CHAPTER VIII

CASE STUDIES OF SOME VILLAGES AND TOWNS

Thirteen Villages

A systematic sampling method was adopted to check the information gathered from standard records of field studies. The thirteen villages studied offer a one per cent sampling. While field studies always tend to add a more human dimension to statistics and generalization, in our case at least almost all the villages showed identical population trends, and the same problems of joblessness and poverty. Eight of the thirteen towns in the district were studied closely and showed more sharply defined individual characteristics.

From 1970 the villages of the district were visited by the author in different seasons. The families were interviewed with a questionnaire. The data collected were later tabulated. It will be evident from the survey findings following that methods and approaches and emphasis varied from village to village. Some villages were studied in greater detail and under more categories, while others were studied for some special features.
Location of Inayetpur village and Chakdah Town.
Case Study 1: Inavyapur Village (J.L. No. 108)(Fig. 39).

Situated in the Chakdah police station area, with a total of 127 occupied residential houses of which 85 were surveyed.

Population:

The total population of the village was around 754 (1971), of which 50.26 per cent were female and 49.75 per cent were male. 66.6 per cent of the total population were Hindus, and 33.33 per cent Muslims. People belonging to a scheduled caste, viz. the Mundas, accounted for 16.31 per cent of the population, and 22.6 per cent belonged to the scheduled tribe. The heads of the families were mostly in the age group of 21-40 years.

The majority of the people were illiterate. But most of the literate had passed the School-leaving examinations, and most of the female population were educated. Only 1.1 per cent of the population had higher academic education. There was one person with a training in radio and TV technology, and there was one trained electrician.

Economic aspects:

The total area of the village was 378 acres. 84.84 per cent of the population did not own more than 0-10
Crafts and household industries allow for continuity and innovation.

(a) Broomstick-making providing employment for the entire family including the children.
bighas of land. Some were landless. 52.22 per cent of the land was used for non-agricultural purposes. 48.14 per cent of the land was under cultivation, and nearly all of it was irrigated. 4.76 per cent of the total land area was cultivable waste of which 13.22 per cent was not available for cultivation. Most of the villagers worked on the land themselves, growing paddy, wheat or jute and betal leaves, with the help of family members and hired labourers. A small amount of fruits and vegetables were grown too.

Irrigation came primarily from tubewells and tanks. In 1971 there were 100 tubewells in the village. As a departure from the general pattern in Indian villages, where agriculture is the main occupation of the majority, 48.14 per cent of the population of Inayatpur were non-agriculturists. There were several working as wage-earners in factories, railways, mines etc.; or in household industries where they had hired labourers making biris or broom sticks. There were other engaged in trade and commerce, and the transport industry or the storage sector. There were no workers in forestry, fishing, hunting or construction.

A typical family in Inayatpur would have 4-8 members, with 4-6 children, and 1-2 earning members.
Railway connections, roads, markets, schools and service centres of various kinds offer stimulii to growth of habitation in a village.
Administrative centre at Krishnagar.
A family would usually earn Rs. 100 - 200 per month. With an income inadequate to serve the needs of the family, the villagers were compelled to take loans from money lenders, friends, relatives, banks, paying an interest between 6 and 10 per cent. Co-operatives were not particularly helpful with credit facilities. People were generally in the clutches of the mahajans, and remained indebted to them for life. Some of the better placed families had savings in banks and the provident fund. Poverty was found spreading dangerously from unemployment and little scope for subsidiary work.

Health and Medical Facilities

The village had no Health Centre. But the villagers took regular vaccination against small pox from the Sub-centre at Simurali, 2 km. away. The Simurali Health Centre is ill-equipped and cannot handle emergency cases. Inayatpur does not have an ambulance, and several emergency cases die on the way, when they are being taken to Kalyani in stretchers.

Most of the villagers were aware of family planning methods, but few practised them. The Simurali Health Centre doctors claimed that they had handled several tubectomy or vasectomy cases from Inayatpur.
Location of Charal Khali and Karimpur villages.
A typical village landscape with paddy-fields (a. in Inayetpur) and one of the paths that offer a common route to the cultivators, scattered wide apart, to the village where they all converge (b. in Inayetpur).
Railway connections, roads, markets, schools and service centres of various kinds offer stimuli to growth of habitation in a village.
Civic Amenities:

Inayatpur had no metal road. The only means of communication was an unmetalled road which even a cycle found difficult to move on. The road would become inaccessible in the rainy season. Inayatpur did not have a daily market. A single primary school with one head master and one teacher was all that the village had with a population, one fourth of which were children. The villagers were excited when electric poles were put up in the village a few years ago, but individual houses are yet to get their connections. There were no proper toilets, no entertainments or recreations facilities, no proper means of transport, no rationing system for food, and a bad sanitation system.

The village Panchayat was the main planning and decision-making body, and was supposed to decide the pattern of development activities. The villagers of Inayatpur generally felt that very little developmental work had actually been done and that the money available was not being properly utilized.

Case Study 2: Charalkhali (J.L.No.149) (Fig.40)

Situated on the border of Bangladesh and India, it is almost inaccessible and remains one of the most
neglected areas of the district. Even the local people of the Karimpur Police Station refused to accompany the author over the hard, tilled paddy fields. The narrow elevations separating one plot from another offered the only road to the village. When the author reached the village, the poor inhabitants spread out a mat under the big mango tree near the temple which was the usual site for a village congregation.

Population

Over 50 per cent of the dwellers are originally from the erstwhile East Pakistan and have a psychological resistance to their new country. Conversations invariably lead to complaints against the soil, the people and the weather of the region, and idealization of conditions on the other side of the border. The soil map (Fig. 9) of the region exposed the falseness of the complaints, and there could not be much of a difference anyway between this area and the land they had left behind, which was barely a kilometre away just across the Mathabhanga river (Fig. 4 and 6). The people nurtured a deep resentment against the Muslims who had uprooted them, and a despair that never allowed them to rise to rebuild their village. They went on complaining about their ill health and weakness to rationalize their inactivity.
Location of Dakshin Duttapara and Manpur villages.
Economic aspects:

Psychosocial factors seemed to have set up an inborn resistance to productive economic activity. A more concerted opening up of demonstrative projects like the Indo-German Fertilizer Educational Project, etc. could go a long way towards breaking down the psychosocial inhibitions.

Health and Medical Facilities:

Without a single metalled road, the village loses contact with the outside world, and if one falls seriously ill during rainy season one is doomed to death for there is no choice left for the person but to be left at the mercy of nature.

Civic Amenities:

The village had no school, no market, no ceremony to attract people from neighbouring villages.

Case Study 3: Dakshin Duttapara (J.L. No. 67)(Fig.41)

It is a mouza included in the Haringhata Police Station area.

Population:

According to the 1951 census it had a population of only 314, going up to 525 in 1961 and 691 in 1971. When the
Bamboo groves, coconut trees and other typical trees - a part of the Nadia landscape (a. and b. in the Haringhata police station area).
author carried out the survey (11-18 December 1976) there were 95 families with 677 members of which 353 were children. Of heads of families about 34 per cent were over 50 years in age. All the residents of the village were Hindus, and about 67.74 per cent of them were literate. 46 per cent of the villagers had middle school and about 20 per cent had high school backgrounds. There was none with vocational or any other kind of training.

**Economic Aspects:**

69.90 per cent of the villagers were agriculturists with small plots of land and very limited scientific knowledge and an inadequate supply of manure and implements. There were a few who had taken up occupations like car-repairing, dairy farming etc. as subsidiary professions. Non-agriculturists worked in the mills and the Haringhata farm office close by.

About 40 per cent of the inhabitants earned between Rs 100 and 200 a month. Only 8 per cent of the earning members earned Rs 750 or more per month. Only 3 per cent of the families had any savings. More than 56 per cent of the families had debts and had to fall back on loans from professional and non-professional money lenders at interest rates ranging from 6 to 10 per cent. More than
Location of Mollapara village and Nabadwip Town.
75 per cent of the total population were non-earning members. More than 45 per cent of the families were single in nature. 24.5% of the families were joint and another 5 per cent extended joint, with their fathers, brothers and other relations sharing the same household. 66 per cent of the inhabitants took part in secular cultural activities (Jatra, Mela etc.), and 92 per cent in religious activities.

**Health and Medical Facilities**

Most of the residents took their small-pox vaccinations from the Jaguli Health Centre. The author detected three families that did not take vaccination. About 87 per cent of the adult members had heard about family planning but showed no inclination to practice it. Only 33 per cent of the families who had some idea about family planning were practicing it. The population of the village consequently, particularly the child population, was growing too fast, and could not be brought under control.

**Case Study 4 : Mollapara (J.L. no.13) (Fig.42).**

The author visited this village in the Nabadwip Police Station area and 6 km. away from Nabadwip town, just after the pujas. Most of the inhabitants were Muslims. There had been an outbreak of cholera in the district
a few days ago, and the village and its neighbourhood were also threatened. Mrs Ranu Ghosh, the then District Magistrate had launched a programme for mass inoculation against cholera.

There had been teams of young Red Cross girls forcing the generally illiterate people to take inoculation. There was a general notion among them that the inoculation was a family planning measure and part of the Government's strong handed tactics. The author reached the village soon after this operation and faced hostility and resistance from the people, particularly the women. The author discovered the explanation only when she called on the District Magistrate the same evening. The author went over to the village again the next morning, and raised the issue tactfully. They came out with their doubts and fears; what would happen if they had sterilization and then all their children died? They did not believe in the utility of family planning practices and the concept of a limited family. They would not think of practicing temporary means of family planning until they had two or more children living and grown up. There was an obvious connection between educational background and adoption of family planning devices. Those who had higher aspirations for their children in
National Highway 34 opening up new towns - (a. the Jaguli crossing) and new villages - (b. one of the new villages).
the form of education and occupation were keen to know about family planning methods and a few of them had already adopted family planning measures. One could see the need for better facilities for health and redeemed mortality and for the use of mass media promotion to educate the people into changing their life style. 

Villagers with a large number of living children and fewer child deaths in the family tended to adopt family planning measures.

Case Study 5: Manpur (J.L. No. 50) (Fig. 41)

The author surveyed this village, situated near the Haringhata farm and to the west of the National Highway 34, in 1980.

Population

86 per cent of the people were Hindus, the rest Muslims. Literacy was high at 62 per cent. 27 per cent claimed education below the middle school level, 47 per cent up to middle school level, 16 per cent up to high school level, and 10 per cent beyond high school.

Economic Aspects:

The impact of Calcutta is felt strongly on the socio-economic life of the people. About 67 per cent
of them have non-agricultural occupations, and a few
of them serve in Calcutta as peons or are engaged in
other services. Non-agricultural occupations include
those of truck drivers, sweepers, lower class govern-
ment servants, milkmen, contractors, shopkeepers, road
repairers etc., of the women there were several serving
as maid servants, and quite a few working at the Harin-
ghata Milk Centre.

53 per cent of the people the author interviewed
belonged to the income group of Rs 201 - 400 per month, and
only 4 per cent had an income of Rs 600 per month, and
about 24 per cent below Rs 200 per month. 76 per cent of
the total population spent Rs. 0 - 400 per month. 56 per
cent of them belonged to a Rs 207-400 monthly expenditure
group. Since 53 per cent of the total population earned
Rs. 201 - 400 per month, there was a close relationship
between income and expenditure for a large section of the
people. About 69 per cent of the interviewees had never had
any savings. There were a small few who made an effort
to save. 25 per cent of the family members interviewed
saved around a rupee and a half per month.

About 56 per cent of the families were in debt, 70 per cent of them took loans at interest rates between
1 and 10 per cent, while 30 per cent of them took loans at a higher rate, between 11 and 20 per cent. The loans came from fellow villagers and professional money lenders. There were a few who had never paid an interest on the loans they had taken.

45 to 48 per cent of the families have between 1 - 5 and 1 - 10 members. Earning members were very few in every family, and the structure of the family was generally single in nature, with 57 per cent of the families interviewed coming under that category. Another 17 per cent were extended single families with a father or a mother or both or some other member living with them. 16 per cent were joint families with more than one earning member, and 10 per cent were extended joint families with brothers and their families and the parents. The joint family system was already breaking up in the village.

The village did not have too many children per family. 85 per cent of the families had between 1 and 5 children, 6 per cent of the families had no children. Children constituted 34 per cent of the total population, and old people above the age of 60 formed 13 per cent.
National Highway 34 offers transportation for the produce of the villages to different destinations. Villagers wait beside the Highway for the next truck at two of the many points along the long route (a. and b.).
People complained of financial problem, of joblessness and poverty, and lack of proper food and housing. Solutions suggested by the inhabitants included the setting up of a stable government and opening of new factories in the neighbourhood, a rationing system to provide food at fair price, a general reduction of prices, and regular supply of water to the agricultural fields.

Health and Medical Facilities:

About 78 per cent of the population take regular vaccination. Only 37 per cent of the 61 per cent who are aware of family planning measures practice it. They take vaccination of their own accord at the Jaguli Health Centre which caters to 47 per cent of the population of this village. 26 per cent of the villagers are vaccinated by the health visitors who visit the village from time to time.

Civic Amenities:

It is connected to the National Highway by an all-weather road. The village has electricity, and primary and secondary schools. Drinking water comes from tubewells. Kanchrapara, the nearest town, is 11 km. from the village. The village has a 'hat' which functions on Tuesday and Fridays.
REFERENCE

POLICE STATION BOUNDARY
VILLAGE
RAIL LINE
ROAD
SURVEYED AREA

Fig. No. 43.

Location of Panighata village.
Pools and jhils formed by the excavation of earth for house-building or directly for water supply are a source of storage water against the seasonal uncertainties of rainfall, irrigation, bathing and other domestic purposes, and they also promote settlement (a. in Manpur and b. in Kulia).
Civic Amenities

The Banerjees have excellent rapport with the local people. The Banerjees have provided the village with Primary and Secondary Schools, a Dispensary, and connections by metalled and unmetalled roads. The village has electricity and irrigation facilities through electrically operated pumps. The drinking water supply comes mainly from tubewells.

Case Study 7: Kulia (J.L.No.83) (Fig.44)

Located near Kalyani, which is only 3 km away, this village was included in the Chakdah Police Station area in 1951 and 1961. There is a very old temple in this village, and another temple of a comparatively recent date, said to have been built by Kanailal Dhar of Calcutta. Adjoining the temple are some tombs, one of which is reputed to be that of the legendary Debananda. Debananda is said to have entertained Sri Chaitanya in the village, after the latter had been refused hospitality in the neighbouring village of Kanchrapara. Sri Chaitanya as a mark of gratitude sanctified the place and declared that all who worshipped there on the eleventh day of 'Poush' would be absolved of all their sins. A fair called the
"Aparadh Bhanjan Mela" is held at Kulia annually on the eleventh day of 'Poush'.

**Population**

The village has an area of approximately 850 acres, with a total population of 3,999 recorded in 1971, with 1,251 of them belonging to the scheduled castes. The population figure had stood at 151 in 1951, gone up to 4673 in 1961, and had come down again in 1971. The increase between 1951 and 1961 can be traced back first to the influx of refugees, and in particular the permanent settlement made by people from the permanent liability camp of 1952; and secondly to the fact that Kalyani was declared a town in 1961 and with several offices transferred to the new town, there was a pressure of population on the neighbouring village where housing was still cheaper. But the village, though situated near Kalyani town, did not have electricity or telephone and telegraphic connections. By 1971 people had begun to migrate to the city itself in sheer desperation over the lack of amenities.

90 per cent of the families had for their heads males between 21 and 40 years of age. In other words, the families are comparatively new to the place.
per cent of the families were nuclear in nature, consisting of husband, wife and children. Of the families surveyed, 51 per cent were male, and the rest female. 66 per cent of the families interviewed had four or less than four members. Hindus constituted 99 per cent of the population, Christian constituted the remaining 1 per cent. 18 per cent of the population belonged to the scheduled castes, and 10 per cent to the Brahmin caste. 44 per cent of the population had originally come from outside, mainly from Bangladesh.

Economic Aspects:

80 per cent of the families had only one earning member each. 3 per cent of the families had no earning member. Only 18 per cent of the people were agriculturists. 20 per cent of the people had more than one source of income, i.e. they had a tea shop or manufactured *biris* to supplement their income from cultivation. 32 per cent of the surveyed families earned Rs 100 - 200 per month, 40 per cent earned Rs 201 - 350 per month, 14 per cent earned Rs 351 - 500 per month, and 3 per cent earned Rs 700 - 1000 per month. Household expenditure figures showed 26 per cent in the Rs. 100 - 200 range, 40 per cent spending Rs. 201 - 350, and 22 per cent spending Rs 351 - 500. 4 per cent of the families spend Rs. 700 - 1000 every month. 18 per cent
of the families had physically handicapped members, and 4 per cent of the families had mentally handicapped members.

The village produces its own requirements of pumpkin, peas, jute, rice, green vegetables, sold from local shops. Some of these are sent to the Madanpur market and also to Calcutta markets.

An Alloy Steel Plant will be set up in the area in the near future. The Department of Fisheries, Government of West Bengal, has selected this village for the setting up of a sweet water fish culture and research centre. The village was chosen for its vast shallow spill channel of the Bhagarithi where fish culture on an experimental basis is possible and because the lowly inhabited village could provide the extensive land area needed for the centre. The location of this centre was also determined to a certain extent by the late Chief Minister, Dr. B.C. Roy's plans for the development of the entire region. The centre has been carrying out investigations with a view to developing suitable techniques to retain the freshness of fish under the transport and storage conditions obtaining in India. Experiments were carried out with a typical fresh water fish, viz. the Lobio rohita of the carp variety.
The fish was caught from the ponds, the 'jheels' or a commercial 'bheri', and the fresh fish was transferred to the laboratory under ice.

**Health and Medical Facilities**

50 per cent of the deaths in the village are due to gastric diseases. 30 per cent of the deaths are from old age. 20 per cent died from different ailments. 38 per cent of the families consulted qualified allopaths for treatment, and 14 per cent referred to homeopaths. 47 per cent of the families took their patients to hospitals for diagnosis, and only 1 per cent of them consulted non-qualified personnel for medical relief.

**Civic Amenities**

The village has two metalled roads and many unmetalled roads. There are three markets at Gokulpur, Bedi Bhavan and Saguna. The market at Saguna is open throughout the day. In case of minor and even major disputes the villagers approach the Gram Panchyats of Kulia, Kataganj, Gokulpur, Satrapara, Kanpura and Gayeshpur, and the Saguna Anehal Panchayat. The people get drinking water from tubewells and quite a few of them have their own tubewells. Most of the villagers went without household amenities, but had transistors and cycles.
Location of Kulia, Chandmari and Jaydevbati villages, Kataganj and Gokulpur Government Colony Towns, Gayespur and Kalyani Towns.
Case Study 8 : Chandmari (J.L.No. 78) (Fig. 44)

This is a village only 3 km away from Kalyani town, in the Kalyani Police Station area. During the author's investigations she found the people very helpful, hospitable and extremely co-operative.

Population

The majority of the families living in this village of 894 acres were Hindus and had come from Bangladesh. Half of the families the author interviewed had able-bodied heads of families. A quarter of them were middle-aged, and a few very young or old. In one case, the head of an extended joint family was over 90 years of age. 50 per cent of the heads of families were capable of manual labour and able to earn their living.

A quarter of the villagers were illiterate, and the author found that most of these people belonged to the age group above 45. About 50 per cent of the villagers had done their middle school, and had dropped out for lack of facilities. Literacy was high among the younger people. Only 4 per cent had received vocational training.

Economic Aspects

80 per cent of the people were engaged in non-agricultural pursuits, since they had been uprooted from
the land where they had been farmers. 8 per cent of the people carried on both kinds of activities.

52 per cent of the families had a monthly income range of Rs 250 - 500, while 37 per cent earned between Rs. 0 - 250 per month. There were a few beggars at one extreme, and 1 per cent at the other extreme earning more than Rs. 1000 per month. 13 per cent of the population spent within their income (a quarter of them the same as their income), and the larger majority well beyond their income. Most of the people lived in debt, and found it difficult to make both ends meet. There were only a very few with some savings ranging from Rs. 1 - 5 per month to Rs 6 - 25 per month. 64 per cent of the people were in debt, with loans from friends, employers, or professional money-lenders, at high rates of interest, going up to 20 per cent. There were a few however who had friends giving loans with no interest claimed. The people did not seem to have any confidence in the co-operatives.

64 per cent of the families had to depend on a single earning member. Very few families had two or more than two earning members. 57 per cent of the families had an average of 6 dependants on a single earning member whose income rarely exceeded Rs 500 per month. 47 per cent of the
families had 4 - 8 children though they did not afford to feed them. The joint family structure was found declining, with 53 per cent of the families nuclear, and 22 per cent extended single.

**Health and Medical Facilities**

97 per cent of the population took vaccination regularly from the Kalyani Rural Training Centre. There was one family that reported that they felt too scared, and had gone without vaccination for generations, and would like to go without. Health visitors visited the village regularly. 95 per cent of the population had heard of family planning, while 5 per cent asked the author what it was all about. While a literate minority practised family planning, most of the people, though aware of the measures available, chose not to practise it.

**Civic amenities**

There were playgrounds before the Schools. Cricket was popular. There was no recreation for the old. For the affluent few there were a women's society and a club of sorts. There were variety programmes on religious occasions with limited participation.
People in the village complained of joblessness, lack of educational facilities, and demanded adequate food and housing, part-time employment facilities, new schools etc.

Case Study 9 : Joydevbat (J.L.No.79)(Fig.44)

This is a small village about a kilometre away from Kalyani Station, near the Chakdah Block in the Kalyani Police Station area of the Ranaghat Sub-division.

Population

With a total area of 228 acres, the village has a population of about 292 persons according to the 1971 Census. Almost entirely Hindu in religion, the population has 59 in the scheduled castes. A large majority of the population are displaced persons from East Pakistan.

Economic Aspects

156 acres of the total area of 228 are not available for cultivation. Only 72 acres of plot are irrigated. The main occupations of the people are cultivation, service and factory labour.

Civic Amenities :

The village has three metalled roads, and one unmetalled road between the Rural Training Centre and
Location of village Hat Boalia and Krishnagar Town.

Fig. No. 45.
Sagua. Bus services at half an hour intervals connect it to Calcutta. The Rural Training Centre, set up by the State Health Department, has electricity. The rest of the village does not enjoy the facility. The village has no market, but can avail of market facilities at markets located within a distance of 5 km. Local shops provide the village with its requirements of grocery and stationery. The village has a primary school. A Kaviraji Research Centre manufactures medicines, but not for use by the local people.

With minor disputes, the villagers approach the village headman who would usually call a meeting of the village elders.

**Case Study 10 : Hat Boalia (J.L.No.114)(Fig.45)**

This village of 74 acres is situated within the Krishnagar Police Station area. Only 20 acres of land are irrigated by tubewells. Rice and wheat provide the staple food. The local market offers good fish, a fact which is said to have inspired Krishnachandra Roy to call the village 'a market for fish'. Most of the people however are cultivators and agricultural labourers. Only 3 people belonged to the scheduled castes. The village has household industries like broomstick-making. All the roads are unmetalled. The village has inadequate transport and communication facilities.
Location of villages Palasipara and Tehatta.
A Settlement is often inhibited by swamps and waterlogged areas (a, in the Karimpur police station area) and hedgelike jungle shrubbery on the banks of rivers and sluggish creeks (b, in the Kaligunge police station area).
Case Study 11: Palashipara (J.L.No.42) (Fig.46)

Situated in the Tehatta Police Station area, the village has a total area of 1,574 acres. 200 acres of the land are irrigated by deep tubewells. 400 acres are cultivable waste land; 174 acres are not available for cultivation. The village gets its drinking water supply from wells, tubewells, and the river. The village has a daily market. 95 of the people were engaged in household industries. The village has both pucca and kutchha roads.

The author crossed the Jalangi river by boat to reach this village, which is about 56 km from the nearest town, Krishnagar. The village consisted of closely clustered houses. The people were quite conscious politically.

Case Study 12: Karimpur (J.L.No.6) (Fig.40)

Situated at the northernmost top of the district, this village within the Karimpur Police Station area has an area of 400 acres. The irrigated land area is 200 acres, irrigated by deep tubewells. While cultivable waste land covered 15 acres, the village had 160 acres of land not available for cultivation, and 25 acres of unirrigated land. The village has both pucca and kutchha roads. The village has a post and telegraph office, and
has telephone connections. The village market is a biweekly affair, being held on Wednesdays and Saturdays. Drinking water comes from wells and tubewells.

While agriculture is the main occupation, there are several small traders and people engaged in household industries.

Case Study 13 : Tehatta (J.L. No.101) (Fig.46)

About 27 km north of Krishnagar, Tehatta is situated in the Tehatta Police Station area. The famous old temple of Jor Bangla is one of the landmarks of Tehatta. The total area of the village is 2,708 acres. The village has many 'khals' and 'bils'. It receives its drinking water supply from tubewells. Of its total land area, the village has 450 acres of irrigated land, 1,585 acres of unirrigated land and 300 acres of cultivable waste land, and 373 acres not available for cultivation. The village has a Primary School, a School for boys, a School for girls, a Health Centre, a Family Planning Centre, and a Post and Telegraph Office.

General findings from the village surveys

All the Nadia villages show a steady rise in population. The percentage of child population in the age range of 0-14 years is quite high. The death rate has fallen considerably,
and people have been taking advantage of medical care and hospital benefits. The villagers are aware of family planning needs and methods, but rarely practise it.

The joint family system is fast breaking up. The Nadia villagers, mostly farmers, are very poor, with an outmoded cropping system. They usually raise only one crop a year, and have to depend on an inadequate number of tube-wells for irrigation. People have started changing their occupational activities, particularly in the villages that are located near towns or enjoy better communication facilities. Tertiary occupational activities that have become popular include 'biri' and broomstick manufacture, and transportation of vegetables and village produce to the nearest town or to a collection point on the National Highway 34 by trucks and other vehicles. But the general transport system is quite poor throughout the district, most of the village roads are unmetalled, and cannot be used in the rainy season.

Nadia has a substantial load of refugees from Bangladesh. In-migration from Bangladesh has always affected the area. Migration also takes place from a village to a town or one village to another village, mostly with marriage or job opportunities.
The larger section of the people belong to the 200 – 400 rupees per month income group. The larger number of heads of families belong to the 20 – 40 years age group. The head of the family is usually male, even when the mother happens to be living with the son. As for educational facilities for the children, the villages have only primary schools, and economic constraints would not allow most of the students to go to Krishnagar for higher education.

The farmers need proper scientific and technical knowledge to raise their incomes and living standards and to engage in cottage industries for supplementary income. Vocational counselling and the setting up of vocational training centres at the village level could go a long way towards this economic reorientation of the life of the Nadia villagers.

**Eight Towns**

Of the 13 declared towns of the district in 1971 only six were municipal towns. Of the municipal towns the author visited and surveyed Krishnagar, Nabdwip, Santipur, Chakdah and Ramghat. The only municipal town she did not visit is Sirnagar. Of the non-municipal towns
Religion plays an important part in the integration of the community through rituals and institutions.

(a) A Gajan ceremony.

(b) The old church and convent at Krishnagar.
(b) The old church and convent at Krishnagar.
she visited Katagunj, Gyespur and Kalyani. She bypassed the non-municipal town of Jagadanandapur which can hardly be called a town. The origins and development pattern of the towns showed differences, with some growing over a long span of historical time, and others set up by the Government and undergoing planned development.

Nabadwip (Fig. 42)

Historical and cultural background: The present town of Nabadwip does not stand exactly on the site of the old Nabadwip or Nadia where Sri Chaitanya, the great saint and religious reformer, was born, and the Sena kings had their capital. The ruins of the old Nabadwip, founded by Vijayasena, grand-father of Laxmansena, can be seen in the village of Samanpukur and Sri Mayapura. Dhoya in his 'Pavanduta' calls the town Vijayapur, giving rise to the notion that it was founded by Vijayasena and named after him.

In Sri Mayapura stands a house where Sri Chaitanya is supposed to have lived. The house has been described as the core and the central point of a circle of eight islands, with a circumference stretching to thirty-two miles. Sri Mayapura, within a stone's throw from the Ballal Lake, and a five minutes' walk from the ruins of the
Ballal Palace and the tomb of Chand Kazi, is the most sacred place of pilgrimage in Bengal for all sections of the Hindus. It attracts thousands of pilgrims from all over India on the Holi Purnima (Del) the birth anniversary of Sri Chaitanya, every year.

The town and its civic amenities: Nabadwip is 125 km from Calcutta. The Bhagirathi is only one kilometre away from the city centre. The city has 69 km of metalled road and 11 km of unmetalled road.

The city has a drainage system with about 815 waterborne latrines and 5,342 service latrines. The city is served by wheel-barrows and a head-lead method of disposal of night soil. The drinking water for the city comes from a tap and tubewell system. Nabadwip and Santipur are the only two towns in the district with fire-fighting services. The town has road lighting facilities, and has about 3,135 domestic, 67 industrial, and 1,248 commercial electric connections, giving the town the highest position among the cities of the district. Cycle rickshaws, hand-pushed carts, cycles and private motorcars ply through the narrow lanes, buses and heavy vehicles on the wider roads. Nabadwip has a Hospital, three dispensaries, and a F.B.Clinic. As for educational facilities, Nabadwip has
a college, 2 vocational training institutions and about
46 schools of which only 9 are higher secondary schools.
The town has 8 public libraries, 1 auditorium and two
cinema halls. Nabadwip has a flourishing traditional
weaving industry, dependant on yarn and dye imported from
outside. Nabadwip produces Tangail sarees, straw covers
and paper boards. Nabadwip manufactures and sends cut to
several markets handloom cloth, jute and gold-plated
ornaments.

Nabadwip has the characteristic of an Indian temple
city. Like Benaras, it has rows of old temples on either
side of the narrow, congested streets. If one comes to
Nabadwip town by boat, the resemblance to Benaras appears
more clearly.

Krishnanagar (Fig. 45)

Historical and cultural background: Once known as Ravi,
it was named Krishnanagar by Raja Nandra Rai whose father,
Raja Baghav Rai built a palace here. During the times
of Maharaja Krishna Chandra, who played a leading role
in the social and cultural life of the city, it became
a centre for culture and learning.

The town and its civic amenities: Situated at 23° 34'
North and 88° 31' East on the left bank of the Jalangi
(b) The author at a Primary School at Inayetpur.

(c) A market at Haringhata.
about 15 km. away from its junction with the Bhagirathi, Krishnanagar is the headquarters of the Nadia district. Till 1898 the town did not have a railway connection, and the nearest railway station was Bogula on the Eastern Bengal State Railway with which it was connected by a metalled road about 20 km in length, broken at Banskhali by the Churni river, which was unbridged and had to be crossed by open ferry boats. Krishnanagar has the usual public offices of a headquarters town. It has a Government College, and a Collegiate School attached to the College. The Horticultural Research Station, the Jute Seed Multiplication Farm, and the Training Centre for the Agricultural Extension Staff at the State Agriculture Farm, all located at Krishnanagar, have a significant bearing on the agricultural development of the State.

The Horticultural Research Station is engaged in a study of several fruits like mango, lichee, citrus fruit, guava, jackfruit, cucumber etc. aiming at (a) breeding and selection work to evolve a better variety of fruits and vegetables with higher yield, better quantity, early and late maturity, resistance to insects, pests, diseases etc. (b) a cultural and manural trial to determine the best cultural methods and manural practices for different horticultural crops, (c) promotion of reliable
and true to type planting material of fruits and vegetable culture in the State. The Research Station produces a large number of grafts and seedlings of fruits and large quantities of seeds and vegetables, and distributes those to growers through the extension staff of the Directorate of Agriculture. The reliable and genuine materials are literally taken to the doors of growers in the remotest corners of the State at a very moderate price.

The main part of the town is only 1.6 km. away from the railway station, and is within a distance of 2 km. from the Jalsangi river. The town has 100 km. of metalled road and 100 km. of unmetalled road. Both Bros surface and open drains are used for sanitation. Disposal of night soil in the city is carried out both by wheel-barrows and the head-load method. The city has about 4,100 service latrines and 4,958 water latrines. Tubewells are the main source for drinking water supply. In terms of domestic electric connections it occupies the first position in the district, with 3,135 connections besides a large number of commercial and industrial connections. One notices an extensive system of road lighting posts.

Krishnanagar has always been intellectually and culturally alive. It has a substantial number of schools, including 12 Higher Secondary Schools.
Krishnanagar experiences political disturbances quite often.

**A Comparative Study of Krishnanagar and Nabawip**

Krishnanagar has an annual rainfall of 1,434.8 mm. Nabadwip has an annual rainfall of 1,770.0 mm. The maximum temperature at Krishnanagar is 42°.8° C, and the minimum 6°7° C. The maximum temperature at Nabadwip is 45°.0° C and the minimum temperature is 3°.0° C. The Jalangi is the navigable river for Krishnanagar, and the Bhigirathi plays the same role for Nabadwip. Krishnanagar has to depend on supplies from elsewhere for foodstuff, medicine and cloth, and manufactures machines and claymodels for supply to other markets. Nabadwip has to depend on supplies from elsewhere for yarn dye and fish and manufactures handloom cloth, jute and gold-plated ornaments for supply to other markets.

**Chaldah (Fig. 39)**

**Historical and cultural background:** Chaldah is credited with a legendary association. Bhagirath, on his way from the Himalayas to the Gangesagar, with the river Ganges, is said to have left the traces of his chariot wheel (chakra) here; hence the name. Not much is known of the ancient history of the town, but Nan Singh, the Mughal army general, is said to have been weather-bound here for some days on
(c) The new temple at Sri Mayapur, an international centre now.
his way to crush Pratapaditya at the close of the sixteenth century. Once an important trade centre, Chakdah lost its advantage with a change in the course of the river (Fig. 8).

The town and its civic amenities: Chakdah has a station on the main line of the Eastern Railway. It is situated at 23°6' North and 88°33' East not far from the left bank of the Hooghly River, and about 62 km from Calcutta.

The town had its first municipality in 1886, with 12 commissioners, all of whom were nominated, with a continuous in-migration of refugees from East Pakistan, it has developed into a busy township with trade centres, shops etc. The town city has got schools, a college, a hospital, a block office, a cinema, a police station etc.

The town has about 23 km of metalled road and 25.7 km of unmetedalled road. Without road lights still, Chakdah has domestic and industrial electrification to a substantial extent. The drinking water supply comes mainly from tube-wells. For sanitation, Chakdah depends on water-borne latrines service and septic tanks. Disposal of night soil is carried out by head-load method and septic tanks.

The eleven industries practised in Chakdah include bakery, biri making, cotton textiles, furniture, fire-bricks, chimney and pottery. In fire-brick units employing more
than 10 workers use power and need bank financing, Chakdah produces substantial stocks of jute, pulses, combs and cloth. Rice, jute goods and raw materials for comb manufacture have to be brought in from outside. Chakdah has two banks and non-agricultural credit societies.

Kalyani (Fig. 44)

Historical and cultural background: Kalyani owes its origin to a Government of West Bengal venture to build a large model town only 48 km from Calcutta with all modern amenities and facilities. The total area acquired for the township was 9,480 acres. The area was divided originally into 6 blocks, namely A, B, C, D, E & F. But in 1954 it was decided with the approval of the Chief Minister to restrict the township area within four blocks, namely, A, B, C and D only. The town has been declared a notified area by the State Government.

The town and its civic amenities: As a newly developed and planned city, Kalyani has very broad, straight, clean and retailed roads stretching to 163 km, with green patches and impressive buildings.

While 9 per cent of the total population are engaged in household industries, the relatively bigger industries in Kalyani include manufacturing cycle parts, manufacturing plants and machinery for the industry, spinning mills for
production of yarn, the Bombay Steel Rolling Mill for re-rolling of steel rods, angles etc., manufacturing railway sleepers and other allied materials and fabrication of steel materials. In view of the increased demand for industrial plants, the Government has recently decided to extend the industrial belt by another 375 acres. New industries in Kalyani include tap and dye, hosiery, porcelain and clay models.

The Kalyani University has constructed a whole complex of buildings for hostel accommodation and lecture halls. It is a residential University, with faculties in agriculture, arts and science. Kalyani also has a B.T. College, a Block level Co-operative Officers Training Centre, an Industrial Training Institute, a Work-cum-Orientation Centre, an Orientation Training Centre. Non-Government Institutions in the township include the Kalyani Civil Association, the Kalyani Club, and the Kalyani Town Club. The town has 10 schools of which 2 are of the Higher Secondary grade.

Modern amenities available in Kalyani include extensive road lighting and domestic, industrial and commercial electricity connections. Kalyani is the only city in the district with a modern sewerage system for the disposal of night soil. The sewerage system is one of the most developed ones,
Fig. No. 47.

Location of Ranaghat Town.
Tubewells supply drinking water. Besides a well-equipped health centre, Kalyani has the Jawaharlal Nehru Hospital and the T.B. Hospital.

Development problems: Kalyani, after a planned start has been going through a period of arrested growth. Inadequate transport facilities, too slow all-round development, delay in land development work have been the main reasons why owners of plots have not built houses. The town is spread two wide and public transport is crowded and exorbitantly expensive between the residential area and the places of work. Kalyani has three railway stations, but the train services are neither regular nor frequent. Shops, markets and recreation centres are inadequate for the population of the township, and are usually located at great distances. There were people who told the author at Kalyani that they found it more convenient to go to Kanpur by train to do their shopping.

Early in 1982 'rush for land sale' was reported at Kalyani (Amrita Bazar Patrika, 16.3.82) and land brokers had 'a field day' with the insufficiency and mismanagement evident at the Estate Manager's Office.

Ranaghat: (Fig. 47)

Historical and cultural background: There are several legends about the origin of the town and its present name.
According to one of those, the town was originally called Ranaghat after the Rani of Maharaja Krishnachandra of Nadia. According to another, a Baja or a Rana had made a ghat on the site, and the name of the town came from the 'ghat'. Pringle in his Final Report on the Survey and Settlement operations of the District of Nadia, 1918-26 mentioned a dacoit Rana, who had given his name to the town when he had chosen the place to be his headquarters. The town has been the Sub-divisional headquarters since 1863. As a family, the Pal Choudhuris have contributed several public utility institutions and services to the city.

The town and its civic amenities: Located at 23°11' North and 88°34' East on the left bank of the river Churni, the town covers an area of about 7.7 sq. km. 74 km away from Calcutta. Ranaghat has a railway junction. With a direct railway connection with Bangladesh, Ranaghat has received a load of refugees from the erstwhile Bangladesh, recording a big population rise in the 1951 Census (Fig. 17 and Fig. 34). Ranaghat is served by considerable river traffic and a bus route connecting it to the important towns of the district.

The town has about 42 km of metalled roads and 10 km of unmetalled roads. The town has an open surface drainage system, and about 2361 service latrines. Wheelbarrows and
Location of Santipur Town.
baskets are used to dispose of the night soil. Taps and tube-wells provide the water supply. The town has a fire-fighting service. The town has about 748 street light points, 2552 domestic electricity connections, 389 and 1168 connections in the industrial and commercial areas.

Ranaghat has a hospital, an arts and commerce college, training schools, and about 48 higher secondary middle and primary schools. There are several schools run by missionary organisations. There are about 8 libraries, 2 cinemas, and one general auditorium.

The town manufactures cloth and yarn, battery products, perfumery products, supplies cloth, fruits and foodgrains to other places, and receives supplies of rice, mustard and salt. The town has a poultry multiplication centre.

Development prospects: Ranaghat can be developed further in terms of light and small-scale industries, and can feed the market of the Calcutta - Durgapur - Rourkela Industrial Complex.

Santipur (Fig. 48)

Historical and cultural background: With an older history than Ranaghat as the headquarters of the Sub-division before 1863, when Ranaghat replaced it, Santipur was given its
present name by Sri Rudra Rai, Maharaja of Nadia. The town is believed to have been in existence in the days of Raja Ganesh who ruled Bengal in the twelfth century. Santipur had a legendary reputation for its muslins and retains a flourishing cloth industry. The old mosques and temples scattered over the city are mostly in ruins from lack of maintenance. A place of pilgrimage, Santipur draws thousands of pilgrims who join in the procession of "lasajatra" on the full moon day in the month of 'Kartika'.

The town and its civic amenities: 98 km away from Calcutta Santipur has a railway station, and is connected to Calcutta and other cities by a steamer service by the Hooghly, bus routes, and the railway.

A good metalled road connects Santipur to Krishnanagar and Ranaghat. The town has about 78.3 km of metalled road and 20.5 km of unmetalled road. The town has open surface drains, about 3880 service latrines, and 442 water-borne latrines. The night soil is disposed of by head loads and wheelbarrows. Drinking water comes from wells and tube-wells. There are about 836 road lighting points, 1569 domestic connection, 500 industrial and 121 commercial connections.

The town has a Health Centre, a Dispensary, Arts, Science and Commerce Colleges, about 46 Schools, 6 Public
Libraries, Cinemas, and an Auditorium.

Santipur's manufactures include cloth and yarn and bakery products. It supplies jute, handloom and powerloom cloth, foodgrains and rabi crops to several regions, and receives supplies of yarn, coal and sugar.

Development prospects: Santipur can be developed as an industrial town and a place of tourist interest. The renovation and maintenance of old buildings need immediate attention.

Gayespur Government Colony and Kataganj and Gokulpur

Government Colony. (Fig. 44)

Historical and cultural background: These two towns are the outcome of a large influx and settlement of displaced persons. In 1950-52 the Government settled refugees from East Pakistan in a cluster of villages including Geopalpur, Kataganj, Gokulpur, Gayespur, Jadavpur and Saguna, very close to the new town of Kalyani. The Kanchrapara Development area was declared a town in 1951 and merged in Kalyani. Both the Gayespur and Kataganj and Gokulpur Government Colonies were declared towns in 1961.

The towns and their civic amenities: Kataganj-Gokulpur, barely 0.41 sq km. in area, has the highest density of
population in the district. Both Gayespur and Kataganj-Gokulpur are part of the Kalyani Police Station area and are situated 50 km away from Calcutta. The Kanchrapara Railway Station, at a distance of 6 and 10 km respectively, serves the two towns. The towns have bus routes, and about 50 km of metalled roads in Gayespur and 45 km in Kataganj. Tubewells provide drinking water. Gayespur has 150 domestic electricity connections, and about 41 industrial and commercial connections. Kataganj-Gokulpur has about 26 connections in all, including domestic and industrial connections. Both the towns have open surface drains. Gayespur has about 149 septic tanks.

Gayespur has a Public Library and about 11 Schools, 2 of which are upto the higher secondary level. Kataganj-Gokulpur has about 4 Schools including one upto the Higher Secondary level.

Gayespur manufactures cloth and buckets, supplies the and also eggs to neighbouring areas, and receives supplies of rice, wheat and stationery goods. Kataganj-Gokulpur manufactures thread balls and 'biri', and supplies them to the different places, Kataganj-Gokulpur receives supplies of rice, wheat and stationery.
General findings from the Urban Survey:

Most of the municipal towns e.g. Nabadwip, Krishnanagar, Santipur, Chakdah and Ranaghat, have historical religious and cultural associations, and draw a steady flow of visitors as pilgrims and tourists. But little conscious effort has been made to develop these towns as tourist centres. Krishnanagar, politically disturbed time and again, needs more infrastructural development immediately.

Non-municipal towns like Kalyani, Gayespur and Katanganj-Gokulpur have developed in a different manner. The influence of refugees in the district and the consequent increase in population pressure necessitate the development of more modern towns with new job opportunities.

Chakdah has developed fast after partition and its people are mainly engaged in services, trade, commerce and industrial activities. People in Gayespur are engaged in services, trade and commercial activities. People in Kalyani are mainly in services and industry. Nabadwip and Santipur show a greater concentration on industry, while Krishnanagar is more service-oriented. Ranaghat has a fair mix of trade, commerce and services.
CHAPTER IX
SUMMARY AND CONCLUSIONS

This chapter offers a summary of the analyses and findings covered in the earlier chapters, and draws inferences from the field experiences and case studies recorded in the chapter immediately preceding. Geography is a descriptive science and it studies the reciprocal relationship between man and his environment. Hence the author have followed a scheme beginning with a study of the ecological factors of the district, followed by an analysis of different aspects of population. The population data of the district has been considered in three categories, viz., for the district in general, for the areas demarcated under different police stations, and in different urban complexes and villages. Towards the close of the study, the author tries to identify the factors affecting population characteristics either singly or in combination with other factors.

In the concluding portion of this chapter an attempt has been made to clarify the growth potential of the household industries of Nadia district as these industries can play a very important role in achieving the salient objectives of self-employment, self-reliance, balanced and increased growth, rural development and rural reconstruction etc. of the district.
In the introductory chapter the ecological features of the Nadia District have been recorded. The study of relief, climate, soil, vegetation etc. are closely related to the study of the people of the district. In the concluding chapter their impact has been discussed.

In the following chapter the patterns of population growth, its history, nature and trend have been analysed. The population concentration is more in the south than in the north (Figs. 16 and 17) not only due to favourable geographical factors but also economic reasons. Particularly the proximity to the industrial complex has helped this concentration.

The third chapter deals with different elements of population. After examining child population and other age groups of the population, a dependency ratio has been worked out (Page 74). Strangely enough, in the initial stage the dependency ratio was as high as that of 1971. In between there was a fall in the dependency ratio, particularly between 1921 and 1931. In 1951 it was the least. Socio-economic factors lie behind this fall. Chapter Four discusses migration and displaced population. The change of definition for migration from time to time makes it difficult to compare the data of different times. Nadia
has been a border district (Fig. 1) and the displaced population need a special study.

Chapter five studies the working population, its definition and characteristics. Lately there has been a shift of the working class from the primary to the tertiary stage (Appendices 7, 8, 9). This is because this district does not have much possibility of a secondary field. The lack of minerals (Fig. 3) and smooth infrastructural development are probably causes of this shift.

The sixth chapter which discusses the aspects of urban population clearly points out that most of the urban centres are declared towns because of accidental origin: Phulia, Takerpur Gayespur, Kataganj; Bagula etc. do not depict a city character. The influx of refugees increased the population in these areas. They could not get down to primary occupations, because of two reasons; mainly, one, because of lack of cultivable lands for all of them, two, the refugees were mainly non-agriculturist by class. Though they were engaged in occupations other than primary their standard of living remained very low. Cycle rickshaw pulling, biri making etc. are a few occupations adopted by them. In no ways do these towns enjoy the amenities of urban areas (Case Study findings of Chapter VIII). However, the Nadia district being near the Calcutta Durgapur
Industrial Complex, this region has the potential to develop small scale industries. Given proper attention and planning, the towns and police station headquarters can become good growth points.

In the seventh chapter aspects of rural population of the district has been taken up. A classification of different categorical villages according to the number of population has been made \( \text{Table VII(8)} \). While relating the district's case the West Bengal case and the Indian case have been brought forward. Finally in the eighth chapter the author's experience in field work has been related and compared with the findings in different chapters. The socio-economic study has supported the empirical study.

Population is dense in the Nadia district. The density can be traced back to its deltaic configuration (Fig. 4). According to Miss Semple (in her Influences of Geographic Environment, pages 526-561), "Mountain region areas as a rule are more sparsely settled than plains". Thus the whole of the Nadia district, being situated in a deltaic region is naturally one of the more populous districts of West Bengal. The alluvial delta plain with relative heights not exceeding 18 m (Fig. 5) is definitely suitable for agriculture and human habitation. The maximum recorded height above sea level is approximately 18 m, in the
police station area of Karimpur and the minimum is about 9 m. in the police station of Chakdah. It has a general slope from north to south. Saucer-shaped depressions occur in many areas. There is one such big depression towards the north of the district and another in the South-East. Smaller ones are found scattered all over the district occurring almost in every police station area.

In chapter one the relief features of the district have been analysed in some detail and after going through the density and distribution pattern of the population it can now be claimed that relief has a bearing on population distribution and density. Most of the populous towns i.e. in the southern part of the district and villages of higher density are mostly distributed in the south eastern part of the region. The author makes no effort, however, to establish relief as a factor of absolute importance in determining the distribution of population. In fact relief does not show a drastic change from north to south in Nadia and cannot therefore explain the low population in the north and the high population in the south (Figs. 35 and 36). All the rivers of Nadia are stagnant, producing the characteristic features of a Moribund river delta, as discussed in Chapter I (Page 20). The settlement pattern has
developed along the highly meandering course, offering an interesting study of population and changes of river direction in the area. Ox-bow lakes, marshes, spill channels etc., are a common sight in this region and have their bearing on the population distribution in the area (Figs. 7 and 8).

If the entire course of the Bhagirathi, the Hooghly and the Jalangi is traced it will be noticed how the changes in the course of the river have brought in changes in the settlement of the population in different decades. Lastly, the Farakka Barage Project has brought in a little change in the river system of the Bhagirathi Hooghly, but the impact on the mainland deltaic Nadia district is still not evident. In the toposheet 79 A which uses surveyed maps of 1917-18 and 1950-51 the distribution of population and settlement patterns show considerable difference (Fig. 7 Chapter I). The 1917 and 1918 surveyed maps do not show a population concentration near the ox-bow lakes and the spill channels, because they were in the process of formation at that time, whereas the 1950-51 surveyed maps record dotted dense settlement along the ox-bow lakes. This is a consequence of the shifting course of the Bhagirathi in the Santipur Police Station area. To cite a particular instance, village J.L.No. 53, originally under the Santipur Police Station has shifted to the right of the Bhagirathi river with the eastward shift of the course of the river, and by the time
of the census of 1971 it had been transferred to the police station of Balagarh of Hooghly district vide the notification No. 8346L REF of 1 June 1961.

Dr. Herbert Welhelm in his paper "The Shifting River Studies in the History of the Indus Valley" (page 53) has commented: "Town that were founded on the right bank of the Indus Valley may now be on the left bank, or perhaps even a long distance away from the river if they have not been more or less completely destroyed by the shifting river. Even in the semidesert area to the east, there is hardly any spot in all this wide flood-plain without abandoned hilltop settlements, ruins, and spreads of potsherds to broken the former presence of civilized man".

In the remote past the river ports were exceedingly important, with navigation as the only mode of transportation. For this reason when the rivers got choked or shifted, towns situated on the banks of the rivers lost their importance. A study of the Indus Valley, the Indus and its tributaries as shifting river courses shows abandoned hilltop towns known as "theps" that are nothing but deserted settlements. They were deserted with the shift of the rivers away from these towns.
Nabadwip, the capital city of the Sena kings, lost its importance to a great extent as the Bhagirathi changed its course in the nineteenth century. In the past the alluvial deposited areas were selected by people for human habitation near the river. But gradually the constant fluctuations of the rivers affected population concentration. One can trace the abandoned settlements along the old course of the rivers in Nadia district. One kind of desertation is found near Santipur in the latitude 25° 15' N - 23° 20' N and 89° 20' E - 89° 25' E as surveyed in 1917-18 and 1950-51 of toposheet No. 79 A.

The story of river migration in Punjab in four phases, as analysed by Prof. Dr. Herbert Wilhelm, substantiates the direct relationship between changes of population habitation and the shifting and silting rivers.

Dr. Radha Kamal Mukherjee has observed that the stretches of the Ganga, Meghna and Brahmaputra are the most thickly populated regions of the earth. The heavy rural density is related to the existence of double cropped areas and the wet variety of rice. After the partition of 1947 the earlier pattern of distribution was of course affected. Another important phenomenon of the population density and river dynamics is that
of seasonal river flooding and its consequences. For example, due to the heavy silt deposition in the river bed the river Ganga flows above the surrounding region. So, during the rainy season when the flooding takes place it overflows the banks, fills up the inland depressions, marshes and river fields at different levels and thus replenishes the area by silt deposition. This is also a form of irrigation, the villages are constructed here at comparatively higher land levels and are thus protected from the direct impact of flooding. The fertilised land areas close to the villages attract a rural population which in due course reflects on the distribution and density of population of the area concerned. As the population grew, the pressure on the land also increased as described in Chapter II, page 65, Table II(6), Figs. 13, 14, 15, 16, and people started changing the landscape and utilising it according to their convenience. As a result of this process the normal flow of many rivers like the Bhagirathi, Jalangi, Churni etc. was affected. In the remoter parts zamindars constructed protective embankments. Gradually, link roads and railway embankments were constructed for the development of communications and transportation.

On the banks of the smaller rivers cultivated fields are sometimes extended so that the river flow is affected.
Embankments for fishing purposes also at times affect the free flow of water particularly in the small rivers like Kumar and Bhairab. Small pools of water here and there get absolutely stagnated from the growth of wild weeds.

There are other ways by which even the flow of the big river is choked and this does a lot of harm. Construction of brick fields, extension of a building up to the river, unscientific river-dredging or the sinking of a boat can obstruct the flow of a river. Sometimes even the falling of a big tree trunk can change the direction of the river. Reclamation of land from the river bed hinders the normal flow of the river.

The faulty embankments of Nadia and Murshidabad district have brought in several problems related with river and river flow. F.C.Hirst has warned that the interference of human beings in the normal flow of the river with other usual problems would bring in sanitary and drainage troubles. According to the 1971 Census there are 108 uninhabited villages under different police station in Nadia district. Most of them are "chars" [Chapter VII, Table VII(9)].

The growth of "chars" and litigation are simultaneous phenomena. Dr. Radha Kamal Mukherjee in his "Changing Face
of Bengal" noticed that "..... Where the oscillation of rivers are extensive and land formation quick and incalculable alluvion and deluvion laws fail to secure justice and rioting follows as a matter of course in the wake of char-building and unbuilding".

Old "chars" represent a typical landscape of their own. Old "chars" are sometimes at a higher level than that of the surrounding lands and here villages are found consisting of little huts interspersed with palm trees and rice fields.

Comparatively newer "chars" have a different appearance than the old ones. There are numerous channels in these "chars" making the land unsuitable for cultivation, otherwise the "char" is generally used for cultivation where trees are absent and a vast track of level land is available.

When the "chars" are in the process of making, they grow luxuriant grass and this grass attracts people for grazing buffaloes and cows. The grass collects mud and sand during floods and increases the level of the land which in due course makes it convenient for human habitation. The attractiveness of a region to settlers often depends partly upon the quality of the soil. Blache in his "Principles of Human Geography" comments: "The great rivers
in particular descending from the high Asiatic massifs and fed by seasonal rainfall not only bring waters impregnated with soluble substances, they also deposit much alluvial material. One is almost tempted to guess that in the beginning the largest human settlements must have been located in the section of the lower valley, where the overburdened stream succeeded in depositing its load. As a matter of fact, are not some of the highest populationdensities on earth found today upon some of the large deltas between the Nile and Yangtze? "

Nadia district is essentially an agrarian district with the majority of the people engaged in agricultural pursuits. If the agricultural population is superimposed on the detailed soil map, it will give a true picture of the density problem of the region. The crop varieties also have their influence on the population distribution pattern.

Study of Uninhabited Villages of the District

The uninhabited villages of the district show one characteristic in common, viz., the tendency of human beings to avoid the low land areas and easily flooded areas. The district is a moribund delta area, and here the history of the rivers shows either strong stream migration
or complete decay. The Ichamati, Churni, Bhagirathi, Jalangi and Mathabhanga are still oscillating in their courses. The changes of direction and creation of spill channels cause depopulation.

There are other rivers particularly like the Bhairab whose decay has also caused changes in the population distribution on its bank.

Though few, there are some cases (which have been discussed under the respective police station areas concerned in Chapter VII) where there is a transfer of a few uninhabited villages to another district, or a part of it is transferred to another district because of a change in the course of river or such allied causes.

Now after the discussion of the different points related with the study of population Geography the author intends to examine which factors or a factor affecting population characteristics singly or in combination with other factors. Which factors are to be given priority for the understanding of the population trend and are playing dominant role in demographic study. The present population of Nadia is the product of a very long process of peopling of the sub-continent. Human groups with different ethnic backgrounds have entered the region at different points of time. Their immigration, their settlement in India and
later movements within the country have led to a high
degree of intermingling between the various ethnic and
cultural streams. The ethnic and cultural diversities
displayed by the Nadia population today have thus acquired
their distinguishing traits through a process of social
intermixing.

The population curve in Chapter II (Fig. 10) can be
split into three sections. In the initial stage there is
a discrepancy because of wrong counting as has been already
pointed out on page 50. But from 1872 onwards a level of
accuracy was maintained. "No opposition was offered to
the census but there was much uneasiness among the people
when the preliminary operations commenced, which, however,
gradually wore off" ....... A Zaminder of some position,
who had been asked to assist us with his influence,
assured Mr. Oldham that he would find the enumerators
enquiries most readily answered throughout his estates
as he had told the people that owing to the Prince of
Walese, rewoery, a distribution of sweetmeats was to be
made among them, and consequently their number was required
to be known". (W.W. Hunter, A Statistical Account of
Bengal, First reprinted in India, 1973, Delhi, p. 3§).

In the second section of the curve depopulation
took place from health hazards in 1911-1921. Except
in a few towns like Krishnagar, Santipur and Nabadwip, the fall in the population due to floods, famine, epidemics, drought and distress continued in later decades till the district was partitioned in 1947 when more people migrated into the district than those who vacated it while there had been a percentage increase of 36.25 in 1951 over the population of 1941 in the District. Palpably caused by immigration, there was an overwhelming percentage increase of 49.65 in 1961 over the population of 1951 caused by immigration from within and without the country, and natural growth. In 1971, the population registered a percentage increase of 30.14 over the population of 1961, which was above the increase in the figure of the state (26.87) during the same period (1961-1971) (Durgadas Hajumder, Nadia, West Bengal District Gazetteers, Calcutta, April 1978, pages 74-75).

The birth rate and death rate for the earlier period till 1921 is not available and it is assumed that the death rate and the birth rate were more or less the same. In Chapter III, p. 94, the author has shown how the birth rate and death rate are more or less the same and no significant change in the population pattern has taken place, but in 1931-40 a significant population rise has taken place because of a considerable fall in the death
rate, and a high birth rate. There is a great jump in the population total from improvements in health conditions in the district. The 1941-51 population figures are not comparable because of truncation of the district and a large influx of immigrants as already mentioned in Chapter IV. The table makes it quite clear that the 40% rise of population is because of immigration. The partition and exchange of population and truncation of the area make it difficult to discuss various components of population like fertility, mortality and migration for different decades. As these are not comparable, density calculation is the only way by which it can be compared and for this reason the density of different decades has been calculated. Density of various kinds also have been calculated. Density of the smallest unit villagewise (jurisdiction list wise) for every 1275 villages has been calculated.

In 1872 the male population was more than the female population in all the three mountainous districts of Cooch Behar, Darjeeling, Jalpaiguri. Besides in West Dinajpur, 24-Parganas and Calcutta also, the female population was less than the male population while in the rest of the districts, viz., Burdwan, Birbhum, Murshidabad, Nadia, Bankura, Midnapore, and Malda, the female population was more than the male. Sure enough in most of the cases
including Nadia in the 0-12 population range, the male population is more than the female and in the 12+ population range the female population is more than the male (S.B. Mukherjee, Age Composition of the population in the districts of West Bengal, 1872-1961, Census of India 1979, Series 22 - W.B. Part XI(i) Special Monographs, Delhi, 1975, page 117). "As in the neighbouring district of Jessore, the small proportion of girls to boys, and excessive proportion of females above 12 years of age to males of the same class, seem to arise from the fact that the natives consider girls have attained womanhood at a much earlier age than boys attain manhood" (W.W. Hunter, A Statistical Account of Bengal, Delhi, First reprinted in India, 1973, page 38).

Thus it is apparent that the female population is larger in most districts of Bengal in the later stage of age than in the earlier stage because of a kind of social stigma, and customs like the Harem among Mohammdans etc. These play an important role in the rise of the female population.

It has been noted in the proceeding chapters that the tribal communities of India display an interesting profile of the country's ethnic diversity.
Among the ethnic groups of India the scheduled tribes hold a significant position they belong to different ethnic, linguistic and religious groups and have some unique social and economic characteristics. These tribal communities forming an important segment of the country's population generally live in areas which are by and large unfavourable for settled agriculture. Their occupations and way of life are intrinsically linked with the environmental setting of these areas.

In 1951 the migratory population had recorded high percentage in the district because of the partition and the riots (Chapter IV). But afterwards also in 1961 the migratory population of the district was as high as 45% and in 1971 it came down to about 40% of the total population. It shows that this district still experiences an influx of population from outside, crowding the district in a haphazard manner.

The district records a higher percentage of female migrants in general in the age group 25-49. Male out-migrants are more than female. This indicates that male migrants are mainly those going out in search of better employment. Unemployment and other economic hazards like too much pressure on land etc. in the district have generated a spirit among the working male members to go
out of the district and find good jobs. Male out migration is generally due to economic causes whereas female out-migration is due to social causes like marriage etc. But in the great dividing area of 1940-1950 migration was primarily from political reasons (Chapter IV). Besides it is generally observed that during any natural calamities like drought, flood, famine, or a great rivercourse fluctuation, women and children are sent out to safer areas while the adult male members fight the cause.

Village life in Nadia, Bengal, depicts more or less similar conditions as in the rest of India. All over India the rural population suffers from common conditions like poverty, low per capita land, ill health, unemployment etc. The author in her case studies also noticed people complaining about these problems (Chapter VIII). Population-wise these villages are growing, the density also is increasing in most of the villages. The birth rate is falling at a very slow rate. It was noticed that among the higher literate persons the birth rate is lower. With the spread of Government family welfare programmes very gradually but steadily, the adoption of family planning methods is becoming popular. Higher literacy rate, higher living standards, a higher number of children survival are all positively related to the lower birth rate.
So far as the size of villages is concerned the maximum number of villages (348) belonged to the 1000-1999 population group as per 1971 census. In the 1961 and 1951 census the maximum number of villages belonged to the below 500 group. This is an indication that villages are getting highly crowded with increasing population concentration. Villages with more than 10,000 people were only 5. Two of them belonged to the Ranaghat Police Station. This is because the Ranaghat Police Station is centrally located and has effective transportation and communication links.

The author observed that the connection between economic factors and population size and rate of growth is strong.

The average percentage increase of population was calculated by the formula of S. Gregary (Statistical methods in Geography, page 203).

\[
\frac{P_2 - P_1}{P_1} \times 100 \text{ Where, } t = \text{ Time} \\
\frac{P_2 - P_1}{2} \text{ } P_2 = \text{ Population of the year} \\
\text{ } P_1 = \text{ Population of the previous year} \\
\text{(This is annual growth rate obtained by dividing the ten year growth rate by ten).}
\]
GROWTH RATE OF POPULATION

ACCORDING TO THE FORMULA

\[
\frac{P_2 - P_1}{\frac{P_2 + P_1}{2}} \times 100
\]

SCALE INDEX

-1 0 1 2 3 4
DECREASE INCREASE

SCALE

5 0 5 10 15KMS.

1961-1971
1951-1961
1941-1951
The population growth of three successive decades \( \text{Appendix 1 and Fig. 49} \) in different police station areas in 1941–1951 has not been uniform and in police stations like Karimpur, Tehatta there was a negative growth rate. This was because of the post-partition impact. The border police stations show a lower growth rate whereas in Habadwip, Ranaghat, Chakdah, there is a high percentage of growth rate. This is because these police stations are connected well by transportation and communication links, particularly Ranaghat which has direct connection with East Pakistan, now Bangladesh. Besides this these police stations are a little away from the international border line which is a disturbed zone.

The growth rate in 1951–1961 has fallen considerably as compared to 1941–1951. Haringhata shows an increase in the growth rate because of the development in the area. The Haringhata farm area is well connected with Calcutta city and the newly formed Kalyani urban complex. Police stations like Karimpur, Tehatta, Chapra also show considerable growth because of political stability gained in the last 10 years in these areas. In 1961–1971 all the police stations in general show a low growth rate compared to the other two growth rate periods. This is because of the fall of the population in general. Chakdah police
station shows no growth rate because a considerable area with its own population from this police station contributed to the formation of the newly established Malyani police station area. Reasons for the pattern of population distribution are difficult to determine for they are complex and involve historical, economic, social and geographical factors. Regions of dense population may have developed because of historical factors, e.g. the location of the Nadadwip urban areas near the Bhagirathi river, but modern industrial growth could be determined by technological and scientific factors. It is because of this consideration that a project on population distribution would be rewarding to the extent that it unravels the influences of all factors. Yet geographical factors must take precedence. Government economic policy can help the growth of industry by a policy of regionalism, whereby entrepreneurs are encouraged to site factories in areas which were considered to be of little economic value.

It is in areas of dense population based on agriculture that geographical factors appear to be paramount. Favourable climatic and soil conditions tend to determine the type of farming that is carried on in a certain area. Transportation of water by numerous irrigation schemes and
the use of fertilisers widen the areas for agricultural development. Areas of sparse population are usually controlled by mere physical and climatic conditions.

"There is a close relation between heavy population densities and good cultivated lands" (C.B. Mameria, India's population problem, Allahabad, 1970, page III). It has been found out that the net area sown per capita works out at only 0.82 acres against the minimum requirement of 2.5 acres.

A close analysis of population growth and future planned development should be combined. A multi-level planning concept is of comparatively late origin, but its usefulness is undeniable. To make the planning fruitful, there should be a thorough analysis of the age and rise and character of the population. Such an analysis should reveal the saving potential and consumption characteristics of the region in question. For example, as the 0-14 age group of Nadia district shows a considerable percentage of the total population, \( \text{Figs. 18, 19, 20, 21 and 22, Table III(1), Appendix 2} \) it is evident that future development will depend considerably on planning for improvements in health, education, recreation spaces, play grounds etc. The number of Primary schools also has to be increased in the area.
Poverty has been increasing in India at a fast rate because, on the one hand, the population has kept on rising and, on the other, the gross national income has failed to rise proportionately. Between 1960-61 and 1968-69, the net per capita income grew only by 0.5% per annum. As opposed to this, the population increased by 2.5% per annum.

It is now realised that due to known limitations on availability and mobilization of resources, it will not be possible for India to attain a higher than 6% aggregate average rate of growth in the national income per annum. It, therefore, follows that we must bring down the rate of population from the current 2.5% to a figure much below 1.5% if the rural population in India is to enjoy the fruits of a rise in the national income by way of better amenities, an improved standard of living, etc.

The measures taken by the Central Government for the extension of family planning to the rural population have resulted in a reduction in the birth rate of 39/1000 population in 1969-70 to 35/1000 in 1974-75 although the target for 32/1000 population has been missed (Fifth Five-Year Plan, Vol. I, Government of India, Planning Commission). Ideally, it is necessary to bring down the birth rate to below 20/1000 population, so that the benefit
of growth in the national income amounting to an aggregate of 3 to 4% per annum can be enjoyed by the rural folk.

The sex ratio works out to 930 females per 1000 males. Of the rural labour force, nearly half is thus comprised of women. In general, the condition of women in our society is not so bright, and is more severe in the rural areas. Rural women are confined to household chores and simple farm jobs such as weeding, loading, unloading etc.

A rural labour force of more than 40 million is unemployed.

Nearly 25% of rural wedded couples are reported to have been exposed to birth control education (Five Year Plans, Vol. I, Government of India, Planning Commission). Therefore, the classical methods of birth control have to be made available to the unexposed rural population to enable them to exercise their choice. However, this matter is considered intimate and private, having religious overtones to our rural countrymen. Therefore, methods involving coercion and violence will be resented. The excesses committed by the administration in enforcing the male sterilization programme during the Emergency and the strong reaction from the rural folk to these excesses are still fresh in our minds. What is needed,
therefore, is a change of heart through untiring educational efforts together with more acceptable methods such as oral contraceptives and male sterilization. These appear to be more dependable solutions to this national problem.

The development of household industries can set in motion a whole new programme of rural development. It fits in well with the innate principle of "self-support" highlighted in the Plan objectives. It is a tool and an agent for short-time planning benefits for the down-trodden masses, as it operates on the economic, psycho-social and cultural levels at the same time.

Hadia District, agriculturally potent, but weak in terms of large-scale industrial growth, can excel in the sphere of household industries, provided proper care is taken in selection, development and maintenance and growth planning. It is also interesting to note that with certain exceptions, many threats of pollution to our surroundings can be resisted with the establishment of household industries and household planning, provided the correct administrative channels are first set up. Perhaps here lies the scope for the elimination of exploiting middlemen, as competent co-operatives can distribute the fruits of achievement to one and all.
The growth and survival of these industries can be ensured if co-ordination and co-operation of Government and other institutions with these establishments are properly maintained at different levels. A comprehensive survey of the potentialities of the district in question should be the first stage in planning for the district and its implementation.

Population and resources of the district study:

Agrarian Nadia District, enlisted as a backward zone of West Bengal, is a deltaic plain formed by the silt deposition of important consequent and tributary rivers. The region is full of elevated flat terrain formed from old and abandoned channels of the main rivers. A physical map depicts the district as an area transversed by innumerable rivers, back-waters, minor streams, shoals, swamps and lakes (Figs 4, 5, 6). Many lakes of the region are permanent natural drainage basins, and can be utilized for various economic purposes. One such suggestion envisages the collection of raw materials for the Jhinuk button industry (shell) of the district from the Dhaparia Kalma bil, situated in the Nakasipara Police Station of the district.

Fish is available in plenty, both in quality and quantity. Here, there is a real possibility of developing
a fish industry by using the inland water and ponds. The operation of a fish farm and fish hatcheries, production of conch-shells, sponges, etc. is also possible by gathering or lifting these from rivers or ponds. Useful and artistic goods can be manufactured from such material. It has been found that the drug Aureomycin is very effective in increasing the storage life of fish. The Kulia village fish research unit in the Kalyani Police Station area can be of great help to the people of the district in this connection.

The soil of the district (Fig. 9), which was at one stage annually replenished by a coating of flood-driven silt, no longer receives this benefit and, for sustainable agricultural pursuits, the area now demands the use of fertilizers. The soil of Kalantar in the north-western part of the district is considered an ideal place for 'aman' rice cultivation. Still, the agricultural tracts of Nadia District require ideal conditions of both irrigation and drainage. Bumper harvests of winter crops and vegetables are assured in the south-eastern tract of the district. Simultaneous with the successful agricultural output, there are prospects of agro-based industries in this region. The area can prosper in this direction, given proper planning and co-ordination of the householders and
Government Institutions, formation of co-operatives by the development of leadership among the different households engaged in agriculture and household industries. The Kalyani Industrial Estate can play an important role in this sphere.

The district which is mainly composed of recent alluvial soil (Fig. 9) – the sandy, sandy-clay and clayey region – can usher in a green revolution provided necessary measures for it are introduced, as has been proved in other parts of India, namely Haryana, etc. The fruits of the revolution can successfully bring here the industrial shift at the household level. Jute is an important crop of the region and the district. Kalyani already has a jute-bag production unit on a handicraft basis.

The district is rich neither in mineral (Fig. 3) nor in forest resources \( \text{Table 1(2)} \). However, even today, there are places which are covered thickly with bamboo groves and other typical trees of the area. Grasses, weeds are also bountiful in certain places. Floating Drosera, large sedges and bulrushes at the edge of sluggish creeks, and hedge-like jungle shrub on the banks of rivers are among the most common views in the district. The district already has about 136 household industries engaged
Women and children find employment - (a) gathering fuel.
in manufacturing wood and wood products, furniture and fixtures. Out of these, 111 are located in the rural areas. There are also units of paper and paper products, printing, publicity and allied industries. These kinds of industries have, on the whole, high development potential. The use of power in the form of coal, wood and bagasse is high in the district's household industrial level. Dried hyscinth is sometimes used as fuel.

The silk industrial centre of Behrampur (Murshidabad District) which is close to this region finds in Nadia District considerable potential for the development of the silk industry. Hemaghat and Palassey in this district have already moved in the direction. It has been estimated that one individual household can easily earn annually approximately Rs 19,422 net from each hectare of land by cultivating mulberry trees and the culture of silk-worms.

During the cold weather, various species of aquatic birds are found east and north of the district. Snipes are also common in the district, particularly in the south during the latter part of the rainy season and the advent of the cooler season. Taxidermy on a household level is possible; the demand for it is growing in the urban areas of the country and abroad. Planning is, however, needed in this operation.
The recent statistics of the domesticated animals of the district reveal that inhabitants of the area are employed in rearing and tending cows, buffaloes, lambs, goats, horses, pigs, ducks, fowls, etc. This place has already gained some recognition for typical sweetmeats and milk items. The growth potential of these kinds of industries has increased with the establishment of the “EPIC” brand balanced animal feed milling plant at Kalyani. The plant was designed and installed by the National Dairy Development Board, and is the biggest animal feed factory in eastern India. “EPIC” feed is available for cattle, buffaloes, poultry, fish etc. The Haringhata Dairy Unit also can be of such help to the people of the locality. What is most important is the management for the marketing of such perishable goods together with periodical financing, technical assistance and advice. Again, Governmental help, leadership formation and co-operative development can contribute to the success of such a venture.

As has been mentioned earlier, the district is administratively sub-divided into 14 Police Stations, each having headquarters of its own. These headquarters can help in the distribution and collection of household industrial products, particularly of the rural households.
In this period of struggle for existence, the glamour for services should be discouraged and new avenues opened to each household, keeping in mind the best utilisation of major labour forces.

Almost every member of the family can participate in building up a household industry. To the family, it can be an issue of pride, a question of prestige and challenge for a better life.

The three standard urban areas, i.e. Nabadvip-Krishnagar complex, Santipur and Ranaghat, can serve the urban household industries (Fig. 73). The Kalyani industrial complex, as already stated, comes under the Calcutta urban agglomeration and can help the region in the distribution and collection of household materials. Unfortunately, all the urban/industrial complexes lie in the southern part of the district. For household industries in the northern part of the district, the Police Station headquarters together with a few towns can be taken into consideration. These in turn can connect with the other centres.

Village fairs and religious melas, for which thousands of people come from far and near, are a regular and attractive feature of rural life. These should be utilized as centres for trading in household products.
(b) The traditional dolls of Krishnagar manufactured at Ghurni undergoing a realistic transformation, a more sculpturesque modelling, at the hands of Kartik Ch. Pal and his family.
Crafts and household industries allow for continuity and innovation - (b) the traditional dolls of Krishnagar manufactured at Ghurni undergoing a realistic transformation, a more sculpturesque modelling, at the hands of Kartik Ch. Pal and his family.
Types of existing household industries of the region and future lines of development:

The district requires three dimensions of growth. It can be done, firstly, by the improvement of existing household industries.

The second dimensional development needs to be in the revival of decaying industries with proper research into the causes of their decay. For example, the once famous clay-modelling and doll-making household industries of Krishnagar-Ghurni area have fallen prey to the common difficulties of cottage industries, viz. lack of supply of raw materials and their uncertain supply from undependable sources, irregularities in price, packing problems, problems related to inter-state tax and state Sales Tax, inefficient forms of co-operatives, lack of organization, etc. Some of the artisans are of the opinion that the returns from the industry are not materially satisfactory, but they continue to practise the trade for sheer mental satisfaction. On enquiry, it was found that most of the artisans do not want their children to take up this profession.

One of the suggestions for the acceleration of such industrial growth has been for the introduction of a sculpture-type realistic figure and further variations in
Women and children find employment - (b) carrying tomatoes in the villages.
doll types. Co-operatives should be formed to (1) procure and regulate the supply of raw materials, (2) study the taste of the market and relate the findings to the artisans, (3) arrange facilities for packing, transport and sale of finished commodities and (4) act as agents of national co-operatives.

The third dimensional movement in this field can be attained by introducing certain household industries which have promising potentiality for the regional development. However, here one cannot afford to overlook the question of the different backgrounds of the people in connection with caste, tribe and ethnic groups. Our rural people especially are tradition-bound and very selective in their outlook for the adoption of an occupational activity. The caste system is a great hindrance in such industries as weaving, silk-rearing, fish-farms and fish hatcheries, toy-making etc. as they are considered to be the work of lower caste people. Taxidermy and agro-based industries like fruit packing and fruit canning, pickles, jam sauces, etc. can be developed successfully.

The northern zone of the district can develop along this line once storage facilities are established. The recent setting up of warehouses at Chakdah, Krishnagar, Nakasipara, Karimpur, Bethuadahari have enhanced the
possibility of these industries.

The Jhinuk button (Shell) household industry has earned some goodwill in the market and is in demand in fashionable quarters. There is further scope for the expansion of this industry which was first started by the refugee settlers in the Ranaghat sub-division. However, for the purpose of development, the improvement of designs and regularity in the field of supply is needed. Water areas, other than Ghoanara bil, can be utilized for gathering mother-of-pearl.

The setting-up of multipurpose co-operative societies can be of great help in collecting raw materials, providing new designs, technical know-how in the form of improvement of tools, etc. and the granting of loans. The sale of products can be arranged by the society, which can simultaneously control the irregular production features of the industries. If the co-operatives combine and are willing to bear some risks and loss, each household unit can carry out the entire work of glazing, finishing, manufacturing, etc. thus completely eliminating the profiteering middlemen at manufacturing centres. This will also result in reduced prices, lesser problems in marketing the commodity. In short, it will involve sale activities at the right time, at the right place and at the right price.
A comparative study of percentage of household industrial workers engaged in 1961 and 1971 in Nadia District, (Showing age, sex and rural-urban break-ups.)

Source: Census of India 1961 & 1971 part II B General Economic tables. (DATA ONLY)
Working Population and household industries:

According to the 1971 Census, the 15 - 59 age group constitutes 48.16% of the total population which comprises of 25.40% males and 22.76% females. In 1961, it was even higher i.e. 50.60%, and comprised of 26.44% males and 24.16% females. The percentage of the 0 - 14 age group was higher in 1971 (45.88%) than that in 1961 (43.55%). But the total percentage of the working population of the 1971 census has decreased from the 1961 census figure, i.e. from 27.16% to 24.77%. Such is the case also for the total percentage employed in household industries. In 1961, the percentage of the household industrial workers, in relation to the total working population, was 9.01%, but in 1971 it had gone down to 5.46%. There is a sharp fall particularly in the percentage of women household workers. The fall in the absorption of child labour in household industries is also marked from the 1961 and 1971 census figures [Table II(1) and Fig. 38]. The actual number of child workers in 1961 was 1980, whereas in 1971 it was only 778. Similarly, in the age group 60+, the total percentage was declined in the 1961 - 1971 period.

The reasons for this fall are:

(1) The whole district is suffering from unemployment problems and that is why the productive labourers are employed in places where there is a bigger job opportunity,

(2) Household industrial practice is being discouraged by the old-timers, as they find it less productive. The problems of household industries are numerous and are obstructing the healthy growth of the industry.
## Table IX(1)

Percentage of Household Industrial workers of Nadia District in 1961 and 1971 with age, sex and rural-urban break-up

<table>
<thead>
<tr>
<th>Age</th>
<th>1961</th>
<th></th>
<th>1971</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
<td>Total</td>
<td>Male</td>
<td>Female</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>R</td>
<td>2.43</td>
<td>1.08</td>
<td>3.51</td>
<td>1.22</td>
<td>0.17</td>
</tr>
<tr>
<td>0-14</td>
<td>U</td>
<td>0.67</td>
<td>0.55</td>
<td>1.21</td>
<td>0.93</td>
</tr>
<tr>
<td></td>
<td>T</td>
<td>3.09</td>
<td>1.63</td>
<td>4.72</td>
<td>2.15</td>
</tr>
<tr>
<td>R</td>
<td>43.31</td>
<td>19.28</td>
<td>62.59</td>
<td>52.09</td>
<td>2.88</td>
</tr>
<tr>
<td>15-59</td>
<td>U</td>
<td>19.56</td>
<td>7.88</td>
<td>27.44</td>
<td>33.98</td>
</tr>
<tr>
<td></td>
<td>T</td>
<td>62.87</td>
<td>27.16</td>
<td>90.03</td>
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<tr>
<td>R</td>
<td>2.58</td>
<td>1.53</td>
<td>4.11</td>
<td>3.53</td>
<td>0.32</td>
</tr>
<tr>
<td>60+</td>
<td>U</td>
<td>0.78</td>
<td>0.32</td>
<td>1.10</td>
<td>1.98</td>
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<tr>
<td></td>
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<td>3.37</td>
<td>1.85</td>
<td>5.22</td>
<td>5.50</td>
</tr>
<tr>
<td>A.N.S.</td>
<td>U</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>T</td>
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<td>0.01</td>
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<tr>
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<td>48.34</td>
<td>21.90</td>
<td>70.24</td>
<td>56.84</td>
<td>3.37</td>
</tr>
<tr>
<td>Total</td>
<td>U</td>
<td>21.01</td>
<td>8.75</td>
<td>29.76</td>
<td>36.89</td>
</tr>
<tr>
<td></td>
<td>T</td>
<td>69.35</td>
<td>30.65</td>
<td>100.00</td>
<td>93.73</td>
</tr>
</tbody>
</table>

**Note:** R = Rural, U = Urban, T = Total, A.N.S. = Age not stated.

**Source:** Computed by the author from the data of Census of India 1961 and 1971 Part II B(ii) General Economic Table.
(3) The population of Nadia District, which is beset by in-migratory population problems from what was first East Pakistan and now is Bangladesh, suffers from the absence of the normal developmental trend of other areas of the country in general. There is always an influx of population from politically disturbed Bangladesh. Since 1965, this has been particularly observed and, as such people of the district are not able to settle down to any kind of permanent work. This again has affected the general distributional feature;

(4) Children are being attracted and encouraged towards education and other work rather than the traditional occupations. Hence, there has been a diminution of child labour.

A comparative study of the nature of household workers in the district has been shown in the Figure 38. It clearly underlines these salient features [Refer also to Table XX (1)].

It is interesting to note that a number of household workers have taken up this profession as their principal work, and cultivation or agricultural labour occupation as secondary to it. The total number of male and female workers from 1961 to 1971 increased in that group taking cultivation as secondary work, but the increase is not so marked in the case of agricultural labour which is only 404-491 in 1961-1971.
The Tables IX(2) and IX(3) show that there is a decrease in the total number of workers between 1961 and 1971, comprising those who have taken up cultivation as their mainstay and household industries as secondary, whereas the increase in the total number, though insignificant, is marked in the group that has taken up agriculture as their main occupation and household industry as secondary (Tables IX(2) and IX(3)).

### Table IX(2)

Number of workers sex-wise who are principally working in household industries and secondary work either as cultivators or agricultural labourers

<table>
<thead>
<tr>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
<td>Male</td>
<td>Female</td>
<td>Male</td>
</tr>
<tr>
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<td>-----</td>
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<td>-----</td>
<td>--------</td>
<td>-----</td>
</tr>
<tr>
<td>Rural</td>
<td>1403</td>
<td>154</td>
<td>2911</td>
<td>211</td>
<td>363</td>
</tr>
<tr>
<td>Urban</td>
<td>25</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>TOTAL</td>
<td>1428</td>
<td>155</td>
<td>2911</td>
<td>211</td>
<td>364</td>
</tr>
</tbody>
</table>

Source: Census 1961, West Bengal, District Census Handbook of Nadia, and Directorate of Census Operations, W.B.
Table IX(3)

Number of workers sex-wise who are principally working as cultivators or agricultural labourers and making household industries their secondary work.

<table>
<thead>
<tr>
<th></th>
<th>Cultivation as Principal Work</th>
<th>Agricultural Labourer as Principal Work</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1961 Male</td>
<td>Female</td>
</tr>
<tr>
<td>Rural</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>2735</td>
<td>70</td>
</tr>
<tr>
<td>Urban</td>
<td>11</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>2746</td>
<td>70</td>
</tr>
<tr>
<td>TOTAL..</td>
<td>2816</td>
<td>1940</td>
</tr>
</tbody>
</table>

Source: Census 1961, West Bengal District Census Handbook of Nadia. and Directorate of Census Operations, W.B.

There is quite a large number of people - 112,243 rural and 75,702 urban - who are engaged in household industries (Appendix 16) and in non-household industry, trade, business, profession or service at the same time. This is a unique aspect of this particular occupation as it does not interfere with, but, rather complements or supplements other occupations.
Women and children can be gainfully employed if secondary
categorical work in the district is improved (pages 150-151). Small scale and household industrial development with proper planning cannot only absorb workers of all age groups but also open up avenues for further promotion in tertiary work. Trade and commerce etc. in the products of household industries can help this process. The author during her field work in Inayetpur village area found the household industry of broom-stick making not only keeping all the members of the household employed but also providing employment opportunities for a few outsiders who carried the finished materials to the market.

The population study of the district would remain incomplete if proper emphasis is not placed on the psycho-social aspects of the population. Chapter IV (pages 109-112) describes how a psychologically dislocated and disoriented mass took refuge in India. The present day population of the district in question have undergone a long spell of suffering in all spheres of economic, social and cultural changes. This district is still a disturbed area; cases of arson, political crime and violent departures from law and order often underline how the people have been torn apart from the past, how the image (of the crack up) still persists in their minds. The impact of their sufferings has left a permanent impression on the present generation.