.

C. Bulcke.

**Man in the Beginning: The story of our own origins, By William Howells, G. Bell and Sons Ltd., London, 1956.**

This work of Professor Howells gives in a small compass the story of the evolution of man and his early steps in adjusting himself to his environment. The ease with which he wields his facile pen on this exceedingly complex subject shows great mastery over the entire subject. Beginning not with history or even pre-history, he takes the story back to natural history. Human beings emerge from nature and even though they are different from nature their connections with it are enduring. In course of his very interesting narrative, Professor Howells has brought in examples from primitive societies scattered all over the face of the earth.

The book however is meant primarily for the beginners in Anthropology or for the general reader. There is such a huge store of material to pick and choose that a balanced account is difficult to produce. But even if there are some angularities and inconsistencies they do not matter very much for contradictions may be found even in one culture. It is to Professor Howells' credit that he has attempted and successfully accomplished a digestive interpretation and condensation; a kind of processing through which all the work of the professional must pass before reaching the general reader.

Sachchidananda.

**Korea Tomorrow, Land of the Morning Calm, By Kyung Cho Chung, The Macmillan Company, New York, 1956, pp. XV + 384, Price \$ 5.95.**

Korea '*Land of the Morning Calm*' is the problem child of the United Nations. The author has dispassionately and critically considered the problems that face the country to-day. He has described the history and geography of the country in details, he has explained the country's social organization and cultural patterns, he has analysed the country's economy and finally he has reviewed the political situation up-to-date all to enable the reader to appreciate the problems. He forcefully points out that the Korean problems were created by major powers and that if the responsible powers are truly concerned for the fate of Korea, surely an acceptable settlement can be found.

H. D. Ghose.

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