

Reading Room

Occasional Paper No. 36

**THE FORMATION OF A TRANSPORT NETWORK
IN AN EXPORT-ORIENTED ECONOMY :
BRAHMAPUTRA VALLEY, 1839-1914**

KEYA DASGUPTA

S/902

6-1



CENTRE FOR STUDIES IN SOCIAL SCIENCES, CALCUTTA

**PUBLICATIONS OF
CENTRE FOR STUDIES IN SOCIAL SCIENCES, CALCUTTA**

OCCASIONAL PAPER SERIES

Mimeographed Occasional Papers for limited circulation for scholarly comments and critical evaluation of first drafts are meant for publication later in journals or books : reference to subsequent publication of each of the following Occasional Papers are given in brackets :

- | | |
|---|--|
| 1. Iswarchandra Vidyasagar and his Elusive Milestones (Calcutta, Riddhi-India, 1977) | 8. Studies in the Constitution and Government of India: A Methodological Survey (<i>Teaching Politics</i> , Vol. IV, No. 1-2, 1978) |
| ASOK SEN | SHIBANI KINKAR CHAUBE |
| 2. Budget Deficit, Money Supply and Inflation (<i>The Contents of Economic Growth and Other Essays</i> . Calcutta, Research India Publications, 1977) | 9. Demand for Electricity |
| BHABATOSH DATTA | NIRMALA BANERJEE |
| 3. Railway Network Growth in Eastern India, 1854-1910 (<i>International Geography</i> , Vol. VI, 1976) | 10. Comintern and the Colonial Question: The Decolonisation Controversy (<i>Marxist Miscellany</i> , No. 8, 1977 and No. 11, 1978) |
| SUNIL MUNSI | SOBHANLAL DATTA GUPTA |
| 4. Sasipada Banerjee: A Study in the Nature of the First Contact of the Bengali Bhadrakok with the Working Classes of Bengal (<i>Indian Historical Review</i> , Vol. II, No. 2, January, 1976) | 11. Communal Riots and Labour: Bengal's Jute Mill Hands in the 1890s (forthcoming in <i>Past and Present</i> , Oxford) |
| DIPESH CHAKRABORTY | DIPESH CHAKRABORTY |
| 5. Reflections on Patterns of Regional Growth in India during the Period of British Rule (<i>Bengal Past and Present</i> , Vol. XCV, Part 1, No. 180, January-June, 1976) | 12. An Enquiry into the Causes of the Sharp Increase in Agricultural Labourers in North Bengal (<i>Economic and Political Weekly</i> , Vol. XII, No. 53, December 31, 1977) |
| AMIYA KUMAR BAGCHI | NRIPENDRANATH BANDYOPADHYAY |
| 6. Social Groups and Social Relations in the Town of Murshidabad, 1765-1793 (<i>Indian Historical Review</i> , Vol. 11, No. 2, January, 1976) | 13. Research Notes and Documents Collected by the Late Prodyot Mukherjee |
| GAUTAM BHADRA | ARUN GHOSH, comp. |
| 7. Contemporary Studies on the Indian Party System: An Evaluative Account (<i>Socialist Perspective</i> , Vol. VI, No. 3, December, 1978 and Vol. VI, No. 4, March, 1979) | 14. Choice of Techniques and Technological Development in Underdeveloped Countries: A Critique of the Non-Neoclassical Orthodoxy (<i>Cambridge Journal of Economics</i> , June, 1978) |
| SOBHANLAL DATTA GUPTA | AMIYA KUMAR BAGCHI |

BRAHMAPUTRA VALLEY

REGIONAL SETTING

0 50 MILES

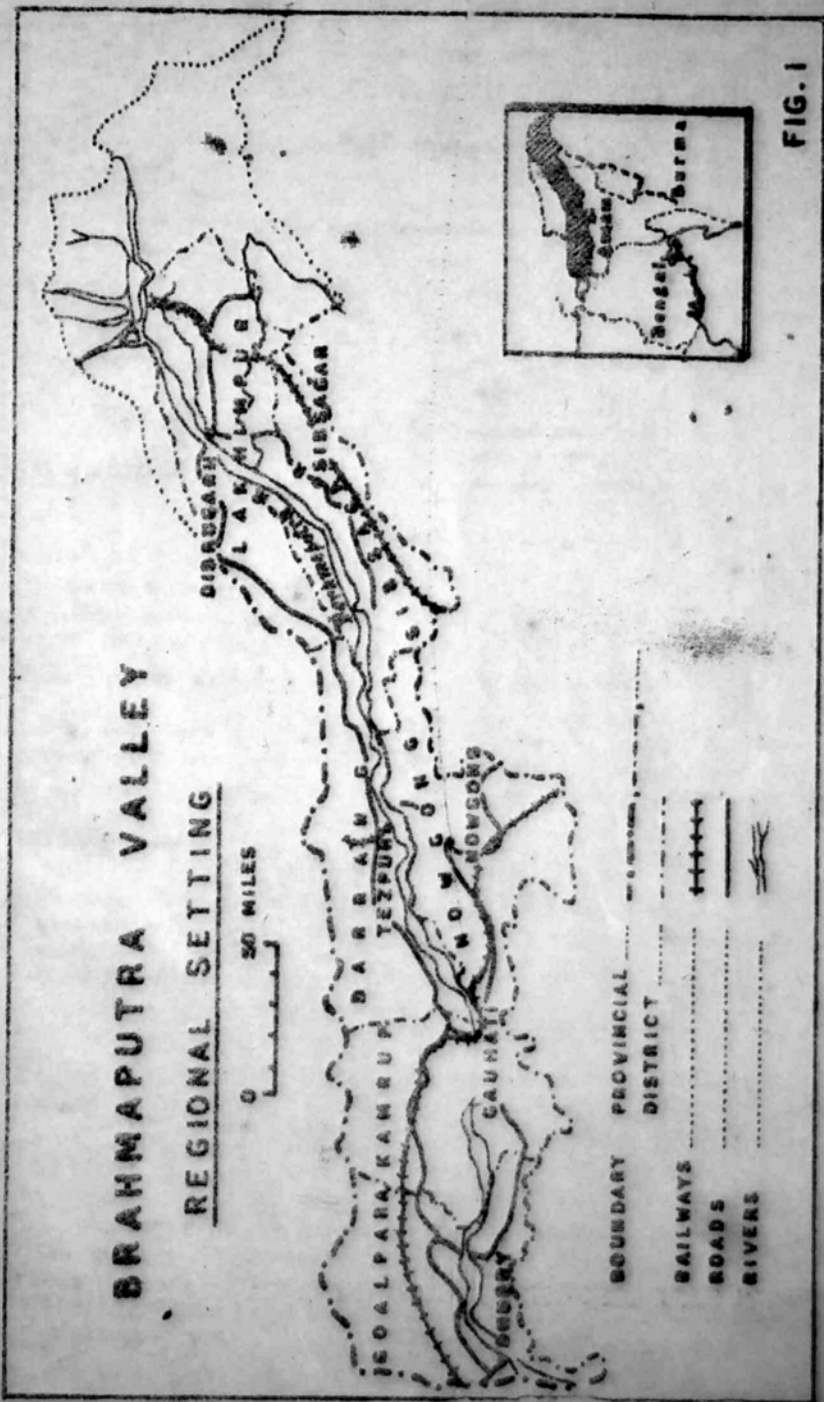


FIG. 1

THE UNIVERSITY OF CALIFORNIA
LIBRARY

THE UNIVERSITY OF CALIFORNIA
LIBRARY

THE UNIVERSITY OF CALIFORNIA
LIBRARY

Centre for Studies in Social Sciences, Calcutta

LIBRARY.

8/902
e-1.

THE FORMATION OF THE TRANSPORT NETWORK IN AN
EXPORT-ORIENTED ECONOMY : BRAHMAPUTRA VALLEY:

1839 - 1914*

Keya Dasgupta

The socio-economic structure of the Brahmaputra Valley upto the early nineteenth century did not call for interactions of any significant magnitude with areas outside. The superimposition of an export-oriented tea plantation enterprise on a subsistence agricultural base brought about a qualitative change in this situation. Tea plantations provided the impetus for the steadily expanding transport network of the Brahmaputra Valley since the middle of the nineteenth century. Tea exports and the imported goods necessary to meet the requirements of the new enterprise depended on significant improvements in the system and mode of transportation. The changes which occurred altered markedly the movement of goods and people, and the growth prospects of urban centres. My aim in the present paper is to focus attention on the spatial structures formed by each mode of transport, to understand the processes that have created them, and the objectives behind its development -- more specifically the role of plantations in this development.

* The paper forms part of a broader study on 'Tea Plantations in the Brahmaputra Valley : A case study in a colonial set-up done under the supervision of Professor Moonis Raza of the Jawaharlal Nehru University. I am also grateful to Professor Sunil Munsri and Professor Amalendu Guha of the Centre for Studies in Social Sciences, for their comments on an earlier draft of the paper.

[The text on this page is extremely faint and illegible. It appears to be a multi-paragraph document, possibly a letter or a report, but the specific words and sentences cannot be discerned.]

T
a
c
c
t
r
t
t
L
B
A
P
w
t
b
w
t
V
r
w
t
m

Transport Network : Historical Perspective.

The transport network during the period of Ahom administration (till the second decade of the twentieth century) comprised of roads and river-ways. The roads constructed by the Ahoms were primarily intended to link the administrative centres with the different parts of the region. Of these roads, special mention may be made of the Dhodur Ali in the south of the district of Sibsagar, the Gohain Komal Ali, which extended from Koch Behar to Lakhimpur; the Bar Ali from Jorhat to Rangpur; and the Bengal Ali from North-East Darrang to North Gauhati, etc. Apart from these main roads, there were numerous mountain passes or duars, through which contacts were maintained with the frontier tribes.¹ There were also routes across the Himalays to Tibet as well as to the Burmese territory beyond the eastern frontier of Assam. These routes, both within and outside the Province of Assam served primarily the barter trade of the hill areas with the Brahmaputra Valley. Apart from the above, there were also three overland routes to Bengal, as described by M'Cosh.² But these routes were almost impassable during the rain, and therefore, the trade with Bengal was mainly water-borne, carried on by means of ordinary boats on the river Brahmaputra, the main

1. See H.K. Barpujari, Assam in the Days of the Company 1826-1858 (Gauhati, 1963) pp.196-197 and p.250.
2. M'Cosh mentioned three overland routes connecting Assam with Bengal : "The first by Murshidabad, Maldah, Dinajpur, Rangpur, Bugwah and Goalpara. The second is via Dacca, Dumary, Pacnalo, Jumalpo, Singymary and Goalpara.. The third passes by Sylhet, Cherra, Mophlung, Nunglow, Ranney Godown..and Gauhati". Quoted in Barpujari, ibid., p.251 from J.N. M'Cosh Topography of Assam, (Calcutta, 1837).

artery of the natural communication system. Thus, we find that there were certain natural routes already in existence in the region which served its commercial needs, and some roads had been constructed primarily to cater to the administrative requirements. With the advent of British administration in the region, while the road network was extended marginally, the condition of existing roads and the use of water-ways remained by and large unchanged.

In the wake of the Burmese war (in the second decade of the nineteenth century), the British administration became greatly concerned with the security of the region, and attention was thus 'drawn to those routes which were of military importance.'³ Several outposts in the Eastern Frontier such as Kujoo, Wingrew, Tejoo, Sadiya and Saikhowa 'were strengthened and connected with one another and with the headquarters of Assam Light Infantry in Dibrugarh.'⁴ Thus, a network of roads emerged on the scene for strategic purposes, and the frontier outposts were linked with the Sadar stations.

The condition of roads as noted by Robinson was quite unsatisfactory even in 1841. The overland routes to Bengal, for example, remained impassable during the rains. Communication with that Province was still maintained through the river Brahmaputra. Robinson noted that 'boats

3. *ibid*, p.199.

4. *ibid*, p.199.

of the largest size pass by different inoculations out of the one into the other, throughout the year'.⁵

It is clear from the above that before the introduction of tea, the British made use of the transport system which was inherited from the Ahom period, for their own commercial interests, and the little development that took place in the communication network was meant to serve the defence requirements of the Government.

Although there were a number of roads in the Ahom period, the means of communication on all such roads were mainly manual labour. Colonel Jenkins, Agent to the Governor General in the North East Frontier, thus made a suggestion in the 1850s to introduce bullock carts in Assam, as was done in Cooch Bihar, where 'this state of things arising out of an immensely increasing commerce is more or less prevalent,... and can only be remedied extensively by the introduction of machinery, and substitutes of manual labour...' Jenkins was of the opinion that,

Carts would 'no doubt, be gradually introduced into Assam where hundreds of thousands of labourers are daily employed in transporting the produce of their fields to the granaries, markets and ghauts,... In Cooch Bihar and the

5. Rev. W. Robinson, A Descriptive Account of Assam with a Sketch of the Local Geography, and a Concise History of the Tea Plant in Assam : to which is added a Short Account of the Neighbouring Tribes, (Calcutta, 1841) p.245.

neighbouring Bengal Districts, carts can almost travel anywhere, whether roads made or not from the dryness of the sandy soil, and the shallowness of the streams, but unfortunately this is not the case in Assam; in the deep mould and retentive clogs of Assam, which makes every unraised road impassable with a slight fall of rain, and renders every watercourse, however small, perfectly impracticable for wheeled carriages without bridges, the introduction of these vehicles can only take place except in a very small degree, as the government prepare the means of locomotion by providing embanked and bridged roads'.⁶

Antrobus, thus remarks that,

'It is remarkable to think that less than a century ago even that ubiquitous means of conveyance, the hackri-gharri, or bullock cart, represented a notable improvement in the method of transport in the province'.⁷

The fourth decade of the nineteenth century, however, witnessed the introduction of a new element in the economy, which brought in its wake significant changes

-
6. Selections From The Records of The Government of Bengal, No.XXXVII, Papers Relating to Tea Cultivation in Assam (Calcutta, 1861).
 7. H.A. Antrobus, A History of the Assam Company, 1839-1953, (Edinburgh, 1957) p.370.

in the existing system of transport and communication in the Brahmaputra Valley. The tea plantation enterprise, by its very nature, needed an extensive and improved transport system for its existence. The network, then existing, was incapable of meeting the new needs. The importance of transport development began to be realised both in the planting community and the Government circles, and policies were formulated accordingly. Besides the Government, the private enterprises also had a significant role to play in the execution of such policies. As an outcome of these efforts, a new system of transport emerged, which was a mix of different modes - roads, river-ways and railways. Of these, the first two were already in existence, although the network was later extended, and the system was made more efficient. The third, a new entrant constituted a modernised element in the system of communication in the region. We will analyse in the following section, the nature and processes of development of these three systems of communication in the Valley of Assam.

Roads

The administration of the region was greatly dissatisfied with the number and condition of the existing roads in the Ahom period. It was remarked that 'there are in parts of the Province of Assam the remains of ancient roads of great magnitude and importance.'⁸ Commenting on one of the disadvantages resulting from the inadequacies of roads, Colonel Jenkins, the Agent to the Governor General in the North-East Frontier stated in 1853 as follows :

8. Report of the Commissioners Appointed to Enquire into the State and Prospects of Tea Cultivation in Assam, Cachar and Sylhet, 1867, (Calcutta, 1868), p.108.

'A great obstacle now to the clearing of wastes is the want of communication between the tracts and the cultivated Districts; wherever this is removed, clearance will take place'.⁹

Comments of a similar nature were also expressed on the subject of the condition of roads. A.J.M. Mills in his Report on the Province of Assam gave his views in the following words :

'(Even though) the outlay on the roads has been considerable but it has been lost to the country by their being allowed to fall into disrepair.'¹⁰

Besides the views placed by the British administrators, we also come across an interesting observation by a local Assamese, engaged in Government service. Baboo Anundoram Dhekeal Phookun, a Sub-Assistant in the District of Nowgong giving his views on the problem arising from the absence of a proper system of communication in the Province, stated as follows :

'The total want of roads in the country has been the source of serious inconvenience to the people. There are no highways which connects all the Districts of Assam with each other; nor are there roads in all parts of

-
9. Letter from Colonel F. Jenkins, Agent, Governor General, North-East Frontier to A.J.M. Mills, Judge of the Sudder Court, dated Gowhatty, 23rd May 1853 in A.J.M. Mills. Report on the Province of Assam. (Calcutta, 1854).. Appendix B, P.V.
 10. Report from A.J.M. Mills to Cecil Beadon, Mills, ibid, p.22.

the country by which travellers can journey from one village to another at all seasons of the year. In tracts not densely populated, footpaths carrying through thick forests are the only roads that could be seen, and this, together with such roads as are better constructed, are likewise useless during the rains. Owing to this want of the means of inland communication, the poor classes can never stir out of their homes during the five rainy months of the year and many a poor sufferer is actually precluded from restoring to the Court of justice for the redress of grievances'.

As an outcome of such conditions, 'the injury to trade and commerce resulting from the want of good roads is not less remarkable.'¹¹ In a statement showing the 'detail and description of all the Roads' prepared by the Public Works Department in 1851, one thus finds that horses, elephants and palankeens constituted the chief means of transport, apart from foot travellers, whereas bullock carts and camels were found to ply along a few routes, as for example the Seeksagur-Golaghat road and the Gauhati-Koliabar road.¹²

11. Baboo Anundaram Dakeal Phookun, 'Observations on the Administration of the Province of Assam', Mills, ibid, Appendix J. xlii.

12. See for details, Statement showing the Roads in the Province of Bengal, under the Department of Public Works, (Calcutta, 1854) pp.54-61.

The condition of roads as reported during the 1850s, remained unchanged even during 1870s. In the Report on the Tea Industry in Bengal (1873), we find numerous references to the impassability of most of the roads during the rainy season, and the lack of proper communication between Assam and Bengal. As a representative view, we may cite from one such report by Major W.S. Clarke, the Deputy Commissioner of Lakhimpur,

'The question of roads is a very important one, and every Officer who has been employed in Assam will know the difficulty of dealing with this subject. The roads in Assam are the worst, and probably the most expensive to construct and maintain'.¹³

An assessment of the unsatisfactory situation led the administration to recommend the repair of existing roads, as well as the construction of new roads. Mills, keeping in view the importance of linking Assam and Bengal thus recommended that :

'there should be two main roads in Assam, one leading from Bengal and running along the South bank by Gowalpara, Gowhaty, Nowgong, Golaghat, Seebesagur, Debrooghur and Saikwah; the other on the North bank going from Gowhaty to Mungledye, ~~Taspoor~~ and Luckimpoor ... The main roads South of Brahmaputra is the most important, and should be first bridged and put in repair'.¹⁴

13. Major W.S. Clarke, Deputy Commissioner Lakhimpur District, in Papers Regarding the Tea Industry of Bengal (Calcutta, 1873) p.92.)

14. Mills, op.cit., p.22.

This general view can be substantiated further by quoting from a note by Mr. W.S. Clarke, Deputy Commissioner of Lakhimpur, in 1873. Referring to the views of a tea planter in that district, he wrote that :

'(Mr. Minto) mentions that the main road (the Jaipur road) to his factory Tingrae is for a mile in length often 6 and 8 feet under water, and its normal condition in the rains is 2 feet under water, and that the road otherwise in its whole length, what with jungle or mud, is very bad.'¹⁵

The planters' view evidenced from the Papers Regarding the Tea Industry in Bengal on inland road communication, were manifold. They expressed their concern on the condition of existing roads, which to them was far from satisfactory. As a representative of the general opinion held by planters, Rabon of Gantoonga Tea Estate in Jorhat, wrote that :

'Although a great deal has been done in this direction (improvement of roads - KD) during the last few years, there is plenty of room for improvement; there are several very good roads in Assam, but there are many that are almost impassable in the rains.'¹⁶

15. Papers Regarding the Tea Industry of Bengal, op.cit., p.84.

16. ibid., p.91.

There were also tea planters, who were of the opinion that they could not 'but pass censure on this road (grand trunk road - KD) of Assam which was in much better order in the Rajah's time.'¹⁷

Apart from giving their views on the condition of existing roads, the planters also expressed their opinion on the issue of the want of new roads. 'The want of roads' to the planters was 'a great drawback' to the development of the plantation enterprise. This drawback was considered to have arisen from the standpoint of several issues. One of the most important issues was facilitating the importation of labour to work in the tea estates. In this regard we could perhaps cite the views of the planters in the Brahmaputra Valley in the 1870s. Those of L. Ingles of Namdang Tea estate in the Subsagar District, were as follows :

'With regard to importation of labour, I would, as a matter of necessity and one affording great facilities, suggest the formation of a first class grand trunk road into Assam. The means of communication once thoroughly opened and established, I am persuaded labour will flow spontaneously and freely into Assam from more parts of India than one.'¹⁸

17. Sinclair of Borholla Tea Estate, Sibsagar District, ibid., p.92.

18. ibid, pp.89-90.

The main obstacle to the fulfilment of the felt needs of the planters in the maintenance and construction of roads in the region, was the lack of administrative initiative in the allotment of funds. As an instance of this feature, we may base our study on the account given by Antrobus in the History of the Assam Company. Considering it necessary to repair part of the Dhodur Ali, one of the important highways in the Sibsagar district, the Assam Company had spent a considerable sum of money on that account in 1840. But the reply to the appeal to the Government for its reimbursement, and for further financial assistance was that 'government were not disposed to offer any pecuniary aid in repairing the Dhodur Ali,'¹⁹ This attitude, remained unchanged even with the change in the administrative set up. Antrobus, for example, stated that 'it has always been difficult to get the Administration to grant what the tea industry have regarded as adequate funds for this purpose.'²⁰

A representation of tea planters appealed during the 1850s to the Chief Commissioner, Colonel Jenkins, who requested the Government of Bengal on their behalf to allot funds to improve land communications in the region. Commenting on this, Antrobus wrote that :

'the answer (of the government) was always the same - there was not enough money from the revenues to improve roads in the more important province of Bengal, and it was less likely that funds could be spared for a remote wild frontier like Assam.'²¹

19. Quoted in Antrobus, A History of the Assam Company, op.cit., p.368.

20. ibid, p.368.

21. ibid, p.369.

This view, that the administration of the Province failed to comply to the necessities of the tea industry in matters of road communication is however negated by certain available evidences. In the first place, we find instances in which the Government directly assisted the tea planting interests in this respect. The planters themselves acknowledged this fact in their reports to the government in 1873. The first of such steps taken by the government to this end was the formation of road committees. Mr. Kingsley, Manager of the New Golaghat Company in the Sibsagar district expressed his views on the matter thus :

'The communications in this district are now in the hands of committees; and whatever favors the keeping of them in proper repair, and their extension where necessary, helps towards the development of the province, not only as regards tea, but all produce.'²²

The same fact is borne out by the views held by Mr. F. Stevenson, Manager and part Proprietor of the Halmorah Tea Estate in the same district, who wrote that he would 'have no doubt the order passed by the Lieutenant Governor for making the money over to committees will prove a great success.'²³

22. Papers Regarding the Tea Industry of Bengal, op.cit., pp.90-91.

23. ibid, p.83.

This however, was not the only feature of the collusion between the administrative and the planting interests. There is yet another side of the picture, that would help to throw more light on this aspect. We get evidence of occasions when the administration sought the assistance of planters in dealing with the matter relating to the superintendence of road works serving planting interests. As for instance, in the Report of the Commissioners appointed to enquire into the state and prospect of the tea industry, it was stated with respect to the want of funds for Public Works that,

'With the assistance of the tea planters and if all the labour obtainable were utilised, much progress would be made. We believe that the planters would not only give their personal services in direction and superintendence, but would also help materially in procuring labour.'²⁴

As a matter of fact, 'in some districts it was customary for managers of tea estates to receive grants from the Government or from the local boards and to undertake the repair of the roads by means of their own labour.'²⁵

This collusion between the Government and the tea planters resulted in a number of measures being taken up for the improvement of the road network in the region. The Government, on its part, took certain institutional measures of far reaching significance. The

24. Report of the Commissioners op.cit, pp.109-110.

25. Griffiths. op.cit, p.639.

first of these was the establishment of the Public Works Department in Assam in the year 1866, to take over the responsibility of the construction and maintenance of road communication in the Province.

Since the Public Works Department was concerned primarily with the execution of trunk routes of provincial interest, it was not in a position to fulfil the needs of particular localities at the district level. The introduction of the policy of local self government, leading to the formation of local boards was one such step taken in the Province of Assam during the 1880s to shoulder the latter's responsibility. As has been previously mentioned, the origin of such boards arose from 'the necessity of treating different tracts of (the) province in different ways,'²⁶ with regard to subjects of local importance such as communication, public instruction, etc. Considering the subject of the constitution of the local boards, the Chief Commissioner of Assam, Charles Elliott was of the opinion that :

'in all the districts where the tea interest is important, such as Lakhimpur, Sibsagar, Darrang, Cachar, and Nowgong, half of the non-official members of the Local Boards should be tea planters, the other half being natives.'²⁷

As a result of such a constitution of the membership, it was considered that,

26. 'Local Self Government in Assam'. Hindoo Patriot 11 December, 1882.

27. ibid.

'the representatives of the tea interest will be a strong element on these Boards, and as the Native members will generally be very weak, the former, by the greater forces of their character will carry everything before them.'²⁸

Formation of local boards in the region gave the interests of the planting community the foremost consideration. It was thus reported in the local press that,

'though numerically the tea planters are far out-numbered by the natives of the provinces, but they have the prestige of belonging to the ruling nation, and they will have the support of the local authorities.'²⁹

The Chief Commissioner of Assam, Mr. Charles Elliott was a strong propounder of such observations. His opinion on the subject was that,

'Their (the planters'-KD) interest lie in the improvement of communication and the cheapening of labour by the spread of colonisation. These are equally the interests of the government.'³⁰

28. ibid.

29. ibid.

30. ibid.

It was reported that :

'It is needless to say that the official members will, as a rule, vote with the representatives of the planters. Such being the case, it requires no prophet to tell us that the Native members of the proposed Local Boards in Assam will be nowhere. They will sit like dummies and will have no real power.. the net result of the proposed constitution of the Boards would be to centre all power in the hands of the tea planters.'³¹

So we find that with the partial exception of districts like Goalpara and Kamrup, where tea plantations did not occupy an important position, in the rest of the districts of the Brahmaputra Valley, the pressing demands of the planting community had been met and 'conditions were favourable for the development of local government institutions,'³² with the planters playing a dominant role therein. After the promulgation of the Assam Local Rates Regulations in 1879, earlier committees were replaced by the district committees. It was observed that,

'the (District -- K.D.) Committee was hardly a representative body .. they were dominated by European interests. It appears that the district officer and the planter members had a community of interest and therefore the Indian members lost all

31. ibid.

32. V. Venkata Rao, A Hundred Years of Local Self Government in Assam, 1860-1960, (Gauhati, 1963), p.58.

interest in the district committees. It is no exaggeration if we say that the district committees were the instruments through which this community of interest was implemented.³³

As district committees were not found to be very effective to deal with local matters, by the Government of Assam Resolution of November 11, 1882, local boards were constituted at the subdivision level. 'In the subdivision where the tea industry was important, half the number of non-officials had to be the representatives of the tea industry.'³⁴ Accordingly, six seats in each board was allotted in the districts of Lakhimpur, Sibsagar, Nowgong, and Darrang in the Brahmaputra Valley, and a similar quota in the Surma Valley. Thus, according to Guha, 'heavily loaded with ex-officio and elected European planter members, these boards functioned till 1905 and, with some modifications, till 1915. As to their undemocratic composition, the 1883 list is illustrative. In that year out of the 300 members of sixteen sub-divisional boards, 25 per cent were planters' elected representatives and 15 per cent official members. In tea districts, the planters' representation was of course, much higher than this average.'³⁵

33. ibid, p.58.

34. ibid., p.69.

35. A. Guha, Planter-Raj to Swaraj : Freedom Struggle and Electoral Politics in Assam 1826-1947. (New Delhi, 1977) p.31.

These features become all the more explicit if one examines a series of correspondences on the communications in the Tea Districts between the Indian Tea Association and the Public Works Department of the Government of Eastern Bengal and Assam, in the Annual Report of the Indian Tea Association, in 1911. The Indian Tea Association were informed, in 1910, by the Public Works Department of Eastern Bengal and Assam, 'that a programme in regard to the roads was under preparation, and that it would be useful in dealing with it eventually, as funds become available, to know the requirements of the tea district.'³⁶ The Association in consultation with its various branches complied with this request and sent a detailed list of 'the projects which were regarded as most in need of attention.'³⁷

The fact that government assistance to planting interests in the development of roads was always forthcoming seems to be well established from the above account.

The development and maintenance of a road network to serve planting interests was thus efficiently carried on with government support. Even apart from the latter, there were cases where this was performed independent of administrative support, by the planters themselves. In fact, several branch lines connecting the estates to steamer ghats, railway stations, or points on the trunk roads were developed solely by planting interests.. That this was in fact taken up as a policy decision by certain tea companies is well portrayed in an extract from a Report by the Chairman of the Assam Company as early as 1841, where he wrote that, 'the

36. Indian Tea Association Annual Report, (Calcutta, 1911), p.17.

37. ibid, p.17.

branch road that leaves from it (high road-KD) to our different stations will remain at our own cost.³⁸

The fact that such policy decisions were executed in practice is evidenced from the Report of the Commissioners in 1868.

'There are many old roads in this district (Sibsagar-KD) which have been partially cleared and repaired by owners of tea gardens, either with assistance from the local Ferry Funds or wholly from their own resources.'³⁹

These institutional arrangements led to an acceleration in the rate of construction of roads under the aegis of the Government. If we examine the resulting road network of the Brahmaputra Valley at the end of the period of our analysis, we can identify two broad categories of roads in the hierarchy of the system. The first comprised the trunk roads which traversed the valley from one end to the other and were meant primarily to connect it with the river route to Calcutta. The second constituted roads which branched out from the trunk roads and served mainly the inter-district requirements. These including the roads constructed by the local boards, comprised the largest share of road mileage, since they also interconnected the district roads and fulfilled thereby the requirements of intra-regional connectivity.

We would briefly present in the following lines, a broad spatial overview of these three categories of road network as existing in the second decade of the twentieth century.

38. Antrobus, op.cit. p.369.

39. Report of the Commissioners, op.cit. p.109.

5902
C-1

As has been observed, the project of making a connected Trunk Road through the Province had been started in 1866.⁴⁰ This trunk road, which completed, traversed throughout the whole length of the Valley, south of the Brahmaputra from Fakirganj - opposite Dhubri (in the Goalpara district) to Saikhowa - opposite Sadiya (in the Lakhimpur district). Apart from the above, there was the north Trunk Road, which extended from Dhubri in the Goalpara district through Kamrup, traversing the whole length of the Darrang district, to North Lakhimpur. The two trunk roads ran almost parallel to the Brahmaputra on both its banks through all the districts of the Valley. Via the Goalpara district, they formed the connecting link between the Assam Valley and the Province of Bengal. Certain sections of the trunk routes were remnants of the past, whereas parts^{were} constructed later.

The feeders, as has been mentioned above, connected the interiors of the districts with points on the Brahmaputra, the trunk roads, as well as the railways. This category of the road network, present in all the six districts, thus served different purposes as would be reflected by their specific alignments. An attempt would be made, in the following paragraphs, to examine the network of feeder roads from the west to the east of the Valley.

In the westernmost district of the Brahmaputra Valley -- Goalpara -- most of the feeder routes ran north from the north trunk road, mostly connecting centres of importance to the North-East Frontier Railway. Moving eastwards (in the Kamrup district) a number of routes connected tea gardens with the river Brahmaputra, for example

40. See W.W. Hunter, Statistical Account of Assam, Vol. I (London, 1879), p.55.

the road connecting Gauhati with Sonapur. There were also roads connecting places of administrative importance, such as the Gauhati-Shillong road.

In Darrang district, in the north bank of the Brahmaputra, from the main artery of communication the North Trunk Road, several cross-roads ran north and south from important centres like Tezpur, Mangaldai, etc. Most of the roads connected tea estates with either the trunk route or the steamer ghats on the Brahmaputra. One such road described by Hunter, from Bengbari runs via Kalaigaon ... in the vicinity of which there are several tea gardens' ... 'This road is extensively used by the planters for the transport of tea etc. to the river'.⁴¹ In Nowgong the main lines of communication mainly diverged from Nowgong, the district headquarters, to the river-ghats and railway junctions, whereas tea estates were also linked by a system of district roads connecting them to railway stations and steamer ghats.

We next come to the two upper Assam district - Sibsagar and Lakhimpur, the two most important districts from the point of view of the development of the tea plantation enterprise. In the Sibsagar district, the principal road was a section of the South Trunk Road. From east of River Dhunsuri, the road turned little towards the south passing through tea estates. Next in importance in the district was the Dhodur Ali which took off from the Trunk Road at Kamargaon and ran to Golaghat, a sub-divisional headquarter of the district. From Golaghat two other roads,

41. ibid, p.137.

one towards Brahmaputra in the north-east, and the other towards the south-east, were of significance. In Jorhat, on the other hand, there was known to be a very complete system of roads which starting from the town at the centre runs to various points on the Dhodur Ali.⁴² Sibsagar Sadar was also well supplied with roads. The district roads under local management were the continuation of Dhodur Ali from Titabar to Sapakati; the Bar Ali from Nazira, the headquarter of the Assam Tea Company to Dibrugarh - a steamer ghat on the Brahmaputra; and the Commissioner Ali from Jorhat to Kokilamukh on the Brahmaputra. All these roads ran through a tea zone, and functioned as linkages between the tea estates and the steamer ghats.

We would finally present a survey of the road network of the easternmost district of the Brahmaputra Valley - Lakhimpur. The main line of communication in this district was the South Trunk Road. It entered the district in the south-west and passed through Dibrugarh - the district headquarter as well as a steamer ghat along the Dibru-Sadiya Railway line, as far as Talap, and finally ended at Sadiya. Another important road took off from the trunk road at Lahoul - 6 miles east of Dibrugarh and ran through Madarkhat, Tengakhat to Jaipur. North of Dibru-Sadiya Railway, the Rangagora road ran through Rohmorla and Bagdang to Girijagaon. All the three roads were 'linked up with one another and with the various tea gardens near which they pass, by a system of branch roads.'⁴³ North of the Brahmaputra in the North Lakhimpur sub-division, the North Trunk Road ran from the border of Darrang through the Narayanpur Laluk, Naobaicha Mouzas. This road also passed along the tea estates

42. Assam District Gazetteer, Vol.VII Sibsagar, (Allahabad, 1906), p.188.

43. Assam District Gazetteer, Vol.VIII Lakhimpur, (Calcutta, 1905), p.231.

of the north-bank. There were also several local roads which took off from the trunk roads to the tea estates.

From the brief account presented above, we could perhaps throw some light on certain salient features of the road network of the Brahmaputra Valley. From the point of view of mileage, the roads under the management of the district authorities far exceeded the roads under the public Works Department. The function of these roads were to link the interior of the districts with the steamer ghats, trunk roads and railway stations. Such interiors as evidenced primarily from the survey of districts like Darrang, Sibsagar, Lakhimpur and to a certain extent Nowgong, comprised mainly of tea plantation areas. In other cases, they linked the district headquarters with other centres of importance.

It is thus evident from the above summary that one of the main factors behind the framing of the road network in the Brahmaputra Valley was the tea planting interest. The network bore a distinct stamp of the planting interests in the following ways. Firstly, the initiative taken up by the administration in the matter clearly kept the planting interests as the primary goal of road development; secondly, the planters responded willingly to requests for help from the Government because it was in their interests to do so. The distribution of road network and the preponderance of local board roads over that of others itself bears evidence of such observations. The alliance of the administrative authorities and the planting interest, the institutional measure taken, and the outcome of such measures show the dominance of a particular sector - the planting enterprise, in formulating the system of road network in the region.

River Communication

In the geography of a region like the Brahmaputra Valley, the river plays a very significant role in the transport system. Brahmaputra, the main river in our area of study flows along the whole length of the Valley for more than four hundred miles and forms the connecting link between all the six districts. At the same time, it also forms the only natural transport connection between its Valley and the adjacent Province of Bengal. Its several tributaries and distributaries connect the interior of the Valley with the main riverway. This system of riverine transport links provided an effective network for the commodity flows of the early nineteenth century.

The introduction of tea and the consequent change in the nature and magnitude of commodity flows called for far reaching improvements in this natural network. We would present in a brief summary the pattern of the network of river communication and the modes used in the region at the time when the tea industry had begun to show interest in this sphere. Brahmaputra was the main route connecting the Valley with the Bengal Delta. We come across an account given in the Assam District Gazetteer based on McCosh's 'Topography of Assam'. It reads that,

'a large boat took from six to seven weeks to come from Calcutta to Gauhati, though the post which was conveyed in small canes rowed by two men, who were relieved every fifteen or twenty miles, reached Gauhati in ten days and Bishnath in three days more .. From Gauhati to Dibrugarh it was a month's journey

for a "pinnacle" even in the cold weather; and in the rains against the current the journey took much longer.⁴⁴

We also get some information on the time taken to travel up the Brahmaputra in the mid eighteen-thirties,

'The original Commission of Enquiry set up by Lord William Bentinck in 1834 to ascertain the possibilities of growing tea in Assam took on their voyage in 1835, about four and a half months to reach Sadiya from Calcutta. The whole journey was made by country boat up the Brahmaputra. But in those days, even people spoke of some improvement having been made in communications, though it was admitted that they were very bad still.'⁴⁵

The situation engaged the attention of both the administrative authorities and the planting interests. The observations made by the officials focussed attention on particular issues. The points which drew their foremost attention related to the speed and regularity of transit. These features have been expressed in a letter from Colonel Jenkins, the Agent to the Governor-General in the North-East Frontier to Mills, wherein he wrote that,

44. See, Assam District Gazeteer, Vol.VIII, Lakhimpur, op.cit., p.223.

45. H.A. Antrobus, A History of the Jorehaut Tea Company Limited, 1859-1946, (London, 1949), p.66.

'a long, tedious and expensive communication with the sea port of Calcutta is a great drawback to European enterprise ..

The Government steamers have in some measures removed the former impediments though the despatch of the vessels has never been so certain and regular as is required for the purpose of trade, nor are these steamers well adapted for the navigation. They are greatly wanting in power when flats are used and they are wanting in capacity when sent alone.'⁴⁶

Similarly, in a selection of the Records of the Government of Bengal, on the Tea Industry, we come across the views placed by Captain Bivar, the Principal Assistant Commissioner of the Lakhimpur district, who, writing to the Agent to the Governor-General, North-East Frontier in 1859, was of the opinion that,

'I would beg to dwell particularly as to the matter of the despatch of the steamer on a fixed date. The point is important, as unless it is determined calculations are rendered futile ..'⁴⁷

46. Mills, op.cit., Appendix B, pp.V-VI.

47. Captain H.S. Bivar, to Colonel F. Jenkins in Papers Relating to Tea Cultivation in Assam, op.cit., p.19.

The review of the system of inland navigation and forwarding the suggestions thereafter arose from the necessity of fulfilling certain objectives that were identified in the official quarters. Firstly, the requirements of administration had to be met. This is well depicted in the Report on the Province of Assam, where Mills stated that, apart from fulfilling other objectives,

'The establishment of steam communication would also add to the more efficient superintendence of the different departments; ... If steamers plied regularly on the river, the Commissioner's and Deputy Commissioner's visitations would be more frequent, and of course, more effective, while the establishment of office boats kept up for their use might be saved to Government. Another saving might also be effected in transporting the troops.'⁴⁸

Secondly, it was intended to facilitate the immigration of labourers, the export of tea and the import into the region of certain products, specially rice. There are several evidences which serve to substantiate these facts,

'Every assistance should be given by Government to the planter in bringing emigrants into the Province, and this I think can best be done by organising under Government patronage a sound system

48. Mills, op.cit. p.23.

of emigration; every facility being afforded to the planter in bringing the emigrants to the Province on board the Government steamers, and if at any, at a more nominal charge with a sufficiency of labour, and regular steam communication with the Presidency, the Assam Tea planters would soon become in a position to increase greatly the field of his operations and the trade and prosperity of the Province be in like measure advanced.⁴⁹

Another subject for consideration was, 'the means of communications for export'⁵⁰

The system of communication was to be improved for the reason that,

'The profits of tea cultivation should attract hundreds where tens now come, but the capitalist is not always to be found who will venture his money in a country to which access is so difficult as it is to Assam, through which his correspondence travels at the rate of a mile and a half an hour, and in which it may take a month to accomplish a journey two or three hundred miles.'⁵¹

49. Captain C. Holroyd, Collector of Sibsagar District, in Papers Relating to Tea Cultivation in Assam, op.cit., p.32.

50. Captain H.S. Bivar, Principal Assistant Commissioner, Lakhimpur, ibid, p.19.

51. Report of Colonel Jenkins (1861) quoted in Assam District Gazetteer, Vol.VIII Lakhimpur, op.cit. p.226.

It would be clear from the above that the overriding consideration in the development of river-borne trade during the period under study was the advancement of the interests of the planting community. This becomes all the more clear when we find that the Government invited suggestions from the planters, and acted largely in terms of the points raised in the memorandum submitted by them. In a memorandum submitted to the Governor General of India, on 6th June, 1853, the Directors of the Assam Company, the fore-runners of the tea industry in the Brahmaputra Valley reviewed the system of river communication in the region. After acknowledging the existing system of government steam communication, they expressed their difficulties:

'The terminus of steam communication with Assam, however, being at Gowhatty, situated in Lower Assam, whilst the seat of operations of the Assam Company and that to which enterprise is generally directed being in Upper Assam, the attempt to transport labourers from Bengal by a partial steam and boat system of transit, proved that the expense was neither much reduced, nor the facilities greatly increased, certainly not in a degree to develop practical and successful results. The experience however, which we have derived from our efforts, hitherto ineffectual and the attention the interests of the Company have called forth from us, lead us to the conviction that improved means of communication and transit with Upper Assam will prove effective for

the existing difficulties, and for the general advancement of the Province, and under this conviction, we venture to suggest for your Lordship's favourable consideration -

- That the existing steam communication be extended to Debrooghur in Upper Assam.
- That the steamers plying accompanied by cargo flats for the conveyance of goods and passenger, and for produce downwards.
- That the rate of passage charged for coolies by the steamers be fixed upon such a moderate basis as would be calculated to encourage and promote their introduction to the Province.
- That a monthly communication be maintained with Gowhatty.
- That the trips to Debrooghur be periodical at intervals not exceeding two months,⁵²

In a joint meeting of planters and Government officials in the Lakhimpur District held on 20th January, 1860, 'convened for the purpose of taking into consideration the suggestions of Government on the subject of immigration', several resolutions were taken. One of them, considering the system of river communication was,

52. Mills. op.cit. Appendix E, p.xx.

'that commodious steamers should ply between Calcutta and Dibrooghur, at regular and fixed intervals, with a view to affording the Immigrants a speedy and safe voyage, and keeping up a steady supply of Rice and other articles of Province.'⁵³

A similar meeting, based on the same government proposal was held in the Sibsagar district, on 16th June 1860. Amongst the resolutions passed therein were,

'A regular monthly steam communication with the province, capable of transporting 500 emigrants at each trip...

In order that the emigrants be landed in as healthy condition as possible, it appears to us desirable that steamers of greater power be provided, so as to perform the trip in a much shorter space of time; and that as far as practicable, arrangements be made to ensure them a certain degree of comfort, convenience, and protection from the weather during the voyage. This is more particularly required where the emigration consists of entire families.

We are further of opinion that the general trade of the Province is not yet sufficiently developed to induce a trading company to place an efficient fleet of steamers on the line; and that, in the first

53. Papers Relating to Tea Cultivation in Assam, op.cit. p.66.

instance, we must look to the Government for the effective performance of this service.⁵⁴

It is clear from the above that though the steps to be taken in this regard were to serve primarily the interests of the tea plantation enterprise, they would be executed exclusively by the Government. The participation of the Government in steam navigation in the Brahmaputra Valley was irregular and sporadic in the initial period. But with the commencement of operations of the Assam Tea Company in the early forties of the nineteenth century, the services became more frequent. It was, however, not before 1848, that Government steam communication was put on a systematic basis. Steamers then plied between Calcutta and Gauhati. Since most of the tea plantations that had developed by that time were in Upper Assam, this service did not prove to be adequate to meet the interests of the planting community. The planters therefore proposed that the service be extended up to Dibrugarh. The then Commissioner, forwarded this proposal to the Government in 1851, but his suggestion that the Government steamers 'should be allowed to proceed right up the Valley to Dibrugarh, three or four times a year' were negated by the Marine Department on the ground that 'voyages would be financially a failure.'⁵⁵

54. ibid. pp.70-71.

55. Assam District Gazetteer, Vol.VIII Lakhimpur, op.cit. p.224.

A similar suggestion was put forward by Mills to the Government in 1853, and met with the approval of the lieutenant Governor of Bengal. Thus, 'instructions were issued for the despatch of a steamer in that year and several voyages were made with results that were not satisfactory, even from the financial point of view.'⁵⁶ In spite of such difficulties, the whole responsibility of steam navigation in the Valley was borne by the Government until 1860.

It was at this juncture that private enterprise in steam communication appeared on the scene. The India General Steam Navigation Company was in operation on the Ganges since its inception in 1844. But with a decline in trade on that river route, and faced with serious competition from the East Indian Railway and private steamer companies, the India General had to look elsewhere for an outlet. This they found in the developing tea industry in the Province of Assam. This industry, in the meanwhile, was being served by the services of Government steamers. The only consideration before the Company was that 'there would be small hope of success so long as this formidable rivalry continued.'⁵⁷ The Directors of the India General thus approached the Government to consider a proposal of withdrawing the Government vessels from the line, thereby permitting the Company to carry on its services without any complication. The result of the appeal is best given in the words of the Report of the Company of 1860.

56. ibid. p.224.

57. A. Brame, The India General Steam Navigation Company Limited, (London, 1900) p.65.

'Your Directors by way of experiment, have come to an understanding with the Government to run a steamer and flat once every six weeks, to Dibrugarh in Assam, the Government steamer being meantime withdrawn from the line.'⁵⁸

Thus the India General Steam Navigation Company Ltd. became the first private trading Company to operate steam navigation on the Brahmaputra in Assam. In 1862, we find that seven trips were made between Dibrugarh and Calcutta; by 1863, the frequency was increased so that vessels plied once a month; and by 1875, the frequency of the services became once a week. Besides the main routes on the Brahmaputra, the Indian General also introduced feeder services on certain important tributaries.

Another private Company in the meanwhile, had entered the field. The River Navigation Company, founded in 1862, and initially operative on the Ganges, became well established on the Brahmaputra by 1868. In their very initial phase they made an agreement for two years with one of the biggest tea Companies - the Jorehaut Company 'for the carriage of its tea and stores,' whereby it offered reduced rates 'in consideration of the whole of the Jorehaut Company's goods being reserved for the boats of the Company, provided no delay occurs in the despatch of their steamers.'⁵⁹

58. ibid. p.66.

59. Antrobus, A History of the Jorehaut Company Limited, op.cit. p.68.

The monopoly of the private steamer companies was however hindered in 1879 with the introduction of a steam flotilla acquired by the East Bengal Railway, a Government enterprise. The joint Companies protested against this, and 'the Home Government considered that Railways subsidized by the State should not run in competition with private enterprise - and the Railway flotilla was withdrawn.'⁶⁰ Needless to say it was chartered subsequently by the India General Steam Navigation Company.

As the competition faced by the India General Steam Navigation Company from the Government enterprise was easily dispensed with, the 'keen competition' from the private sector that prevailed between it and the River Steam Navigation Company for the traffic on the Brahmaputra 'was harmonised in 1889, and the river carrying trade of the Province was equally shared.'⁶¹

Besides the two operative forces - the Government and the private steamer companies, there was a third force involved in this sphere. These were the tea companies themselves, who attempted to operate river services. The earliest instance of participation of the tea companies in river communication was that by the Assam Company. The Company started its own steamer service in 1842, to make itself independent of the irregular plying of Government vessels. But this service was short-lived, as the steamer 'was found to be useless for the purpose for which she had been built,' and it was sold to the India General Steam Navigation Company, in 1847.

60. P. Griffith The History of the Indian Tea Industry (London, 1967), p.637.

61. A. Brame, 'The Indian General Navigation and Railway Company', S. Playne and A. Wright (ed) Bengal and Assam, Bihar and Orissa, (London, 1917), p.718.

The next attempt on the planters' initiative was taken by William Roberts, one of the proprietors of the Jorehaut Company. At the time of taking over the properties of the Company in 1859, 'one of his first efforts was to establish an inland water steamer Company', since he found the Government steamers plying on the Brahmaputra 'was nevertheless quite inadequate'.⁶² But the attempt proved futile.

The next and perhaps the final attempt within our period of analysis in this context was a proposal from Dr. Berry White, a Director of the Assam Railways and Trading Company, and a member of the London Committee of the Indian Tea Association. He put forward 'a scheme for establishing a planters line supported by the Indian Tea Association.' The urge behind this effort was, according to Alfred Brame, because 'the industry was to be freed forever from the iron grasp of the steamer companies.'⁶³ This proposal was not accepted, 'partly because the tea Companies themselves were satisfied with existing arrangements,' and so, 'there was no more talk of a planters line.'⁶⁴

As an outcome of the measures taken by the three operative forces - the Government, the private steamer companies and the planters, in the sphere of inland navigation at different points of time, a network of river communication was set up in the Brahmaputra Valley. In the following analysis, we would describe the pattern of this network, the frequency of services, the mode of communication, and the purpose behind such operations. The present analysis would be focussed on that phase which represents the end of our period of analysis.

62. Griffith, op.cit. p.635.

63. See Griffith ibid, p.638.

64. ibid. p.638.

The River Brahmaputra, the main natural artery of communication in the region, providing the primary link between the region and the rest of the country, at the same time formed the connecting link between the districts. The services that connected the region with the outside world was that operated between the port of Calcutta and Dibrugarh in Upper Assam. This was the lengthiest route in operation. On this route, there were mainly three services. Of these, the two cargo services - the Assam Accelerated Direct and the Assam Direct Special plied weekly, and the third, Assam Sunderban Despatch Service plied daily, throughout the year. Steamers of all types and sizes were used from Dibrugarh to Calcutta. The cargo comprised mainly of tea, whereas the return journey carried up labourers as well as grains, provisions, textiles, metals etc. The mail service on the other hand transported mail to and from the region. The other service, connecting this region with areas outside was that between Goalundo (at the junction of the Ganges and the Yamuna) in Eastern Bengal, and Dibrugarh, daily. This service served the same purpose as that mentioned above. Between Goalundo and Gauhati, there was also a daily steamer service, which plied throughout the year. We would now discuss the intra-regional river communication services.

In the Goalpara district, two steamers ran daily between Dhubri and Gauhati, whereas a mail service also plied on the same route. The important ports of call of these services as well as of those from Goalundo (as mentioned earlier) were at Dhubri, Bilasipur, Goalpara, and Dalgoma. Apart from these there were steamer ferries across the Brahmaputra between Dhubri - Fakirganj and Goalpara - Jogighopa. The main-line services were operated

by large and small cargo steamers with flats attached, small and big passenger boats, etc.

Apart from the three services operated between Gauhati and Dhubri, in lower Assam, tributaries of the Brahmaputra were largely used for the removal of grains and produce from the interior. One of the main feeder services connecting Kamrup with Nowgong district was operated between Gauhati and Nowgong, four times a month, during the rains only. Although large cargo and passenger steamers connected the district with areas both within and outside the region, large country boats came up the Brahmaputra up to Gauhati, though only a small number proceeded above that town.⁶⁵ The main stations at call were Kholabandha, Soalkuchi, Palasbari, and Gauhati.

The river communication in the Nowgong district, apart from being operated along the Brahmaputra were confined within a few feeder services. Notable among those were one between Gauhati and Nowgong and the other on the Kallang River between Silghat on the Brahmaputra, and Nowgong. The latter was used primarily to carry tea from the interior to the steamer ghat at Silghat. The feeder services, however, were operational four times a month during the rainy season.

In the Darrang district, the river Brahmaputra formed the main channel of communication--the important ports of call being Rangamatighat for Mangaldai, Singri, Tezpur, Bisnath, Behalimukh and Gamirighat.

65. See Assam District Gazetteer, Vol. IV, Kamrup (Allahabad, 1905) p.181.

The feeder routes in the Sibsagar district which connected the interior with the main line services on the Brahmaputra were many. Important among these were one connecting Dikhumukh with Amguri; Disangmukh with Mohamaraghat, Dhansirimukh with Bordeobam, and Dihingmukh with Jaipur (in Lakhimpur District). These services were mainly operated in the rainy season by means of small feeder steamers, 'to carry away tea'. The ports of call were Dhansirimukh, Negheriting for Golaghat, Kokilamukh for Jorhat, Kamalabari in the North Bank Dikhumukh for Sibsagar and Dehinmukh.

All main line services connecting the region with Calcutta, Goalundo, and the districts in the Brahmaputra Valley terminated at Dibrugarh in the district of Lakhimpur. A feeder service was however maintained between the latter and Sadiya, further upstream. This service was run six times a month, throughout the year. The other feeder services were operated along the Dibru River up to DumDuma during the rains; along the Burhi Dihing up to Jaipur in the cold weather; well above Margherita in the rains; and along the Noadihing and Tengapani. These services were mainly operated by small feeder steamers, and boats were meant 'to carry away the tea manufactured on the estates.'⁶⁶

Railways

Roadways and riverways as modes of transport were already existent in the Valley of Assam when railways were introduced. The former preceded tea, whereas the latter followed it. In the first stage, the existing modes of transport were improved, but since this could not cope

66. Assam District Gazetteer Vol.VIII Lakhimpur, op.cit.
p.234.

up with the rising demands emanating from the planting enterprise, railways as a new mode were brought in.

Railways strengthened the already existent route network. It formed a breakthrough in the nature of communication in the sense that it introduced speed and regularity on the one hand, and offered the added advantage of through traffic, and certainty of operations at all seasons, on the other.

The phases of railway development in the Brahmaputra Valley are marked by certain significant features. The accompanying table gives chronologically the progress of the railway network in the region. Linking the plantations to the steamer ghats as well as the roadways with feeder systems, marked the first, the rivers still serving the function of trunks. The rising demand for a speedier and more efficient communication with the sea port for an export-oriented enterprise led to the construction of the two trunk routes connecting the valley with the ports of Chittagong and Calcutta - the Assam Bengal Railway, and the North-east Frontier Railway, respectively as show in figure 2.

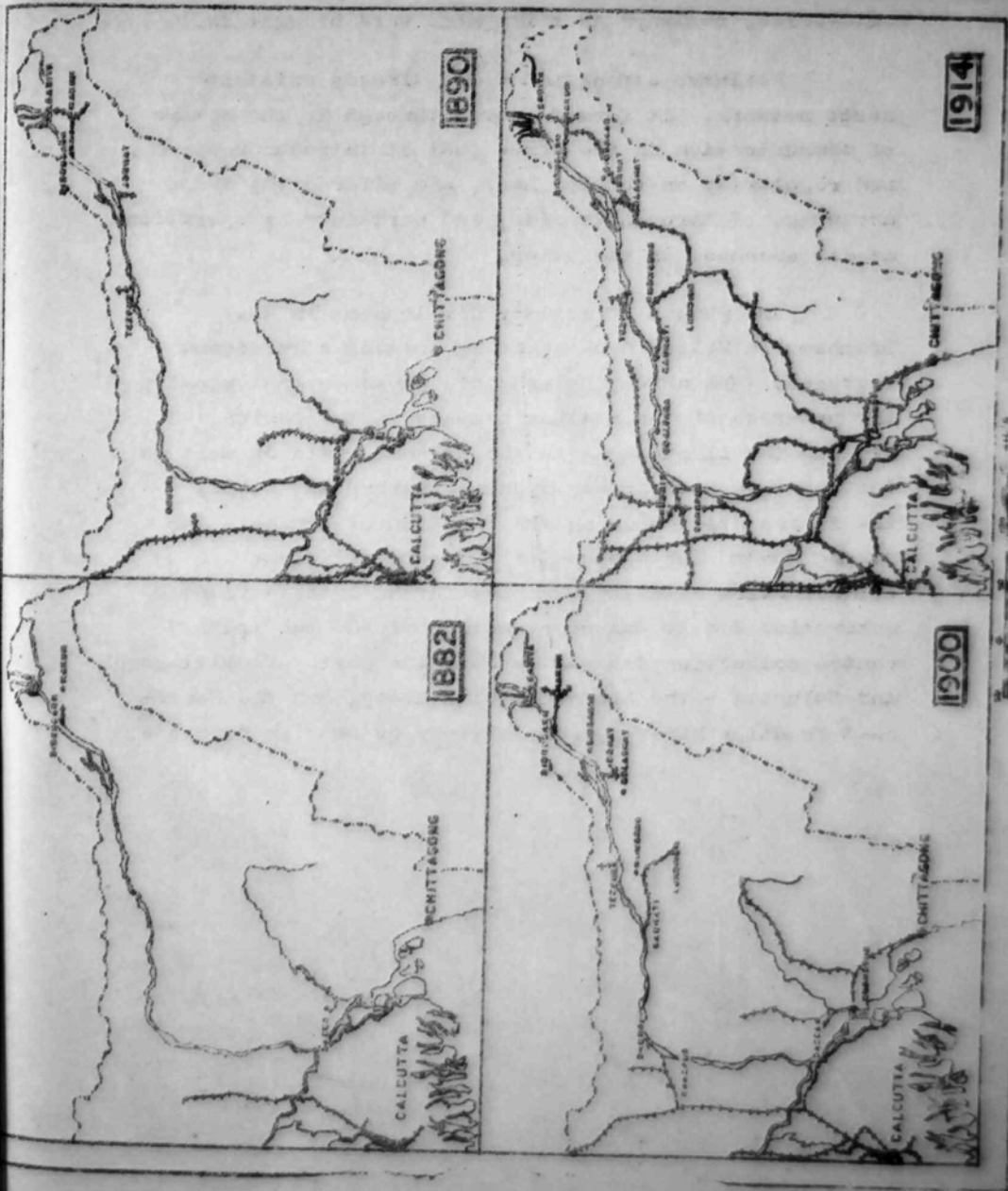


FIG. 2

STATE OF CALIFORNIA

DATE	AMOUNT	DESCRIPTION
(C)	(D)	(E)
12-31-00	100.00	...
12-31-01	100.00	...
12-31-02	100.00	...
12-31-03	100.00	...
12-31-04	100.00	...
12-31-05	100.00	...
12-31-06	100.00	...
12-31-07	100.00	...
12-31-08	100.00	...
12-31-09	100.00	...
12-31-10	100.00	...
12-31-11	100.00	...
12-31-12	100.00	...
12-31-13	100.00	...
12-31-14	100.00	...
12-31-15	100.00	...
12-31-16	100.00	...
12-31-17	100.00	...
12-31-18	100.00	...
12-31-19	100.00	...
12-31-20	100.00	...
12-31-21	100.00	...
12-31-22	100.00	...
12-31-23	100.00	...
12-31-24	100.00	...
12-31-25	100.00	...
12-31-26	100.00	...
12-31-27	100.00	...
12-31-28	100.00	...
12-31-29	100.00	...
12-31-30	100.00	...
12-31-31	100.00	...

Progress of Railway Network

<u>Sections of Railway</u>	<u>Date of Opening</u>	<u>Length in Kms.</u>
(1)	(2)	(3)
Dibrugarh Town to Dinjan Stream	15.8.1882	17.76
Dinjan Stream to Makum Junction	16.7.1883	37.01
Gosaigaon to Jorhat	13.9.1883	11.27
Dehing Bridge to Ledo	17.2.1884	9.10
Makum Junction to Dehing Bridge	2.5.1884	37.01
Makum Junction to Doomdooma	2.5.1884	15.53
Jorhat to Dhali River	15.12.1884	15.29
Doomdooma to Talap	6.2.1885	9.60
Chenimara Junction to Mariani	1.12.1886	11.27
Dhali River to Titabar	16.7.1887	2.82
Tezapore Ghat to Bindukuri	9.8.1894	13.04
Bindukuri to Balipara	1.9.1895	19.31
Rangapara to Balipara	1.9.1895	5.00
Gauhati to Jamunamukh	1.1.1897	119.23
Lanka to Lumding (Temp.Stn.)	1.1.1899	25.01
Jamunamukh to Lanka	2.1.1899	30.80
Lumding (Temp.Stn.) to Lumding	20.2.1900	5.54
Lumding to Nazira	1.1.1901	227.46
Gosaigaon to Borghop	22.10.1901	7.64
Nazira to Lakwa	15.11.1901	17.33
Lakwa to Bhojo	1.2.1903	20.37
Bhojo to Tinsukia	1.3.1903	67.07
Golokganj to Dhubri	23.9.1902	19.16
Golokganj to Kokrajhar	1.2.1906	57.01
Kokrajhar to Sorbhog	1.3.1909	63.78
Sorbhog to Changsari	1.4.1909	104.77
Pandu to Gauhati	1.1.1910	6.37
Talap to Saikhoa Ghat	1.5.1910	5.63
Borghop to a Point Further Down the River	3.12.1911	4.02

<u>Sections of Railway</u>	<u>Date of Opening</u>	<u>Length in Kms.</u>
(1)	(2)	(3)
Rangapara to Tangla	1.3.1912	39.05
Simalguri to Bihubar	4.2.1913	10.94

Source: Compiled from Government of India, Railway Board, History of Indian Railways Constructed and in Progress upto 31st March, 1918, and 1961.

Note : In the case of some lines where the lengths have been given in miles, they have been converted into kilometres.

The Dibru-Sadiya Railway in the Lakhimpur district marked the introduction of the railway system in the Brahmaputra Valley, constructed at various stages between 1882 and 1910. This line connected the Brahmaputra at Dibrugarh with Makum, from where one branch ran northwards to Saikhowaghat on the Brahmaputra, and another ran south-eastwards to the Ledo collieries. This line, running through several important tea estates in the district served the purpose of transporting tea to the steamer ghat, and bringing in labourers and rice to the estates. It also served as an important outlet for the coal of Makum, Ledo and Margherita, and the oil of Digboi, which were used also by the tea factories of the neighbourhood. The initial purpose of constructing this railway was to find an alternative to the roads, which due to 'prohibitive' metalling costs and being 'incapable of carrying heavy traffic in the rains' failed to serve the required purpose. The Dibru-Sadiya Railway was constructed by the Assam Railways and Trading Company - a private enterprise formed

'with the object of developing the mineral and other resources of the North-Eastern portion of Assam.'⁶⁷ It is noteworthy perhaps that the Company also owned a few tea estates in the district of its operation. Figure 3 shows an area of the Lakhimpur district with the tea plantations through which the Dibru-Sadiya Railway runs.

The railway route that was opened next in the region, was also a feeder system. The Jorhat State Railway in the Sibsagar District which was opened between 1883 and 1911, connected a steamer ghat on the Brahmaputra, passed Jorhat to Cinnamara, from where it divided into two branches -- one going to Titabar, and the other to Mariani. 'This line .. originally known as the "Kokilamukh Tramway" or "the Kokilamukh Railway" was constructed 'out of Provincial revenues of Assam, for the convenience of the numerous tea gardens in the neighbourhood of Jorhat,'⁶⁸ and connected the tea gardens in the interior to the steamer ghats on the Brahmaputra. The Annual Report of the Jorhaut Tea Company of 1886, thus referred to this Railway in the following words,

'The Government Steam Tramway is now running from the Ghat on the Brahmaputra River through the station of Jorhaut, and on to some of the principal plantations

-
67. 'The Assam Railways and Trading Company Limited' in Playne and Wright, op.cit, p.374.
68. Government of India, Railway Board, 'History of Defunct Railways' supplement to The History of Indian Railways. (New Delhi, 1951), p.129.

belonging to the Company, affording great facilities for the carriage of stores and teas.⁶⁹

The Jorhat State Railway was thus extended to the factories of individual plantations and also to join up with the Assam Bengal Railway subsequently.

The Tezpur-Balipara Frontier Railway was the third line to be sanctioned in the region, and in fact, formed the only Railway route in the Darrang district within our period of analysis. This line, opened between 1894 and 1895, connected Tezpur - the district headquarters on the Brahmaputra, with Balipara, about 32 miles in the north-east. It performed the same function as its counterpart in the south bank - the Jorhat State Railway, that is, serving the several important tea estates that were located beyond the river. This railway was constructed by a private company, but it was subsidised by the Local Board of Tazpur and the Government supplied timber free of royalty and the free use of Government land. It is, however, worth mentioning that 'tea gardens subscribed to 45 per cent of its paid up capital.'⁷⁰

Perhaps the most important construction of the period under review was that of the Assam Bengal Railway, which finally connected the Chittagong Port of Eastern Bengal to the different parts of the Province of Assam. This Railway was sanctioned for construction in May 1891, 'as it was considered that railway communication with Bengal

69. Antrobus, A History of the Jorehaut Tea Company Limited, op.cit, p.76.

70. A. Guha, 'A Big Push Without a Take off : A case Study of Assam, (1871-1901) The Indian Economic and Social History Review Vol.V, No.3, September 1968, p.209.

TRANSPORT NETWORKS & PLANTATIONS: DIBRUGARH & ITS NEIGHBOURHOOD

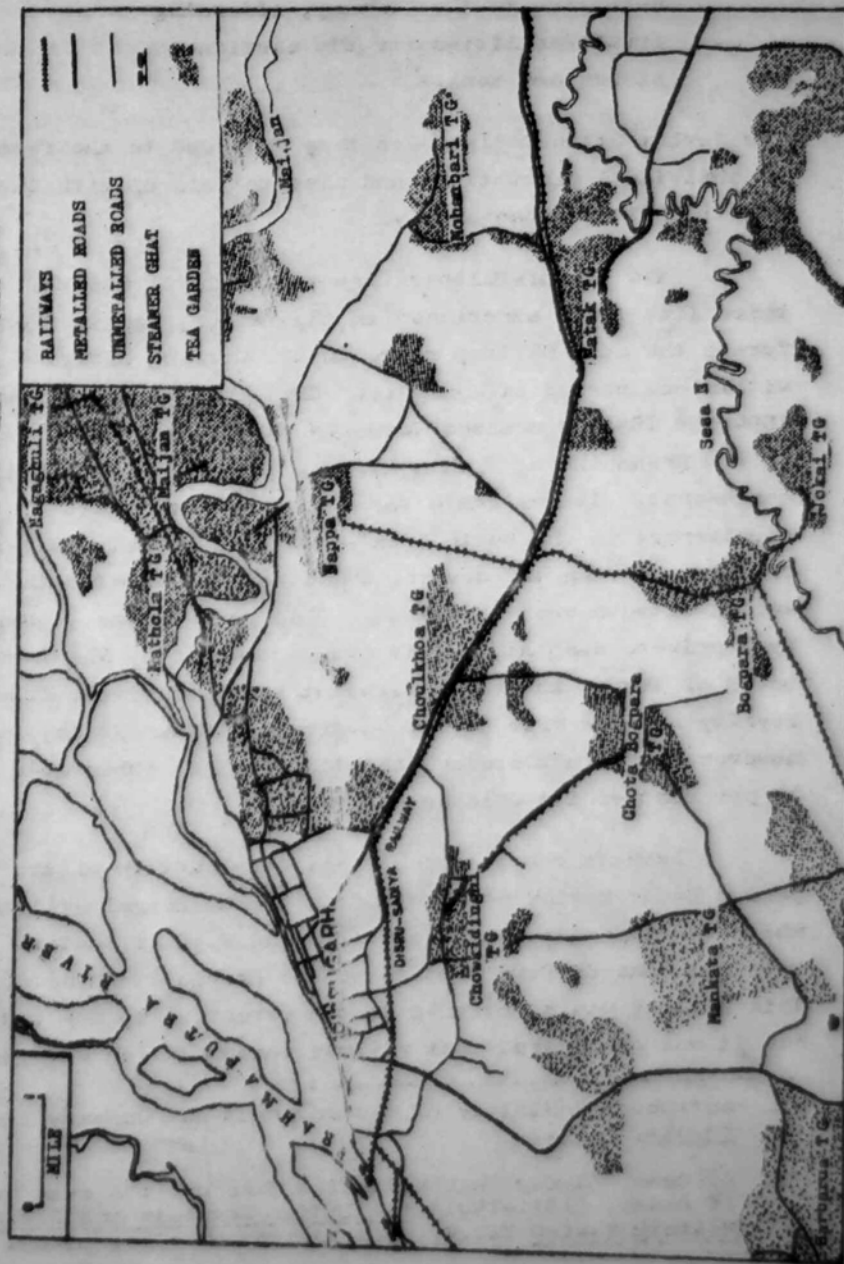


FIG. 3

The first part of the report is devoted to a general
description of the project and its objectives. It
is followed by a detailed account of the work done
during the period covered by the report. The results
of the work are then presented and discussed. The
report concludes with a summary of the work done
and a list of references.

and Assam was a matter of urgency.⁷¹ The different sections of this Railway in the Brahmaputra Valley were opened between 1897 and 1913, in the Kamrup, Nowgong, Sibsagar and Lakhimpur districts. The Gauhati branch of the Assam-Bengal Railway ran eastwards from Gauhati passing across the Nowgong district connecting Lunding junction. From the latter, another section ran north-eastwards through Sibsagar district, till it ultimately joined the Dibru-Sadiya Railway at Tinsukia. The Railway connected Upper Assam with Gauhati on the one hand, and the Chittagong port with the Brahmaputra Valley, on the other. The important stations along the route were Bokajan, Barpathar, Furkating, Kamarbandh Ali, Titabar, Hilika, Mariani, Noakachari, Seleng, Amguri, Nazira, Dhodar Ali, Lakwa, Bhojo and Namrup in the Sibsagar district; Jaipur, Makum, Talap in the Lakhimpur district, and Jagi Road, Dharamtul, Chaparmukh, Kampur, Jamunamukh and Lunding in the Nowgong district. All these stations lay in the very midst of tea locality.

As was reported in The History of the Jorehaut Tea Company, before the opening of the Assam Bengal Railway, tea produced by the Company was first transported to Gauhati and from there by steamers to Calcutta. But 'the company was quick to take advantage of the through line to Chittagong' - the terminus of the Assam Bengal Railway, and from then onwards part of the tea was exported abroad through this port.

71. Government of India, Railway Board, History of Railways constructed and in Progress, 1904-1905, (Simla, 1905)
p.180.

The Assam Bengal Railway was constructed by a private company working under a Government guarantee. It is thus obvious that this Railway route was constructed primarily with a view to serve the tea industry.

The second and perhaps the most significant construction was the railways connecting the valley with the port of Calcutta. In the seventies of the nineteenth century, the nearest railway line from Calcutta in Assam was the Eastern Bengal Railway to Kaunia on the River Teesta, and to Goalundo. The Indian Tea Association thus observed in its annual report that :

'from Teesta to Doobree on the Brahmaputra River there are yet about forty miles to be sanctioned by the Government of India, the construction of which would be a great boon to Assam as.. great facilities would then be offered to travellers and labourers in proceeding from Calcutta to Assam.'⁷²

The Eastern Bengal Railway was continued up to Dhubri in the Goalpara district in 1881, and to Amingaon opposite Gauhati in 1909-10, thus connecting the latter with the Assam Bengal Railway. The construction of this railway connected the region with the port of Calcutta, thereby facilitating most effectively the demands emanating from an export-based industry, most of the needs of which were met by imports.

72. See, Griffith, op.cit p.642.

The discussion on the railway system in the Brahmaputra Valley throws light on certain important aspects. If examined in detail, it becomes very clear that the whole network that developed was to cater to the needs of the tea plantations of the region. The main artery of railway communication - the Assam Bengal Railway running through 740 miles in the Province linked the tea areas of the different districts to the port of Chittagong. It was also connected to a branch of the Eastern Bengal Railway at Gauhati, which was meant to link the Brahmaputra Valley to the port of Calcutta. Thus, by the second decade of the twentieth century, the areas producing tea - an export oriented product, were connected to the two leading ports of India - Calcutta, and Chittagong. The other railway lines, mainly feeders, served the three-fold purpose of connecting the tea gardens with steamer ghats, stations on the main lines of railway, and the trunk roads. If we observe the location of the stations - both on the main line and on the branch lines, we find that they were mostly situated within the tea locality. In the formulations of this network, the force which in most cases played a determining role, could be considered to be that emanating from the planting community. This could be substantiated by referring to a few specific cases. One such case relates to the proposed Rangia-Tezpur extension of the Eastern Bengal State Railway. While a survey of the proposed line between Rangia in Kamrup in the direction of Mangaldai town in Darrang, and onwards to Tezpur, was taken in hand, the Chairman of the Mangaldai Sub-Committee of the Assam Branch, Indian Tea Association, wrote to the Manager, Eastern Bengal State Railways that,

'We would ask you to be allowed to point out that from the point of view of the tea industry in this district, a line running in such a direction (Rangia to Mangaldai) would be of little benefit to a preponderating majority, as most estates would still have to cart their teas and stores a matter of twenty-five to thirty-five miles, whereas a line tapping the country some six or eight miles from the hills would bring every estate but one into direct touch with the railway.'⁷³

In order to place their requirements on a more sound footing, the Association regarded the fulfilling of administrative interests as being of less importance. They were of the opinion that the route through the Mangaldai town - a subdivisional headquarter, would not fulfil the need of developing the Province. In reply to the letter quoted above, the authorities of the Eastern Bengal Railway sent a ferro of the proposed extension to the Indian Tea Association giving the different alignments, hitherto proposed, in which was written the following lines:

'I shall be obliged if you kindly mark the line which it is considered will best suit the interests of the tea industry.'⁷⁴

73. 'Eastern Bengal State Railways - Proposed Rangya-Tazpur Extension', The Indian Tea Association, Annual Report, (Calcutta, 1905), p.203.

74. ibid, p.215.

The Indian Tea Association accordingly selected the alignment which would best suit the interests of the tea industry. Needless to say, this was the final selection.

There were also instances where deputations of the representatives of the tea industry placed their views to Government authorities regarding the development of rail communication to serve planting interests. For example, in 1881, an 'influential deputation composed of representatives of the Chamber of Commerce, and others interested in the tea district of Assam waited upon the Lieutenant Governor to urge upon His Honor the necessity of establishing Railway Communications with Assam.' The aim was to facilitate 'the transport of food to the tea districts and thus cheapening their cost to the people thereof.'⁷⁵ The Lieutenant Governor promised a survey of the proposed line.

The interests of the tea industry in developing railway communication was not only felt by the tea planters. The Government officials often expressed the same opinion in this regard. As for example, Major W.S. Clarke, the Deputy Commissioner, Lakhimpur, in a report of 1873, wrote that,

'the only road which will open up the Province, and with it the tea plantations, will be, if ever it be constructed, a main line of railway throughout the length of the Valley.'⁷⁶

75. Supplement on Railway Communication with Assam, Hindoo Patriot, Calcutta, 17 April, 1882, p.6.

76. Paper Regarding The Tea Industry of Bengal, op.cit. p.92.

In formulating thus the alignment of railway communication in this region, the Government considered the interest of the tea plantation enterprise as being a primary factor. In the construction of the railways, the Government also lent its support - both financially and materially to the railway companies. The financial assistance was given in the form of subsidies and guarantees. Material assistance was usually given through supplies of timber free of royalty, and the use of government land.

It stands clear from the above discussion that the railway system like all other means of communication in the Brahmaputra Valley was developed primarily to cater to the needs of the plantation enterprise. In this development, the Government took into consideration the proposals placed by the planting community. The Government itself constructed, as well as assisted private railway companies to construct railways. As a consequence, thus emerged the most modernised communication system in the Brahmaputra Valley.

Similar developments characterised the transport networks in several other export-oriented economies in other colonies of the world. For example, in certain parts of Brazil, where rail-roads developed to meet the demands of the growing coffee plantation, it has been noted that '... coffee and rails spread together and were partners in the conquest of a new frontier, an economic frontier...'⁷⁷ It was further observed that railways 'accelerated the growth of the export economy and its effect upon specific localities was electrifying'.⁷⁸

77. R. Graham, Britain And The Onset of Modernization in Brazil - 1850-1914, (Cambridge, 1968) p.51.

78. ibid, p.54.

Characteristics of the Transport Network under the Impact of Plantations : An Overview.

The three modes - roads, river-ways and railways, set up a system of transport network in the Brahmaputra Valley by the beginning of the twentieth century. This network was developed in a manner by which each of the three modes, in their functioning, were utilised optimally mainly in the interest of the plantations. The roads connected the region with other provinces, and linked tea estates and the administrative centres to the steamer ghats and railway stations. Riverways connected the Province with the port of Calcutta, and also linked the tea estates with the main routes on the rivers. The railways connected the region with the ports of Calcutta and Chittagong, and linked the administration centres and tea areas to the trunk routes. The pattern of the network evolved rendered service to mainly two groups of interests - administrative and commercial. The commercial interests at that time comprised primarily the tea plantation enterprise in the absence of any other significant developments in the economic sphere in the region. In the framing of the whole system, this particular sector played the dominant role. With its development, the existing system of communication was found to be inadequate to meet the continuous needs of export and import. Demands were placed to the administration, and policies were formulated accordingly. The execution by the government and the foreign private enterprises with Government support, was done in favour of the planters' requirements.

The expansion of the transport network thus followed the development of an enterprise which was export-oriented as well as import-based. This network gradually served the purpose of linking as efficiently as possible the plantations with the ports. Such developments have been known to be characteristic of colonial economies in other parts of the world where the desire to reach areas of potential agricultural export production existed, and has been described very aptly for the case of Tanzania in the following lines :

'Each economic region corresponds to a 'one line economy', an axis based externally on a port where import and export were conducted and comprising a series of adjacent branches which subdivide in turn until they peter out in the bush. The axis and branches were followed by an ascending current, that of produce imported, and by a descending current, that of exportable products. Each region resembled a kind of lung with its system of veins and arteries running parallel, receiving its oxygen at the level of agricultural production. But the heart was placed outside, far beyond the seas; the impulses which regulated the nature and the intensity of flow were external ones.'

79. Quoted from J. Suret-Canale, French Colonialism in Tropical Africa 1900-45, in D. Slater, 'Colonialism and the Spatial Structure of Under development: Outlines of An Alternative Approach with Special Reference to Tanzania' Centre for Documentation and Research on Latin America, (University of Amsterdam, Holland,) (n.d.) (mimeographed).

15. On the Scientific Study of Politics: A Review of the Positivist Method (*The State of Political Theory: Some Marxist Essays*. Calcutta, Research India Publications, 1978)
PARTHA CHATTERJEE
16. Trade and Empire in Awadh, 1756-1804
RUDRANGSHU MUKHERJEE
17. The Ethnic and Social Bases of Indian Federalism
SHIBANI KINKAR CHAUBE
18. বাংলা সংবাদ-সাময়িক পত্রে বর্তীচহের ব্যবহার, ১৮১৮-১৮৫৮
(Use of Punctuation Marks in the Bengali Journalistic Prose, 1818-1858)
DERBES ROY
19. The Medieval Northeast India: Polity, Society and Economy, 1200-1750 A.D. (forthcoming in *The Cambridge Economic History of India*, Vol. I)
AMALENDU GUHA
20. The Colonialist Premise in the British Occupation of Bengal: Contributions by Clive and Pitt the Elder, during 1757-59 (*Proceedings of the Indian History Congress*, Bhubaneswar, 1977)
BARUN DE
21. Thinking About Ideology: In Search of an Analytical Framework
PARTHA CHATTERJEE
22. Material Conditions and Behavioural Aspects of Calcutta Working Class, 1875-1899
RANAJIT DAS GUPTA
23. An Essay on John Rawls' Theory of Distributive Justice and its Relevance to the Third World
A. P. RAO
24. Impact of Plantations on the Agrarian Structure of the Brahmaputra Valley
KEYA DEB
25. Assamese Peasant Society in the late Nineteenth Century: Structure and Trend (*The Indian Economic and Social History Review*, Vol. XVII, No. 1)
AMALENDU GUHA
26. Of Trade and Traders in Seventeenth Century India: An Unpublished French Memoir by George Roques
INDRANI RAY
27. Pattern of Organisation in Handloom Industry of West Bengal (*Social Scientist*, Vol. 9, No. 1)
ABANTI KUNDU
28. Foreign Technical Collaboration in Indian Business Houses, 1957-76: A Quantitative Analysis (*Business Standard*, Annual Number, 1980)
SUBHENDU DASGUPTA
29. The Multiple Faces of the Early Indian Merchants
INDRANI RAY
30. Agrarian Relations and Politics in Bengal: Some Considerations on the Making of the Tenancy Act Amendment, 1928
PARTHA CHATTERJEE
31. Cobb Douglas Agricultural Production Functions: A Sceptical Note
N. KRISHNAJI
32. রাড়ের ইতিহাস প্রসঙ্গে কয়েকটি কথা
(A Few Observations on the History of Raah)
HITESHANJAN SANYAL
33. Continuity of Linkages: A Study of Transnational Corporations in the Power Sector of India, 1947-1967
SUBHENDU DASGUPTA
34. An Enquiry into the Nature of Frontier Settlements: Case Study of Hill Darjeeling.
SUNIL MUNSI
35. Coming of Gunpowder and the Response of Indian Polity
IQTIDAR ALAM KHAN

PROCEEDINGS OF CONFERENCES & SEMINARS :

1. Problems of the Economy and Planning in West Bengal (CSSSC, 1974)
2. Change and Choice in Indian Industry (in press)

PERSPECTIVES IN SOCIAL SCIENCES :

Volumes of essays on a common theme by scholars in the Centre to be periodically published :

1. Historical Dimensions (Calcutta, Oxford University Press, 1977)
2. Three Studies on Agrarian Structure in Bengal, 1850-1947 (in press)

MONOGRAPHS

Results of research work individually undertaken by the Centre's staff :

1. SUNIL MUNSI : Geography of Transportation in Eastern India under the British Raj. Calcutta, K. P. Bagchi & Co., 1980
2. NIRMALA BANERJEE : Demand for Electricity. Calcutta, K. P. Bagchi & Co., 1979
3. SOBHANLAL DATTA GUPTA : Comintern, India and the Colonial Question : 1920-1937. Calcutta, K. P. Bagchi & Co., 1980

PUBLIC LECTURES :

1. ASHOK MITRA : Terms of Exchange and Accumulation : The Soviet Debate (R. C. Dutt Lectures on Political Economy, 1976) Calcutta, Orient Longman, 1977
2. KRISHNA BHARADWAJ : Classical Political Economy and Rise to Dominance of Supply and Demand Theories (R. C. Dutt Lectures on Political Economy, 1976) Calcutta, Orient Longman, 1978
3. B. N. GANGULI : Some Aspects of Classical Political Economy, in the Nineteenth Century Indian Perspective (R. C. Dutt Lectures on Political Economy, 1977) Calcutta, Orient Longman, 1979
4. I. S. GULATI : International Monetary Development and the Third World : A Proposal to Redress the Balance (R. C. Dutt Lectures on Political Economy, 1978) Calcutta, Orient Longman, 1980
5. V. M. DANDEKAR : Peasant-Worker Alliance : Its Basis in the Indian Economy (R. C. Dutt Lectures on Political Economy, 1979) in press