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Adaptations to Physical Environment: A Microlevel Study of Occupational Change in Two Villages

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ABSTRACT The methods and practices of many of our traditional occupations are mostly stereotyped and pursued with little modification in tune with the environmental situation. Often physical environmental factors need to be minutely artificially manipulated to make them yield the optimum. Not all environmental modifications are welcome ones. After all the human factor holds the key to the optimum yield from a given geo-physical setting. The study here pertains to a man-made geo-morphological change to which two distinct occupational groups of people responded differently depending on socio-cultural habits and norms.

Microlevel environmental metamorphoses are not infrequently viewed with alarm, and a constellation of them is thought to lead to ecological degradation. Socio-cultural mobility of appreciable dimension cannot be wrought without occasionally disfiguring or modifying the geo-physical features in and around habitational settings for long term benefit leading to betterment and enrichment of life. The quality of life would be static and immobile if the environment is not worked upon to extract the optimally exploitable resources thereby recreating a changed socio-cultural environment that eventually continues to serve as a perpetual reservior of national wealth. Measured and systematic changed environmental situations could enhance the quality of life bringing in economic fluidity coupled with material prosperity and growth.

The effect of long term environmental stimuli could well be gauged and understood from a diachronic study undertaken over a time lapse of 15 years concerning a given population in a natural habitation locale. Any change in the geo-physical structure of a habitat is bound to be associated with concomitant variations in the traditional life and behavioural patterns of its inhabitants, as asserted by Das and Lahkar (1990:39) in their study of a particular plains tribe of Assam in the outer margin of the old Guwahati town. Quite often man-made environmental metamorphoses prove bountiful and goad the inhabitants to newer work-pattern and style of life. Artificial structures built carefully and judiciously with engineering skill and effacement of uneconomic natural outcrops and eradication of bogs and pits and marshes in a habitable locale may go a long way in changing traditional age-old habits and norms and thereby consequently replacing them with acumen and urge for development and prosperity. Ours is a country where habits die hard. Age-old occupations are pursued often most scrupulously with little modification under normal environmental situations. Many an occupation is static and suffices mere subsistence livelihood. Most traditional caste occupations not excluding agriculture are pursued without bringing in an iota of innovation despite considerable changes in other parameters of life over the last four decades especially in Assam. Keeping the environmental situation intact, the people's traditional pursuits go on unabated, thereby failing to cope with the emerging cultural environment that often becomes overwhelmingly tinged with large scale urbanization and westernization. The result is that we happen to see dire poverty amidst flourishing affluence, countrymen still living

below poverty-line side by side uncommon luxury among few.

With a view to understanding the effects of specific physical environmental changes on the socio-cultural life of rural communities, a study was undertaken in two select typical villages in the South Kamrup District of Assam. The villages were Monpur and Agchia; the former was a bicaste village being inhabited predominently by the Kaibartttas or fishermen by caste, while the other was a multi-caste one with agriculture being the common occupation of all and sundry of the village. The study is confined to significant environmental metamorphoses that came about as a result of a planned and systematic human action causing widespread alterations in the geomorphological features of the whole of South Kamrup District having an area of 4625.9 sq. km. The region abounds with 112 villages. On the basis of the pursuit of traditional occupation as a criterion, the villages can be categorised into two sets: one, comprising 35 unicaste and bicaste villages practising exclusively fishing as a traditioal caste-ordained occupation with or without agriculture as a subsidiary one. The other set comprises the remaining 77 multi-caste villages practising agriculture as a common primary occupation besides relying on various other vocations as subsidiary sources of earning. All these villages have since had to cope with somehow or other the emergent geo-physical situations following man-made alterations in the surface structure that came into being from 1974-76. It was during this period that a 5 1/2 km long embankment with the provision of a sluice-gate came to be constructed along the bank of the Brahmaputra as a permanent measure for controlling flood in the flood-prone South Kamrup District. The man-made structure had its instant desired effect of controlling flood ever since in the region. It brought about a good deal of geomorphological changes in the catchment-area.

The present study aims at revealing the extent of the resultant geo-physical change and its direct effect on the two major occupations of the region, *viz.*, fishing and agriculture. In order to assess the post-alteration environmental effect on the overall land-morphology and occupations, it is worth understanding the traditional mode of working and practices of the two occupations. For this we have taken the period of 1974-76 as a base-line. The pre-and post- 1974-76 states of land-features are supposed to indicate pursuits of occupations under differential environmental situations. The study was carried out in the two typical villages of the region, *viz.*, Monpur and Agchia.

METHOD OF STUDY

The paper is an attempt at a re-study. It is basically a diachronic or rather following Raymond Firth (Sarana, 1973:14) a dual synchronic study of the bicaste village of Monpur and the multicaste village of Agchia. The author studied the first village for nearly two years from 1974 to 1976 in connection with his doctoral work. The community was restudied after a lapse of some 15 years in 1989 by the same author giving him scope to assess the expanse and extent of changes that came into being over the period under observation. The other village Agchia also came under a re-study in 1989, by way of empirical observation, as this village along with a cluster of other villages was under day-to-day contact and observation of the author as a native to this region for long 35 years since his birth. The method of 'dual synchronic' adopted in this study is a clear departure from Das and Lahkar's (1990:39) method of what may be called 'memory culture' (Sarana: 1973:12) in their study of the particular plains tribe of Assam.

GEO-PHYSICAL SETTINGS

Prior to the base-line period, the whole of South Kamrup district was a veritable subsidence, compared to the adjoining Khasi and Joyantia Hill ranges to the south and the south-west. The entire region was a relatively low flood-plain of the Brahmaputra. The region abounded with as many as 36 natural perennial inland pools of water locally called *beels*, ranging in area from 2.5 sq km to 24 sq km each. It was these inland water bodies that perpetually served the region as perennial sources of fish supply throughout the

year. The great river Brahmaputra flows by nearly 1 1/2 km away from the village Monpur. A few hundred metres behind the village flows the Kalbog, a tributary of the Brahmaputra. Beside the Kalbog, a large number of perennial streams and rivulets pass across the area; most of them originate from the Khasi Hill ranges and meander their ways ultimately to join the Brahmaputra in the plains. The whole area was easily susceptible to annual floods of the Brahmaputra and the hilly torrents. The annual floods would leave the region swampy and boggy almost round the year. The Kalbog served not only as another excellent source of fishing but also as a good river-route to many a distant upstream village during the monsoon. The entire South Kamrup district, thus criss-crossed by streams and rivulets and studded with the perennial *beels*, presented an ideal fishing ground for the year round. The area around the village Monpur upto a distance varying from 12 to 15 km is the most low-lying in the whole of South Kamrup district. This is the area proper around Monpur that abounds with some 27 *beels* of various sizes within the reach of a day's return-trip from the village. The *beels* served as the natural reservoirs and breeding sources of the multiple varieties of fish all round the year. During floods, certain varieties of river-fish[1] would get into the marshy zones and inland water-bodies for breeding. These used to get permanently lodged in the inland sources after the final recession of the floods. Besides the flood-borne river-fish, certain varieties of mud-water fish[2] would make the *beels* and marshy lands their permanent abodes. These varieties provided excellent catches to the Kaibarttas after the recession of the floods during the lean dry months of the year. To the Kaibarttas of Monpur till the pre-base-line period, since time immemorial, fishing was a never-failing occupation, providing the people with a complete sense of economic security. The people practised it almost round the year, though most intensively in the post high-flood period lasting from June to mid-September. The region thus virtually formed the economic zone of the Kaibarttas with exclusive undisputed traditional right of fishing throughout the year. The non-Kaibartta village folks also did enjoy the normal fishing right in the entire area including the *beels* at any time of the year for the purpose of consumption at home. No non-Kaibartta would go fishing for sale for fear of getting degarded in the caste hierarchy and status.

Besides fishing, prior to 1974-76, the land-mass of South Kamrup district also supported another means of livelihood, that is, the cultivation of paddy. It was a monocrop area. The non-Kaibartta villages as stated above subsisted on the cultivation of a single variety of paddy called the *baodhan* (Oryza sativa). As the region was a low-lying swamy area, prone to frequent floods, annually, only this special variety of paddy could thrive well in the deep water and also withstand the fury of the floods to a great extent. The paddy was the prime staple of the people in the region. But however greatly flood-resistant the *baodhan* might be, it does not thrive in prolonged high floods. As such whenever the crop failed, the plight of the people of the region beggared despription. The people were thus sent to live and reconcile themselves with the vagaries of nature that invariably created a sense of uncertainty with regards to their very economic sustenance.

The aforesaid recurring seasonal havocs befalling the region came to an end almost overnight following the construction of the embankment with the provision of the sluice-gate that could control the level of the back-waters during the floods and also in the dry periods.

It will be worth mentioning that the author as

1. Not all varieties of river-fish are habituated to getting into the inland water-sources during floods. The varieties that breed in the *beels* are as follows: *Rou* (Labio Mohita), *Area* (Mystus menoda), *Chital* (Notopterus chitala), *Bamee* (Mastacembelus armatus), *Kandulee* (Notopterus notapterus), *Boralee* (Wallago attu) *Tingra* (Mystus vittatus), *Bhagon* (Labeo leoga).
2. Some of the mud-water vrieties of fish are as follows: *Kawai* (Anabas testudineus), *Singi* (Hetenopuestes fossilis), *Magoor* (Clanius betracus), *Sol* (Channa striatus), *Goroi* (Channa Puntatus), *Chenga* (Channa gachua), *Sal* (Channa marulius), *Khalihana* (Colisa faciatus), *Batiya* (Lapidocephatichthys guntea).

one born and brought up in the very region of his present study had been an eye-witness to the entire village scenes till the 30's of his age. For a comprehensive understanding of the general mode of livelihood and agricultural practices in the post-base-line period, the author re-visited at random some 5 select typical villages of the region in 1989. From the revisit it could be observed that the man-made structure brought in far reaching changes in the geo-physical features of the region to the accompaniment of a good deal of metamorphoses in the occupational pursuits of the people. The recurring annual floods of the Brahmputra ceased to have their crippling effects on agriculture by and large; the water level in the vast hinter-zone could now be suitably controlled and maintained at the optimum. The new situation of the land-mass turned out to be a great boon to the cultivators who now had a sense of relief from the trauma of the flood-havocs. Normal optimum water-supply in the fields without much ado has thrown open a good deal of avenues in the agricultural operations. Many a cultivator has resorted to growing various high-yielding varieties of paddy in lieu of age-old *baodhan* that was indeed an inferior variety. People have now begun practising rotation of crops following availability of profuse water even in the lean season. People, are, however, aware of the dwindling of the natural fertility of the soil as alluvium-bearing flood-water of the Brahmaputra could not flow into the fields as it the days before the embankment came into existence. It could be observed that the people were supplementing the loss of the natural manuring with the use of chemical fertilizers together with home-made organic manures. The people have since adopted a good many innovations. Rotation of crops has become a perpetual practice. Raising of cash-crops has come about as a novel experience. An element of competition in the matter of production of seasonal cereals and vegetables has already gained momentum in view of the fact that the faster or sooner a seasonal vegetable is produced, the higher is the return of price in the market especially in the capital city of Guwahati.

While the non-Kaibartta agricultural folk could prosper under the changed geo-physical situation, the Kaibarttas, the fishermen of the locale, got almost dislodged from their erstwhile economic zone resulting in the change of their age-old traditional occupation and the way of life. Following the construction of the embankment, the entire catchment area became flood-proof. Only a limited quantum of flood-water of the Brahmaputra is now allowed to enter into the hinterland area through the only sluice-gate provided in the embankment. Obviously there was no free movement of the several varieties of fish in the recurring inundations in the flood season. Quantum of fish sharply declined, as there was no replenishment by freshly bred fish, barring the few varieties of mud-water fish. To their great dismay and disappointment the fishermen found all the *beels* bereft of fish barring the aforesaid mud-water varieties in the year following the completion of the embankment. In the following two or three years all the *beels* became empty of all varieties of flood-borne river fish. It could be undersood that the mud-water fish also sharply dwindled owing to the unimpeded catch by the fish-mongers and others of the region.

The people of Monpur were in a great predicament when they had to face an unwarranted situation that was beyond their normal comprehension. However, there was an instant almost God-sent means of recovery. The resultant economic crisis had a fall out in the form of occupational mobility in the villages. The people now desperately began to go for alternative vocations—the choice was for the ones that fitted well with the socio-cultural milieu of the people. It was a matter of sheer coincidence that by 1978 a good many machine-based concerns like saw-mills, rice-mills and various small scale industries grew up in the neighbourng town of Palasbari. Also there was an expansion of the capital city of Guwahati. The heavy construction concerns that came up there provided most of the occupationally dislodged Kaibarttas with avenues of engagement as unskilled and semi-skilled hands. Some of the dislodged people resorted to

self-employment—opening of petty shops, rickshaw or hand-cart pulling, wage-earning as day labour etc. The study in the revisit revealed that none of the erstwhile fishermen opted to go for the practice of the traditional occupation in the altered situation.

DISCUSSION

Both the aforesaid traditional occupations subsisted on time-honoured age-old methods and practices. Both the occupations had provided the people with bare means of livelihood. Both the sets of people were dependent upon the vagaries of nature; they did not have any control over probable adverse situations.

Then came the man-induced metamorphoses resulting in extensive geo-morphological alterations. These obviously called for a change in the people's outlook combined with a desire to cope with the emergent situation. In the present study it is worth noting that while the non-Kaibartta people of the South Kamrup district could suitably avail themselves of the new situation and achieve economic betterment, the Kaibarttas failed to take advantage of it. Habitually prone to a sort of gathering fish from the open fields and natural water-bodies, an occupation that required little ingenuity and mental or physical effort the Kaibarttas failed to adhere to the traditional occupation. It was rather under circumstantial compulsion than sheer eagerness for novelty that the Kaibarttas chose multifarious vocations somewhat away from their socio-cultural milieu. It could be learnt in the course of interviews with some neo-occupation holder Kaibarttas that they were mere fish-gatherers and not fish growers or breeders. In other words, pursuit of the traditional occupation in the modified or developed form, that is, pisciculture in the new geo-physical situation did not suit the fish-mongers of Monpur. Pisciculture called for a good deal of innovations including application of technical and scientific know-how and investment of substantial capitals and the search for an enlarged market. Modernizaiton of traditional mode of fishing therefore proved elusive. It was an in-built inertia, a low level of aspiration and a lack of adventurous spirit that dissuaded the people of Monpur from exploiting the available resources with a view to saving the occupation from obliteration.

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