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MAN IN INDIA

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CLAN ORGANIZATION AMONG THE GARO OF ASSAM

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D. N. MAJUMDAR

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Abstract : This study highlights the clan organization of the Garo. It describes the characteristic features of Garo clans. It shows the relation of clans with larger groups of clans known as *chatchi*. It will also be seen here how the processes of fusion and fission have acted and reacted in bringing about the present shape of the Garo clan organization. The most important aspect involved in these processes is the *chanrima* practice, by which two clans recognize a bond of unity and mutual obligation.

THIS study is based on investigations extending over a decade among the Garo of Assam. The Garo are widespread in Assam and the adjacent districts of East Pakistan. Their social structure has undergone considerable change in the areas where they have come in close contact with other peoples. The Garo of the Garo Hills district of Assam have preserved the traditional social customs to a

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great extent. Even among the Garo of the Garo Hills district there is considerable difference in different areas, as also between the Christian converts and the non-converted section who are commonly known as *songsarek*. The *songsarek* of the Garo Hills form the basis of the study, though occasionally references have been made to divergences between them and the Christian Garo.

In a previous paper¹ we discussed the position of the *mahari* in Garo social structure. It has been shown in that paper that the *mahari* is the effective unit within the clan, within which the most important functions of a clan are usually confined. But despite this, the clan has remained as the unit for the purpose of regulation of marriage, though other functions have gradually been taken over by the *mahari*. In the present paper the focus will be upon the clan.

Garo matri-clans (Ma' chong)

The Garo recognize a number of unilateral, exogamous matrilineal descent groups, which henceforth will be referred to as clans. These groups are known as *ma' chong*. Playfair² has named about 127 of the most common Garo clans. It is not known from what source he compiled his list. But our investigation shows that his list is not at all exhaustive, though it appears to be fairly representative of the whole of the Garo Hills and adjacent areas. Probably he included a number of clans from amongst some neighbouring tribes. For example, he has listed a clan named Nongsobal; the junior author has found members of this clan among the Lynggam tribe inhabiting the outer fringe of the Garo Hills bordering the Khasi Hills district. So also the Raichir clan is found among the Lynggam, though occasionally we found members of this clan among Garos proper inhabiting areas adjacent to the habitat of the Lynggam (due to linguistic variation the Garo call this clan Raichil or Rechil). Likewise members of the Hatui clan are found among the Rabha inhabiting the northern boundary of the Garo Hills. The phenomenon of cross-cultural equalization of Garo clans has already been discussed in our paper on Garo *mahari*.

The Garo *ma'chong* is strictly exogamous. The *ma' chong* name is transmitted through the females. Now-a-days members of each *ma'chong* are found in widely separated areas. However, members of some *ma'chong* are, even at the present time, found in some particular areas only. Even though blood relation between members of a *ma'chong* living in different areas cannot be traced, bearing of the same clan name is considered to be enough to recognize an individual as a near relation ; though in cases of dispute, substitution, etc. (see below) more closely related clan members, with whom actual blood relationship can be traced, are mostly taken into account.⁸

Garo clans are not named after a common ancestress. On the contrary most of the clans are named after places, such as Bangbonggre, Adokgre (the suffix *gre* indicates a village or a hamlet). However, a few of the clans are named after animals, plants, etc., such as Do' po (owl), Bolwari (a kind of tree), Gara (a kind of lizard), Chambugong (a king of wood), Mecheng (an odorous plant). Some other clans have names which do not bear any recognizable meaning at the present time, such as Nengminza, Rangsa, Kobi, Maji, etc. The members of the clans bearing animal or plant names have no special emotional or ritual attachment to the corresponding animals or plants. Nor do they refrain from killing or injuring such animals or plants. Hence, it can be said with certainty that the Garo do not have any trace of totemism, nor is there anything to indicate that they had it in the past. From the vast majority of clans named after villages, it is easy to infer that clans originated in some particular village and spread therefrom to different areas. The validity of this hypothesis is confirmed by the fact that we observe in a large number of villages that most of the females belong to one particular clan, and that clan members from that particular village establish themselves as a more closely related kin group. This is the process how an incipient clan starts. This process of clan formation is evident in the case of some clans which are on the way of forming independent clans by the process of fission. For example, the females of Gabil

village (in east-central Garo Hills) belong to the Gabil clan. But members of the same clan coming from the Dabit hamlet of the village (this hamlet is an offshoot of the main village situated about three miles away), now call themselves as Gabil Dabit, in order to distinguish themselves from the Gabil members of the parent village. This process will become complete when the first part of the newly acquired clan name is lost. Such fission of clans is a frequent phenomenon, as will be evident from the subdivisions of the following clans :

<i>Original clan</i>	<i>Subdivisions</i>
Gabil	Chingsil Dabit Wacheksi Watre
Agitok	Jamdap Kokchep
Rangsa	Do'sik Gipi Gitchak

To explain the animal or plant names of clans it can be added that those may as well indicate names of villages with the village-indicating affix missing. Such animal or plant names of villages are quite frequent, for example, Bolsalgre (a village abounding in *sal* trees), Menggobraa (the village of the cat), Do'pogre (the village of the owl). In support of this argument it can also be added here that very often in clan names with a village-indicating affix, the latter part is not mentioned. The Bangbonggre clan, for example, is often referred to as Bangbong. From this another deduction can be made. Clan names without any significant meaning today might have as well been coined after some village; and later such villages might have been abandoned or taken on new names.

Chatchi Groups

In Playfair's list, Garo clans have been classified under three groups: Sangma, Marak and Momin. These groups

are known as *chatchi*. At the present time we find two more *chatchi* : Sira (comprised by the Dalbot clan and its branches) and Areng (comprised by the Nongbak clan and its branches). Each Garo clan is affiliated to one of the *chatchi* groups, and here we will refer to a *chatchi* as a constellation of clans, in order to distinguish it from its cognate, *ma'chong*. In case the Garo term *chatchi* is conceived of as an equivalent of a clan, *ma'chong* should stand for a sub-clan. But it is seen that, at the present time, the usual functions of a clan are found in the *ma'chong*, while the *chatchi* has emerged as a group without any well-defined functions. Hence, we have paraphrased the term *chatchi* as a 'constellation of clans'.

As previously noted, the clans are strictly exogamous. But regulation of marriage is a function of the *chatchi* also, though to a lesser extent. Ideally the member of a *ma'chong* affiliated to the Sangma *chatchi* cannot marry into another *ma'chong* of the same *chatchi*. But restriction of marriage within the *chatchi* is less strict. Such marriages are very frequent now-a-days and there is not much of social disapproval against them. Such couples are ridiculed as *bakdong* (those who have married their own relatives) and is considered to be a milder term than *ma'dong*, indicating those who have married within the *ma'chong*, and this term means 'those who have married their own mothers'. *Chatchi* exogamy is losing ground day by day. The Garo Christian church now-a-days recognize *chatchi* mates (excepting those belonging to the same *ma'chong*) as eligible.

It will be interesting to examine at this stage the part played by *chatchi* in the general framework of Garo society. Besides regulation of marriage as described earlier, the only function of the *chatchi* is to give a name to the members. A Garo has three names, firstly his personal name, secondly his *ma'chong* name and thirdly the name of his *chatchi*. For example, in the name Rongmin Nengminza Sangma, Rongmin is the personal name, Nengminza is the *ma'chong* name and Sangma is the name of the *chatchi* to which the Nengminza clan is affiliated.

The Functions of the Ma' chong

As stated above, the clans are *par excellence* marriage-regulating groups. However, some clans may recognize a bond specially for regulation of marriage. This process is known as *chanrima*. The Garo term *chanrima* literally means 'counting together'. In case of a replacement marriage, the most suitable selection is from the *ma'chong* of the deceased partner; but failing such a preferable choice, the selection may be made from any cognate *ma'chong* which is linked with the former by the process of *chanrima*. For example, the members of the Agitok clan consider members of the Cheran clan as nearer to them than the members of any other clan, though both are independent clans affiliated to the Sangma *chatchi*. However, the *chanrima* practice is not extended to a *ma'chong* of another *chatchi*. At the root of this practice is the belief that such clans originally happened to be united. Clan exogamy is very strict. Marriage within the clan (*ma'chong*) is regarded as the greatest sin and consequently such couples are compared to inferior animals.

In a broad sense, property is held by the clan. Property held by an individual is regarded as clan property for all practical purposes. However, the individual has all the right to utilize the property during his lifetime and transmit it to the proper inheritor within the clan. Thus property is never allowed to pass over to another clan (see case history I). Another striking feature of holding property by the clan jointly is exemplified by the right over the *a' king* land. To make the point clear, some details of the *a' king* system are discussed here. In the Garo Hills property right over land (within certain demarcated boundaries) is held by the Nokma. A Nokma is the husband of the female inheritress of the traditional title. The territorial possession of a Nokma is known as *a' king*. Any outsider (a person coming from another *a' king*) settling down or coming to utilize land within the *a' king* must recognize the right of the Nokma by paying him a nominal fee known as *a' wil*. The Nokma can sell the right over a small plot provided the important members of his wife's

clan, which include the elder brothers and maternal uncles of the wife, accord consent (see case history II). Each *a' king* is denominated by the name of the clan which holds exclusive right over the land. The *a' king*, the owner clan of which is the Chambugong clan, for example, will be spoken of as the *a' king* of the Chambugongs. However, in case of possessory right over household property the right of the clan is usually exerted by the smaller group of closely related kins within the *ma'chong*.⁴ The ownership right over the *a' king* as well as household property is invariably connected with *a' kim* regulations, whereby the right of managing the wife's property is strictly held by the husband-giving group. The husband exercises his right of managing the property through the wife only ; and so when the wife dies the wife-giving group is bound to find him another wife, so that the property-possession and property-management relationship remains unimpaired.

The clan holds joint responsibility in case of disputes. However, for the purpose of joint responsibility, the Garo usually take into consideration clan members whose blood relation can be traced and who reside within a particular locality.⁵ They have a system of fines traditionally fixed for different categories of offences. They recognize neither offence against individuals nor offence against the social group in general. To a Garo all offences are offences against the clan (to be more precise, the *mahari*).⁶ Fines imposed for a particular offence are paid by all the constituent families of the clan, (i.e. all those families in which the females belong to that particular clan) and after receiving the fine the aggrieved clan distributes the fine among its constituent families. When the amount of the fine is very small, the usual practice is to purchase salt with it and distribute the salt equally among all the constituent families. In the case of larger disputes involving great expenditure, constituent families of the clan living even in distant areas are also occasionally called upon to subscribe.

As the clan acts as one unit in the case of disputes, marriage likewise is regarded as a permanent bond between the clans of the spouses. A permanent bond is established between the

man's clan and his wife's. This bond is known as *a' kim*. Even the death of one partner of a union cannot break the bond, because the dead spouse's clan members consider it to be their duty to provide a suitable mate from amongst the clan members as a replacement for the deceased. Burling states that replacements are selected within the 'lineage'.⁷ But the junior author observed several instances of replacement provided from clan members residing in distant areas (see case history III). Presumably Burling confused this issue, because in selecting replacement, preference is given to the nearest kin of the deceased. For example, if the deceased is a female without issue and she has a sister of marriageable age then this sister would be considered to be the fittest replacement. However, there are some exceptions to this generalization. A grown up widower with children is usually provided with a grown up widow and a recently married young man without any issue is provided with a virgin. Hence, if in the deceased spouse's family or near kin group no suitable mate is to be found after taking into consideration the above conditions, then a suitable mate is found from amongst the remoter clan members. Thus, the order of preference in selecting a replacement stands as follows :

1. From amongst the siblings of the deceased.
2. From amongst the *mahari* of the deceased.
3. From amongst the *ma'chong* members of the deceased.
4. From amongst the members of a *ma'chong* having *chanrima* relationship with the *ma'chong* of the deceased.
5. From amongst the members of the *chatchi* to which the deceased's *ma'chong* is affiliated.

But in no case does the choice go beyond the *chatchi*. The same order of preference holds good in the case of adoption also.

Relation of the Chatchi with the Ma' chong

Lowie points out two processes by which larger groups are formed from individual clans or *vice versa*. As an example, he cites the case of the fission of the Turkey clan of the

Mohegan into three smaller clans called Turkey, Crane and Chicken. He further exemplifies the process of accretion by the ceremonial alliance between Hopi clans.⁸ Amongst the Garo, both the processes are observed. Sometimes clans subdivide and sometimes clans recognize a bond of unity for the purpose of marriage regulation. However, the second process is very vague and only found in the case of a few clans only; whereas the fission of clans is a popular thing. It will be seen that among the Garo both the processes have operated to give them their present shape of clan organization. The process of fission starts with the recognition of clan members of a particular area as a more closely related clan group. Gradually a name is found for such a group, usually by suffixing the name of the village. This process becomes complete when the original clan name is dropped, as in the case of the Watre clan affiliated to the Momin *chatchi*. Members of the Gabil clan of Watregre (*Watre*, a kind of bamboo; *gre*, village-indicating affix) came to denote themselves as Gabil Watre and have subsequently established themselves as the Watre clan within the Momin *chatchi*.

It can be presumed that the *chatchis* were the original clans from which different clans were formed by the process of fission; and as the original clans were exogamous, the newly formed clans inherited the exogamous nature of the original clan. However, the *chatchi* exogamy is gradually becoming obliterated due to more and more stress on the *ma'chong*. But even though in some spheres the *mahari* has become the most important kin group, it has not affected the exogamous nature of the *ma'chong* in the least. But what were the original clans of the Garo? The Garo recount a number of stories to trace the origin of the *chatchi*. Reserving our opinion about the authenticity of such stories, since they seem to be expert in stretching their imagination to invent a story about the origin of anything, it can be said that the *chatchi* were the original clans. A story narrates that the Garo had the following clans at the time of their migration to the present habitat :

1. Sangma, 2. Marak, 3. Momin, 4. Areng, 5. Sira,

6. Malik, 7. Siri, 8. Tegite, 9. Chambugong, 10. Balgitchak, 11. Wajak, 12. Bilbang, 13. Rapa, 14. Rongchi.

The same story relates that subsequently other clans excepting the first two returned to their original home and only Sangma and Marak remained. On examining the above list, we find that the first five have now established themselves as *chatchi*; however, the fourth and the fifth are now formed by one clan each. Among other clans listed above we find the eighth and the ninth as separate clans under the Sangma and Marak *chatchi* respectively. As regards others no trace is found today. But an interesting fact needs consideration at this stage. Sangma and Marak are by far the most widely spread *chatchi*. Sira and Areng *chatchi* are only nominal ones and the clans comprising both these clan-constellations alternatively affiliate themselves to the Sangma *chatchi*. There is a story about the origin of the Momin *chatchi*. A girl of the Gabil clan was married to a Muslim and according to Muslim custom the father affiliated the children as Momin. But subsequently the female children of this Muslim transmitted the name to their children according to Garo custom, and this gave rise to the Momin *chatchi*.⁹ Whether or not this story bears any historical truth, the fact remains that the Momin *chatchi* is limited only to the Awe and the Chisak sub-tribes inhabiting the areas of the district bordering the plains. The Momin *chatchi* is never found among the most conservative section of the Garo. Hence it is very likely that the Momin *chatchi* is a recent innovation, and its mention in the story can be explained as an interpolation. Like Sira and Areng, the clans affiliated to Momin *chatchi* are alternatively affiliated to the Sangma *chatchi*. Thus all the three *chatchi* Sira, Areng and Momin can be considered as sub-clan-constellations of the Sangma *chatchi*. There remaining in the field practically two clan-constellations has given a semblance of moiety division to the Garo social organization. Perhaps this is the reason which led Burling to think of them in terms of moieties.¹⁰

Let us now examine whether the typical features of a moiety organization are present among the Garo.

(i) There is no division of functions of any kind between these groups.

(ii) There is no spatial division between the groups in villages.

(iii) There is no rivalry between the groups, excepting that at the time of the ceremonial war dance known as *grika* when the dancer calls out the name of his own *chatchi* offering a challenge.

(iv) Though the kinship terminology shows a semblance to a moiety organization, it actually points out to a multi-clan organization. It is worthwhile to examine the typical kinship terms adopted to a moiety organization. Burling has given the Garo kinship term for Fa. Si. Hu. as *mama* which is also used to denote the Mo. Br.¹¹ This type of terminology is adopted to a moiety organization, but the following observations are noteworthy :

(a) Our investigations show that Fa. Si. Hu. is not necessarily termed *mama* in all cases. In most of the villages of the conservative section of the Garo, the marital alliance is between two clans only (these clans necessarily belong to different clan-constellations) and hence the Fa. Si. Hu. is actually a man of the first ascending generation in the same clan (not only the same *chatchi*) with ego. The Garo practice is to address a clan mate in the first ascending generation as *mama*. Similarly Fa. Si. is addressed as *mami* (Mo. Br. Wi.).

(b) Whenever there is no definite marital alliance between two clans only in a village, we have found that no specific term is used for Fa. Si. Hu. or Fa. Si. as is the case with many other kins of the father outside ego's own clan.

Now let us examine two more kinship terms to show that though Garo kinship terminology shows a semblance to that of a moiety organization, it is adapted to a multi-clan organization :

(a) The term *sari* is used by a female to address a female of another *chatchi*. This term is also used to indicate the (female ego's) Br. Wi. Hence it can be said that the term *sari* indicates all the females who are potential mates of her brother. And this term can be used by a female, say of the Momin *chatchi* to another female belonging to any other *chatchi*.

However, the term *sari* is never used by a woman to address a woman belonging to a *ma'chong* different from hers but affiliated to the same *chatchi*.

(b) Similarly the term *mosa* is used by the males to indicate males of the same generation in another *chatchi*. This term is also used by a male to indicate his Wi. Br. or Si. Hu. Thus it is used to indicate a male of the wife's clan (and broadly, of her *chatchi*) in the same generation with ego. Thus a male who belongs to the Sangma *chatchi*, for example, can address another male of the same generation belonging to any one of the other *chatchi* as *mosa*.

Conclusion

From the above discussion it can be concluded that the Garo originally had a few large matrilineal exogamous clans, among which Sangma and Marak were by far the largest. Other smaller clans gradually affiliated themselves to one or the other of the larger clans, by the process of *chanrima*.¹² For a time these larger clans became divided and subdivided into smaller local kin groups, which ultimately established themselves as full-fledged clans. However, smaller clans originating from bigger clans recognized their unity as descendants of a single clan, but gradually the newly formed clans encroached upon the function of exogamy; and this process of loosening of *chatchi* exogamy is still going on and has not reached the final stage of wiping out all the signs of exogamy based on the *chatchi*.

Case histories

Case I: K of D village belonged to the Gabil Watre clan. His wife P belongs to the Sinal clan. The couple has four sons and no daughter. After the death of K, Sinal clan elders decided that P should adopt a girl from the Sinal clan, so that she can transmit the property to her adopted daughter after her death. But P refused to comply with the decision of the clan elders; she wanted to keep her third son with her even after his marriage, so that the property could be transmitted to him. But the Sinal clan elders strongly opposed this,

because in that case property would pass to P's son's wife's clan. However, they have allowed P to utilize the property as she likes, during her lifetime, but after her death the clan elders will decide as to who will inherit the property.

Case II : The *a'king* near about Rengsangiri belongs to the Chambugong clan Rengsangiri, and the Nokma of the *a'king* is G. The Sericulture Department of the Garo Hills wanted a plot of about 3 acres for establishing a sericultural farm. The departmental heads selected a plot suitable for the purpose within the *a'king* of Rengsangiri. They contacted G and convinced him that they would not encroach upon any more land, and with the Nokma made a written agreement to that effect. But the elders of the Chambugong clan were not consulted before entering into this agreement. When the department started work, the elders came to know about the deal, and they strongly opposed the Nokma's action. N, an elder of the Chambugong clan remarked: 'G has no right to give away the plot secretly. The land is ours and he cannot give it to others without our consent.' The District Council authorities had also approved of the transfer. But N, with other elderly members of the Chambugong clan, filed a case against this unauthorized transfer. Ultimately the court nullified G's agreement with the Sericulture Department, and consequently the farm had to be shifted from the *a'king* of Rengsangiri.

Case III : H of R village belonging to the Mangsang clan was married to K of T village belonging to the Agitok clan. K died in 1963 after a sudden illness. At that time H was 30 years of age and K's age at the time of death was 25 years. They had four children. H wanted to marry K's sister P, aged about 18 years. But P was studying in a college, and she was unwilling to marry H, nor did the elders of the Agitok clan want to give her in marriage to H. So they selected a girl L, aged about 19 years, from the Agitok clan of a village, about 30 miles away from T village, to be the replacement wife of H.

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- ¹ Goswami, M. C. and D. N., Majumdar, 'The Mahari among the Garo', *Journal of the University of Gauhati*, vol. XV, no. 2 : Science, 1964, pp. 214-222.
- ² Playfair, A, *The Garos*, London, 1909.
- ³ Goswami, M. C. and D. N. Majumdar, *op. cit.*
- ⁴ *Ibid.*
- ⁵ Burling calls such clans members 'lineage' (Burling, Robbins, *Rengsanggiri : Family and Kinship in a Garo Village*, Philadelphia, 1963, p. 23.) We feel that it is a very vaguely defined group with great flexibility to include any distant clan member when occasion arises.
- ⁶ Cf. Ifuago system of justice as described by Lowie (Lowie, Robert H., *Primitive Society*, London, 1949, pp. 395 ff.).
- ⁷ Burling, *op. cit.*, pp. 140 ff.
- ⁸ Lowie, *op. cit.*, pp. 124 ff.
- ⁹ Rongmuthu, Dewansing, *Folk Tales of the Garos*, University of Gauhati, 1960, p. 295.
- ¹⁰ Burling, *op. cit.*, p. 22.
- ¹¹ Burling, Robbins, 'Garo Kinship Terminology', *Man in India*, vol. XXXVI, 1956, pp. 203-218.
- ¹² This may be the reason why different clans are affiliated to different clan-constellations in different areas. For example, the Mangsang clan is affiliated to the Marak *chatchi* among the Chisak sub-tribe, while it is affiliated to the Sangma *chatchi* among the Ambeng sub-tribe.

THE LADAKHI CUSTOM OF CREMATION

BAIDYANATH SARASWATI

(Received on 4 January, 1967)

Abstract : The author worked in Leh for three months in 1964, when he observed the methods of pottery manufacture there.

Here he gives us an interesting account of disposal of the dead by cremation, in which the oven is shaped like a *stupa*.

ENCLOSED by the Western Himalayas and the Karakoram Mountains there lies the most fascinating district of Ladakh. Situated in the eastern part of the Kashmir Valley, across the Zoji-la, it is annexed to Jammu & Kashmir for administrative purposes. Linguistically as well as culturally it has a closer affinity with Lahul and Spiti in Himachal Pradesh. The evidences on record show that it has been a part of India since time immemorial. The Ladakhis themselves hold the view that Buddhism penetrated into Ladakh and even spread beyond the Indus to Tibet and China by the missionary zeal of the Kashmiri monks who came to them in or around 243 B.C.

The population of Ladakh is predominantly Buddhist. There are a few Moslems and very few Christians of the Moravian Church. The Christians are now disappearing from Ladakh, but the Moslems are increasing through proselytization.

Culturally, the Ladakhis may be broadly classified into four groups: Dogpa, Balti, Changpa, and Ladakhi. The Baltis of Baltistan are largely Moslems, but the Changpa nomads of eastern Ladakh are exclusively Buddhist. There are both Buddhists and Moslems among the Dogpas of Kargil and Skardu. The Buddhists of Ladakh proper consider both the Dogpa and the Changpa as inferior.

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The social dichotomy of the Ladakhi Buddhists rests on sacerdotal and secular considerations. The Lamas (Superior Ones) form a sacerdotal organization with the sKushok as its head. The spirit of the sKushok is that of the Buddha or of some Bodhisattvas. He is born, not made. After his death he is reborn only as sKushok. Next to him are Gelong, Gesjyan and Gechhul in order of superiority. The nuns are the Chomos. In the secular organization or the organization of the Jikhtenpa, the rGyalpo (king) and the Lonpo (ministers) are at the apex, although the kingship has been abolished. The Lharje (physicians) and the Onpo (astrologers) are inferior to them, but held superior to the Mangriks (commoners) who constitute peasants, shepherds, and artisans. At the lowest level of society are the untouchables called rKsngan. All the four classes are endogamous and are further subdivided on the basis of occupation. They are polyandrous by tradition, but have now in most cases adopted monogamy by law.

Ladakhi Buddhism is identical with Lamaism. It comes under the Mahayana School of Buddhist discipline which lays emphasis on *bhakti* (fervent devotion) and *puja* (worship) of the Hindu kind. There are innumerable Hindu gods and goddesses which the Ladakhis worship under different names. The elements of ancient Hinduism or early Buddhism are conspicuous in the various aspects of Ladakhi culture. The present note on the customs of the disposal of the dead, for which the data were collected in 1964, attempts to throw light on one such element.

The Ladakhi term for death is *shiva*. As soon as somebody dies in the family the lamas and the *phasphuns* (members of the sub-lineage) are called. The lama mutters a *mantra* (prayer) and lightens an earthen lamp. He thereafter pulls up the hairs of the dead so that the life-force (soul ?) may come out easily. It is believed that there are two *ushnins* (holes) in the skull. One is *uma*, another is *skyanma*. It is through these holes that the *samjeet* (life-force) comes out at the time of death. The next stage is the bathing of the dead and tying up the corpse in a squatting posture. It is followed by wrapping in a white shroud called *roras*. The dead is bathed by family members

and wrapped in a shroud by the *phasphuns* or members of the sub-lineage. The corpse is kept in the *chhot-khang* (prayer room of the house) and covered by another piece of cloth. It is left there in this condition until the auspicious day for cremation arrives. Usually after five, seven, or nine days such a propitious day comes according to astrological calculation. If no auspicious day falls within a fortnight or so, the family plough, yoke, and harrow are kept on the roof of the house where the dead body is placed, and then the cremation follows. During all these days of waiting the lamas come with their ritual instruments to perform a fire-sacrifice called *chingshek* or *jingshek*. The *phasphuns* are very important on this occasion. They feed the bereaved family, sleep in the prayer room and guard the corpse until it is cremated.

On the appointed day the *phasphuns* bring the corpse to the exit and load it on the back of the executioner on whom the main work of cremation rests. The corpse is then laid on a *remes* (bier) and carried to the cremation ground. Every *phasphun* has its *turthot* (funeral oven), usually a little off the village. Only men participate in the funeral procession, while the women are left in the house to cry and mourn. The lamas lead the procession while the *phasphuns* and others follow. When they reach the cremation ground the bier is laid down and all the relatives circumambulate three times clockwise and bow their heads without any consideration of age, sex, and degree of kinship. The family members, excepting the chief mourner, return home soon after performing this rite. The corpse is laid in the funeral oven, whereupon the lamas perform a fire-sacrifice with rice, millet, barley, pea, sesamum, flowers, jaggery, *umbu* and many other herbs, roots of various kinds of grasses, and wood. When it is half-burnt, a piece of bone is taken out by the lama and kept in a *khataks* (scarf). The relic is called *thhus*. When this is over, the *phasphuns* add more fuel to the oven so that the corpse may be completely burnt. After performing the funeral the lamas return to the deceased's house while playing on ritual trumpets.

The bone brought by the lamas is kept in the *chhot-khang* which in the meanwhile has been kept clean by the female *phasphuns*. The lamas are sumptuously fed and given almost all the personal belongings of the deceased, namely, clothes, ornaments, and utensils. One-fourth of this gift is given to the *gompa* (monastery), to which they belong, and the rest is either sold or used by the lamas themselves. All the members who were in the funeral procession are given sweetmeats to eat, *chhang* (malt beer), and also paid some money which is equally distributed among them. This ceremony is called *srang-chhang*.

On the fourth day, the *phasphuns* and a member of the family of the deceased go to the cremation ground at the end of the midnight to collect relics. The lamas also reach there in time. The skull is kept for making a *stupa*, but the ashes and the bones are thrown into a running stream, after they have been duly sanctified by the lamas. It is on this day that the lamas forecast the new birth of the deceased by looking into some mysterious symbols in the ashes. The skull is powdered and mixed with clay, parched grains, herbs and perfumes. The entire substance is then kneaded and a *stupa* is made thereof. This *stupa* is called *chchha* which the lamas worship for the whole day. After one month it is worshipped again. On the 49th day it is finally immersed after the performance of an elaborate ceremony presided over by the lamas.

The corpses of children below eight years are not bound with strings as in the case of grown-up persons. They are buried on the cliff of the mountain where wild animals may not dig it up. No music is played on this occasion, excepting the small prayer bell *tilbu*. Persons dying of cholera, small-pox, or other epidemic diseases are also buried without musical performance. People believe that disease spreads when music is played on. Persons committing suicide or women who died in pregnancy are cremated. But those who die of typhoid or high fever are first buried for about a month or two, and later on cremated in the funeral oven.

Those who have been declared as 'great soul' by astrologers are not cremated in the common funeral oven of their *phasphun*. Such persons, called *skewa thanbo*, are cremated in

the kitchen garden of their house. The cremation ground of the lamas are separate from the *jikhtenpa*. The sKushak is cremated in the *gompa* premises. The rGyalpo and the Lonpo have also separate cremation grounds and also a different type of funeral oven. The *turthot* of the common people is a simple four-walled structure, about 3 feet in height and almost of the same length and width. It has a perforated platform over which the corpse is loaded from the top, and burnt through a stoke hole provided on one side. It resembles a pottery kiln. In the *turthot* made for the lamas, the rGyalpo and the Lonpo there is a roof on the top of it, and the corpse is loaded from the side opening which is temporarily sealed at the time of burning.

The Changpa nomads have different customs for the disposal of the dead. They generally mutilate the body into pieces and expose it to wild birds and beasts. The practice is believed to be endowed with religious merit for the deceased. There is a story of one Bodhisattva who once met a starving tigress which was unable to give milk to her cubs. He offered himself as her prey, and thereby saved the life of the beast. The Changpas also sometimes tie a boulder round the neck of the corpse and throw it into the river. These practices are common only in the plateau, such as Chumantang, Chushul, Changchenmo, and the areas bordering Tibet where there is no wood.

The Dogpas follow almost the entire Hindu method of cremation. They do not make use of the *turthot* described about the central Ladakhi. The specialty of their custom is to cremate the dead with its head to the west. In their case, apricot wood is essential for burning. It is believed that if green apricot trees with fruits and flowers are burnt in the funeral pyre, it would bring peace and happiness to the deceased in heaven. Once the body has been burnt, the ashes and the bones are made into the shape of a small *stupa*. After being kept for a year in the house, the *stupa* is placed in one of the many *chhortens* (dedicatory pyramidal structure) which form the cultural landscape of Ladakhi villages and are owned by lineage members or monasteries

for the monks. This custom of placing the relics of the deceased in the holy *chhorten* is widely prevalent in Ladakh, both among the Ladakhi proper and the Dogpas. The data on the Balti Buddhists could not be collected.

The malignant spirit of the dead, called *shinde*, is believed to take the form of a cat, a dog, or such other animal. To ward off its evil influences on the family, the lamas perform a magical rite, called *shod-long*. A parched grain model of a mule mounted by a man is dragged and beaten with a stick for some time, while chanting *mantras*, and then finally thrown off the house. Householders participate in this mimetic magical rite. To give peace to the departed soul, the astrologers recommend the name of a deity to be painted in a silken scroll and hung in the prayer room of the family. The scroll is known as *lha-skul* or the painting of the god.

All the relatives who had touched the corpse observe pollution for a month. After the death of a husband, the wife has to observe mourning for a period of one year during which she is not supposed to come out of the courtyard of her house. She does not wear *peyarak* (head-gear) and other ornaments. She dresses in a black woollen garment, called *chhali*, sleeps in one corner of the house, completely segregated from the rest of the family members, and is tabooed to have sex relations with her other husbands. On the death of the wife the husband (s) has to observe the same restriction of dress, movement and sex relation. He has to keep the flaps on either side of his quilted skull cap hanging down straight. This mark of mourning is observed by all the male members of the family. They also shave their hair and beard on the purification day which are till then allowed to grow. The women wash their hairs. All the members must bathe in hot water before they give feast to the lamas.

The death anniversary, *shizak*, is observed at least for three years, when the soul of the dead is worshipped by the lamas. Feast is thrown to the *phasphuns* on each occasion. A little quantity of food is offered on a flat stone by the sister's son. Again on the *losar* (new year's day), the *shinpos* (ancestors)

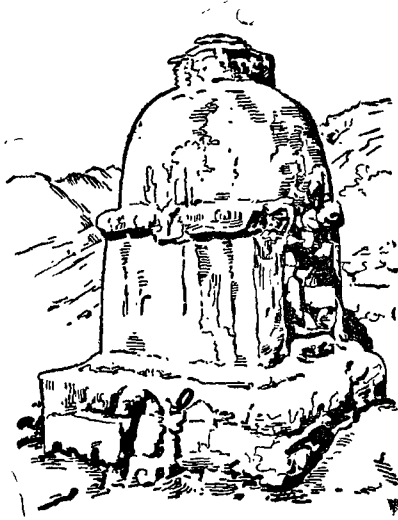
are invoked at the cremation ground by offering balls of *sattu* (parched millet flour) and libation of *chhang*. The rite, called *shir*, is performed by the *phasphuns* and the lamas at about 3 o'clock in the morning. Parched grain and saffron are burnt on this occasion. The sacrificial food is finally consumed by the rKsngan.

Observations

The Ladakhis adopt four different methods in disposing of their dead ; these are, cremation, mutilation, immersion, and burial. The first is the most common, the last is only under special condition, while the other two are regional and perhaps due to ecological causes. Most religions like Zoroastrianism, Christianity and Islam have a particular custom of disposal of the dead which in all cases has to be followed by their adherents. Although cremation is common in Hinduism several sects like the Lingayat, Bishnoie, and Sannyasis regularly bury their dead. The custom of burying a pregnant woman and infant is also in vogue. There is a Pauranic reference of Dadhichi who allowed a cow to lick his body to death so that the gods might arm themselves with his bones and gain easy victory over the demons. The Ladakhi's belief of religious merit by exposing the dead to wild animals and the story of Bodhisattva offering himself to the tigress to save the lives of the cubs, find a parallel in the Zoroastrian and Hindu idea of gaining religious merit by offering the body.

As it transpires from the preceding discussion, the Ladakhi Buddhists are highly under the influence of soul-spirit complex. The pulling up of the hairs of the deceased, tying up the dead body in a squatting posture, mortuary room, circumambulation of the corpse, the forecast of the lamas of the new birth, the malignant spirit of the dead taking the form of animals, performance of mimetic magical rites to ward off ghosts, ancestor worship, rules of pollution, annual *pinda* offering and libation to the ancestors and fire sacrifice are some of the most significant customs which are perhaps due to a synthesis of Hinduism, Buddhism, and the old Bon religion of the Ladakhis.

One of the most interesting elements in the Ladakhi method of cremation is the funeral oven called *turthot*. Those



who have seen the Buddhist *stupa* at Sanchi, Karle and the like would find an amazing similarity between this and the funerary oven (see fig.) of the Ladakhis. The present writer does not know of a similar practice anywhere else. The ancient Buddhist *stupas* which are structurally similar to the *turthot*, as we are told by archaeologists, possess the relics of the Buddha and his disciples, and are therefore, functionally different from the latter. At this point, it may be stated that the Ladakhi Buddhists have a different dedicatory structure called *chhodten* which is a holy receptacle for the relics of their ancestors. The *chhodten* is an inverted and truncated cone, the basement of which is square. It is sometimes pronounced as *chhorten*, and is perhaps derived from the Sanskrit *chaitya*, an offering receptacle. We are unable to give any satisfactory explanation of the evolution of the funeral oven and its functional correlation with the ancient Buddhist stupas. Archaeologists may perhaps throw some light on the subject.

Lastly, it may be pointed out that the Ladakhi term *shiva* for death seems to be theologically significant. The Hindu classical god of the same name, Shiva, is identified with Rudra, the god of death.

SOME OBSERVATIONS ON FACTORS INFLUENCING SETTLEMENT OF HOUSEHOLDS

A. B. BOSE

N. S. JODHA

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Abstract : This paper discusses the forces which influenced in-migration in the early days of the growth of a village in western Rajasthan and indicates the factors which led to settlement in dispersed dwellings during the agricultural season. The findings show that though prospects of better and more stable earnings have been important considerations for in-migration, caste and kinship ties and institutional factors have been equally significant. Most of the in-migration has been from nearby places and has been a gradual process. About one-fourth of the families stayed out in their fields every year for about six months of the cultivation season. The choice of fragment to which the family shifts is governed by a number of social and economic factors. The sequence of settlement has been first for a compact settlement to grow round the houses of the first few families who settle here. Later, people started moving seasonally to their lands and a few households even settled permanently in their fields.

Introduction

SOME of the earlier studies on settlement of rural households in desert villages made by the Central Arid Zone Research Institute indicated the influence of not merely the physiography of the region but also of social and economic factors. In this paper an attempt has been made to study in somewhat greater detail the forces which influenced in-migration in the early days of the growth of village and the factors which led to settlement in dispersed dwellings during the agricultural season. Other aspects of settlement, such as residential

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patterns of different groups, are proposed to be taken up subsequently. The data presented here are based on field work done in 1965-66 in a village near Jodhpur inhabited by 378 households. The village is spread over 4,064 hectares. The fallow and cultivated land covering nine-tenths of the total land area comprise the arable land, almost all of which is un-irrigated. The chief sources of livelihood are agriculture, animal husbandry and the traditional caste occupations. The income from agriculture, however, is uncertain in view of the low and erratic rainfall (normal annual 300 mm).

Findings

Authentic records about the first settlement and the growth of the village are not available. But, according to popular belief, the first settler came about 400 years ago and was a Purohit by caste after whom the village is reported to have been named.

Gradually other households were drawn, swelling the village population to 1,505 persons by 1901. Its present population is 2,251 which represents an increase of 49.6 per cent in about 65 years. This growth in population can be attributed mostly to natural increase, but in the earlier period of the settlement of the village, in-migration played a significant role. Table 1 indicates the factors which prompted heads of different lineage groups to come and settle here. The data show that though prospects of better and more stable earnings have been important considerations, caste and kinship ties and institutional factors have been equally significant, as for instance, the custom of *gharjamai*³ or the protective influence required to be

TABLE 1

Factors influencing settlement in the village.

Economic		Number
(a) Drawn by better arable and grazing land	...	42
(b) Drawn by better opportunities for caste and other occupations	...	41

	Economic		Number
(c)	Came to accept gift of property by <i>Jagirdar</i> , etc.	...	5
(d)	Came to inherit property	...	4
(e)	Came as employee	...	5
Social			
(a)	Came as <i>gharjamai</i>	...	25
(b)	Came as guardian to look after the property, etc. of orphan nephews or other relatives	...	2
(c)	Came to live with maternal uncle or other kin after death of father	...	8
(d)	Invited by caste brethren or kin to come and settle in the village	...	21
Miscellaneous			
(a)	Brought by other in-migrants	...	24
(b)	Quarrels with <i>Jagirdar</i> or kin members at native place	...	5

n=148 ; the reasons for settling in the village could not be ascertained for the heads of eight lineage groups.

exercised by the maternal uncle over his sister's children when she is widowed. These were important considerations for enabling the in-migrants to get the initial assistance and protection for settling down.

Six-tenths of these in-migrants were from the district itself while 30.7 per cent were from villages outside the district but within a radius of about 75 miles. This short distance migration is the natural outcome of poor means of communication due to which information about better economic prospects is spread through inter-personal communication over a limited area which is usually also the sphere of operation of the kinship network and the caste territorial council. Thus a

limited geographical territory forms the zone of operation not only for fulfilling kinship or caste obligations but also for spatial mobility. The in-migration was a gradual process spread over a number of villages and not confined to a particular caste. For instance, in the present case the in-migrants had come from 78 villages and belonged to 30 castes. Once the land resources in the village reached saturation point as a result of the impact of the twin forces of in-migration and natural increase, the former diminished considerably in importance.

The village first grew into a compact settlement but during the last four decades or so, 14 families (3.7 per cent) have settled permanently in their fields (*dhanis*) while 99 families (26.2 per cent) stay out in their fields every year for about six months of the cultivating season and return after harvesting and post-harvesting operations are over. The 14 families who have permanently settled in the *dhanis* are actually near the railway station adjoining which their lands are situated, and a few members of these families had employment opportunities in the railways. So, in their case, the twin factors of nearness to place of employment in railways and possibility of better cultivation by residence in the fields, have influenced the pattern of settlement. The factors which influence seasonal movement were studied (Table 2). An important consideration was found to be the source of livelihood. More families whose livelihood is based chiefly on cultivation and animal husbandry live in *dhanis* compared to those who have a more diversified economic base and follow occupations which, on the whole, stand to gain by residence in the compact settlement. The size of holding also influences the place of settlement. Families with larger land-holdings stay in their fields at least for a part of the year to ensure better management of the farm. The data show, for instance, that 62.8 per cent of the households who live for the whole or part of the year in their fields have 12 hectares of land or more as compared to only 12.0 per cent households living in compact settlements.

TABLE 2

Residence in dhanis for whole or part of the year by source of livelihood, size of holding and caste.

	Households living whole or part of the year in dhanis		Householding living in compact settlement in abadi	
	No.	%	No.	%
Source of livelihood :				
Cultivation only	—	—	2	0.8
Cultivation and livestock raising	41	36.3	19	7.2
Cultivation, livestock raising and others	60	53.1	122	46.0
Cultivation and others	12	10.6	57	21.5
Others	—	—	65	24.5
Size of agricultural holding (in ha.)				
No holding	—	—	65	24.5
Less than 4	1	0.9	78	29.5
4—8	19	16.8	59	22.3
8—12	22	19.5	31	11.7
12—16	37	32.7	12	4.5
16—20	10	8.9	12	4.5
20 and above	24	21.2	8	3.0
Caste of groups on the basis of traditional occupation				
Religious service	—	—	27	10.2
Money-lending and shop-keeping	—	—	38	14.3
Agriculture	90	79.6	52	19.6
Raising livestock	—	—	38	14.3
Craftsmen	13	11.5	76	28.7
Others	7	6.2	28	10.6
Muslims	3	2.7	6	2.3

Caste traditions regarding settlement have also some influence. Agricultural castes, particularly Jats, Kalbis and Malis, traditionally stay in *dhanis* in the interest of better cultivation, as studies in other parts of the arid zone have shown (Bose and Malhotra 1963). The Raikas who raise livestock also traditionally live in *dhanis*, but in this village they were found living towards the outer fringe of the *abadi*. Thus the needs of their livestock can be met by living in the village compact settlement. Other considerations influencing movement to *dhanis* are the distance of agricultural lands from the *abadi* and their location. Thus, 91 of the 99 households who move to their fields during the cultivating season stated that if they stay in the *abadi*, a lot of time was spent in transit through meandering sandy roads, and timely attention to the land and the crops was not possible. Also, agricultural fields during the agricultural season are not easily accessible except through bad roads or through other people's fields which creates difficulties when crops are being raised. Farmers cultivating such lands, therefore, find it prudent to shift.

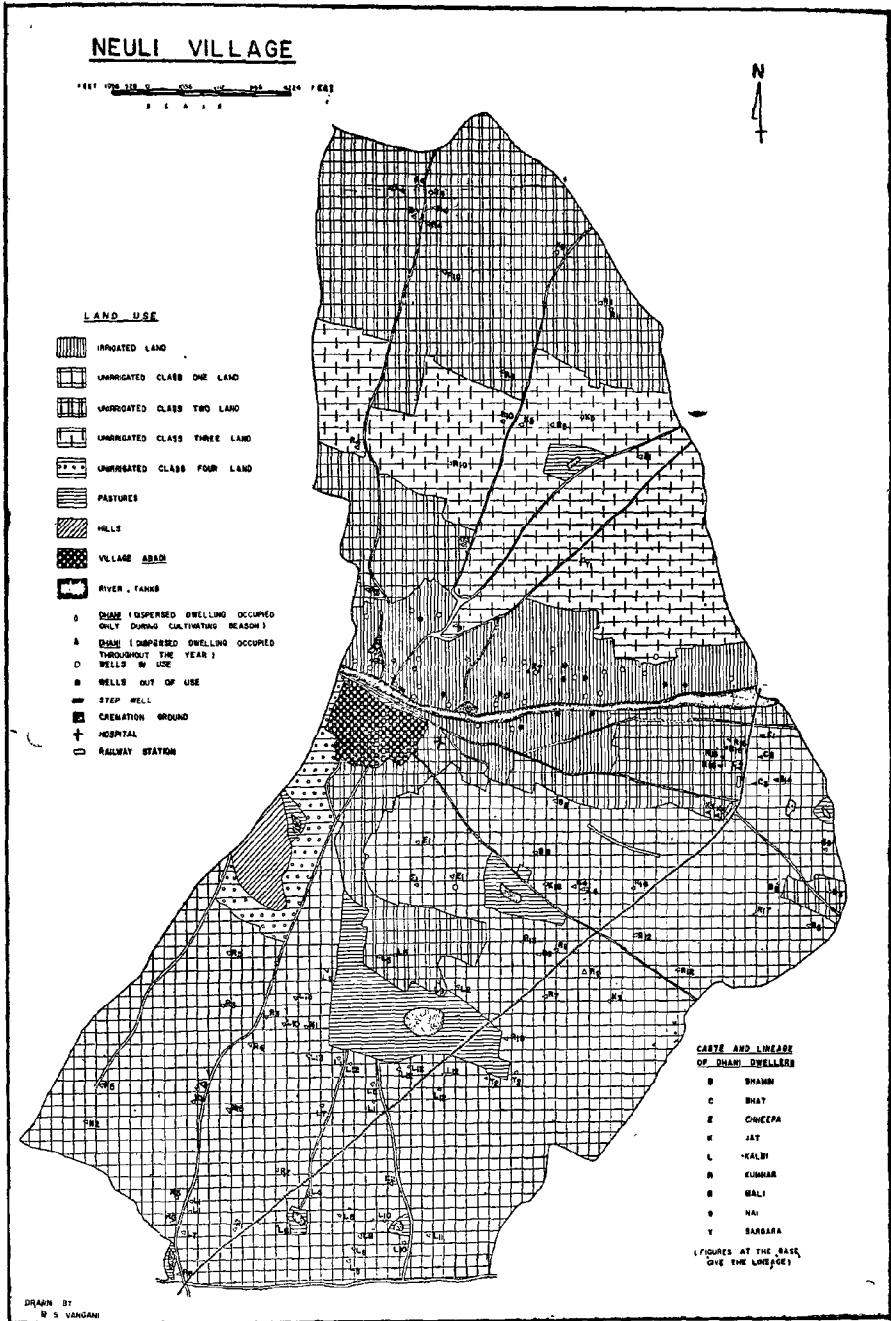
The holdings of the farmers are fragmented and scattered over the village. The average number of fragments per holding is 5.08. The choice of the fragment in which the family shifts is governed by the following factors :

(i) Presence of tanks nearby which store rainwater for a few months and are used for drinking by both men and livestock.

(ii) Nearness of pasture and grazing lands where the livestock could move freely, since during the cultivating season most areas are closed to grazing.

(iii) Size of the plot or its location in relation to other plots. The bigger plots or those centrally situated tend to be chosen. Where the plots cluster, the problem of choice is somewhat easier.

(iv) The fertility status of the land. The better lands tend to be chosen as they have a higher potential for increased productivity. In this village, 76.8 per cent of the families



who shift move to *barani* (unirrigated) class I land and 18.0 per cent to class II land.

(v) Nearness to village roads, since during the cultivating season traverses through fields are usually not permitted by cultivators.

(vi) Proximity of other *dhanis* as this ensures mutual aid and co-operation in agricultural operations or social life. Here, too, caste, kinship and lineage play a significant role. Households of the same lineage group tend to cluster. Thus the bonds of the lineage group are observable not only in the residential pattern in the village *abadi* but also in such seasonal movements on account of its significance for mutual aid and group living. Uterine kin and affines also influence the pattern of settlement in some cases.

Conclusions

The pattern of settlement is thus influenced not merely by physical factors but also social, cultural and economic factors. The sequence of settlement in this village, therefore, has been first for a compact settlement to grow round the houses of the first few families who settled here. Later, people started moving seasonally to their lands and a few households even settled permanently in their fields. Elsewhere in Rajasthan, too, this trend has been noticed (Bose and Malhotra 1963 ; Bose and Saxena 1965 and Bose and Bharara 1966) and it appears that in the course of a few decades the village will have a larger proportion of households in *dhanis* than in the compact settlement.

NOTES

1. Contribution from the Human Factor Studies Division, Central Arid Zone Research Institute, Jodhpur.
2. The son-in-law staying with his wife's parents.

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USE OF TRACE LINE ANALYSIS IN THE CONSTRUCTION OF AN ADOPTION SCALE OF RECOMMENDED FARM PRACTICES*

SATADAL DASGUPTA

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Abstract : The purpose of this study was to construct an adoption scale with the help of trace line analysis and its validity by applying it in the study of characteristics of farmers who adopted recommended farm practices in six villages of Punjab in India. Trace line analysis, an improved method of item analysis, was employed for selection of the items in constructing the scale. Six practices were found to consistently and monotonically related to latent continuum of adoption behaviour of the farmers. These six items were selected and combined into an adoption scale.

The validity of the scale was tested cross-tabulating the scale-scores of the farmers with the independent variables theoretically expected and empirically established to be related to adoption in previous studies.

VARIOUS indices have been used by rural sociologists to measure the adoption behaviour of farmers. One of the widely used indices of adoption is the proportion of applicable practices adopted. An improvement of this index has been sought by taking time into consideration. Bose and Dasgupta¹, in constructing an adoption index, not only considered the proportion of applicable practices adopted by the

* Data utilized in the paper were taken from a study conducted co-operatively by the Social Science Research Center, Mississippi State University (U. S. A.) and the Department of Sociology, Punjab University (India). Funds for field work and a portion of the analysis were supplied by the Agricultural Development Council.

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farmers but also the number of years each of the adopted practices was used. Rogers³ constructed an innovativeness scale by which he categorized the farmers into five groups in terms of the degree to which each of them was relatively earlier to adopt new ideas than other members of the community.

Rural sociologists not satisfied with the discrete categorization of farmers attempted to construct adoption scales by which the farmers could be continuously ranked in terms of degree to which each of them adopted the practice included in the adoption scale. Abell³ attempted to construct adoption scales of home-making practices with the help of Guttman's Scalogram analysis. In her attempt with seven different series of home-making practices she obtained meaningful and acceptable scales with four of the seven series of items. A similar attempt by Copp,⁴ however, in constructing an adoption scale of recommended farm practices with the help of scalogram analysis was not successful. He obtained a co-efficient of reproducibility of .82 which was far below the minimally acceptable co-efficient of .90.

In the present study, an attempt was made to construct an adoption scale with the use of trace line analysis which is an improved method of item analysis. With the help of this technique a number of recommended farm practices which were internally consistent and monotonically related to the latent variable of adoption behavior were selected. These practices were then combined into a scale, and the number of practices adopted by each farmer out of the practices included in the scale was taken as an indicator of his position on the latent variable continuum. Since the resulting scale was ordinal in nature, it helped in classifying the farmers into a number of continuous ranked categories. The reliability of the scale was tested by the application of split-half technique. The construct validity of the scale as an operational measure of the extent of adoption behaviour was tested by cross-tabulating the scale scores of the farmers with a number of independent variables which were found to be related to adoption in previous studies.

The purpose of the present paper is to describe how the adoption scale was constructed with the use of trace line analysis and how its reliability and validity were tested.

Research Site and Procedure

The field work was carried out in six villages under a development block of central Punjab in India. This block had a total population of about ninety thousand individuals distributed in 171 villages and towns. Only 15 per cent of the population was literate. Farming was the primary occupation of 82 per cent of the people, and the rest depended upon various non-agricultural pursuits like blacksmithing, carpentry, oil-pressing, shoe-making, etc.

The present paper is an outcome of secondary analysis of of the data which was primarily collected for a bigger project on community structure and rural development in these six villages. Out of a total number of 451 households from which data were collected 178 were farming households. Data of adoption of recommended farm practices were collected from these farming households. Each head of household was asked, (1) which of the nineteen⁵ recommended practices he had adopted, (2) for how many years he had been using each of the practices, (3) how he first came to know about the practice, and (4) whether or not he used it in the previous year. Besides these items of information, data collected were his age, occupation, education, size and ownership of farm, number and types of crops grown, trade-town and extension contact, and organizational participation.

The Adoption Scale

The primary purpose of constructing an adoption scale is to be able to measure the adoption behaviour of the farmers which is an hypothesized latent variable assumed to serve as a causal agent of the manifest behaviour of adoption and rejection of recommended practices. The latent variable of adoption behaviour is a continuum, and the farmers can be arranged theoretically along the continuum according to

the degree to which they manifest their adoption behaviour. Empirically, however, they may be found to be concentrated into a number of clusters at various points along the continuum. The researcher is primarily interested in assigning values distributed along the hypothesized latent variable continuum to observed behaviour of adoption.

Trace line analysis⁶ is a method by which items which are consistently related to the latent variable continuum are selected for the purpose of constructing a scale. In the present analysis the adoption behaviour of the farmers was the hypothesized latent variable continuum. With the help of trace line analysis, attempts were made to select a number of recommended farm practices which were consistently related to the latent variable continuum for the purpose of constructing an adoption scale.

A trace line is a curve obtained when the percentages of individuals endorsing an item at different points of the latent variable continuum are plotted.⁷ In other words, in the present case, a trace line for each recommended practice was obtained by plotting the percentages of farmers adopting that practice at different points on the latent variable continuum. It was presumed that proportion of farmers adopting a practice would monotonically increase as the strength of the latent variable continuum increased if that practice was a consistent indicator of adoption behaviour.

The practices which were found to be consistently and monotonically related to latent continuum of adoption behaviour were combined into an adoption scale and number of practices adopted by the farmers was supposed to be indicative of his position in the latent continuum.

Outline of the Procedure followed

The first step in the procedure involved a preliminary selection of the recommended practices which were to be used for constructing a scale. Originally data were collected on nineteen practices regarding whether or not each of these was adopted by the farmers interviewed. The practices which

were adopted by more than 80 per cent or less than 20 per cent of the farmers were eliminated because these were supposed to have little discriminatory power. The practices which were not applicable to farm situations of all farmers interviewed were also eliminated. As for example, practices which were related to cultivation of groundnut, rice and sugarcane were discarded because a majority of the farmers did not cultivate these crops. Seven practices out of nineteen met the two above mentioned criteria. These were used for the purpose of measuring their 'scalability'. These seven practices have been shown in Table 1 by per cent of farmers who adopted each of them.

TABLE 1

Types of practice by percents of farmers who adopted them

Practice No.	Types of farm practice	Percent of farmers who adopted
1	Improved variety of cotton seed (American 220)	73.0
2	Chemical fertilizer in wheat	65.0
3	Vaccination against hemorrhagic septicemia in cattle	60.0
4	Weeding of cotton	55.0
5	Improved variety of wheat (C 273) for irrigated land	49.0
6	Improved variety of wheat (C591 or C286) for unirrigated land	43.0
7	Drilling of cotton	29.0

In the next step each of the seven practices was dichotomized into two categories, 'adopted' and 'not adopted'. Arbitrary weights of 1 and 0 were assigned to each of

these two categories respectively. Each farmer's total raw score was computed by summing the weights corresponding to adoption or non-adoption of the seven practices. For example, the farmer who adopted all the seven practices had a total raw score of seven, the farmer who adopted six practices had a raw score of six, and so forth, down to and including those who did not adopt any of the seven practices and had a raw score of zero.

In the third step, category weights for each practice were cross-tabulated with total raw score. Table 2 shows how the category weights of Practice Number 1 were cross-tabulated with total raw scores. However, there was built-in correlation between the score for each practice which was being cross-tabulated and the total raw scores because the category weights of that practice were also included in the total raw score. To remove this self-correlation, the category weights of each practice, which were being cross-tabulated, were subtracted from the total raw scores. Thus, the total raw score remained unchanged for the farmers who scored 0 in that practice, the total raw scores were reduced by one point for the farmers who scored 1.

TABLE 2

Original cross-tabulation of total raw scores and improved farming Practice No. 1.

Total raw score	Adopted Practice No. 1, weight = 1	Not adopted Practice No. 1 weight = 0
0	0	3
1	8	8
2	15	20
3	18	6
4	29	6
5	19	6
6	34	2
7	4	0
Total	127	51

TABLE 3

Cross-tabulation of adjusted raw scores and improved farming Practice No. 1 with self-correlation removed.

Adjusted total raw score	Adopted Practice No. 1, weight=1	Not adopted Practice No. 1 weight=0
0	8	3
1	15	8
2	18	20
3	29	6
4	19	6
5	34	6
6	4	2
Total	127	51

This procedure yielded a new set of tables in which category weights for each of the practices were cross-tabulated with the total raw scores for the remainder of the practices in the set. These new total raw scores were termed 'adjusted raw scores'. Table 3 shows how category weights for Practice Number 1 were subtracted from the total raw scores and cross-tabulated with the 'adjusted raw scores'.

These adjusted raw scores were taken as approximations of the latent variable continuum. At each point of the continuum indicated by adjusted total raw scores, the percentage of farmers adopting the practice was calculated. For example, as can be seen in Table 3, out of eleven farmers with adjusted total raw score of zero, 72.7 per cent (or 8 farmers) adopted Practice Number 1; out of 23 farmers with adjusted raw score of one, 65.2 per cent (or 15 farmers) adopted the practice and so on. When the number of individuals in any category of the adjusted raw score fell below eight, it was combined with the adjacent category before calculating

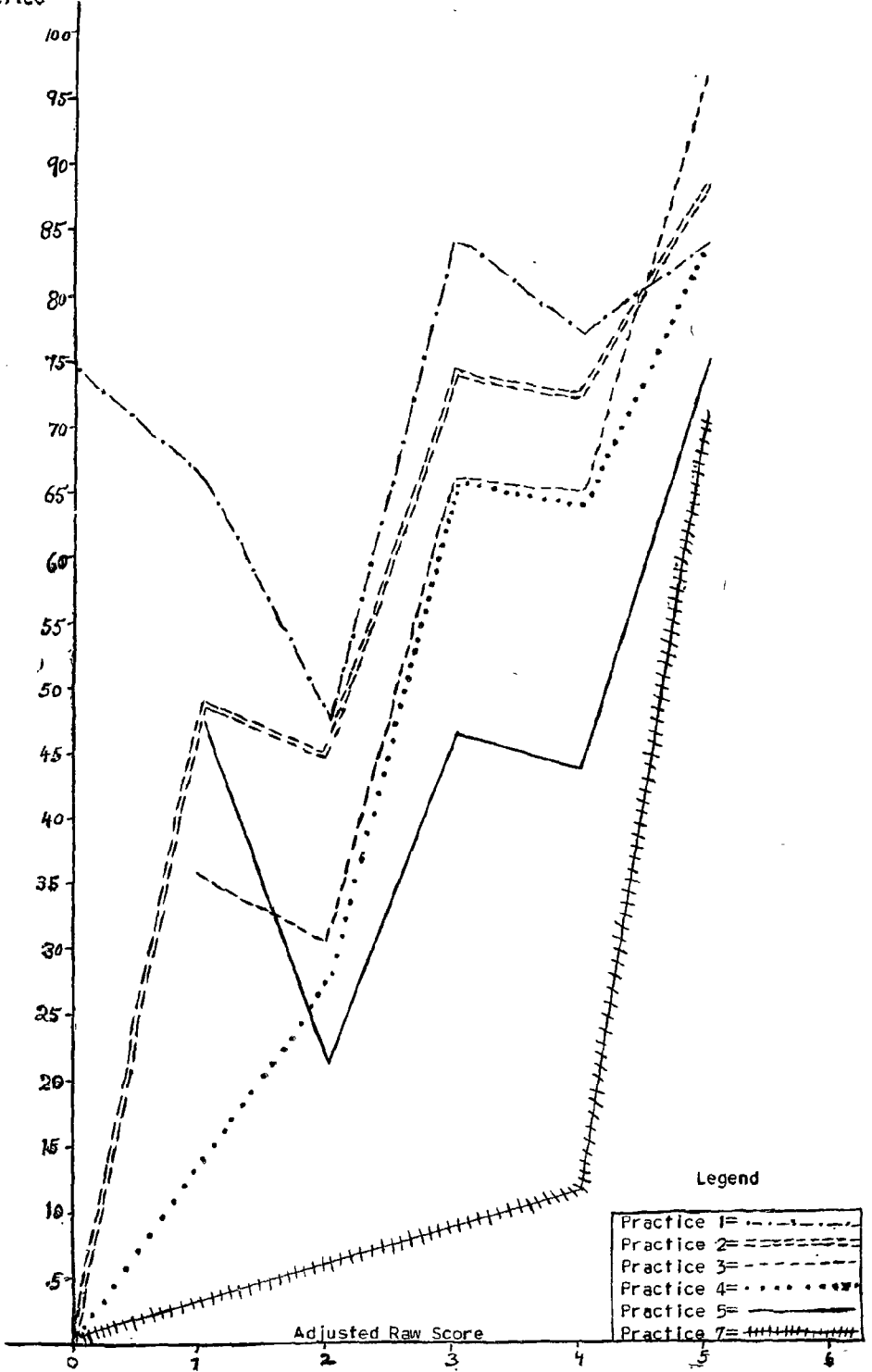
percentage, otherwise sampling variation would have been intensified. For example, as can be seen in Table 3, number of individuals with adjusted raw score of six for Practice Number 1 fell below eight and so it was combined with the adjacent category before calculating percentage. The percentages on each point of the continuum (as indicated by the adjusted raw scores) were now plotted. The procedure was repeated for each of the seven practices and seven trace lines were obtained in this manner.

The final step involved making a judgment about the acceptability of the trace lines. The acceptability of trace lines for measurement purposes can be visually determined with a high degree of accuracy.⁸ An ideal trace line starts close to the x-axis at the lower end of the latent continuum, increases monotonically, and approaches the 100 per cent ordinate at the upper end of the continuum.⁹ The curves of the internally consistent items are supposed to be roughly parallel although they might show different degrees of curvature. Trace lines of the items which are non-monotonic and not internally consistent tend to be erratic showing an irregular series of rises and dips, do not increase monotonically and are not found to be parallel to other trace lines of internally consistent items. Thus the items whose trace lines generally confirm to the ideal trace lines are accepted and the items whose trace lines deviate greatly from the ideal trace lines are rejected.

In the present case the trace lines did not very closely conform to the ideal trace lines (Figure 1). However, trace lines of six practices out of seven increased monotonically and approached the 100 per cent ordinate of the upper end of the continuum, although they showed a series of rises and dips. The reason for which the trace lines of the Practices Number 3 and 5 did not start from zero (the lower end of the continuum) was that the number of farmers with a raw score of zero for each of these two practices were below eight and had to be combined with the adjacent raw score category 1. However, all these trace lines increased monotonically and were generally parallel

Percent
Adopted
Practice

(Figure 1) Traco Lines of Six Improved Farm Practices



Legend

Practice 1	=	---·---
Practice 2	=	- - - - -
Practice 3	=	· · · · ·
Practice 4	=	—————
Practice 5	=	- - - - -
Practice 7	=	+ + + + +

to each other roughly corresponding to the ideal trace lines. The trace line of Practice Number 6 was highly erratic and not parallel to other six.¹⁰ As a result, this practice had to be eliminated for consideration in the resulting adoption scale.

These six practices were now considered to be internally consistent and monotonically related to the latent continuum and were combined into an adoption scale. The farmers were given scores on the basis of number of practices each of them adopted out of these six practices. These scores indicated their position on the latent variable continuum of adoption behaviour. They were grouped into seven categories on the basis of their scores starting from zero through six as shown in Table 4.

TABLE 4

Distribution of farmers by adoption scale score.

	Adoption scale score							Total
	0	1	2	3	4	5	6	
No. of farmers	5	26	33	36	30	19	29	178
Per cent of farmers	3	15	18	20	17	11	16	100

Test of Reliability

Reliability of a scale is measured by the degree to which it consistently produces the same results when applied to the same sample.¹¹ Split-half technique is one of the methods by which the reliability of scale can be measured. In this procedure the test items are split into halves and each of the two halves is treated as a separate scale and scored accordingly. The scores on these two halves are correlated and the resulting

coefficient is taken as a measure of reliability of the scale. A significant coefficient of correlation indicates that 'the individuals' position is not affected by particular sampling of items in either of the tests but would be substantially the same on any test made up of items from the same universe'.¹²

The reliability co-efficient of the adoption scale was computed by the application of split-half method. The six practices which constituted the adoption scale were split into halves with all the three practices with odd numbers in one half, and the practices with even numbers in the other. Two sets of adoption scores were then computed for each farmer on the basis of odd numbered and even numbered practices adopted respectively. These two sets of scores were then correlated and the co-efficient of correlation was found to be .44 which was significant at .001 level. After the application of Spearman-Brown correction, the co-efficient of reliability was found to be .59. Considering the fact that number of items in the scale was only six, the co-efficient of reliability may be considered quite high.

Application of the Scale : A Test of Validity

Validity of a scale may be defined as the extent to which differences in scores on it reflect the differences among individuals regarding the characteristics which it seeks to measure.¹³ One of the methods of testing the validity of a scale is to correlate it with a number of independent criteria which are already known to be related to the phenomenon which the scale is supposed to measure.¹⁴ If the scale scores predict variations in these independent variables in the same way as it is theoretically expected and empirically established in previous studies, the validity of the scale may be substantiated. To test the validity of the present scale to the extent it measures the adoption behaviour of the farmers it was cross-tabulated with a selected number of independent variables which were found to be consistently related to adoption in previous studies.

Among others, factors like size and ownership of farm, extent of agricultural commercialization, level of living,

organizational participation and extension and outside contact have been found to be positively related to adoption of recommended farm practices in a large number of studies conducted in the United States and in other countries.¹⁵ Larger farms, full ownership of the farm, higher level of living, greater degree of social or organizational participation, and greater extent of extension and outside contact, have been found to be consistently related to higher rate of adoption. For the purpose of measuring the validity of the adoption scale all these variables were cross-tabulated with it to see whether or not the scale scores predicted variations in these variables in the direction found in the previous studies.

TABLE 5

Characteristics of Farmers at Different Levels of Adoption

Characteristics	Number of farmers	Adoption scale score								d.f.	p.
		0	1	2	3	4	5	6	× 2		
Per cent operating large farms	46	—	23	33	44	53	74	66	20.441	6	.01
Per cent cultivating large area of land	57	—	19	36	67	73	79	79	38.971	6	.001
Per cent own farm wholly	65	10	42	65	63	77	89	69	17.498	6	.01
Per cent grow 5 or more crops for sale	42	—	4	21	44	43	58	97	59.943	6	.001
Per cent with high degree of commercialization	53	40	42	52	58	36	58	76	12.875	6	.05
Per cent with high level of living	50	20	35	31	54	53	63	72	23.100	6	.001
Per cent member of organizations	48	20	37	27	67	68	57	43	18.760	6	.01
Per cent had contact with V. L. W. during last 2 years	46	—	4	21	43	61	58	97	62.940	6	.001
Per cent visited trade-towns most frequently	47	40	42	28	44	31	53	93	33.028	6	.001

Table 5 shows the relationship between the adoption scale scores and the independent variables. Each of the independent variables was dichotomized and was then cross-tabulated with the adoption scale scores of the farmers.¹⁶ Chi-square values were found to be highly significant in each case.

It may be seen in Table 5 that percentage of farmers operating larger farms increased, by and large, from lower to higher-levels of adoption. Similarly, percentage of farmers cultivating larger area of land also increased progressively with the increasing scale-series.¹⁷ Relatively greater percentages of farmers with higher adoption scale-scores wholly owned the land they cultivated. Percentages of farmers growing 5 or more crops for sale also increased progressively as the scale-scores increased.

The commercialization score for each farmer was computed by dividing up the area of land he had under commercial crops by the total area of land he cultivated that year and multiplied by 100. Thus, if a farmer had grown commercial crops in 10 Bighas out of 20 Bighas of land he cultivated, his commercialization score would be 50. The farmers were then dichotomized into two categories—the farmers with the high degree of commercialization (with commercialization scores of 37 or above) and the farmers with low degree of commercialization (36.9 or below). It can be seen that the percentage of farmers with high commercialization score consistently increased with the increasing scale-scores.

A level of living scale for the farmers of these six villages was constructed with the help of Guttman scaling technique. Five items like the ownership of bicycle, separate cattle shed, crockery, chairs and separate sitting room were used in constructing the scale. The coefficient of reproducibility was .93. The farmers were then dichotomized into two categories—high, who had level of living score between 3 and 5, and low, who had level of living score between 0 and 2. Table 5 shows that percentages of farmers with high level of living scores increased progressively from scale score zero through six.

Similarly, it was found that the percentages of farmers who were members of one or more organizations, who had contact

with the village level workers (V. L. W.), and who visited the trade-towns most frequently also increased with the increasing adoption scale-scores.

Thus the scores in the adoption scale predicted variations in all the variables in the direction found in the previous studies and the validity of the scale to the extent that it measured the adoption behaviour of the farmers was demonstrated.

Conclusion

Use of scale analysis in measuring the adoption behaviour of the farmers helps to classify them into a number of continuous ranked categories according to the degree they adopt the recommended farm practices. Such a scale can also be achieved by the use of Guttman's scalogram analysis. It has already been noted that Abell¹⁸ attempted to construct adoption scales with seven series of home-making practices and obtained meaningful and acceptable scales with four of the seven. The reason for using trace line analysis in the present study in preference to Guttman's scalogram analysis was its relative simplicity as a method. Furthermore, many of the items which are rejected as 'imperfect' types in Guttman's scalogram analysis may have acceptable trace lines and so may be included in a scale constructed with the use of trace line analysis and still may be as discriminating, if not more, as the scale constructed with the use of scalogram analysis.

Although ideal trace lines are almost impossible to be obtained empirically in sociological research, close approximation to them is possible. However, the trace lines obtained for the farm practices in the present study were not entirely satisfactory. They very roughly approximated the ideal trace lines increasing monotonically and being roughly parallel to each other. In view of the fact that this was a secondary analysis of the data which were available and that the total number of cases was not quite large trace lines closely conforming to the ideal ones could not be expected. Nonetheless, the resulting scale was found to be reliable, and it successfully predicted variations in the independent variables in the

expected direction. However, on the basis of the present findings it may be expected that with careful selection of items and with a large number of cases satisfactory trace lines can be achieved and a reliable, valid adoption scale with a high degree of predictability can be constructed.

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6. James H. Copp, *Trace Line Analysis, An Improved Method of Item Analysis*, (Mimeographed), Pennsylvania State University, (February 9, 1959), p. 8.
7. *Ibid*, p. 2-3.
8. Besides this visual judgment one can evaluate the acceptability of the trace lines rigorously by calculating the theoretical proportions of endorsement of each item and comparing it with the actual proportions. However, this procedure involves complex computations and use of logarithms. 'In ordinary work, visual inspection of trace lines should suffice.' See, Copp, *Ibid*, p. 17.
9. Copp, *Ibid*, p. 5.
10. The only practice, the curve of which was not parallel to other six curves, was 'improved variety of wheat (C591

or C286) for unirrigated land.' This was probably due to the reason that the factor of non-irrigability of land for an individual farmer was a determining factor in his adoption of this practice. Naturally for the farmers who did not have any non-irrigable land, the question of adopting the practice did not arise. So the adoption of this practice was a non-monotonic function of the latent variable. As a result, the practice had to be eliminated from the scale.

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16. For example, the area of land operated was dichotomized as 'large' when it was 50 bighas or more, and 'small' when it was less than 50 bighas. This was then cross-tabulated with the adoption scale scores and the chi-square values were computed. For the sake of convenience, the percentage distribution of farmers operating small farms has not been shown in the table. This has been done in the case of other variables also.
17. The area operated by the farmer was the total area of cultivable land he owned. Very few of the farmers cultivated the whole area of their farms every year. The area of land cultivated by the farmer was the area which he cultivated during the year before the data were collected.
18. Abell, *op. cit.*

FACTOR ANALYSIS OF FARMER'S SELF- IMAGE OF PERSONALITY TRAITS

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Abstract : 'The image of the self acts as a factor in determining role behaviour'. In view of the agricultural development programmes in India, farmers' self-image about their own personality traits is one of the important determining factors to understand their roles towards participation in the programmes. The present study is an attempt to answer the question: whether farmers' self-image of some important personality traits is uni-dimensional or multi-dimensional. The study was carried out with 200 cultivating owner farmers of five Delhi villages in relation to the personality traits of innovation proneness, economic motivation, adoption leadership, closeness with the extension agents and rural life preference. It is found through factor analysis that the farmers' self-image about these five personality traits is multi-dimensional. The centroid factors extraction and the orthogonal rotation of axes reveal that there are three main factors in their self-image: (1) innovation oriented factor, (2) motivation or occupation oriented factor, and (3) leadership oriented factor. The self-image pattern as revealed in the study indicates a very favourable situation so far as the participation in new agricultural developmental programmes by the farmers is concerned and it is for the planners to seize upon the situation which has been created, most likely through the tremendous impact of new agricultural technologies.

Introduction

ALTHOUGH the importance of farmers' personality characteristics was quite aptly emphasized by various research scholars and authors, most of these studies in relation to farmers' innovativeness were dealt with the personality

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characteristics as measured by the researchers and not as farmers self-rating or self-perceiving phenomena. Angell¹ emphasized that, 'there is a close, if not causal, relationship between the way an individual thinks about or perceives himself and his behaviour'. Farmers with predominant self-depreciation deeply rooted in their self-concepts, are not likely to expect much of themselves in relation to success in farming and in many cases this expectation is realized.

The present study is an attempt to develop a standardized and reliable self-rating tests of farmer's personality characteristics and to indicate, through factor analysis, the relevance and importance of the personality characteristics under study in the domain of farmers' self-schema of personality syndrome.

The Sample

The present study of farmer's personality syndrome was carried out with special reference to North Indian farmers of Delhi State. The investigation was undertaken in five villages of Delhi State. Two hundred owner cultivators of these five villages were covered by this investigation. The sample of respondents was selected from the total farming population of the five villages stratified into three landholding size categories, viz., under 5 acres of land, 5-10 acres of land, and over 10 acres of land. The sampling was done on stratified random basis, proportionately distributing the respondents among the three categories of landholding size and five villages under study.

Farmers' Self-rating Scale :

It was necessary for the study to measure the farmer's self-perception of personality traits in purely quantitative terms. In response to the necessity of a measuring instrument, a self-rating scale of personality characteristics was developed.

1. Selection of personality traits

Among the groups of personality characteristics, 'performance traits' are of considerably greater importance in relation to the farmers' reactions towards the improved

agricultural technologies and other development programmes. In view of the past studies and the theoretical relevance, the self-rating scale the present study focussed its attention upon the following types of performance traits :

(1) Innovation proveness, (2) Economic motivation, (3) Adoption leadership, (4) Closeness with extension agents, and (5) Rural life preference.

2. The scale

Based on the selected personality characteristics, items or statements indicating different degrees of the characteristics were collected from the farmers of the area under study and from a score of past studies (Wilcox² *et al*, Anderson⁸, Straus and Parrish⁴, and Straus).⁵

In all 45 items were collected for the self-rating scale with 9 items for each one of the five personality characteristics. The statements were phrased in the first person, as if stated by a respondent himself. Pre-testing of the statements indicated that three statements in a block describing a personality trait were optimum which could be conveniently remembered by the respondents when asked to give their 'most-least' choices. Thus, the 9 items for each of the personality traits were classified on *a priori* basis into three categories indicating high, medium and low degrees of the traits. In each of these three categories, there were three items. The statements of these high, medium and low categories were assigned weights of 3, 2 and 1 respectively.

The statements thus classified on *a priori* basis, were given to 20 judges for their expert rating on a 3 point scale. It was considered that between the three statements in a particular set, there might be shades of difference in degrees in spite of the fact that the three statements were grouped together in a set on *a priori* basis to indicate the same degree of the personality characteristics. In the list of the sets of statements given to judges, there was no indication as to which one of the 3 sets was indicating high, medium and low degree of the personality trait for which the sets were composed. This was done purposely to avoid response bias of the judges.

After obtaining the responses of the judges rating, the coefficients of concordance (W) suggested by Kendall⁶ were worked out for each of the 15 sets of the scale to find out the agreement between 20 judges about rating the 3 statements in a set. A high and significant value of W interpreted as meaning that judges applied essentially the same standard in ranking 3 items in a set. It was observed that in three cases, values of coefficient of concordance (W) were not significant. The statements of these three sets were rephrased and again rated by the same judges in which case W values were significant. The statements with low, medium and high mean rank values assumed the first, second and third positions respectively indicating high medium and low degrees of the personality characteristics within each set.

Of the three sets of statements for a particular personality trait, the three statements securing the first position were grouped together as A, three statements securing second positions were grouped as B, and the three statements securing third position were grouped as C. The statements thus arranged in the three groups A, B and C for a particular personality trait were considered equivalent to each other in relation to the degrees of the trait indicated by the statements.

In the final list of the self-rating scale, the statements within the groups A, B and C indicating high, medium and low degrees of a particular personality trait were arranged in random order to avoid the response biases.

3. Scoring

The instrument thus developed was administered to all the 200 sample farmers under study. Data were collected by interviewing them individually.

The scoring of respondents' degree of self-evaluation of the five personality traits was done by 'forced-choice' technique as designed by Straus and Parrish.⁷ This method forced the respondent to choose from a group of three short statements describing a particular personality characteristics the one which most accurately described the respondent himself and also the one which least accurately portrayed the respondent

himself. The score of a respondent for a particular personality characteristic was the sum of the ratio of the weight of the 'most-like' statements to the weight of the 'least-like' statement. As there were three sets of statements describing a personality trait the sum of the ratios for the three sets was a respondent's self-rating score for that personality trait. Each set of statements in the final list of the self-rating scale contained three statements with weights 3, 2 and 1 indicating high, medium and low degrees of a personality trait respectively. Thus, the maximum score possible was 9 and the minimum possible was 1.

The self-rating scale was standardized for Delhi villages. The scale has high test-retest reliability, and high concurrent validity. The scale has been used to predict the farmers' level of adoption of nitrogenous fertilizers.

Factor analysis

Thurstones'⁸ centroid method of factor analysis was used for analysing the farmers' self-evaluating data obtained in the present study. The factor analysis was carried out with all the five items (personality traits) in the self-rating scale based on the data from 200 owner-cultivating farmers. Table 1 gives the inter-correlation matrix of the five items of the self-rating scale.

TABLE 1

Inter-correlation matrix of the self-rating scale items.

Variables	X ₁	X ₂	X ₃	X ₄	X ₅
Innovation proneness (X ₁)		0.5164	0.4536	0.3662	0.1263
Economic motivation (X ₂)	0.5164		0.3600	0.2762	0.2210
Adoption leadership (X ₃)	0.4536	0.3600		0.4250	0.2273
Closeness with extension agents (X ₄)	0.3672	0.2762	0.4250		0.0802
Rural life preference (X ₅)	0.1263	0.2210	0.2273	0.0802	

The procedure followed in the factor analysis of the above data was that given by Guilford.⁹ The following points should be noted regarding this analysis :

(1) The guessed communality for each item of the self-rating scale was the highest correlation coefficient in its column in the correlation matrix.

(2) Reflection had to be done for some items of factor residuals to maximize positive signs.

Extraction of Factors

The factors were extracted by using the centroid method.

Table 2 gives the original factor loadings obtained for the three factors.

TABLE 2

Centroid factor loadings with proportions of variances contributed by the three centroids, and obtained communalities prior to rotation of axis.

Items	Factor loadings			Obtained communalities
	a_1	a_2	a_3	(h^2)
1. Innovation proneness	0.6894	0.1066	0.2837	0.5669
2. Economic motivation	0.6580	-0.1976	0.2564	0.5376
3. Adoption leadership	0.6683	0.1027	-0.2015	0.5205
4. Closeness with extension agents	0.5479	0.2984	-0.0967	0.3984
5. Rural life preference	0.3071	-0.2494	0.0943	0.1974
Variance per cent	79	10	11	

There is no single infallible index or criterion of when we have extracted the proper number of factors. However, as suggested by Guilford,¹⁰ one rough criterion was used in the

present analysis. The criterion was the frequency distribution of the residuals. It is expected that in ideal conditions when the proper number of factors are extracted, the residuals will be zero. But in actual research problems the residuals do not vanish completely because of the guessed communalities. Thus, to be sure, we want that the residuals are all sufficiently small as to assure us that it does not pay to extract more factors. In the present analysis, the extraction of factors was stopped when it showed that the extractions of three factors had exhausted the correlation matrix in the residuals, except for rare rounding errors. Therefore, loadings of only three factors were calculated as shown in Table 2.

Rotation of Axes

Centroid factors need be rotated to obtain their psychological and mathematical meaning. Thurstone¹¹ believes that when simple structure is achieved in rotations the factors have psychological meaning. In other words, simple structure is a principle of order in psychological nature. So, this is necessary not only for the first centroid factor which has high loadings in most of the items in the scale, but also for the second and subsequent factors which have positive weights on some items and negative weights on others.

Orthogonal rotation in two dimensions was employed taking two factors at a time. New loadings were calculated after locating the new reference axes. The location of new axes was guided by the principle of maximization of zero factor loadings and minimization of negative loadings.

Altogether three rotations had to be made. Both the rotations were done in clockwise direction. The first rotation was between A_0 and B_0 , the angle of rotation being 61° (figure 1a). The second rotation of 62° was of factors A_1 and C_1 (Figure 1 b) and the third rotation of 2° was between B_2 and C_2 (Figure 1 c). The final loadings of the three centroid factors on the basis of the new rotated reference axes are shown in Table 3. The last column in Tables 2 and 3 show that communalities are almost the same in both cases.

Fig. 1a

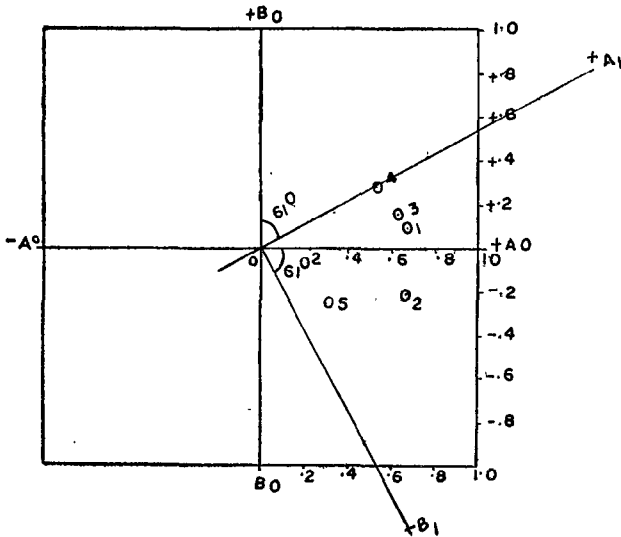


TABLE 3

Final factor loadings of five items on the three centroids after orthogonal rotation of axes.

Items	A ₁	B ₁	C ₁	Communality (h ²)
Innovation proneness	0.7130	0.2396	0.0461	0.5678
Economic motivation	0.5458	0.4897	-0.0149	0.5379
Adoption leadership	0.5052	0.1717	0.4857	0.5206
Closeness with extension agents	0.5095	0.0091	0.3732	0.3990
Rural life preference	0.0389	0.3712	0.2406	0.1972
Variance per cent	59	21	20	

The orthogonal rotation revealed the existence of three factors. The first factor consists only of item 1 (innovation proneness); the second factor consists of item 2 (economic motivation) and item 5 (rural life preference); and the third factor consists of item 3 (adoption leadership) and item 4 (closeness with extension agents).

Interpretation of Factors

It is evident from Table 3 that factor 1 has relatively very high loading in item 1 (innovation proneness); low loadings in item 2 (economic motivation), item 3 (adoption leadership) and item 4 (closeness with extension agents), zero loading in item 5 (rural life preference). Factor 2 has relatively high loadings in items 2 (economic motivation) and in 5 (rural life preference); low loadings in items 1 (innovation proneness), 3 (adoption leadership); and zero loading in item 4 (closeness with extension agents). Factor 3 has relatively high loadings in items 3 (adoption leadership) and 4 (closeness with extension agents); low loading in item 5 (rural life preference); zero loading in item 1 (innovation proneness); and negative loading in item 2 (economic motivation).

The three factors constituting the self-schema of farmer's personality traits may be designated by the symbols A, B and C. Thus, Factor A has significantly high loading in item of innovation proneness; Factor B in economic motivation and rural life preference; Factor C in adoption leadership and closeness with extension agents. It was found that Factor A accounted for 59 per cent, Factor B for 21 per cent and Factor C for 20 per cent of the variance respectively. Thus, we observe that Factor A accounts for the major proportion of the variance. However, the results of this study should not be construed as identifying the relative importance of items of self-schema of farmer's personality traits. It may be taken as only a guide line to structure the domain of the said self-schema.

Factor A

The main aspect of Factor A is, what may be called as the 'impact of new agriculture or innovations'. For the last two/three decades, the information about a good number of modern farming innovations have been diffused in Indian agriculture and many of them have been successfully demonstrated and practised by the farmers. This technological thrust in a traditional agriculture has created a disequilibrium in a perceptual set up of the farmers and a completely new;

vista of consciousness has emerged, influencing their self-image of achievement pattern. The norm of innovation proneness as viewed for himself is a matter of self-influence and the individual feels obligated to conform to this norm to bring back the equilibrium state of their perceptual set up. Even if a farmer is not in a position, for several reasons, to practice innovations in actuality, the over-all influence of surrounding norms of innovations and the continuous inflow of information about the innovations condition the farmer about the use of innovations and he will obviously think that he has interest in and desire to seek changes in farming techniques. This perceptual phenomenon leads the farmer to imagine himself innovation-prone consciously in a self-schema.

It is interesting to note that Factor A has also relatively high loadings in economic motivation, adoption leadership, and closeness with extension agents, all of which are the result of the impact of new agriculture or innovations and are acquired. On the other hand, the item like rural life preference, which is in no way connected with the agricultural technology, but is more or less an inherent value, has almost a zero loading.

Factor B

Factor B has high loadings in economic motivation and rural life preference. This factor may be designated as the 'motivational' or 'occupational' factor.

A farmer's economic motivation is an indication of scale and of the degree of his willingness for investment of available potential resources in adopting farming innovations. A recommended farming innovation always aims at higher economic return emphasizing monetary profit. With the advent of money-economy in the rural polity of India and also with the introduction of various improved farming practices, it is logically expected that the farmer will be viewing himself economically motivated with higher aspiration level in terms of monetary gain. But this type of self-image of economic-motivation is directly related to the

farmer's self-image about the preference of occupation. Only individuals or groups who view farming objectively as but one out of a number of possible occupations will be economic-motivated in their investment pattern in the farming. Thus, in actual situation, the self-schema of occupation determines the farmer's economic-motivation. That is why this factor has high loadings in rural-life preference.

Factor B has low loadings in innovation proneness, adoption leadership and zero loading in closeness with extension agents. These items as discussed earlier, are more innovation-oriented and are acquired characteristics rather than the inherent motivational factors.

Factor C

The main characteristics of Factor C is that the items in which it has high loadings (adoption leadership and closeness with extension agents) are related to development activities and thus are indicative of leadership role. The factor may be termed as 'leadership' factor.

In the present situation of the Indian farming community, farmer plays some social and influential roles among his fellow members in co-operation and in close contact with the governmental change agents in order to maintain his aspired social status and to keep pace with the new emerging leadership situations. Individual who perceives himself in a higher level for the characteristic of adoption leadership is expected by his fellow members to be more informative and influential than his counterpart. This is possible in the present situation of India, only when a person can have a close rapport and relationship with the local governmental change agents. That is why this factor has high loadings in the two very much interrelated leadership items, i.e., adoption leadership and closeness with extension agents.

Factor C has low loading in rural life preference, and almost zero loadings in innovation proneness and economic motivation.

General

The above interpretation of factors reveals that there are three basic factors in the farmers' self-schema. The basic factors of farmers' self-image pattern emerged from the above analysis are: (1) innovation-oriented, (2) motivation or occupation oriented; and (3) leadership oriented. It is interesting to note that all these three factors point towards the roles expected to be played by the farmers in view of the country's agricultural developmental programmes. A person behaves in accordance with what the self means to him, and this meaning of self is largely determined by the existing socio-economic conditions and norms. The image of the self acts as a factor in determining role behaviour, for as Dai Bingham^{1,2} said, 'The conception of self may also be thought of a role one intends or is expected to play in social situations'.

It is evident from the above discussion that Factor A is 'innovation oriented'. Factor B is a 'Motivation or occupation' factor and in this factor, rural life preference and economic motivation are the two components. Bealer^{1,3} *et al* preferred the word 'rural' to 'people engaged in agricultural production. In these terms 'rural life' denotes an employment category, differentiated from most others by a characteristic direct confronting of nature's physical elements and a primary economic conversion functions'. Thus, the main construct of this factor is called as occupational or motivational aspect of the farmer's self-image.

Factor C is similar to leadership functions, and may be designated as such. Because influencing other community members to adopt farming innovations (adoption leadership) is the main item in this factor, and because to be an adoption leader, one has to close relationship with the extension agents, this factor is regarded as the leadership-oriented image in the self-schema of the farmers.

The present study has indicated three most important factors of a farmer's self-image for the rural areas of Delhi. This is an interesting finding in the sense that it is indicating a growing consciousness of the Delhi farmers about the new

agricultural strategy in their self-analysis. It would also make much of our work directly and clearly useful to agricultural extension personnel. While these persons may sometimes serve a wider clientele, the principal focus of their endeavours is still farmers and their families, and for that it is necessary to know their self-image pattern about themselves.

The result of the factor analysis and the interpretation in this study leads to the conclusion that the farmer's self-schema is not a unidimensional but a multidimensional construct, having three dimensions in the form of the three factors discussed above.

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Fig. 1b

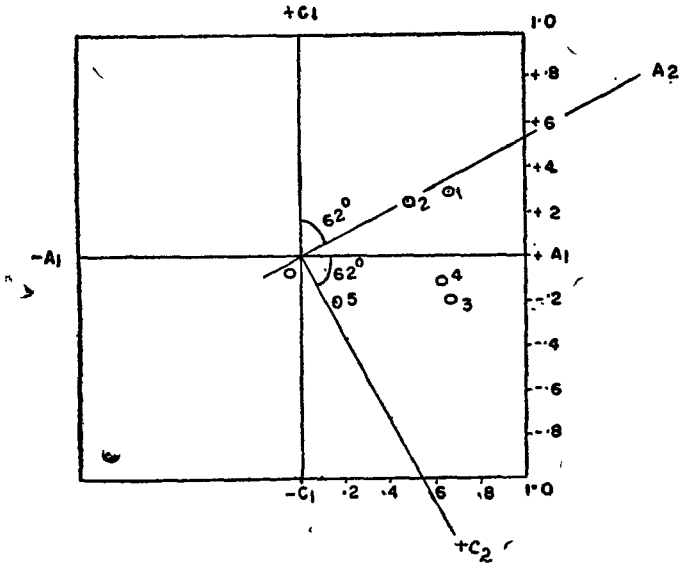
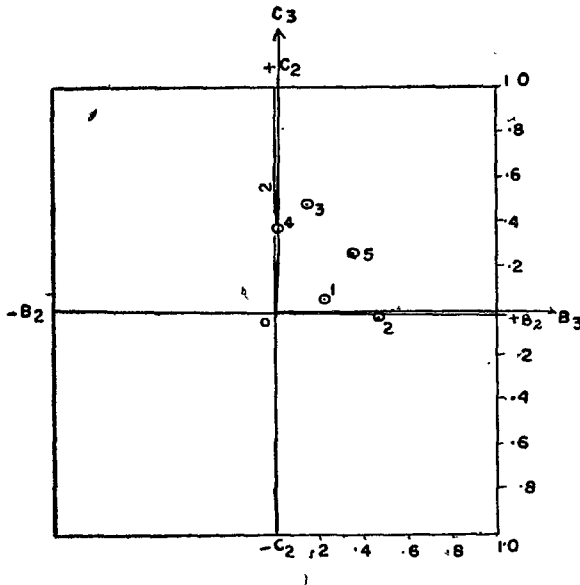


Fig. 1c



OCCUPATIONAL DIFFERENTIATION IN A NORTH INDIAN COMMUNITY

S. P. JAIN

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Abstract : Interview data collected in a small town of North India lend support to the view that the occupational differentials based on religion and hierarchy of caste still remain in North Indian communities ; particularly in communities which reflect an inter-mixture of rural and urban characteristics and are small in population.

IT is generally believed that the rapid growth of urbanization and industrialization has been conducive for the change in the occupational structure of Indian communities. During the last four decades the traditional occupational pattern of Indian communities, especially of cities, has experienced considerable changes. The factors such as religion and caste, which have been a binding force in the occupational selection of the people hitherto, are not so potent today. But it is evident from the study of Gist¹, conducted in important cities of South India that, though the traditional occupational system is changing due to increased urbanization and industrialization, nevertheless, occupational differentials based on religion and hierarchy of caste still remain. In a similar study he found much correspondence between positions in the hierarchy of caste and occupational structure.²

Some sociologists³ have found an intimate relationship between the hierarchy of caste and hierarchy of a man's occupation. They have concluded that members of higher castes generally prefer to go in for occupations of higher prestige

¹ The data for this paper were collected when the author was doing field work for his doctoral degree.

² The author is grateful to Dr. V. S. D'souza, Head, Department of Sociology, Punjab University, Chandigarh, for his guidance.

while the lower caste people go in for the occupations which are of lower prestige. Similarly about religion. Gist⁴ points out, 'A man's religion still counts. If he is a Muslim or a Sikh..... there is perhaps more than an even chance that he will be attracted in a given occupational direction.'

The above conclusions, however, are based on the studies which were conducted either in villages or in cities. Therefore, the pattern of occupational differentiation in middle-sized towns which do not fall either in the category of villages or in cities but exhibit an intermixture of rural-urban features remains unknown.

From the above standpoint the present paper may be considered as an attempt to find out the occupational differentiation in terms of religion and hierarchy of caste in a small town in U. P. Assuming that differential occupational pattern is related to different aspects of social structure such as religion and caste, we shall attempt to examine the extent of relationship of occupation with religion and hierarchy of caste.

The Universe of the Study

The community selected for the purpose of our study was a middle-sized town of nearly 19,000 population (1961 census) in western Uttar Pradesh. The town is inhabited by two religious communities, namely, Hindu and Muslim. The former religious group constitute approximately 38 per cent and the latter 62 per cent of the total population. The economy of the town is predominantly agricultural. The town has developed educational facilities. It has a number of small villages near its boundaries.

Sample size and selection

For the collection of data, a sample of 236 male and female household heads was drawn by method of systematic sampling from the household list of the town. Of the 236 household heads, 81 were Hindus and 155 Muslims. The sample thus drawn represented nearly 8 per cent of the total number of household heads.

For the purposes of the present study the classification of occupation prepared by Sovani⁴ was adopted. It was felt that the use of Sovani's classification would enable us to understand the occupational pattern of the town in a balanced way. It may, however, be noted that we slightly modified Sovani's classification. Keeping in view the data at our disposal we excluded those occupations from the scheme where there was no representation. In all, nine occupational categories were employed, but with the liberal use of an unclassified category for occupations that did not fit logically into the occupational scheme. The nine occupational categories are : (1) unskilled manual workers ; (2) skilled manual workers ; (3) lower professional and administrative jobs ; (4) small business ; (5) highly skilled and supervisory posts ; (6) clerks and shop assistants ; (7) intermediate professions, salariéd posts and secondary school-teachers ; (8) medium business ; (9) agriculturists and unclassified.

The hierarchial ordering of castes of Hindus and Muslims, used in the forthcoming analysis, was devised through a separate enquiry : 'Social Grading of Castes in a North Indian Town'⁵. However in order to simplify the analysis the scheme of grading of castes so achieved was compressed into four broad categories, namely : (1) The upper caste ; (2) The upper middle caste ; (3) The lower middle caste, and (4) the lower caste. The social grading of castes is applicable to both Hindus and Muslims.

TABLE 1

Percentage distribution of Hindus and Muslims by occupational categories

Occupational Category	Hindu percentage	Muslim percentage
1. Unskilled manual worker	8.6	19.4
2. Skilled manual worker	30.9	29.7

Occupational Category	Hindu percentage	Muslim percentage
3. Lower professional and administrative jobs	9.9	3.9
4. Small business	15.0	8.4
5. Highly skilled and supervisory posts	12.3	3.9
6. Clerks and shop assistants	1.2	1.8
7. Intermediate professions, salaried posts and secondary school teachers	—	1.8
8. Medium business	1.2	1.9
9. Agriculturists	16.0	27.0
10. Unclassified	4.9	3.2
Total	100.0	100.0
	(81)	(155)

Religion and Occupation

The factor of religion seems to be a compulsive force in the selection of occupations. It is evident from Table I that as many as 30.9 per cent of Hindus are skilled manual workers. 16.0 per cent agriculturist followed by 15 per cent small businessmen. While highly skilled and supervisory workers, lower professionals and administrative post holders and unskilled manual workers are 12.3, 9.9 and 8.6 per cent respectively. Thus there is a definite tendency among Hindus for going in for certain occupations. A large percentage of Hindus predominate in the occupations of skilled manual workers, agriculturists and small businessmen.

On the other hand, the Muslim population preponderate mainly in two occupations, namely, skilled manual workers and agriculturists. In the former category they are 29.7 per cent and in the latter 27.0 per cent. The unskilled workers are 19.4 per cent, followed by businessmen 8.3 per cent. In the remaining categories the representation is insignificant.

On comparing the occupational pattern of the two religious groups, it is noted that skilled manual workers and agriculturists are in largest percentage among Hindus and Muslims. Significantly, skilled manual workers are by and large in equal percentages in the two religious groups. Unskilled manual workers on the other hand are in a much higher percentage among Muslims (19.4 %) than among Hindus (8.6 %). As regards small businessmen they are in a higher percentage among Hindus (15 %) than among Muslims (8.4 %). On the whole, nearly 49.6 per cent Muslims are represented in agricultural pursuits such as unskilled workers, agricultural labourers, including unclassified occupations. As against this, 37.2 per cent Hindus are engaged in occupations such as lower professions and administrative jobs, small business and highly skilled and supervisory posts. Thus though the members of the two religious groups are found to be predominant in occupations such as skilled manual and agriculture, there is an evidence of a definite tendency for Hindus and Muslims to predominate in certain occupations, and hence the occupational pattern of the two religious groups is distinct to a certain extent.

We may now analyse the occupational pattern of different castes of Hindus and Muslims separately.

Occupations among different castes of Hindus

It is evident from Table 2 that the different castes of Hindus follow distinct occupational patterns. The highest percentage (37.5) of upper caste Hindus is in the category of small business, followed by 31.2 per cent of agriculturists and 12.5 per cent of skilled manual workers. Then there are 38 per cent upper middle caste people who are highly skilled manual workers, followed by 30.8 per cent engaged in lower professions. As many as 65.2 per cent belonging to lower middle caste are skilled manual workers as against 26 per cent of agriculturists. In the lower caste there are 27 per cent skilled manual workers, 23 per cent small businessmen, 19 per cent unskilled manual workers and 12 per cent highly skilled manual workers. It is thus obvious that the upper caste people are concentrated in

small business and agriculture ; the upper middle caste people are predominant in occupations such as highly skilled manual worker and lower professions ; the lower middle caste member are found in largest percentage in the occupational categories of skilled manual worker and agriculture. The lower caste people are, however, represented in varying proportions in the category of skilled manual workers, small business, unskilled manual worker and highly skilled manual worker. Thus the four caste categories of Hindus exhibit different patterns of occupational following.

Occupations among the different castes of Muslims

It may further be observed from Table 2 that as many as 47.3 per cent upper caste Muslims are agriculturists followed by 25.7 per cent unskilled manual workers. As regards the upper middle caste, 51.6 per cent are represented in the category of skilled manual workers. Then come the agriculturists who are 19.4 per cent in this caste group. In the rest of the occupational categories, again, the representation is relatively insignificant. Skilled manual workers are in the largest percentage (58.8) in the lower middle caste, followed by 23.5 per cent of highly skilled manual workers. Similarly there are 52.2 per cent lower caste Muslims who are found in the occupational category of skilled manual workers. Then come the small business man and unskilled manual worker who are represented by 15.8 per cent in each category.

When we compare the occupational pattern of different castes of Hindus and Muslims separately we find that the lower middle and lower caste Hindus are predominant in the occupational category of skilled manual worker. Significantly, the upper middle, lower middle and lower castes of Muslims do exhibit similarity in their occupational following. In all the three caste groups, the skilled manual workers are represented in maximum percentages and the variations in their percentages are not much. Thus, among Hindus the lower middle and lower castes and upper middle, lower middle and lower castes among Muslims exhibit a similar occupational pattern,

TABLE 2

Percentage distribution of Hindus and Muslims by occupational categories and caste groups.

S. No.	Caste	Unskilled manual worker	Skilled manual worker	Lower professions	Small business	Highly skilled manual worker	Clerks and Shop Assts.	Intermediate professions	Medium business	Agriculturists	Unclassified	Total sample
Hindu												
1	Upper	0.0	12.5	6.3	37.5	6.3	0.0	0.0	6.3	31.2	0.0	100(16)
2	Upper middle	7.7	7.7	30.8	0.0	38.0	7.7	0.0	0.0	7.7	0.0	100(18)
3	Lower middle	4.4	65.2	0.0	0.0	4.4	0.0	0.0	0.0	26.0	0.0	100(23)
4	Lower	19.0	27.0	0.0	23.0	12.0	0.0	0.0	0.0	4.0	15.0	100(26)
	Unclassified	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100(3)
Muslim												
1	Upper	25.7	5.4	2.7	6.7	2.7	2.7	2.7	0.0	47.3	4.0	100(74)
2	Upper middle	6.5	51.6	9.7	3.2	0.0	0.0	0.0	9.7	19.4	0.0	100(31)
3	Lower middle	0.0	58.8	0.0	17.6	23.5	0.0	0.0	0.0	0.0	0.0	100(17)
4	Lower	15.8	52.2	5.3	15.8	0.0	0.0	0.0	0.0	5.3	5.2	100(19)
	Unclassified	42.9	42.9	0.0	7.1	0.0	0.0	0.0	0.0	0.0	7.1	100(14)

Though we have seen that some castes of Hindus and Muslims do exhibit somewhat similarity in their occupational pattern, yet we do not have much evidence to say that there is a high degree of relationship between the hierarchy of caste and occupation. All that we may say is that there is a tendency in certain castes to concentrate in certain occupations. This goes to prove that the occupational differentials in the town under study are not based on the factors such as religion and hierarchy of caste.

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THE PROBLEM OF THE NEO-CHRISTIANS OF KERALA*

K. C. ALEXANDER

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Abstract : The Pulayas belong to an untouchable caste occupying an extremely low status in Kerala. When opportunity for improving their status through conversion to Christianity was opened to them there was large-scale conversion. But such conversion did not bring about much improvement in the status of most of them, nor were the converts integrated into the traditional Christian community. It is the opinion of the author that it is the lack of fundamental change from their traditional behavioural pattern and non-adoption of Christian values and practices in respect of important institutions that stood in the way of their integration with the Syrian Christians.

The Problem

THE word 'Neo-Christian' is the translation of the Malayalam word '*Putuchristiani*' which literally means 'new converts to Christianity'. But in Kerala, the word is generally used to refer to converts from the lower, especially untouchable, castes to Christianity. Some of these people were converted four or five generations ago, but are still referred to as Neo-Christians, to distinguish them from the Syrian Christians, who are the oldest Christians of Kerala. On the other hand, converts from the higher castes are never called Neo-Christians but are referred to as 'Syrian Christian'.

* This paper is based on the work the author did among the pulayas of Kerala between December 1963 and April 1964, in connexion with a study of the changing pattern of behaviour of the pulaya untouchables of Kerala. Professor Y. B. Damle has been kind enough to go through the paper and suggest certain modifications. However, the author alone is responsible for the main thesis embodied in the paper.

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This means that the accepted meaning of the term *Putu-christiani* is 'lower caste Christian'. In this paper we are concerned with the problem of converts to Christianity from the lower castes. The problem essentially is, to what degree the converts from lower castes have been integrated into the Syrian Christian Church and with the Syrian Christians of Kerala.

Social ranking

Kerala society had the most rigid caste system,¹ in which each caste occupied a more or less definite position in relation to other castes.² Brahmans occupied the highest rank whereas Pulayas, Parayas and Nayadis occupied the lowest rank in the hierarchy. Naiars (Sudras) and Syrian Christians were two important groups who occupied a status somewhere in the middle of the hierarchy. The *patitia jatis* consisting of Izhavas, Fishermen, etc. ranked below the Naiars and were untouchables.

The Syrian Christians are mainly traders and farmers, but follow many 'polluting' occupations like dealing in fish, toddy, leather, meat, etc. They do not observe many of the dietary taboos and eat beef, etc. In the institution of family, they have got monogamous family where divorce is prohibited but widow remarriage is practised. Economically they are land-owners and independent farmers. Theoretically, they should rank along with the Parayas, as they eat beef and follow several polluting occupations. But when evaluated on the basis of secular standards, the Syrian Christians rank rather high, more or less equal to the Naiars.

The Pulayas or Cherumas, occupied an extremely low status in society. Ritually they were untouchables (for higher caste Hindus) and economically they were slaves.³ In the middle of the nineteenth century, under the influence of the British, slavery was banned and slave castes were freed. However, prohibition of slavery did not bring about any spectacular improvement in the status of the Pulayas and others, who thereafter became serfs or bond-servants of higher castes. But there was no change in their status as untouchables.⁴

Conversion to Christianity

With the establishment of English supremacy in Kerala, Christian missionaries from various European countries came to work in Kerala. There were converts from higher castes as well as lower castes; but the former were comparatively few and the bulk of the converts came from lower castes, especially the Pulayas and Parayas. There were a number of converts from the Izhava or Tiya caste also. The higher caste converts did not gain much in the social sphere by embracing Christianity; but it was not so in the case of converts from untouchable castes like Izhavas and Pulayas. When they embraced Christianity and ceased to be Hindus, they were no longer governed by caste rules and treated as untouchables. Moreover, Christian missionaries endeavoured to bring about an improvement in the life of the converts through education, employment in mission schools, etc.

The Status of the Converts

But converts from lower castes are treated more like Pulayas and Parayas rather than as 'Christians' by Syrian Christians, even though with conversion the former ceased to be untouchable according to law. Lack of integration between the Syrian Christians and converts from slave castes is revealed both at the social as well as at the denominational levels. The old Christians are known as Syrian Christians whereas lower caste converts are known as Neo-Christians, Cheramar Christians, Pulaya Christians, etc. During the course of the field work it was found that only Syrian Christians are generally referred to as 'Christians' and Pulaya Christians are referred to only as 'Pulayas' by all, including the Pulaya Christians themselves. The Pulaya Christians have to address the Syrian Christians by honorific titles such as *Tampuran*, *Panikke*, etc., whereas Syrian Christians add the suffix *Pulaya* while addressing a Pulaya Christian. For example, a Thoma is called Thoma-Pulayan, a Chacko as Chacko-Pulayan, a Maria as Maria-Pulakalli (female), and so on, as is done in the case of Hindu Pulayas.

In the presence of rich Syrian Christians, the converts had to remove their head-dress. While speaking with their Syrian Christian masters, they had to keep their mouth closed with a hand. Pulaya Christians are not given food inside the house of a Syrian Christian or in a good dish, but only outside the house in some broken dish or leaf. After taking food, they have to wash the dish before returning it.

In Central Travancore where the investigations were carried out, the bulk of the Pulaya Christians are members of the Mar Thoma Church, and the Church of South India (former C. M. S. - Church Mission Society). Even though neither the Mar Thoma Church nor the Church of South India officially approve of segregation of their Syrian and Pulaya members, such segregation is actually prevalent. It was found that the Syrian and Pulaya members of the same church conduct religious rituals separately in separate buildings. The Syrian Christian priests who conduct the ritual at the Syrian Christian churches do not go or perform rituals in the church of the Pulayas, but there are separate persons specially appointed for this purpose. There is no positive ban on the Pulayas attending the rituals at the Syrian Christian churches, but few Pulayas ever do so. In the organization of the church also, the Pulaya Christians are not given proper representation. For example, in the Mar Thoma Church every Syrian Christian parish is entitled to send representative to the Representative Body called *Mandalam*, but the Pulaya parishes are not entitled to this right. In other words, conversion to Christianity in so far it was an endeavour on the part of the Pulayas for the achievement of a higher status, has not actually brought them a higher status. Because of this, the Pulaya Christians were relegated to a marginal position in society, standing on the periphery of the Pulaya and the Syrian Christian communities.

Some of the recent developments

When the Pulaya Christians found that they could not achieve complete membership in the Christian church and that they had to be satisfied with a subordinate status in it, they

started reconversion to Hinduism on a large scale. In addition to this, as Hindu Pulayas alone were regarded as members of the Scheduled Castes enjoying special benefits provided by the Constitution, there was an additional reason for reconversion to Hinduism. The Christian Pulayas are not entitled for these benefits even though they continue to be socially degraded.

Some other interesting developments are also taking place among the Pulaya Christians. The most important of these is the emergence of the *Prathyaksha Raksha Daiva Sabha* (God's Church of visible Salvation) popularly called P. R. D. S. It was founded by the late Poykayil Johannan who was himself a Paraya convert. He was first a member of the Mar Thoma Church, but later on left it and joined the Brother Mission in which he started arguing that caste differences should be done away with, and accordingly in his congregation there was a proposal to marry a Syrian Christian girl to a Pulaya Christian youth. When the news spread, the local Syrian Christians threatened severe action at which the intercaste marriage was abandoned. It was after this that the P. R. D. S. was started under the leadership of Mr. Johannan with a majority of untouchables and a few Syrian Christians. Even though it was an offshoot of Christianity, the P. R. D. S. subsequently started spreading new religious ideas among its members. These may be summarized as follows* :—Every age has got its paramount problems for the solution of which God incarnates as man. The paramount problem of the present age is the emancipation of slaves from the fetters under which they have been suffering for ages, and to bring them on par with others. For this purpose God became incarnate as Poykayil Johannan who is the saviour of all slaves, i. e. untouchables. Since God has come to the earth as Johannan, haven is like a cattle-shed without cattle and only those who believe and pray to Johannan and hear the voice of God directly (i. e. his

* So far the fundamental tenets of the P. R. D. S. are not codified and printed. What is given here is based on a talk which the author had with Smt. Jnammal, the present head of P. R. D. S.

teachings) would be saved. As Johannan and his followers believed that removal of untouchability and destruction of the caste system is the paramount need of this age, they abolished the observance of caste distinctions within the P. R. D. S. and there is inter-marriage between persons belonging to all castes. The teachings of the P. R. D. S. are becoming popular among Christians from the lower castes and thousands of them have already left Christianity and joined P. R. D. S. and they are endeavouring for the realisation of the goal of their late leader, namely the creation of a casteless society.

The formation of the P. R. D. S. in which its founder claimed to be God, is a very revolutionary step. But less revolutionary phenomena also are taking place among the Pulaya Christians in Central Travancore. One such instance is the formation of the *Cheramar Daiva Sabha* (Church of God of Cheramars=Pulayars). Its founder is a Pulaya Christian called Solomon Markose. Mr. Solomon was an evangelist with the Church Mission Society and he was very much disappointed with the treatment of the Pulaya Christians by the Syrian Christians. Why should there be Pulaya Christians and Pulaya Churches? Why should the Pulayas occupy a back seat in the Church? Mr. Solomon was concerned with these problems and the answer was revealed to him by God. One night he got a revelation from God to found a new church called Cheramar Daiva Sabha for the social and spiritual uplift of the Pulayas. Mr. Solomon started preaching his new ideals among the Pulayas and established some followers and his congregations are to be found at six places in Central Travancore.

Very recently the majority of lower caste Christians of the Church of South India have separated from it and formed a new church under the leadership of Bishop Stephen, who was preciously a priest in the Church of South India. In an interview with the author, the Bishop explained the main reason for the separation which was the discrimination that the low caste Christians had to suffer at the hands of the Syrian Christians.

A number of independent Pentacostal Churches, having Pulayas only as members, are also coming into existence. These groups differ little from other Pentacostal denominations in theological matters, but they do not like a joint congregational life with Syrian Christians. The Pulayas prefer to have their own pastors, however uneducated they may be, and the company of their own fellowmen, however dirty and uneducated they may be, rather than be served by the educated and sophisticated Syrian Christian who do not sit along with them, who do not take food with them, or who do not marry from or with them.

Religion

Conversion to Christianity for many of the Pulayas was merely a change of name and adoption of a Christian name without a corresponding modification in their religious beliefs and behavioural pattern. For many, it was the material benefits that accrued through conversion which were the dominant motives for conversion, and this might have been a reason why conversion very often failed to bring about change in their religious beliefs and practices. Their faith in the power of demons like Mallan, Madan, Kali etc. was not given up and many of them resorted to demons very often. About eight per cent of the Pulaya Christians admitted that they resort to demons and Kali and perform black magic (*mantravadam*). The incidence of magic is certainly higher than this, as there is an attempt to conceal its practice, since it is looked down upon. The following are some of the typical answers of the Pulaya Christians in this regard :

'I resort to *mantravadam* in order to cure the disease caused by demons.'

'When my son was sick, I resorted to magic in order to find its cause and curing it.'

'When children became ill through fright (caused by the demon), we resorted to magic two or three times, as the illness could not be cured by medicine

Afterwards I was afraid whether God would punish me in retaliation.'

'My daughter-in-law was getting abortion during the fifth month of her pregnancy. In order to prevent its recurrence, we did some magic along with medical treatment.'

These excerpts show the deep faith which many of the Pulaya Christians still retain in demons and in magical practices.

It was found that many Christian Pulayas reconverted themselves to Hinduism in order to avail of the facilities that are provided by the Government for the Scheduled Castes. Some have done so in order to do something which they would not be able to do as Christians. For example, if a Pulaya wants to divorce his wife and remarry another woman, then he may leave Christianity, as the Church does not allow divorce and remarriage. It was also found that there is regular inter-religious marriage between Christian and Hindu Pulayas. What is evident from all this is the lack of deep conviction on the part of many Pulaya Christians in Christianity.

Family

Family is another important institution. Among the Syrian Christians, polygamy, divorce and remarriage are prohibited; and those who break the norms are excommunicated from the Church. Husband-wife relationship is considered a 'sacred' relationship, and sex-relation outside the family is condemned. Premarital chastity is highly esteemed. The husband is the head of family and wife and children have to obey and respect him. In all these respects, the Syrian Christians treat the Nambudiri Brahmans, who occupied the highest status in the Kerala society, as their reference group.

The institution of family and marriage of the Pulayas stands in sharp contrast to the Syrian Christians. Pulayas are a

polygynous caste.⁵ Polygyny of the sororal as well as non-sororal type is practised. It is permitted by custom, encouraged by public opinion and successful men resorted to it. Divorce and remarriage are permitted and are common. Husband-wife relationship is comparatively weak and the husband is not always obeyed and respected. Children are found to be self-oriented, showing scant respect towards the parents. Many marriages are arranged by the youth themselves and elopement is not rare. All these practices are disdained by the Syrian Christians.

Conversion to Christianity has not brought about any fundamental change in the institution of marriage and family of the Pulaya converts. It was found that among them divorce and remarriage take place very often. In our sample, there were 106 married Christian Pulayas and out of them 16 (15 per cent) had divorced at least once. There were persons who had divorced four times. It was also found that the Pulaya Christians even now practise cross-cousin marriage. In our sample, there were several persons who had married cross-cousins.

Secular sphere

Equally great is the distinction between the Pulaya and Syrian Christians in the secular sphere. The secular level of achievement of a caste may be gauged with reference to the following standards : (1) educational level ; (2) occupation ; (3) dress and personal appearance ; and (4) housing, and general standard of living. In the sphere of education, Syrian Christians are one of the most educated communities in Kerala. In the sphere of occupation, traditionally, Syrian Christians were landowners, independent farmers, traders and businessmen. They are now in all kinds of white-collar occupations, such as those of clerks, teachers, nurses, doctors, engineers, etc. These are all relatively prestigeful occupations assuring a relatively high standard of living. In the matter of dress and personal appearance, Syrian Christians are very scrupulous.

⁵ Iyer, L. A. Krishana, *op. cit.* p. 164.

Their women seldom appear with uncovered breasts. Similarly, in the matter of housing and living standard also, Syrian Christian houses are well furnished with tables, chairs, cots, etc. Houses have got such accessories as wells, bath-rooms, latrines, etc. In short, the Syrian Christians have got a relatively high standard of living. But the Pulayas compare very unfavourably with them in this respect also.

Earlier, Pulayas were slaves of the higher castes, including Syrian Christians, until slavery was banned when they became bond serfs of their masters. Practically most of them were serfs, living in the land of others, and leading a hand to mouth sort of existence. Educationally most of them were illiterate. The 1901 census showed their literacy rate as 0.2 per cent. There were restrictions on their women covering their breasts. Their house and living standard was also equally low. Their houses were nothing more than simple huts (called *madam*), devoid of any furniture except a few pieces of mat and pots. Nobody would feel like going near them or entering them. In other words, when evaluated on the basis of secular standards, the Pulayas ranked extremely low, standing at a great distance from the Syrian Christians.

Though conversion to Christianity facilitated the social improvement of a few of the converts, it did not bring about a radical improvement in the status of most of the Pulayas. Conversion was on a large scale and the resources of the missionaries were limited and therefore the facilities for economic development were also limited. Consequently, most of the converts continued to be serfs living in the land of higher caste masters. In the matter of education, especially Western education, the achievement of the Pulaya Christians is very low. Many are still illiterate, and persons with higher education are exceptions among them. In the occupational sphere, the Pulayas even after conversion continued to be serfs of higher castes. Few could follow any other occupation due to lack of education and capital. The following table shows the percentage of the sample found in different occupations.

TABLE 1

Occupational level of Pulaya Christians

Occupation	Percentage
Coolies	80
Agriculture, Trade etc.	5
Housewives	7
White-collar jobs	3
Social service, Evangelical work etc.	5
Total	100

As is evident from the table, the great majority of the Pulayas are coolies. Those who said that they were engaged in agriculture and trade (5%) were found to be rather poor people, cultivating a small piece of land as tenants or keeping a small shop. Only three persons were found engaged in white-collar jobs, of whom two were peons and one a primary school teacher.

Dress and personal appearance : Even though at present there are no legal disabilities preventing the Pulayas from wearing neat and tidy clothes, the Pulaya Christians appear, generally, in dirty and shabby clothes. They are comparatively indifferent to cleanliness and their women are often found in dirty clothes, with dishevelled hair, etc. Many Pulaya informants said that they had separate churches and services, because they themselves felt hesitant to sit side by side with Syrian Christians in the church.

House and standard of living : Most of the Pulaya Christians were found living in huts rather than 'houses' made of mud and plaited coco-nut leaves ; and only a few Pulaya houses having stone walls or tiled roofs could be found. Not a single Pulaya Christian had electric lights in his house, a bathroom or sanitary latrine. Most of the houses visited were in a dirty

and filthy state. In many of them, they could not offer anything more than a piece of mat to a visitor. Household equipments were scarce. The result was that even higher caste person without any caste feeling would feel hesitation in entering their house or accepting their hospitality.

The Problem of Integration

We have found that there is great distance between the Pulaya Christians and Syrian Christians in all the spheres of life. In the religious sphere, as a whole, even now many of them are only nominal Christians and have not completely given up their faith in demonic cults. In the sphere of family, it is still far from the Syrian Christian ideal type of family. In the economic sphere, the hiatus is as wide as it ever was. It is argued that it is this inability of the Pulaya converts to change their social image which prevents their integration with the older Christians.

Now, what are the possibilities of such an integration of the two groups? Even though most of the converts to Christianity are from lower castes like Pulayas, there are a few converts from higher castes, who are integrated with the Syrian Christians, without any difficulty. This shows that the past religion of the converts does not prevent their integration with the Syrian Christians. There are several converts to Christianity from the Izhava caste also. Izhavas are untouchable, but economically independent. Izhava converts are also integrated with the Syrian Christians. This shows that it is not the Hindu concept of untouchability assimilated by the Syrian Christians that prevents the integration of the Pulaya converts with the Syrian Christians. In fact, as we have seen earlier, the Hindu concept of untouchability has not got much significance for the Syrian Christians. All this confirms that the primary reason for the non-integration of the Pulaya Christians with the older Christians is the inability of the former to change their social image.

The Catholic Church in Kerala is also riddled with the caste problem. In it, the large number of converts from the

FISHERMEN caste have become an inferior caste group called Latin Christians, in contrast to the Romo-Syrian Christians. But successful Latin Christians, in spite of their low caste origin, are able to pass off as Romo-Syrians and enter into marital relations with Syrian Christians. Kathleen Gough says : 'For the prosperous Latin Catholics, there were, however, gradual avenues of mobility upward into the Syrian Caste. In many cases Latin Catholics tend to call themselves "Syrians" where they are not known, and in cities often pass as such. Inside Catholic church, which in theory does not uphold caste distinctions, a wealthy and educated Latin Catholic family may eventually inter-marry with Romo Syrians of another area and assimilate itself to them'⁶. This further corroborates our view that a low caste can achieve membership within the Syrian Christian group by undergoing anticipatory socialisation to a significant degree. It has been our finding that Pulaya Christians who have changed their traditional behavioural pattern and have approximated it to that of the Syrian Christians have been able to improve their status. The improvement in their status was measured with reference to the following behavioural patterns : (1) mode of addressing higher castes ; (2) use of abject expressions and words for referring to things connected with the Pulayas ; (3) social disabilities ; (4) serving of food to the Pulayas ; (5) restriction on entering the house of higher castes ; (6) observation of untouchability ; (7) restriction on commensality ; (8) restriction on intercaste marriage. It was found that a few Pulaya Christians who have got significant achievements to their credit are no longer treated in the abject way in which the average Pulaya Christians are treated. For example, Pulayas who are employed in white-collar jobs, or work as an evangelist or are university graduates are never called by derogatory expressions like *Eda*, *Nee*, etc. ; nor do such people address Syrian Christians with honorific titles such as *Tampuran*, *Panikke*, etc. Such people are given food inside

⁶ Gough, E. Kathleen, 'Indian Nationalism and Ethnic Freedom', *The Concept of Freedom in Anthropology*, ed. David Bidnen, Monton and Co., The Hague, (1963), pp. 170-207.

Syrian Christian houses ; they are not asked to wash the plates after eating, as other Pulayas are expected to do. Nobody treats them as untouchable and nobody hesitates to eat food with them or accept it from their house. Their Syrian Christian neighbours attend and participate in the wedding feasts of well-to-do Pulaya Christians. Even though intercaste marriage is not yet common, it takes place here and there, and these are not as much opposed by the Syrian Christians as in the past. From this it may be inferred that if the Pulaya Christians can undergo anticipatory socialisation to a significant degree and be like the Syrian Christians in all respects, there is possibility of their being integrated with the Syrian Christians. Of the various sectors of life, the economic or secular sphere should receive special emphasis, as wealth seems to be the standard which largely determines one's status within the church and society : and as it is in this sphere that the gulf between the Syrian and the Neo-Christians is the widest.

R E F E R E N C E S

- ¹ Marriot, McKim, *Caste Ranking and Community Structure in Five Regions of India and Pakistan*, p. 32.
- ² Ibid.
- ³ Iyer, L. Ananthakrishna, *The Cochin Tribes and Castes*, p. 134.
- ⁴ Mateer, Samuel, *The land of Charity*, p. 46.

FAMILY PLANNING PROBLEMS

S. N. SANYAL

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Abstract. The author examines the different methods employed for checking the growth of population in India. He is of opinion that work must be concentrated on the rural population rather than on the middle or upper urban classes. The method of preventing conception should also be *acceptable* to the people concerned. After examining various contraceptives, he recommends an orally administered pill in place of the more costly ones in vogue. He is also of opinion that a 50 % reduction in the rate of pregnancy would suffice for India.

THE abject failure of the Government plans to control population explosion in India is amply demonstrated by the constant shift of policy and methods in the field. A large sum was sanctioned from the public exchequer to cope with this gigantic problem, but it is a matter of regret that the poor performance of agencies entrusted with this work has caused an almost total wastage of money and effort and a severe set-back to India's progress which depends very largely on the solution of her population problem. With bewildering rapidity, the Public Health authorities switch back and forth between foam tablet, sterilizing operations, intra-uterine device and hormone pills, the latest of a sorry series. Every change is not only a monumental milepost of wastage and failure, but also results in a mounting distrust of all future methods, however good and effective.

This effect has been amply reflected in the population rise. In the last decade the increase was 10 millions a year but now this has gone up to 12 millions a year, i.e. one million a month. The total population of India has already crossed the 500

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million mark. With the present rate of increase, it is living in a fool's paradise to think of self-sufficiency in food within any foreseeable future.

Primary cause of failure

The basic fact which has long been ignored is that India is not a small country. There are more than 550,000 villages in India and not less than 75 % of the total population live in these villages. They are mostly poor, unsophisticated, illiterate, superstitious and subject to strong religious prejudices. These are the people who are adding to the numbers and not the urban population. For this proliferation one cannot blame them. These poor rustics, like all other 'have-nots' of the world, being deprived of all other avenues of pleasure on account of poverty, are still left with sex, the only avenue of self-satisfaction. In a drab and severely restricted existence, they resort to it, too eagerly in the hope of some relief from a perpetually joyless life. The health authorities are however oblivious to them and the difficult task of solving their problem is being practically ignored. They concentrate instead on the urban population, thus following the path of least resistance.

It is a misrepresentation of facts to state that the rural people of India are either unconscious or opposed to the necessity of family planning. This was no doubt true twenty years ago, with a high mortality figure for infants and mothers. With the establishment of maternal and child welfare clinic and rural health centres throughout Indian villages, the infant mortality is now a fraction of what it was previously. This has added to the problems of overpopulation and malnutrition. The village population of India is as much alive to self-interest as their counterparts in other lands. But this does not mean that they will submit like a flock of sheep to any and every experiment the authorities care to perform upon them. If for the prevention of pregnancy, the authorities recommend that their uteri should be plugged with hot paraffin, as was used unsuccessfully in the veterinary research centres,

and the rustic people do not submit to it, they should not be blamed. However uneducated and unsophisticated these people might be, they have their prejudices, beliefs and sentiments. The key to success of family planning measures lies in the acceptability of the method even if the effective reduction is lower.

Rhythmic method

Dr. Stone's apparently attractive rhythmic method was tried for two years in the Ramnagar and Lodhi colonies in New Delhi, and after spending a large amount of money it was declared to be a failure. The underlying reason for failure is that there is no safe period. Ovulation-time is very variable and Nature is always ready to outwit all human calculations.

Foam tablet

On the recommendation of the Family Planning Association of India, the Government of India introduced foam tablets, believing that this would be ideal for poor rustics. About 1.2 crores of rupees of foam tablets were imported from U. K. alone every year. Unfortunately 50 % of the tablets were lost due to the evolving out of the foam within the containers in a moist climate. The rest was distributed through family planning centres and hospital clinics. The result of its use was not evaluated, only ever increasing population figures indicated the futility of the method.

Operative measures

Operative measures should be considered as failures where only a small decimal fraction of the total population could be sterilized in a decade, even when the Government of India offered a bait of Rs. 10 for every male and Rs. 30 for every female volunteer. At present the Ministry of Health has increased the offer to Rs. 100, irrespective of sex, and those who will induce villagers to undergo such operations will receive Rs. 5 for each case. Even recently the Health Minister has been pleased to offer a radio set as a prize for sterilization. It is idle however to expect any substantial

result from this field. The psychological set-back and also the fear of not leaving an heir, if death comes to the existing child or children, is a serious bar to its acceptance in the background of national sentiment. In fact, abortion is better than these crippling operations and Japan has solved her population problem with 2.2 million abortions per year and reducing the pregnancy rate by 50%. However, under Indian conditions, only the more sophisticated people will be able to gain some advantage from such facilities, as it is extremely unlikely that the Government of India will be able to maintain abortion clinics in 550,000 villages and a birth rate of 12 millions a year. It is also risky, repulsive and morally unacceptable to many patients. For India, abortion is not a feasible solution of over-population.

Intrauterine devices

The I. U. D. (Loop) has been the subject of prolonged controversy. Grafenburgh's gold ring (1925) and Openheimer's and Ishihama's (1959) silkworm guts were rejected long ago. In the present case the character remains the same, only the consistency has changed and this is no reason why this should be successful. It is impracticable in many cases, automatically rejected in others and in many remaining cases the introduced loop has to be taken out due to excessive pain and haemorrhage. The ultimate gain from the loop is very limited. Indeed, that this method is not acceptable is corroborated by the Government's own declaration. In spite of vigorous propaganda and persuasion, a programme of insertion of 4 million loops annually had to be cut down to half a million in actual practice, much to the dismay of the Public Health authorities.

Hormone tablets

Oral hormone tablets are very costly, requiring daily administration for 22 days in a month. Moreover it has some side-effects which require frequent medical attendance. With its discontinuance, there is possibility of enhanced pregnancy and twin formation, due to rebound effect. The present Health Minister proposed the scattering of oral pills in rural areas

from helicopters, perhaps for creating a educative effect. Its greatest disadvantage lies in the fact that it is still a dark horse and its pregnancy reduction rate under Indian conditions remains a matter of hope.

Increasing the marriagable age

The critical evaluation of the statistical result of the human trial has revealed that the pregnancy rate is highest at the age group of 15—19 for women. There are 97 pregnancies per 100 couples per year. In the next age-group, 20—24 it comes down to 72 and in the age-group of 25—29 it is still lower, only 67. Increasing the age of marriage to 20 years is one of the best prospective avenues in the solution of the problem. But with the experience of the Sarda Act and the widow remarriage bill it is idle to hope that any real benefit will come merely from legislation. This and other sociological programmes like increased education, better employment and higher standard of living can yield dividends very slowly. For the present the other oral contraceptive is the only hope.

Sanyal's pill (m-xylohydroquinone)

An oral contraceptive, m-xylohydroquinone (Sanyal's pill) originally isolated from common field pea (*Pisum sativum*) and the first oral pill introduced after scientific investigation, was successful in reducing pregnancy rate to the extent of 60% in a maiden trial in a demographic experiment during two years. The pills are non-toxic, do not induce abortion, has no known effects on the child in failure cases and do not cause permanent sterility. In a subsequent trial by the Government of India, under the aegis of the All India Institute of Hygiene & Public Health, Calcutta, 60% reduction was observed in the trial group in comparison with that of the control group, receiving placebo. All the previous observations of the first trial, such as non-toxicity, non-abortifacient action, etc. were fully endorsed. The experimenting authorities remarked that with all allowances, a 50% reduction in the pregnancy rate is assured. Unfortunately the authorities entrusted with the implementation of family planning methods insisted on 100% reduction. Not that any of the methods actually tried at great

cost and after the expenditure of huge amounts of foreign exchange has approached this figure. But the insistence remains.

Effective for males

M-xylohydroquinone is not only effective for women but can be used by males with advantage. In a trial of two years on human males, a 50% reduction in the pregnancy rate in their wives was actually observed. In case of males, weekly administration is required, whereas for female cases, two administrations are necessary in the cycle. If both the partners use the pills, some approximately 70% reduction in the pregnancy rate could be achieved. Implementation is easy; the anti-malarial units, who have approaches to the most interior villages in the unions, may be utilized. Any large chemical or pharmaceutical company can, moreover, prepare it at a very cheap rate.

Unfortunately this scheme ran into an opposition which it has not been able to overcome, in spite of sustained efforts. The Public Health authorities were not satisfied with a 50% or 60% reduction and refused to have anything to do with it. They insisted on 100% reduction and, as far as it is known, has not changed their stand. Not that any of the methods (surgical operations, loop, hormone tablets, etc.) tried by them has even remotely approached this figure. Still they continue to insist and the population goes on increasing by millions while experiments are going on. It may be mentioned, that according to the World Bank Study Team (Cole, Hoover, Warren Thompson etc.) a 50% reduction in the pregnancy rate is sufficient to solve the population problem of India. Japan has solved her population problem by 50% reduction in the pregnancy rate by performing 2.2 million abortion every year. This oral pill can at least be distributed and tried until a better one which can achieve the utopian dream of 100% reduction is available.

It would not be wrong to surmise that the low cost and simple mode of administration has carried a degree of

unmerited disbelief and possibly contempt from highly placed Public Health officers, familiar only with costly western methods. It may be pointed out that the people entrusted with the work seem to move within a narrow orbit of sophisticated methods and psychological approach largely borrowed from the West. Whatever the latter are worth, their efficacies are in actual practice, limited to the educated upper and middle classes of India which have a birth rate well near the figures for U. S. A. and many advanced countries. It is not this class which is producing the avalanche of unwanted mouths to feed, but the poor illiterate, prejudiced and taboo-ridden people, inhabiting some 550,000 villages of India. It is an open question whether the complicated, costly and sometimes revolting methods, adopted so far been able to make any impression on these 500 million people living in our country.

Yet if anything worth the effect is to be done it must be done at this level. Many of them, though uneducated and illiterate, no doubt understand the urgency of the problem. But until and unless the actual methods are understood, appreciated and above all *accepted* by them, the millions spent and proposed to be spent, will make very little difference. Unless the Government seriously propose abortions and infanticide by millions, there is no real alternative to a method involving cheap, harmless and universally acceptable oral contraceptive.

It is admitted by all responsible persons that women should be given a free choice of method according to their own belief and sentiments and means and the responsibility of the Government lies in making them available. The main attention should be directed to the people living in more than half a million villages and not the urban people, otherwise, instead of finding a solution for this vital and pressing problem of population, more problems will be created to the embarrassment of the Government and the people as well. A decision has to be taken now and immediately. Further experiments will only mean real danger to the planned progress and economy of the country.

BOOK REVIEWS

Myths of the Hindus and Budhists. By Ananda K. Coomarswamy and Sister Nivedita. Originally published in 1913. Reprinted by Dover Publication Inc., 180 Varick Street, New York, 10014, 1967. Pp. 400, with 32 black and white illustrations by Indian Artists under the Supervision of Abanindra Nath Tagore. \$2.50.

This presentation of Indian myths was first designed by Sister Nivedita, but she left it incomplete. It was first published in 1913, two years after her death, after it had been completed by that eminent scholar, Ananda K. Coomarswamy.

For long years the book has not been available ; and one should be thankful to the Dover Publications Inc., for having placed this excellent and cheap edition once more before the public. It presents in outline the tales of the *Ramayana*, the *Mahabharata*, and of Krishna, Buddha, Shiva, as well as a few other stories culled from the Vedas and Puranas.

The presentation is of a high standard from the literary point of view, while it also reaches a very quality in the depth of its analyses of the ideals which have inspired the people of India for ages past.

In a way, the book forms one of the best introductions to Indian civilization. The reader may profitably proceed from this to other works of Sister Nivedita, which are being published in a centenary edition or to the interpretations presented by Coomarswamy of Indian art and of Buddhism in particular.

Nirmal Kumar Bose
Problems of National Integration. By Nirmal Kumar Bose. Indian Institute of Advanced Study, Simla - 5. 1967. Pp. 77 + viii. Rs. 7.50/ \$2.70/17s. 6d.

This publication 'Problems of National Integration' consists of six lectures delivered by Professor Nirmal Kumar Bose at the Indian Institute of Advanced Study, Simla, as Visiting Professor for the year 1966. In the first lecture Professor Bose examines the economic and social changes which took place in the country as a result of the advent of the British in the late eighteenth and nineteenth centuries. He points out that these changes were not the same or even in different parts of the country. According to him not only did different parts of the country like Bengal and Uttar Pradesh, Maharashtra and Madras, Punjab and Bihar behave differently to the impact of British rule and the Pressure of modern life, but different parts of the Bengali-or Bihari-speaking population reacted in a very unequal manner. In the second

lecture Professor Bose examines in detail the effect of British rule and western culture, taking Bengal as a specific case. In the third lecture, he analyses very clearly the social transformation which was brought about in different parts of the country like Bihar, Bombay, Bengal etc., during the nineteenth and early twentieth centuries. In the next lecture, he traces the various political movements which arose in different parts of the country and brings the history of these movements down to the period of Mahatmaji's return from South Africa and the changes brought about by him in the ideals and programmes of the Indian National Congress. The subsequent political developments in the country are examined in detail in the next lecture. He analyses the causes which led to the rise of the Muslim League in the country and in the final section, he describes the effect of all these political and social movements on the tribal communities in the country. In the last lecture, having described the political, social and cultural movements in the country which have given rise to the different problems of national intergration which we have to face today, he propounds what we have to do in order to achieve real national integration. There is an appendix at the end of this book in which a number of quotations from Gandhiji, relevant to the problems of national integration, are given.

Today almost every intelligent Indian knows that the foremost problem facing the country is the problem of national unity. In almost every field of national activity we are threatened by forces of disintegration and this book is a timely publication which will be read with great interest, not only by scholars of sociology, but also by statesmen, politicians and officials entrusted with the task of the government of the country. V.

Naseleniye Indii. (*The Population of India*), V. V. Petrov, Nauka, Moscow, 1965.

Demographical studies have, in the recent past, become highly popular in their historical as well as contemporary perspectives. Some scholars have even ventured in the realm of future and have tried to chart the coming trends. This great interest partly stems from the population explosion now taking place in the developing Asian, African, and Latin American countries which outstrips their material progress resulting in lower standard of living, which in turn buttresses the fear that the Malthusian prophecy may come

true some day. Among the developing countries the Indian experiment is undoubtedly a test case and has rightly attracted attention of researchers, both inside and outside the country. No wonder we find a Soviet scholar presenting the monograph under review on Indian demography. Perhaps with a view to acquainting the Soviet readers with the background, the author has considered it necessary to give a brief historical outline of the problem.

Rejecting the Malthusian point of view, the writer, a Marxist, asserts that improvements in the modes of production have been generally accompanied by a growth in population. This was true not only of the XIXth Century Europe, but also of the XIXth Century India. Therefore, the present increase in the population of developing countries merely confirms the above contention. The author further criticises the above contention, The author further criticises the habit of western demographers to put the entire blame for the economic backwardness of the developing nations on their phenomenal population growth and then suggest population control as chief way of improving the situation. As a matter of fact, population control can only be a subsidiary factor in promoting economic well-being. The prime effort must always be directed towards laying the foundations of material prosperity and improving the material conditions, i. e. increasing the tempo of socio-economic progress. The author has correctly stressed this significant point.

A great merit of the book is the analysis of Indian population data in the light of facts and figures (past, present and expected future) of important countries of the world like Great Britain, France, U. S. S. R., China, Japan, U. S. A., Latin American countries, Australia and African countries etc. It helps one to keep the correct perspective and to realize the goals that are possible of achievement, although the journey may seem to be a long one. For example, the author on page 131 points out that between 1913 and 1960 the rate of infant mortality in the U. S. S. R. dropped down by 7.6 times and is now 3.5 times below the infant mortality rate in India although at the turn of the century it was higher than that of India. The lesson is obvious—given the correct lead and honest and hard efforts, standards of living in India can be improved much beyond what has been achieved in the last two decades.

Surendra Gopal

Notice

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