Rural Change in Karnataka: a workshop

Proceedings edited by Jean RACINE

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DEPARTMENT OF SOCIAL SCIENCES
RURAL CHANGE IN KARNATAKA

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Department of Social Sciences, on 29th and 30th March 1989

Edited by Jean Racine
FOREWORD

Karnataka is one of the Indian states in which rural change is particularly noticeable, for a series of factors stimulate it: large scale irrigation here still has a vast potential to tap, and taps it actually; political reform is quite active, maybe because a stiff competition between Congress and non-Congress parties sustains a positive emulation; and the social history of the present state testifies to the recurrence of social or socio-cultural movements eager to promote the poor or the down-trodden.

For two days, on March 29th and 30th 1989, scholars from South Indian Institutions joined fellows from the French Institute for a workshop on Rural Change in Karnataka. While providing a platform for debate, the workshop was also conceived as an opportunity for attempting to get an overview of the present socio-economic context in South Karnataka: a useful exercise for us, as a new Indo-French research project is now engaged under the title "To migrate or to stay? A study in rural change, mobility and retention of rural population in India: The case of South Karnataka".

The present proceedings collect only abridged versions of the communications presented during the workshop. A few full-fledged versions may later on be published in this series, as separate issues.

I would not like to end this brief foreword without acknowledging the cooperation of all those who readily attended this workshop. It is truly a matter of satisfaction, for a newly created department, to welcome scholars from established institutions such as the Institute for Social and Economic Change, Bangalore, Mysore University, and the Madras Institute of Development Studies.

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May 1989
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The localized studies

Village studies
- Aziz: Hunisikote
- Schar: Rangashipura

District studies
- Nagaraj: Dakshin Kannad
- Ramachandran: Tumkur
- Udayakumar: Mysore

Areas studies
- Mahadev: Tungabhadra command area in Raichur district and Sakleshpur area in Hassan district
- Racine: Command areas in Mysore and Mandya districts

Legend:
- State boundary
- District boundary
- Taluk boundary
- State Headquarters
- District Headquarters
- Taluk Headquarters

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RURAL SOCIETY AND CHANGE
THE BROADBASING OF KARNATAKA SOCIETY
A NOTE ON FORCES AT WORK*

M.V. NADKARNI

The society in Karnataka has two important features - it is diverse and broad-based. Diverse and stratified though, it is also not highly polarised, and has in its mainstream the bulk of its population sharing the benefits of development even if inequitably. The process of broadbasing may be in operation alongside the opposite process of marginalisation, but the former has been dominating over the latter in the long run. This is happening not with any revolutionary speed, but slowly and gradually; not smoothly either, but producing enough backlashes to cause concern about the direction of advance. Any one who has travelled in bullock cart on a countryside track knows that smoothness is not a necessary attribute of a slow advance. The speed of the advance of any social process is determined by the diversity of the society in which it operates, and Karnataka society has such diversity in ample measure.

In terms of social development, if not economic, Karnataka is at a higher level than the country as a whole, but still behind Kerala. For example, literacy rates - including female literacy - are higher, and birth rates, infant mortality rates and general death rates are lower in Karnataka than in the country as a whole. The proportion of people below poverty line are also reported to be at least a little lower, viz. 35 per cent in 1983-84 as against the national figure of 37.4 per cent. These are indications to the broader base of the society and a lower extent of marginalisation than in the country as a whole.

Reports of atrocities on members of scheduled castes are still being heard now and then, but there are not reports of whole colonies of these people being burnt down or of blinding them, as in several other states. Subjecting them to severe humiliation and beating them is certainly not pardonable, and the treatment of scheduled castes in Karnataka still leaves much to be desired. Even then, a positive feature of the situation is that though in rural areas agricultural labour is still the most important source of livelihood, it is heartening to come across scheduled caste farmers in many Karnataka villages now. This is so

*This is an abstract of the author's presentation at the workshop. A more detailed version is under publication in V.K. Nataraj (ed.) - Society, Politics and Development in Karnataka.
other socially and economically backward classes. Thus while we cannot deny the existence of disparities within Karnataka society, there are indications that it is fairly broad-based and that the long run direction is also strongly towards broad-basing.

Such a society did not evolve suddenly. It has taken decades, even centuries. Probably the most important breakthrough came as early as in the 12th century with the Veerashaiva movement, the most well-known spokesman of which was Shri Basaveshwara. The movement challenged discrimination based on caste and sex, and brought religion to the masses. Even at a great personal risk, Basaveshwara promoted marriages between the brahmins and untouchables among his followers. His vachanas (sayings) expressed in simple poetic prose (for an English translation see A.K. Ramanujan, Speaking of Siva, Penguin), promoted self-respect and resistance to oppression. Eventually, Veerashaivas, also called the Lingayats, formed a social group by themselves and emerged as a dominant caste in the state. The point to note is that to begin with it did not consist of dominant communities. Except for a few Brahmins, many followers were drawn from classes at the lower rungs of social hierarchy.

They played an important role during this century too when leaders like Sirsangi Lingaraj promoted schools with Kannada as a medium of instruction, and its religious heads opened schools and colleges in the interior, and provided hostel facilities to students at nominal or no cost. This enabled many to enter the mainstream of society and in all walks of life monopolised earlier by the upper strata in urban areas. This was done at a time when the government had hardly any educational institutions beyond the primary level in the interior.

Though not on a religious basis, there was a socio-political movement in Uttara Kannada since the 1940s on tenancy issues under the leadership of Dinkar Desai. He organised the backward and downstrodden community of Halakkis who were almost entirely tenants or agricultural labourers. The movement not only succeeded in securing legal recognition of their tenancy status and its official recording, but also better terms with land owners. At the time of the formation of the state, tenants in the district were in the best position compared with their counterparts elsewhere in the state. Seeing the limitations of tenancy reform by itself, Desai also promoted schools and colleges in the interior, even giving monetary benefits to Halakki children. Though other communities also benefited, these schools also enabled Halakkis in no small measure to enter the mainstream of social life.
In the old Mysore area, pressure on the government to seek reservation of jobs for non-brahmin communities also had the outcome of broadening the administrative base of the state, and thereby the social and political base.

We thus see that even before Devraj Urs came to the centre of the stage in Karnataka in the 1970s, the broadbasing process was already in operation, which however, accelerated during his regime. His role in organising backward classes, scheduled castes and tribes, and minorities, and in bringing them on to the centre of political stage is too wellknown to be recounted here in detail. More than the 1974 Land Reforms Act, it was their entry into the political mainstream that helped them to gain increased access to economic assets, particularly land. While Urs may not have succeeded in transferring land from the big landholders to the landless and the small, land was transferred to them at least from the government ownership and common property resources. Lest it should be attributed only to Urs, it should be also noted that scheduled castes and other backward classes also formed their own caste associations to further their interests. The Dalit movement, particularly, took a shape and gained in strength, and has been effectively protesting against the atrocities committed on Dalits, and has been playing a positive role in eradicating social evils like the nude worship by Dalit women and forced prostitution (Devadasi system). Dalit literature has now gained a pride of place in Kannada, voicing both the agony and aspirations of Dalits.

Economic policies and measures also have contributed to the broadbasing process. The HYVs and fertiliser use have now percolated to even marginal farmers, and the differences in the use of modern inputs as between large and small farmers have narrowed, though they still remain. Particularly, dryland development, spread or irrigation in droughtprone areas, sericulture, and the anti-poverty programmes have had the effect of countering the marginalisation process and involving the people in peripheral regions in the mainstream of development. Where development projects threatened to uproot the local people and deprive them of their customary sources of livelihood, the environment movement in the state has by now gathered enough strength to protest against such marginalisation and countering it at least to some extent.

Though the government may have played a catalytic role and at times an active role in the whole process of broadcasting, the main role has been played by spontaneous people’s movements. Modern economic development and urbanisation too have played a supportive rather than a reactionary role in the process, since in the long run they have contributed to the broadbasing of the society. The fact that de-
democracy as a form of government based on universal adult franchise has been in operation in the country including at the state level in a fairly stable manner could also be an important contributory factor. The introduction of democracy at the grass roots level would, hopefully, further consolidate and strengthen the broadbasing process, provided that feudal, communal and chauvinistic elements do not hijack it. If past experience is a guide, such a hijacking would not be allowed, though we cannot take it for granted and be complacent about it.
IMPACT OF DEVELOPMENT PROGRAMMES ON
THE STRUCTURE OF RURAL COMMUNITIES:
SOME POINTS FOR DISCUSSION

V.M. RAO

It is useful to consider the development programmes in rural areas as falling into four groups:

i - Relief and support measures,
ii - Programmes for creation of new economic opportunities,
iii - Programmes for investment in human resources
iv - Programmes for reform structure and relationships. While the relief and support measures are important in the context of widespread poverty, they can only play a secondary and peripheral role in initiating and sustaining the development process. The development process needs the combined and complimentary thrust of the other three categories of programmes.

Out of the four categories of programmes, only the first category can be regarded as having the capacity to reach the poorest among the poor and to leave some impact on their economic conditions. The second category seems to benefit primarily the middle stratum in villages having some access to land. The poor have meagre capacity to absorb the new opportunities due to weak resource-cum-skill base and/or handicaps in taking up self-employment activities. As regards the third category, the willingness to undertake investments in long-gestation-period human capital remains confined now only to the uppermost fringe of the rural society. Among the four categories of programmes, the last category is possibly the weakest in its implementation and impact. A little reflection would show that it is this category which is likely to evoke maximum resistance from the rural elite and rich.

It is interesting to look at the impact of these programmes in the broader context of changing rural environment in the wake of growing and widening rural-urban linkages. These linkages have two major effects on the structure of rural communities. First, the relatively closed, inward-looking and local level-based village economies trend to breakdown, exposing the rural strata to the stress of numerous and rapid economic changes. By and large, only the rural elite manage to adjust to these changes and make substantial gains. In the process, they become rurban, getting drawn more and more in the mainstream activities outside the village and shifting away from their tradi-
tional local level-based activities. The middle stratum may gain little
from these changes but may have some capacity to withstand the
negative effects. It is the lower strata which suffer from the dislocation
of village economies which makes their already precarious life even
more so. Secondly, the village community also gets drawn into the
mainstream political activities which has some intriguing consequences.
The electoral politics weakens to an extent the one-way dependence of
the poor on the elite. As these changes cumulate, the elite may be
expected to come under pressure to reach a new accommodative
arrangement with the poor. Another effect of electoral politics is the
eventual broadening of the rural strata from which local leaders emerge
to mobilise people. The total effect of both the economic and political
linkages is to make all the rural strata far more keenly aware than now
of the large and exceeding world of which the village is a tiny part.

Viewed against these pervasive and powerful forces working for
rural change (not all of which is developmental or pro-poor), the
development programmes for the villages remain far too modest to
dominate the rural scene. But, what is easy to miss is that the impact of
development programmes can complement and modify some of the
broader change processes. For example, the relief and support
measures on an increasing scale in rural situations of competitive
polities would enhance the bargaining power of the poor vis-a-vis the
elite. This, coupled with the growing outward orientation of the elite
and their diminishing interest in traditional sources of wealth and
power, would create conditions for the emergence of more equitable
relationship between the poor and the elite. Similarly, the middle
stratum may become more active - in both the economic and political
arena - owing to their better access to some of the components of new
economic opportunities made available by the development
programmes. Thus, the development programmes have some effect of
turning the processes of change towards the middle and poor strata.

The overall effect of change processes and development
programmes is a thorough-going churning of rural societies. The final
outcome and the resulting shape of the rural societies are difficult to
predict. Given the weakness of the third and fourth category
programmes, the movement of rural societies towards broad-based
development would inevitably be very slow. What one can foresee in
the immediate decades ahead is substantial activation of the poor and
middle strata along with some readiness on the part of the elite to
accommodate these strata. A good understanding of this scenario would
help the policy-makers, political parties and voluntary agencies to
strengthen the rural development processes. If the growth in the macro
economy is substantial, they would find it easier to work for the rural
poor and to mobilise their energies for positive and constructive purposes. If, on the other hand, the macro-economy remains stagnant, rural change may only lead to sharper conflicts in rural communities among the contending groups and factions.
DEVELOPMENT PLANNING AND DISPARITIES AMONG SCHEDULED GROUPS IN KARNATAKA

P. HANUMANTHA RAYAPPA
R. MUTHARAYAPPA

I

In Karnataka nearly one-fifth of the total population (about 7.4 million) belonged to scheduled castes and scheduled tribes in 1981. There were one hundred and one sub-castes among scheduled castes and forty-nine tribal groups among scheduled tribes. However, about seven to eight major caste groups and eight to ten major tribes account for over three-fourth of their respective total population in the state. There are large regional variations in population size, concentration and ethnic background of scheduled groups. Population growth rates for both SCs and STs have been higher than that of the non-scheduled population during 1971-81. While population growth rate for the non-scheduled population has been 2.3 per cent per annum, for scheduled castes the growth rate is close to 3.7 per cent. For scheduled tribes, even though the number of tribes has not changed between 1971 and 1981, the population growth rate has shown an abnormal increase at 15.5 per cent and their share in the total population has increased to nearly 5 per cent in 1981 from 0.8 per cent in 1971. While scheduled caste population has increased to 5.6 million in 1981 from 3.8 million in 1971, the tribal population has shot up to 1.8 million in 1981 from 0.2 million in 1971.

II

Large disparities existed between scheduled and non-scheduled population at the time of independence when reservation policy was formulated. As a sequel to the implementation of several welfare measures disparities have narrowed down to some extent in selected fields. For instance, in 1961, male literacy rate among SCs was 15 and it has increased to 29 in 1981. Female literacy rate has risen from 3 in 1961 to 11 in 1981. Similarly, male literacy rate among scheduled tribes has risen from 13 to 30 and female literacy rate from 3 to 10. The ratio of literacy rate of non-scheduled to scheduled groups has declined from 3 to 2 for males and from 5 to 3 for females during 1961-81 period. Real progress has been in bringing children of the scheduled groups into the school system. Of course, wastage and stagnation in school education is more acute among scheduled groups, particularly at the primary level.
Another area where significant achievement has been made is with regard to employment in the government. The percentage share of scheduled groups in government services which was very low to begin with has improved though not in proportion to their population size. Their share in Class I and Class II positions in the state has risen from 4 per cent in 1971 to about 11 per cent in 1983-84. However, we are not sure whether differences on the income or consumption front have narrowed down or widened because of paucity of data. Thus, improvements can be clearly seen in school enrolments and literacy, employment in the government and representation in various elected bodies because of reservations. However, it should be acknowledged that much more remains to be done to bring them on par with the general population.

III

While disparities between scheduled and non-scheduled population have narrowed down to some extent in selected areas, wide disparities continue to exist between different caste and tribal groups. These are glaring with respect to education, ownership of assets, employment and income. For example, among different caste and tribal groups literacy levels ranged from 4 to 23 in 1971 as against 3 to 16 in 1961. Differences in higher levels of education may not be as large as their levels themselves are low. Similarly wide disparities exist with respect to school enrolments among students in the school going ages. For example, the percentage of schoolgoing children in the Integrated Tribal Development Project Areas of Karnataka varied between 17 to 61 among boys and 4 to 49 among girls aged 6-11 years. Among children aged 11-16 years these percentages varied between 6 to 53 among boys and 3 to 27 among girls. Generally castes and tribes which have low literacy levels tend to have higher school drop-out rates.

Similar situation prevails with respect to ownership of assets including land. Among scheduled castes percentage of households owning land varies from 6 to 69 and among different tribes it ranges from 3 to 66. However, the size of land very rarely exceeds 5 acres and in most cases the average land owning size ranges from 1 to 3 acres. Generally the quality of land they own is inferior.

In general, more rural and more backward the caste or the tribe, higher is the work force participation rate and higher their concentration in traditional activities including agriculture and forestry. There are certain occupations which are peculiar to certain castes and tribes. The kinds of activities these people are mostly engaged in are highly tradi-
tional, time consuming and less remunerative. In the same vein, not all the castes and tribes have proportionate share in government and public sector employment. Those who are resident in urban areas, and among them, the more literate educated and enterprising, tend to take a major chunk of employment in the government and other public sector undertakings.

The income position of different caste and tribal groups also shows wide variations. In the first place, the scheduled groups are placed at the bottom of the scale with respect to income and consumption levels. The per capita income of selected castes ranged from Rs. 274/- to Rs. 418/- and from Rs. 123/- to Rs. 546/- for different tribes in 1973-74. Main source of income for different castes and tribal groups is of course different. Similarly, their consumption levels also may vary because of their dependence on different sources of income, occupations and variations in their regional concentration.

IV

Since there is some evidence to indicate that disparities among different castes and tribes might have widened over the years there is need to look into the factors which might account for the existing situation. In the first place, the scheduled groups, as already mentioned, belong to a large number of heterogeneous caste and tribal groups. While scheduled castes are mostly resident in villages as neighbours to the non-scheduled population, tribes are resident in hills, forests or near the sea. Scheduled tribes are widely scattered usually living in tiny hamlets. In view of this, it is rather difficult to provide basic infrastructure facilities such as road, electricity, health and educational facilities as they are not viable. Also, the clusters with large concentration of scheduled caste population tend to have relatively poor infrastructure. Secondly, the initial conditions differ substantially and they act as barriers for bringing about reductions in disparities in their levels of living.

More importantly, the manner of implementation of welfare programmes has certainly made all the difference. While conferring benefits, they have not been given to the poorest of the poor among them. Benefits have not been conferred either in proportion to population size or extent of poverty. For example, the award of post-matric scholarships have been garnered by the most advanced groups in the state.

Similarly, distribution of assets and other benefits has not been either in proportion to population size or incidence poverty or back-
wardness. While over half of the beneficiaries of surplus land distribution in the state belonged to scheduled groups - 48.6 per cent belonged to scheduled castes and 7.5 per cent belonged to scheduled tribes - the number of households benefited by them varies by different castes and tribes. The provision of employment has not been according to the number of job seekers or those who require jobs. In general, provision of employment in government and public sector undertakings has tended to favour those caste and tribal groups who are placed in a relatively better position in terms of education and social status.

V

Since independence reservation policy has been in existence. Several plan schemes have been planned and implemented to improve the welfare of the scheduled groups. Special component plan for scheduled castes and tribal sub-plan for scheduled tribes include programmes under different departmental heads. In addition, they are entitled to benefits from general programmes such as IRDP, RLEGP, TRYSEM and other anti-poverty programmes as well.

Under the Special Component Plan and Tribal Sub-Plan, amount earmarked at times has not been fully utilised and the targets have not been fulfilled. Some of the schemes that have been proposed may not be relevant for some of the caste and tribal groups. The response of these groups to some of the schemes may not be adequate enough. Duplication of efforts appear to be common as many departments are involved in the implementation of these schemes. The benefits are yet to reach the poorest of the poor among them and, hence, disparities seem to have further widened. This is certainly not a very healthy development and this trend needs to be arrested by paying more attention to the most backward among them.

Schemes are generally formulated at the centre and at the state levels and are being implemented at the local level by local functionaries. While a few of these schemes may not be relevant at all, a few others may need suitable modifications before being implemented at the local level. However, such kind of thinking appears to be absent at the implementation stage. Also, the approach to the plans may have to be from below at the grass-roots level rather than from above. In fact, each caste and tribal group may require different treatment in the planning process.

Secondly, the implementing agencies of plan schemes seem to believe that once the amounts earmarked for them are spent the benefits
will automatically reach the target groups. In reality the situation may be
different as the available data are not adequate to provide any clues as to
the extent of leakage, actual benefits reaped by the target groups or their
response.

There are several agencies involved in the implementation of these
welfare programmes. These agencies have multiplicity of duties and
there is no coordination among them. At times more than one
department may be involved in one particular activity like distribution of
seedlings or agricultural inputs. As a result, it becomes difficult to
obtain the list of actual beneficiaries at the village, caste or tribe level
from any of the agencies or departments. To overcome such problems it
is suggested that there can be a central coordinating agency to
 supervise, monitor, and provide the required data base.

Lastly, there are several difficulties in listing various castes and
tribes in censuses and surveys. Several anomalies have been noticed at
the time of their enumeration. There is also a fear that persons
belonging to non-scheduled groups may declare themselves as
scheduled as such a happening has become evident at the time of 1981
census count in Karnataka, particularly in the case of scheduled tribes.
This has serious implications as large disparities already exist among
different scheduled groups. Ultimately a consequence of such a
happening would be adversely affecting the most backward among
castes and the most primitive among tribes. Initiation of appropriate
measures to arrest such happenings perhaps is the urgent need of the
hour.
RURAL SYSTEMS AND VILLAGE DYNAMICS
RURAL SYSTEM AND THE (ALMOST) ELUSIVE QUEST FOR A REPRESENTATIVE VILLAGE

J. RACINE, P.J. ROCA, F. LANDY

The paper presented here would be highly premature if it would pretend to offer assured conclusions. At the present stage of research conducted by its authors, it would rather and more modestly confines itself:

- to an exposition of some of the basic concepts backing a starting project;
- and to a presentation of self-interrogations nurtured by what was observed in South Karnataka (mainly in Mysore and Mandya districts) during a few weeks of field trips and field survey.

After exposing what the basic axis of investigation will be, i.e. a study of villagers’ rationales, we shall present the broad frame of analysis we have selected for understanding the background of villagers’ life, this broad frame being the concept of rural system. This will rise, as a matter of methodology, the issue of the choice of a representative village, which in turn will lead to comment the concept of representativeness in the present context of intense rural change observed in South Karnataka.

FIRST AIM: INVESTIGATING VILLAGERS’ RATIONALES

The main issue of the project has been already presented and discussed, at the Madras Institute of Development Studies and at the Institute for Social and Economic Change, Bangalore: to study the rationales of mobility and/or the rationales of retention of village population, in the general context of overall Indian structures, and in the more specific context of the dynamics of rural change in Southern Karnataka*.

* “To migrate or to stay : a study of rural change, mobility and retention of village population in India. The case of South Karnataka”. An Indo-French project conducted in collaboration with the Department of Geography, Mysore University, and the M.I.D.S., Madras, by the French Institute, Pondicherry and the French National Centre for Scientific Research.
Simultaneously, an investigation of overall peasants rationales is also conducted. This parallel study conducted by F. Landy does not focus itself on all villagers (as all villagers are not peasants, even if cultivators and agricultural labourers highly predominate). Landy's study limits its social field to peasants, but it enlarges it - for this large and diversified group - to all rationales correlated with economic decisions; and not just to the mobility-retention rationales. Large is the field, here, because economic decisions do not express only choices and logics dictated by the search for strict economic rentability and higher ratio of return from investment. The cultural anthropologist's perspective has to be taken into account.

However, we do not intend to conduct what would be only a behavioural study. "Our" villagers and "our" peasants are components of a particular social structure, they are historically positioned, and they are a fragment of a complex geographical entity that we can define as a rural system.

RURAL SYSTEMS

By rural system we understand here all the structures and relations giving a rural space its functional identity. The agro-ecological parameters, the agrarian structure and the agricultural system of production are the core of any rural system, but a rural system is not just agricultural. Take the correlations established between the rural and the urban spheres, between the agricultural and the non-agricultural sectors, between the grass-roots level and the pyramid of powers acting above and upon it: all such elements are a part of the rural system and interfere with it. They have to be considered as such if one wishes to understand the intricate context in which villagers' rationales insert themselves, deliberately or not. Fig. 1 provides an outline of a theoretical rural system. The level of schematization is such here that we have not try to symbolize on this sketch all the relationships established between levels and circles. Nor have we attempted an enumeration of all the parameters involved in such a configuration.

Amongst the various rural systems present in South Karnataka, we shall confine ourselves in this paper to the irrigated one, where the rural change observed since two or three decades could perhaps be labelled as "green revolution". The relevance of the formula has been debated, true. Let us just use these words here as a convenient surrogate for a certain type of rural change, characterized by a set of intensive agricultural practices linked with irrigation, and by a rise of
Fig. 1. An outline of a theoretical rural system and its schematic interrelations with larger systems.

(All correlations between all parameters at any level have not been represented, nor all correlations between various levels.)
commercialization and investment which stimulate, in the village society, social dynamics as well as economic change.

Two remarks are to be made here:

1. A rural system is not a close-up entity, and hence cannot be studied in isolation. To underline just an example amongst many others, there are links between the irrigated areas and the dry ones, particularly as far as demand for labour at peak season of cutting and crushing the cane is concerned.

2. Dry areas in Karnataka sustain dramatic changes since a number of years. Areas mainly devoted to dry farming with just patches of tank irrigated lands have been or will be transformed in large-scale irrigated areas, thanks to the construction of new dams and to the digging of new canals. In the general frame of a South Maidan ecosystem, and cutting across the traditional zonation of pluviometry, the irrigated rural system has thus expanded, and is bound to expand furthermore.

Those remarks made, we can pay attention to the rural system based upon large scale irrigation in South Karnataka. Amongst the parameters which can be encompassed under the main headlines whose interrelations build up a rural system, a few are particularly relevant: social structure, agrarian structure, agro-ecological landscapes, water management, agricultural production systems, non-agricultural activities, marketing and exchange processes and networks, demography and mobility, public policies implementation, etc...

The relationships linking the considered rural system to the outer spheres (particularly the Karnataka State and the national level) cannot be overestimated, and will be studied in due course. However, at the present stage of investigation, we shall pay more attention to another factor. By and large, the irrigated rural system developed around the Upper Kaveri can be considered as one entity. But the overall access to water - the key criteria in such a system - is not uniform everywhere, and this diversity explains why distinct agricultural production sub-systems are observed inside the considered system, and why, localized as they are, these sub-systems of production raise a few important issues: in terms of peasants' adaptability to different agro-ecological units in relation with various opportunities (in capital, labour, etc...), and in terms of diversification strategies.

The search for villagers' rationales, the internal diversity in the rural system under observation, and the specificity of the topic mainly investigated the mobility/retention logics, rise finally a crucial point: how to select a representative village, or a few of them?
THE QUEST FOR A REPRESENTATIVE VILLAGE

We had, at the start of the quest, five considerations:

1. To investigate rationales of various individuals, in various social groups, is a time consuming process, which preferably requires a long stay amongst villagers. This consideration pleads for a residential research.

2. For the sake of comparison with dry lands, particularly with drought prone areas, as well as for an understanding of rural change at its maximum, investigation must be conducted in priority in the most intensive agricultural production sub-system.

3. Considering the core issue investigated, i.e. "to migrate or to stay", the representative village must not be in the immediate vicinity of district towns, nor too close to the major regional city (Mysore, pop. 600,000).

4. The quest for representativeness must evidently take into account the average parameters of size, population growth and social structure, in the considered area, i.e.:

- Average size of villages in the irrigated parts of K.R. Nagar, T. Narsipur, Mandya taluks: 1400 - 1900 inhabitants.
- Rural population growth 1971-81: Mysore district: + 21.2%; Mandya district: + 19.9%
- T. Narsipur taluk: 20.6%; Mandya taluk: 20.7%
- Percentage of scheduled castes in 1981 (in ratio to rural population):
  - T. Narsipur taluk: 22.7%; K.R. Nagar: 12.9%; Mandya taluk: 12.8%.

5. The quest has to be limited to areas where large scale canal irrigation is in vogue for long. Leaving aside the new projects recently or presently implemented (along the Hemavati, the Harangi, the Lakshmantirtha and the Kabbani rivers), field trips were henceforth conducted in four areas.(Fig. 2).

- The Chamaraja command area, in K.R. Nagar taluk, Mysore district
- The Hemagiri command area, in K.R. Pet taluk, Mandya district
- The Ramaswami command area, in T. Narsipur taluk, Mysore district
- The Visvesvarayya command area in Mandya district

This selection was based upon a map illustrating, at village level, the ratio between irrigated area and cultivated area, attention being focussed upon villages where the ratio was, in 1981, above 70%.

The diversity observed can be mainly linked with one basic criteria: overall access to water. Inside the general frame of the
The diversity observed can be mainly linked with one basic criteria: overall access to water. Inside the general frame of the Southern Maidan irrigated rural system, a few sub-systems of agricultural production can be distinguished when attention is paid primarily (but not exclusively) to this criteria.

**Type 1. Ramaswamy Canal Command Area**

Near T. Narsipur, in the Ramaswami command area, sugarcane is rare, because it requires pumpset irrigation. Except in the best villages, two paddy crops a year are never sure, and farmers, besides paddy, turn to sugandaraj flower cultivation and mulberry. The New Canal, out of Bannur tank, is not bringing much change in the visited area, for lack of water. In summary, Type 1 illustrates interesting attempts at diversification of cropping patterns, but does not illustrate the most intensive agriculture.

**Type 2. The Hemiagiri Command Area**

The lower Hemavati offers only a narrow strip of high ratio of irrigation, and sugarcane is not much cultivated.

**Type 3. The Chamaraja Command Area**

The problem here is not so much the intensivity of agriculture, as the Kaveri valley offers, around Krishnagard, an image of indisputable prosperity: two paddy crops, and sugarcane cultivation stimulated by a sugarmill. Besides the usual limiting factors (canals tail ends or local town proximity) the noticeable hurdle here is the settlement pattern: the most irrigated areas, near the river bank, have been deserted by a population who has settled beyond the lateral canals, at the edge of dry lands: inhabited villages, henceforth, have a low ratio of irrigated land as the most irrigated fields are located outside their administrative boundaries. Such a pattern might be extremely interesting by itself (were village sites shifted in order to leave the entire fertile lands free for intensive cultivation?). But the quest for a representative village cannot end in such a specific context.

**Type 4. Visvevarayya Canal Command Area**

Here, in two thirds of Mandya taluk, are the most intensively irrigated areas, where the abundant canal water supplement the old and dense network of tanks. Two factors, however, tend to subdivide this type.
2. Irrigated areas around Mysore

Areas with a tradition of canal irrigation

Areas recently irrigated, or to be irrigated

Visited command areas:

- R Ramaswami Canal
- H Hemagiri Command Area
- C Chamaraja Command Area
- V Visvevaraya Command Area, near Mandya
- ▲ Motanahalli village

HE Hemavati
HA Harangi
L Lakshmántirtha
K Kabbani

State boundary
District boundary

50 kms
1. Mandya town has grown considerably and a number of highly irrigated villages are now too close to it for being selected (Sampahalli, Mallanayakanakatte). Villages far above the average population size have also emerged in this rich area, at the north west of Mandya, where sugarcane and two annual paddy crops coexist (ex: Goravalle, pop. 2500).

2. Near the boundaries of Maddur taluk, the supply of canal water weakens. The rule, in irrigated lands, is one paddy crop followed by ragi, or sugarcane. Sugarcane is much more common than two annual paddy crops in Nallahalli for instance, because its schedule of water requirement is less demanding than what is necessary for a double paddy crop (attempted only if rains are generous).

3. The quest ended finally in Motanahalli, a village 10 kms south of Mandya town, located on the bank of the Kaveri branch of Visvesvarayya Canal. Sugarcane, two paddy crops and in addition irrigated ragi take the lead. A rice mill and many cane-crushers have been constructed. An age old tank and new pumpsets add their resources to what supplies the large canal. The village offers, on the whole, a fairly significant image of intensive agriculture as it could be observed in the irrigated rural system of Southern Maidan. Moreover, socio-demographical indicators are significant:

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</thead>
<tbody>
<tr>
<td>1670</td>
<td>+ 57%</td>
<td>+ 42%</td>
<td>+ 27%</td>
<td>+ 182%</td>
<td>14%</td>
</tr>
</tbody>
</table>

RURAL SYSTEM AND MOTANAHALLI: A PROVISIONAL ASSESSMENT

To study Motanahalli will not end with a monograph of it. Basically, what we looked for, through a case study, is an understanding of:

- a rural system
- villagers' decisions processes.

Motanahalli might be a representative village, but what is it representative of? In one way Motanahalli is representative of the South Maidan irrigated rural system. But in the other hand Motanahalli may also be considered chiefly as representative of a certain sub-system,
which itself is only one sub-type of the rural system selected for study. Compelled by the residential approach to focus attention intensively on a single village in each system, the selected sub-system here is somehow the one where what can be called "green revolution" is the more present. The limitation of such a choice is easy to underline. The diversity observed in the various areas visited and the multiplicity of villages which could differ from the average criteria on one or several grounds are such that, of course, sought-after representativeness is unavoidably restricted, and must not stand for what it could not be: the physical embodiment of a computerized average model. Is there a way to overcome this limitation?

What emerges finally, is a double image:

1. The concept of rural system leaves room for diversity inside an entity whose specificity cannot be denied when analyzed in a larger framework. Availability of water, agricultural production sub-types, settlement patterns and unequal demographical growth are some of the main parameters which, in building up diverse sub-systems, generate in the process diversified rationales and behaviours inside given rural system. This relative diversity calls probably for briefer additional village surveys. T. Narsipur area, seems, in this regard, particularly interesting.

2. The rural system is not locked in rigidity. By definition, it is open to the outside influences. By necessity, it is also in constant evolution. This world of South Maidan does not lack resources, and what was observed tend to suggest that the village community as a whole, as well as distinct social groups, always consider several solutions, which take into account the diverse agro-ecological parameters and are guided also by an unequal access to economical and technical tools.

Change is patent everywhere, and at all scales. More precisely, a gradation of three types of change, if we consider not just the irrigated rural system of South Maidan, but also its counterpart, the dry farming rural system prevailing around it. We may identify those three types of changes as:

- adaptation,
- transformation,
- drastic change when dry lands are converted through large scale schemes in canal irrigated areas.

In this process of change, the State plays fully its part in many ways, particularly as a geographical agent, when creating new command areas. But which social role does the State perform simultaneously?
Adaptation, transformation, or drastic change: who is able to generate and/or to control each of these three stages, in each rural system, in each sub-system? Who, moreover, has access to the benefit raised from these changes? Who suffers from them, absolutely or relatively? With which reactions, nurturing which decisions, which individual or collective strategies? These questions bring us back finally to our starting point, for they set the background of all villagers' rationales we are interested with...
SETTLEMENT PATTERNS IN DAKSHINA KANNADA DISTRICT: A CASE STUDY OF A MOBILE SOCIETY

K. NAGARAJ

INTRODUCTION

This note attempts to summarize a study of the nature and process of urbanisation in Dakshina Kannada district - known as South Kanara before the 1981 census - in coastal Karnataka. The nature and process of urbanisation in the district display some very distinctive features: a thin urban spread punctuated by a number of relatively more dense urban centres and an extremely high degree of instability in the spatial settlement pattern characterise the nature of urbanisation here. In this, the district exhibits many similarities with Kerala, and can be said to have what is generally called the Kerala-type urban features, a type largely unexplored in the literature.

An unstable settlement pattern is generally prevailing in dry, backward regions, reflecting in essence an unstable, backward agrarian economy. Dakshina Kannada, in sharp contrast, is far from dry, and going by conventional indicators, is also a district with a level of socio-economic development. This note also attempts to provide a very tentative explanation for this rather paradoxical phenomenon. A highly lopsided pattern of development, where the 'modern' and the 'traditional' - or the 'backward' and the 'advanced' - features co-exist in a very striking fashion, is identified as the centre-piece of the phenomenon.

SPECIFIC FEATURES OF URBANISATION IN DAKSHINA KANNADA

The nature of rural-urban spread in Dakshina Kannada

Table 1 gives below some of the salient features of the nature of urbanisation in Dakshina Kannada. The figures for Karnataka provided in the table can serve as comparative yardsticks.
Table 1: Some salient features of urbanisation in Dakshina Kannada

<table>
<thead>
<tr>
<th>Feature of Year/urbanisation</th>
<th>Year Period</th>
<th>Dakshina Kannada</th>
<th>Karnataka</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Degree of urbanisation</td>
<td>1961</td>
<td>17.93</td>
<td>22.30</td>
</tr>
<tr>
<td></td>
<td>1971</td>
<td>20.27</td>
<td>24.30</td>
</tr>
<tr>
<td></td>
<td>1981</td>
<td>24.48</td>
<td>28.92</td>
</tr>
<tr>
<td>2. Town-density (number of towns per 1000 Km²)</td>
<td>1961</td>
<td>1.066</td>
<td>1.111</td>
</tr>
<tr>
<td></td>
<td>1971</td>
<td>1.540</td>
<td>1.184</td>
</tr>
<tr>
<td></td>
<td>1981</td>
<td>2.014</td>
<td>1.304</td>
</tr>
<tr>
<td>3. Percent of urban population in</td>
<td>1981</td>
<td>52.59</td>
<td>40.94</td>
</tr>
<tr>
<td>a) urban agglomerations</td>
<td>1981</td>
<td>52.59</td>
<td>58.60</td>
</tr>
<tr>
<td>b) class-I towns</td>
<td>1981</td>
<td>nil</td>
<td>6.46</td>
</tr>
<tr>
<td>c) class-II towns</td>
<td>1981</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Even in terms of a snapshot, i.e., in terms of the picture at a specific point in time, the urban scene in the district has certain specificities: first, the district has a low degree of urbanisation and a significant level of concentration of urban population (the district headquarters, Mangalore Urban Agglomeration, accounts for more than half of the urban population of the district. In spite of this, the district also has a significant - and increasing - level of dispersal of towns.

The second specificity, related to the one noted above, relates to the nature of urban dispersal in the district. The towns here do not develop in isolation, but form part of a continuous, but thin, urban spread. Or, to put it in simpler terms, the distinction between a rural settlement and an urban one is very weak, except for certain urban centres where the urban characteristics are more pronounced.

Stability of the urban settlement pattern in the district

The most striking feature here is the very high degree of instability in the spatial distribution of urban settlements in the district. Since this feature plays an extremely important role in the district it is useful to elaborate the method adopted in the paper for studying this phenomenon. (See appendix).

With the method adopted, let us now turn to the components of growth for isolated towns and the urban agglomeration (viz., Manga-
Ilore U.A.) in Dakshina Kannada for the period 1961-1981. The results are given below in table 2.

It is clear from the table that the degree of instability in the spatial distribution of towns is exceedingly high in the district. The district witnessed a high degree of urban extension - i.e., emergence of new isolated towns - in the sixties and this phenomenon of urban extension played an exceedingly important role in the process or urbanisation in the seventies. The seventies also witnessed a very high degree of declassification.

We may also note here that the only urban agglomeration in the district, viz., the Mangalore Urban Agglomeration, witnessed a high degree of extension in the seventies. But this process of extension can hardly be claimed as a "process of agglomerisation": The core-city in fact was losing population in this decade.

Another important feature of the process of urbanisation in the district is that large scale urban extension has been taking place in the district, particularly in the seventies, the established towns in the district have fared very poorly in terms of growth rate, with a large number of them losing population in the seventies: The fact that the intensive rate for isolated towns in the seventies is as low as 12.40 per cent clearly brings it out. Thus one may hypothesise that urban extension in the district - whether within the only urban agglomeration in the district, or as emergence of new, isolated towns - has perhaps taken at the expense of established towns in the district, the core-city of the urban agglomeration inclusive.

So much for the specificities in the process of urbanisation in the district. Let us now turn to an explanation - tentative though - underlying this urban phenomenon in the district.

A TENTATIVE EXPLANATION OF THE PROCESS OF URBANISATION IN DAKSHIN KANNAKD

The economy of the district can be characterised as follows. A large part of the agrarian economy - the part which refers to the cultivation of the major food crop, paddy - can be characterised as being backward, both technologically and socially. But this backward sector co-exists with a commercial component to the primary sector. The industries in the district are basically of the primary processing type, and are well dispersed in the area.
Table 2: Components of growth for isolated towns and urban agglomerations in Karnataka, 1961.

<table>
<thead>
<tr>
<th>Period</th>
<th>Total Urban Population</th>
<th>Urban Agglomerations</th>
<th>Isolated Towns</th>
<th>Total of Urban</th>
</tr>
</thead>
<tbody>
<tr>
<td>1961-1971</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>1971-1981</td>
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<td>1981-1991</td>
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<td>1981-1991</td>
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<td>1991-2001</td>
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<td>2001-2011</td>
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Note: Figures in brackets give the contribution of the specific component to the overall rate of growth.

1981 (per cent)
On the other hand, in terms of certain indicators of social development, the district - particularly its coastal belt - appears to be an advanced one: It has a high degree of literacy; has a large number of educational institutions, including professional ones, it also has a fairly developed system of health care. And the district has an extremely well developed tertiary sector. In other words the co-existence of an extremely well developed tertiary sector with a backward agrarian economy, and with an industrial base characterised by the absence of large scale, heavy, modern industries appears to be a very striking feature of the district, so also the co-existence of backward social institutions with a high degree of literacy etc.

Let us now try to relate the specificities of urbanisation in the district with the specificities of economy observed above:

The first specificity, viz., the almost continuous, but thin, urban spread punctuated by a number of more concentrated urban settlements, observed along the coastal belt in the district can perhaps be explained in the following terms: first of all, the number of towns encountered on the coastal belt act as the processing centres and marketing outlets for the marine products, the forest produce and the cash crops from the district and its hinterland. More importantly, the nature of industrialisation - with primary processing industries scattered all along the coast line - and the very high level of development of the tertiary sector activities - again, spread along with coast line - are the factors responsible for this phenomenon of the continuous urban spread encountered on the coast. A high population density on the coast and the specific nature of the rural settlement patterns in the district¹ have also contributed their not insignificant share to it.

The most important consequence, for our purpose, of the specific characteristics of the economy outlined above is that it renders its population - or at least a significant proportion of it - very mobile. In this the nature of the agrarian economy acts a powerful 'push factor'. the low technological level - and the consequent low productivity level - in paddy cultivation, the high population pressure on land, preponderance of small uneconomical holdings, absence of gainful employment for a large part of the year for a large proportion of the population, the backward social institutions under which surplus is extracted on a large scale from the peasantry - all these factors make it almost impossible for a large section of the peasantry to eke out even a bare subsistence from the land. On the other hand, the high degree of literacy - as also the large number of educational institutions, including the professional ones - in the district can provide, at least to a part of the population, a level of education and skills that can provide the basis - as
well as the motivation and the incentive - for migration. The large scattered industrial base and the highly developed tertiary sector in the district, apart from acting as pull factors, add to the mobility of the population in the district also by virtue of their specificities, which in turn would impart certain specificities to the towns in the district, noted below:

As already noted, the large number of towns on the coastal belt act as processing centres and marketing outlets for the marine products, forest produce and high value cash crops from the district and its hinterland. A primary processing industry - unlike a large scale, heavy modern industry - has a limited range of backward and forward linkages and this restricts the size and the growth process in these towns. Moreover, the fortune of these towns is closely linked to the production, and much more importantly, to the market conditions, of these products. Given the high degree of instability in the market conditions for these products - particularly since they are often linked to international markets - one should also expect a high degree of instability in the fortune of these towns.

All the factors noted so far can lead to: a) a large scale migration, both long distance permanent and short distance seasonal and b) a high proportion of 'floating population' within the district, with a large number of people commuting to work place, or travelling for business purposes, every day (a highly developed tertiary sector, the transportation system in particular, ensures this).

Thus the district has the characteristics of what may be termed a 'mobile society', and this is particularly true of its coastal belt. It appears as if this mobility is almost a permanent feature of the economy, with the very nature of the economy providing the basis for such an almost continuous and constant movement of population. Needless to add, this high degree of mobility prevalent in the district should explain, to a considerable degree, the very high degree of instability of the settlement pattern in Dakshina Kannada.

But while the foregoing constitutes a general, broad explanation for the high degree of mobility - and hence of instability - as a general feature of the economy, the specific questions as to why certain specific settlements get classified as urban in a census, or the reason why many of the urban settlements remained stagnant or lost population in the seventies, are still open. And we offer the following as tentative answers:
The development of an excellent transport system, particularly along the coastal belt, in the last decade or so would have played an important role in the instability. Paradoxical though it may seem, some of the transportation nodes in fact lost population on a large scale in the seventies. A part of the reason for this phenomenon would be that the development of the transportation system obviated the need for a significant section of workers – especially the salariat employed in the highly developed tertiary sector, particularly the banking sector - in these towns to stay there: they would either stay on the outskirts of the towns, or in a village nearby and commute to the work place every day: Mangalore city, Mulki, Udupi and Coondapoor on the coast belt, Karkal and Puttur in the interior are examples of this. On the other hand, some other settlements which are also transportation nodes, and appear to have some 'positional advantages', appear to have grown at moderate to high rates over the decade, and hence get classified as urban in 1981. Buntwal, a 1981-new town, with a population of 31,379 in 1981, is a case in point. Saligrama on the coast, or Surathkal near Mangalore may be also quoted in this regard.

In sum, our discussion on Dakshina Kannada district has brought home the fact that a high degree of instability can occur under conditions other than a dry, unstable and backward agriculture. In fact a stable agriculture - albeit with a low level of technology, and with a high commercial component to it can also act as a basis for instability. And a high level of development of secondary and tertiary sectors, based primarily on the commercialised component to the primary sector, can in fact lead to a high degree of mobility of the population, and hence to a high degree of instability.

APPENDIX: A Methodological approach to the spatial distribution of urban settlements

The net addition to urban population in a geographical area (say, a state or a district) between any two censuses can be decomposed into the following components:

1. Net increase in the population of already existing towns and which continue to be towns; for want of better term we call this the 'intensive component' (I);

2. Addition due to emergence of new towns: i.e., addition due to classification as 'urban areas' of settlements hitherto classified as 'rural areas'. We call this the 'extensive component' (E). This urban extension can take place in two ways:
a) extension can take place around a core town in an urban agglomeration - i.e., a new satellite town can emerge as part of an urban agglomeration (E1); and

b) extension can take place by the emergence of an isolated town (E2);

3. A third component, a negative one, due to declassification of urban areas - i.e. the component due to the fact that settlements which were hitherto classified as urban areas get declassified and become rural areas. We call this the 'declassificatory component' (D).

Now, in any geographical area, the growth rate of total urban population, or of population in isolated towns, or of population in urban agglomerations, can be decomposed into three parts corresponding to the three components noted above. That is, the total growth rate R (for population/urban agglomerations/isolated towns in an area) can be written as the sum of the three parts, Ri, Re, & Rd, corresponding to the intensive, extensive and declassificatory components respectively.

Now in a high degree of instability in the urban settlement pattern in an area is generally associated with:

1. A high (positive) value of Re, or a high (negative) value of Rd (or both) for the isolated towns in the area: or

2. A high (positive) contribution of the extensive component, or a high (negative) contribution of the declassificatory component (or both) to the net addition to the population of the isolated towns in the area.\(^2\)

We may emphasis here that the criteria delineated above relate solely to the components of growth for isolated towns in an area. This is because extension around a core-city in an urban agglomeration cannot always be taken as an indicator of instability in an area. We shall try to clarify this below:

Extension around a core-city in an urban agglomeration can take place in two forms:

1. The core-city in the urban agglomeration continues to grow at a fast rate while urban extension around it takes place; and

2. The core-city grows at a low rate, or stagnates (or even loses population) while urban extension around it takes place.
We denote the first process, where the core-city in an urban agglomeration, while continuing to grow at a fast rate by absorbing population from a larger hinterland, simultaneously transmits the urban growth process to its immediate vicinity, as the process of agglomerisation. Generally this process is associated with high values of both Ri & Re for the urban agglomerations in an area.3

We may note here that the process of agglomerisation as defined above cannot be taken as an indicator of instability. If anything, by concentrating population in dynamic (large) urban agglomerations, the process imparts a degree of stability to the settlement pattern; it in fact, represents a process of accretion to the already existing, dynamic urban agglomerations.

On the other hand the second process above simply represents a case of extension within an urban agglomeration with the core-city, which perhaps does not have any dynamism of its own, not playing an integral, or key role in this process of extension. The relationship between the core-city and the satellite towns in this process is not an organic one as it is in the case of the process of agglomerisation. We term such a process, which is generally associated with a low value of Ri and a high value of Re for the urban agglomerations, simply the process of extension within the urban agglomerations. And this process, unlike the process of agglomerisation, is not considered to be an indicator of stabilities.

NOTES

1. A rural settlement in the district consists of scattered and dispersed houses. The cluster of houses constituting a rural settlement, a phenomenon that one comes across in many other parts of the country is almost totally absent here. Thus a village here is more of an administrative unit than an economic one; and it is very difficult to know where one village ends and the other begins. This pattern is perhaps due to the fact that groundwater is available almost everywhere in the district and this obviates the need to build a settlement - i.e. all the houses which constitute a settlement - near a water source.

2. Which is the same as a high contribution by Re and Rd to R in the case of isolated towns in the area. This will take care of situations where the overall rate R for isolated towns has a low absolute value, but the contribution of Re and Rd would be high: i.e. a growth pattern where a high degree of instability coexists with a low rate of growth of isolated towns.

3. Note that Ri here does not represent the growth rate for the core-city. It is the (intensive) growth rate between two censuses for that part of the urban agglomer-
ation which was classified as urban in the earlier census. And since the core-city generally accounts for a large proportion of the population in an urban agglomeration, a high Ri is usually associated with a high growth rate for the core-city.
SOCIAL AND ECONOMIC CHANGE
IN A KARNATAKA VILLAGE

Abdul AZIZ

INTRODUCTION:

Change is generally viewed both as a process which discloses the mechanism of change and as a sum total of elements whose structure assumes a state of relative stability of the system. Keeping this broad perspective of the meaning of change, the present writer has examined the social and economic change that has occurred in his own village over a period of three decades or so. While details have separately been presented in a full paper, it is intended here to attempt a summary of that paper to meet the seminar requirements.¹

The village studied is Hunisikote of Kolar district. It has 115 households having 789 persons. The village is a multi-caste settlement though like almost all villages in South Karnataka the Vokkaligas - the cultivating caste - are dominant. Members of the traditional artisan castes like potters, weavers, stone cutters etc., and Harijans and Muslims constitute the other social groups.

THE CHANGE AGENT

The change agent identified is a spurt in sinking of irrigation wells and the consequent change in cropping pattern with the coming of mulberry to the village. During the period prior to this change, the farmers depended on the village tank and the unprotected open wells for irrigation. The irrigated crops raised were sugarcane, betel leaf, paddy and potato. But the proportion of land under these crops was not very significant. The vast proportion of land which depended on rainfall was put to cultivation of ragi and other millets. Not surprisingly, irrigated land by and large belonged to medium and large farmers and mostly to Vokkaligas. The other social groups were generally dry land cultivators engaged in growing ragi and millets.

The drought of the mid-'60s led to sinking of wells on a large scale with or without Government assistance. Even the non-traditional irrigator went in for an irrigation well with a view to cushioning the impact of a possible drought in future. The cultivation of cash crops like
sugarcane, potato and betel leaf continued to be the monopoly of the traditional irrigation users who were incidentally the medium and large farmers belonging to the Vokkaliga community. The new irrigators - the non-Vokkaliga small farmer - continued to be cereal producers growing either irrigated ragi or maize or both. They did not take to cash crop till the first half of the '70s when mulberry was brought to the village from the neighbouring taluk. Mulberry became part of the basket of crops and it became a favourite of both the small and large irrigator farmers. With mulberry cultivation, cocoon rearing was adopted by the farming households as subsidiary occupation.

SOCIAL AND ECONOMIC CHANGE

Spread of well-irrigation and mulberry cultivation brought about a striking occupational mobility. In the first place, a larger number of households adopted agriculture as the main or as a subsidiary occupation. Secondly, the well-sinking activity generated new skills viz., stone cutting. This skill which was a preserve of the Voddas - a backward community - was picked up by the Harijans who are thriving as the much sought-after stone-cutters. The Vokkaligas, who were reluctant to learn these skills from the low cast Voddas, could share the gains of well-sinking activity by participating in the low paying unskilled job of Voddas viz., earth cutting. With the decline in well-sinking activity this group is now engaged in loading and unloading of the cut stones into transport vehicles - an activity which has gained a foothold in the village following a rise in demand for size stones and stone slabs in the neighbourhood.

Well-irrigation has thus transformed the economy of the village under study into a mulberry growing, cocoon rearing and cut-stone producing economy. The question is whether the village economy would stabilise its cropping pattern and occupational structure at the present point. Though it is difficult to be categorical, there are indicators that mulberry cultivation will be further extended as there is some possibility of the remaining well-owners taking to its cultivation. The possibility of some more households from the present non-irrigators farmers sinking wells and cultivating mulberry cannot be ruled out. Similarly, as only 42 out of the 55 mulberry growers were rearing cocoons at the time of our investigation, the chances of the rest of them taking to cocoon-rearing cannot be ruled out. This means that all of those who have the required infrastructure like land and irrigation well are likely to become mulberry growers and cocoon rears. Even then, the question to be examined is whether the village economy will
stabilise at that point. That depends, among others, on demand for silk from which demand for cocoons and mulberry is derived. Assuming that demand for silk will continue to grow as ever, then it is the relative rates of return from various crops that will determine whether or not the present cropping pattern and the occupational structure will remain intact.

SOME OBSERVATIONS

The structure of the village economy under study in terms of cropping and occupational patterns appears to have undergone a drastic change with the sinking of wells and adoption of mulberry cultivation. Thus, there has been some degree of diversification in cropping pattern during the period under consideration. New cereal crops like maize and new cash crops like mulberry, vegetables, etc., are being grown. The traditional cash crops like sugarcane which had promoted gur making as a cottage industry, betel leaves and potato have in a substantial measure been replaced by mulberry. Mulberry cultivation is not confined to a handful of caste cultivators as was the case with the cultivation of sugarcane, betel leaves and potato; even the traditional non-cultivator belonging to backward castes is drawn into mulberry cultivation today.

Further, agriculture is becoming a source of livelihood to an increasing number of households in the village. With the result that the number of households which can be considered as directly not depending on agriculture has drastically come down. However, it is desirable to note that despite the prominence of agriculture the village under study is not following the unilinear growth path as did Epstein's Wangala village. Though the base of agriculture has been strengthened after irrigation, new vocations like stone-cutting, earth-cutting and, above all, cocoon rearing are flourishing in the village. Cocoon rearing, it may be noted, is a replacement for gur making. But unlike the latter, cocoon rearing is neither a seasonal activity nor is confined to a handful of households; it is an all season vocation and is practised by traditional as well as non-traditional cultivators alike. Thus the village economy has both a flourishing agriculture and a flourishing cottage industry in cocoon rearing. The differential growth paths observed in respect of our village and Epstein's village lies in differences in the nature of the major commercial crop grown. The former is a mulberry growing and the latter is a sugarcane growing economy. Mulberry and sugarcane are inputs of wider industries viz., sericulture and sugar respectively. But the setting up of the sugar mill in the nearby town did not encourage in Epstein's village gur making, which is a logical corollary of sugarcane
cultivation. On the other hand, the absence of a large scale organised cocoon rearing farm nearby did encourage the mulberry cultivators of our village to develop cocoon rearing as a cottage industry and, in this way, set the tone for at least a bi-linear growth path in the village. Moreover, mulberry cultivation and cocoon rearing have integrated our village economy into the wider market economy by producing linkages through scale of mulberry and cocoons and purchase of the necessary inputs like fertilisers, pesticides, silk-worm eggs, and other infrastructure needed for cocoon rearing.

Whether the structure of the village economy as seen in terms of cropping and occupational pattern will stabilise at the current point is a difficult question to answer. One possibility is that in future some village household might consider the proposition of starting filatures and thus might take the village economy to the logical end of the sericulture industry. Another possibility is that some enterprising farmers might take to cultivation of more remunerative but more risky crops and thereby further diversify the cropping pattern. But the present mood of the farmers seems to be otherwise. They appear to be happy with mulberry growing and cocoon rearing for the time being. A further change in cropping pattern and occupational structure seems to be a distant possibility unless mulberry and cocoon rearing become less remunerative compared with the low risk cereal crops in which case there will be a shift to cereal growing.

NOTE

1. Social and Economic Change in a Karnataka Village, 1989, which is a revised version of the paper published in G. Thimmaiah (Ed.) : Studies in Rural Development, Chugh Publications, Allahabad, 1979. This revised version will be published in a coming P.P.S.S. issue.
AGRICULTURAL COLONIZATION AND SOCIO-ECONOMIC CHANGE IN A KODAGU VILLAGE.

Philippe SCHAR

Rangashipura, the studied village, is located in the eastern part of Kodagu district, on the left bank of the Kaveri river between Kushalnagar and Siddapura. The village has recently been created to the detriment of the dry deciduous forest which occupies this part of the district where the average annual rainfall is 1000 to 1500 mm. In this area, the socio-economic changes have been linked to the different phases of the agricultural colonization which have been followed by different influxes of immigrants. The cultivated area could be extended and the easy access to agricultural lands for most of the settler families led to a peculiar type of socio-economic relationships between the groups of the village society. Rangashipura is hence an atypical village compared to those one can find in Kodagu district.

THE STAGES OF THE AGRICULTURAL COLONIZATION

According to the village people, the first migrants settled in Rangashipura during the first part of the 19th century, after the fall of Tippu Sultan. In those days, the area lying between Kushalnagar and Nanjarayapatna was entirely covered with a dense forest. The settlers cleared plots of land to cultivate paddy in the alluvial valley of the Kavery river. The average annual rainfall being 1114 mm, the yields of the crop used to be very uncertain, as a result of the high annual variability of the monsoon. In 1870, the administrative borders of the village were delimited by the classification of the surrounding forests as Governmental Reserved Forests.

In 1881, nine families lived in Rangashipura. It seems that only three of them had some land in the village, the six others were agricultural labourers attached to the farmers. These three landholdings appeared to be patches of cultivated land scattered among the forest. At the end of the 19th century, the British decided to build a dam on the Chikle Holle river in order to irrigate 20 kms of alluvial lands in the Kaveri valley. The canals gave the farmers the opportunity to irrigate paddy during the kharif season. Although the size of the dam was not
Figure 1: Landuse and landholdings - 1912

Figure 2: Landuse and landholdings - 1951

- Orange plantation
- Wet land
- Dry land
- Paleari

A number has been allotted to each landholding.
sufficient for allowing a second crop, the area became attractive and the
village irrigable lands were rapidly turned into paddy fields.

The first Village Register Book (1912) gives the following
particulars: the total village area was 187 ha. The agricultural area was
93 ha out of which 68 ha under paddy. Houses and dry crops were
located above the paddy fields on a strip of 18 ha of dry land (figure 1).
Paisari (village forest) occupied 87 ha of land at the bottom of the hill.
This forest was used by the whole village community for cattle pasture
and firewood gathering.

The agricultural land was divided between 18 landholders.
Twelve owned more than 2 ha. These medium and large farmers
belonged to castes that traditionnally possessed agricultural land, i.e.
Lingayat, Kodaga (the dominant caste in Coorg), Okkaliga and Gowda
(peasant castes that came and settled in Coorg during the 17th century).
The predominant number of medium and large farmers (figure 3) could
be explained by the fact that the new settlers had to be wealthy enough
to employ an important number of labourers to clear the forest and built
the terraces needed for rice cultivation.

Until 1951, the landholding and landuse situation remained more
or less the same. Only 15 ha of paisari land were gained for agriculture.
The number of landholders reached 24. The medium and large farmers,
who still represent the dominant groups, started turning some plots of
dry land into orange plantations.

In the 50's, the booming of population in the district led to a
second phase of migration in the village. This second influx of
migrants was possible due to the declassification of a portion of the
reserved forest: 80 ha of irrigable land and 15 ha of dry land located in
the Chikkle Holley Valley (figure 2). In this area, the government
decided to create a colony for Scheduled Tribes families. The colony
consisted in 11,2 ha of wet land and 5 ha of dry land allotted to 20
households. The objective was to fix on agricultural lands, and within
the village boundaries, tribal families that used to live in the Reserved
Forest. The remaining 75 ha of irrigable land were rapidly deforested
and turned into paddy fields by new migrants belonging to the
traditional peasant castes, as well as backward castes and scheduled
tribes. Between the mid 50's and the late 70's, 50 families came and
settled in the Chikkle Holle Valley. Most of them created small and
marginal land holdings.

Coffee cultivation expanded rapidly in Coorg at the end of the
19th Century. Its geographical extend was limited by the British who
declared the eastern part of the district unsuitable for coffee cultivation as it was too dry. After Independence, the farmers, attracted by the high profitability of this crop gradually developed the plantation beyond the traditional cultivated area. The first coffee plantations were created in Rangashipura in the 60's by some of the largest farmers. The old paisari which totalised 70 ha in 1951 does not exist anymore as a traditional village forest. Located at the bottom of the hill, the land appeared suitable for coffee cultivation and was gradually encroached by farmers.

At the same time, the increase of labour requirements due to the development of paddy and coffee cultivation has led to a new phase of migration. Landless families, among which a majority of Harijans coming from the dry parts of neighbouring districts, came and settled in Rangashipura. They have progressively encroached the remaining of the village forest in order to built their houses and cultivate plots of dry land. In 1977, the Panchayat President created a colony on 10 ha of paisari land. Each new settlers received a plot of 0,4 ha.

Nowadays, the village total area is 280 ha out of which 224 ha are cultivated. The paisari have been reduced to 14 ha which are under a high pressure from the tribal families. The paddy fields represent more than 50% of the agricultural land. Paddy cultivation is still traditionnal but gives good yields (5,4 t/ha). Since the introduction of coffee cultivation in the 60's, the plantations have been developed on 41 ha out of which 75% are mixed with orange trees. These plantations are of a rather small size compared to the one in Kodagu District, but the crop appears to be a very valuable one. The rainfed crops (maize, tapioca, ragi ...), mostly restricted to the two colonies, occupy 16 ha.

SOCIO-ECONOMIC RELATIONSHIPS BETWEEN THE GROUPS

The transformation of the Chikkle Holley Valley and the traditional village forest into agricultural lands have resulted in the creation of a new class of small and marginal farmers which did not really exist in the village before 1950. The availability of agricultural land has allowed most of the families of migrants to own some land and start cultivation. Among the 192 households residing in the village, 169 have cultivation as their primary or secondary source of income. Only 11 families are landless agricultural labourers.
Figure 3 - Land distribution (1912 - 1984)

1912

1951

1984

size of the landholdings

> 4 ha  2 to 3.9 ha  1 to 1.9 ha  < 1 ha

> 4 ha  2 to 3.9 ha  1 to 1.9 ha  < 1 ha

> 4 ha  2 to 3.9 ha  1 to 2.9 ha  < 1 ha

number  wet land (ha)  plantation (ha)  dry land (ha)
The easy access to agricultural land has allowed the castes traditionally dependent from the peasant castes to start cultivation for their own purpose. Among 88 scheduled caste and scheduled tribe families (46 % of the total village population), 79 % own some land. Most of them are small or marginal farmers. Nevertheless, the relative independence towards peasant castes has been the main reason to built up new socio-economic links between the different groups.

Eighty-eight families get their main income as agricultural labourers. The 11 landless families are permanent labourers who work for a particular landlord on a monthly basis. Their condition are not very different from those of the traditional attached labour workers. They get the lowest salaries in the village, most of it must be paid back to their landlords to whom they buy their foodgrains. All of them belong to the Yarava tribe and came to the village before 1950.

For the marginal and small farmers who have to hire out labour, the situation is different. The labour requirements are very high in the village. It was estimated that an agricultural labourer is used to working an average of 225 to 250 days per year. During the paddy transplantation and the paddy and coffee harvests, landlords have to bring labourers from neighbouring districts. The seasonal unemployment is reduced as paddy and coffee represent a long agricultural season. On top of this, some farmers in the neighbouring villages have dug wells as they could not get enough water from the Chikkle Holle canals. Now they can grow two paddy crops a year which represent an important number of working days for the labourers in Rangashipura.

Among this group of labourers, we have estimated that the income gained from their own land was about 30% of their total annual income. The relative independence towards the village peasants have given them a mean for a social and economic type of revendication. They have succeeded in imposing minimum salaries which are equivalent to the minimum salaries given by the governmental bodies like the forest department employing daily labourers to work in the nearby forest plantations. During the peak season, they get wages which are about 25 % on top of the minimum salary.

On the other hand the development of coffee and orange cultivation has introduced a specialization of agricultural tasks like orange picking for which the workers are paid twice more. This group has tried to organize itself in teams of labourers working under contract
for specific agricultural operations like paddy threshing, coffee harvesting and sometimes paddy transplanting. In that way, the labour productivity gets higher, the farmer has his work done quicker and the workers get better wages.

Considering the artisan and services castes, the traditional system of remuneration in foodgrain has never existed in the village. The eight families belonging to this category settled in Rangashipura after 1950. All of them, except one, are landholders.

To answer to the local demand, three achari carry on the ancestral occupation of the caste. They are paid in cash after the work is done. They have been farmers since they moved to Rangashipura and agriculture is the main occupation of the family. A fourth one is a landless family in which the head is a cabinet-maker who works for the urban market of Kushalnagar. The potter has given up his traditional occupation after he moved to the village due to the lack of local demand, as the village people are nowadays more fond of modern vessels. He owns 1.5 ha of wet land and his two daughters work as agricultural labourers during the kharif season.

The easy access to agricultural land or the possibility to obtain a better employment have put an end to the traditional degrading occupations. For instance, the dhobi who has 2.5 ha of wet land does not want to wash the villagers' clothes anymore. In the same way, the Madiga family has given up the traditional duty of the caste which consists in looking after the dead cattle. The head of the family is a contractor who works for coffee planters and has his own small coffee plantation. The dead cows are taken to the forest by some other harijan families from the Holeya caste who accept to do this degrading work for the benefits of flesh and skin.

Nevertheless, these two people have kept some of their traditional occupations, the honorable ones. For instance in Coorg, the dhobi is the only person, along with the brahmin priest, who may purify a house after a death, and the village washerman is still doing this ritual fonction. Similary the madiga keeps officiating as pujari at the Mariamma festival.

PERSPECTIVES

Rangashipura appears to be a prosperous village. We have conducted nutritional enquiries among the different socio-economic
groups for a period of a year. The results have shown that the caloric and protein intakes were above the Indian standard requirements in every category. That did not mean that all the families had enough food, the whole year round, in terms of quantity and quality. We have estimated that 48% of the village population belonging to the lowest income group had a nutritional intake just above the limits. In this weaker section which include landless agricultural labourers families, and small and marginal farmers who have to hire themselves out as daily workers, seasonal or occasional nutritional problems might occur. However, the local situation was better than the average nutritional situation in Kodagu villages. The relative importance of income in this category was linked to the availability of land and the high village labour requirements, in other words, to the type of economic development that has taken place in the village since the beginning of the agricultural colonization.

Nowadays, this type of economic development based on the extent of cultivated land is over. Most of the irrigable area has been turned into paddy fields. The development of coffee cultivation is still possible for some farmers but limited to a few hectares. The small and marginal farmers have to face acute problems. The pressure on land is very high, especially in the two colonies where 85 families live instead of the 40 expected at the time of their planning. On the average, the marginal farmers did not get much benefits from the different Rural Development Programmes that started in the villages a few years ago, and proletarianization seemed to be the only way open to this group.

Nevertheless, a new dam is under construction on the Chikkle Holley river, which should allow the farmers to grow two paddy crops a year, and irrigate the coffee plantations through sprinklers. It is not too optimistic to think that the whole population will take advantage of this new economic change although different sort of problems may arise. The possibility to grow two paddy crops means more labour. The village labour requirements could increase all the more since some small and medium farmers who own wet land will become self-sufficient and will withdraw themselves from the labour market.

Mechanization does not seem to be a solution because of the topographic conditions in the village. The increase of irrigation could lead to a new phase of migration. As the uncultivated lands are not available anymore, the result could be the creation of a new socio-economic group (landless daily workers) that hardly exists in the village at the moment. Another possibility is that the new settlers start encroaching the Reserved Forest area. In fact, that has always been the local answer to this kind of phenomena.
The villagers' pressure on the Reserved Forests is already very important. Without a change of behaviour from the villagers as well as from the Forest Department which is reforesting the area with teak from which the local people do not get any benefit, the increase of the actual trend could lead to desastrous consequences:

1) for the villagers, because the use of forest areas has always been part of the village economy (the forest is the only pasture land for the village cattle; it provides free firewood, the sale of by-products collected by some tribal families represents a non negligible source of income...).

2) for the environment of the western ghts, because the dry deciduous forest is one of the last forest left in South India.
3

THE MIGRATION ISSUE
PERMANENT AND SEASONAL MIGRATION
IN TWO CONTRASTED RURAL AREAS
(RAICHUR AND SAKLESHPUR)

P.D. MAHADEV

In any development process, the human resources play a decisive part. The human resources in question could be either indigenous to the region concerned or introduced from outside the region. If in case it is indigenous it would have contributed to the development of the region from the very beginning and the region concerned would have become fully matured and developed. This type of development is not very common. But the chances of development taking place with the addition of human capital from outside the area seem to be more common. This leads us to conclude that if human resources are not added in the form of migration, then the development of the area tends to suffer. This conclusion however is highly debatable.

Migration is of different types: urban to urban; rural to urban and rural to rural. The last type, i.e. rural to rural is not very common except in predominantly agricultural countries with a slow rate of urbanisation. In addition, this type of migration is not usually discernible or visible, since it involves no change in occupational structure of the population but rather testifies for the migrant’s quest for a better individual or household economic condition. The receiving end of the migration also does not show any drastic change in the environment; the agricultural or plantation area remains the same, perhaps with changes in the type of agriculture or the crops grown. One of the main reasons why it does not show drastic changes is because unlike urban centres which are point destinations, rural areas are space/region destinations. So much so, the impact is diffused rather than concentrated.

This paper would try to deal with two economically and physiographically contrasting regions of Karnataka with different types of migrations. First, the permanent migration from Krishna and Godavari delta areas of Andhra Pradesh to the left bank command area Tungabhadra reservoir in Raichur district and the second, the seasonal migration of plantation workers to Sakleshpur plantation region from the neighbouring area, mainly for the purpose of coffee berry picking.
COMMAND AREA CASE: RAICHUR DISTRICT

This is a case which exemplifies the oft repeated term pull factor. The Tungabhadra project was completed during the year 1958 and the migration into the area started in the early 1960's and continued upto the middle of 1970s. During this time span, most of the area was brought under irrigation agriculture. The immigrants, mostly landless agricultural labourers or small and marginal farmers migrated over a distance of 600 kms in search of better economic opportunities where they could use their skills which they possessed to practise irrigation agriculture. Originally, Raichur district was a backward region with semi-arid climate where rainfed agriculture with coarse grains and oilseeds as the main produces were characteristic. When the region was converted into an irrigated area, the local farmers were not able to adapt themselves to the new situation and hence, sold away a part of their lands to the migrant farmers who were ready to pay higher prices. This purchased land was converted into blooming fields by the migrant farmers which led to all round development particularly in agricultural sector.

When the migrant population is analysed in structural context, it can be said that a part of the migrants were amongst the poorest of the poor who did not have any land in their native places to sell. Another section of the farmers belonged to the small and marginal farmers land holding category who hoped to make good and were often rewarded in their efforts. The last section of the migrants had medium sized holdings and they either sold their lands or left them with their kith and kin. They migrated with some capital and became big landlords in their destination areas. If one sees the overall picture it can be said that due to the hard work put in by the immigrant population, the region itself developed. This is the case where addition of human capital in the form of permanent migration has resulted in the development of rural area by strengthening the agricultural base.

PLANTATION CASE: SAKLESHIPUR AREA

The second example is of seasonal migration to the coffee plantation area of Saklespur in Western Ghats. This part of Western Ghats were slowly converted from forest economy to plantation economy. This transformation begun approximately 150 years ago. This area which was densely forested had very sparse population and even now it ranks lowest in population density though considerable immigration has taken place due to establishment of coffee plantations.
The scarcity of human resources was a deterrent to the development of the region. The establishment of plantation first led to a permanent gration to manage them but now, with enough population base, the seasonal migration has been going on. The seasonal migration is itself of two types; first, migration through middlemen and labour contractors for a duration of about four months and second, migration for contract work for shorter periods for a number of plantations. The responsibility of feeding and sheltering the seasonal labourers for berry pick-up lies on the estate owner whereas in the case of contract labourers, the responsibility lies with the contractor.

During the peak season of orange picking, pesticide spraying, weeding etc., the contractors bring their own labour force who migrate from Kerala. These migrant labourers go from one plantation to another, do the job in the shortest possible time and return back to Kerala.

Seasonal plantation labourers are those who migrate to the plantations in the picking season. They migrate from various places outside the taluk as well as from other districts in search of jobs on the estates. This is because the demand for labour varies drastically from the lean months to the picking season. Permanent labourers alone are unable to cope with the increased workload in the picking season. When the seasonal labourers are not working on the estates they farm either their own land or that of others. In the slack season of their traditional agriculture, which coincides with peak season of coffee plantations, they migrate to Sakleshpur and other plantation areas for a period ranging from 3-4 months a year, usually between the months of December and March. Their work pattern can be roughly described as follows: They plough their land in their villages soon after the first shower in April and tend the land. Soon after the regular rains begin in June and the temperatures are consistently high they begin their agricultural operations like sowing the seeds and weeding the fields. In late November or early December, when the growing period is over, they harvest their crops. Then these labourers migrate, seeking employment on the estates, usually taking their meagre belongings and their entire families with them.

As indicated earlier, migrant labourers are those who have a long pronounced slack season in their own agriculture in their native villages and who being poor, need alternate employment. In other words, these migrants usually come from non-irrigated dry agricultural tracts which do not require continual attention. The survey\(^1\) also indicated a previous association with the labour supplier and plantation area.
It should be noted here that in the eastern part of Hassan District dry conditions prevail and this lead to the migration of seasonal labourers to nearby Sakleshpur. Similarly, the drier part of Dharwar such as the Ranibennur area supplies the bulk of labourers amounting to 27.7 per cent though the distance is great. The neighbouring district of Chikkamagalur which also has plantations and where environmental conditions are similar to Sakleshpur, supplies about 15.5 percent of the requirement.

The spatial pattern of migration of the seasonal labourers reveals that there is no pronounced distance decay function. This is because apart from the distance, other factors also affect the flow of labourers such as the resource structure of the regions surrounding the plantation areas and their capacity to supply labour and the working season complement. The direction from which labourers come is influenced by rainfall, topographic, and accessibility conditions. Furthermore, the source regions are to some extent drought prone and the small and marginal farmers and landless labourers find it profitable to migrate and work as seasonal labourers rather than stay back at their villages and be unproductive.

The labourer suppliers who generally deal with the estate owners are somewhat like middlemen who go about scouting for labourers in villages with which they have contact. It has to be made clear that the labourers do not go to just any plantation, but rather they are recruited by a labourer supplier from their own or a nearby village who takes them to certain plantations. He would have already visited the various plantations and talked to the plantation managers or owners, and decided upon the period, wages and the quantum of labour required. On such a firm understanding he would recruit labourers already known to him as well as those whom he had taken the previous year and take them with him. Usually the labour supplier deals with the same plantation as in the previous year if his past relations and experience with the manager of the plantation had proved satisfactory. The manager also prefers to use a regular supplier because he knows him already, thus making their dealings easier. It was found by the survey that most of the labourers go to the same plantation year after year and in some cases even for two generations. The labourer supplier is responsible for providing the number of labourers required: usually up to fifty in number. For this he gets a fixed sum from the estate owners and they employ him to supervise the labourers recruited by him and to pay their wages. Furthermore, he also usually gets a commission from both the labourers and the estate owners. Normally about 10% of the labourers wages is taken as a commission by the labourer supplier. He is held responsible for the labour he recruits. On
a bigger estate which may need more than one or two hundred seasonal labourers the contract to supply labour is given to more than one supplier. This system for supplying the required labour exists on most of the estates which are medium or large in size, that is those over 15 hectares with a large scale of operation.

These labourers are housed either in dormitories or in rows of sheds and their wages are paid on a weekly basis. They are, however, not entitled to other benefits like provident fund contributions and long-term medical benefits. Their wages are determined by the quantity of berries they pick each day, with a stipulation that they must pick a certain minimum quantity. Any amount picked over and above this quantity becomes additional income. Though child labour is not allowed on coffee plantations, the children of the labourers also help their parents with picking and this is added to their parents’ daily quota. In the year of the survey (1982) it was found that on average about 50 kgs. of berries were picked at the rate of Rs. 0.16 per Kg. and the daily wage earned by each labourer amounted Rs. 7 to 8. There is an almost equal ratio of permanent to seasonal workers on big plantations which means that the coffee plantation areas witness a very high rate of immigration, whereby the worker population increases to about twice that of the usual labour force for a period of three to four months.

The smaller estates, on the other hand, resort to a contract system for picking the coffee berries. These smaller plantations do not have permanent labour of any significance. At the time of picking, batches of labourers usually come from Kerala and do the picking in about 15 days on a contract basis and then move on to the next small plantation and repeat the same process. The small planters are not able to give jobs to the labourers for a long duration and this necessitates the migration of the contractor along with his band of labourers. The advantage for the small planter is that he need not pay for provident fund contributions, health, educational and childcare facilities, thus making a saving on these items. The contract labourers also do many of the jobs such as weeding, pruning the shade trees, and applying pesticides and fertilizers to the fields etc. Since most of these jobs are done by contract labour the maintenance of a permanent labour establishment throughout the year is not needed.

The above two studies bring out the differences and similarities in migration patterns in two different geographical regions. The permanent migration and the seasonal migration seem to depend mostly on the nature of agriculture practised and the crops that are grown. In the long run there would be assimilation of permanent migrants with local people
in Raichur district whereas in Sakleshpur plantation area this is not expected.

NOTES

1. The study of plantation labour in Malnad region of Karnataka is drawn from a bigger study conducted by the University of Hiroshima and the University of Mysore under a joint project titled by Geographical Field Research in South India 1982.

2. The study of the migration of Telugu farmers to Raichur district forms a part of a wider study titled Impact of irrigation on settlement, landuse and demographic change funded by International Development Research Centre, Ottawa, Canada.
EDUCATION AND RURAL OUT-MIGRATION

H. RAMACHANDRAN

INTRODUCTION

The paper is based on a research project completed recently wherein we have attempted to analyse the role of education in rural development*. The study pertains to a backward district -Tumkur- of Karnataka. The data base is provided by a household survey of about 30,000 households residing in 245 randomly selected villages in Tumkur district and the questionnaires were canvassed during April-June 1976. A resurvey of 10% of the sample villages (25) covering about 4,200 households has subsequently been completed to analyse the changes in the household attributes. This data is now being analysed.

Educational selectivity of inter-regional migrants has been long recognised. The association of educational level and distance of migration, and education with mobility in general have also been dealt with a number of studies (Shyloch and Nam 1965, Preston and Preston 1983, Meyer 1972). However, it is apparent that the study of immigrants and their attributes have dominated over the study of out-migrants particularly those originating in rural areas. A study of rural out-migration assumes importance since education is considered to be a major agent of social change and development and one finds from the few studies high incidence of migration of the educated in the rural-urban migration stream (Zachariah and Hanumantharayappa 1966, Zachariah et al. 1966).

Education level of the household members residing in the 245 sample villages as well as those who have out-migrated for purpose of employment have been retrieved from the household survey mentioned earlier for purpose of this analysis. Thus, while this data is analysed to bring out the association between educational attainment and rural out-migration, it would omit information on entire households which emigrated.

Tumkur has been an out-migrating district, as shown by an analysis of census data (Bhat 1979). What is the characteristics of out-migrants with reference to their socio-economic characteristics and educational status? Does schooling of rural population encourage out-migration? These questions are answered by an analysis of household data, pertaining to those out-migrants who form a part of the work force.

ATTRIBUTES OF RURAL EMIGRANT WORKERS

On an average 2.2 percent of the male members above the age of 15 years had migrated out of the villages for purposes of employment (Table I). The propensity to migrate is more among members of professional/salaried groups as compared to households engaged in traditional rural occupations. However, it must be noted that a large proportion of professional/salaried group is in-migrant in the first place. This is partly indicated by the fact that a considerable proportion of them lived in rented houses (48 per cent) in an environment where almost all live in owned houses (95 per cent of the sample households).

Among the households engaged in traditional rural occupations, the emigration rate is slightly higher among the weaker sections than among medium or large farmers. And within the weaker sections it is not the weakest (agricultural labourers) who record higher incidence of out-migration but the marginally landed group (small and marginal farmers). Barring the professional/salaried groups the rate of emigration is highest among scheduled caste population. However, the small land owning households tend to record as high an emigration rate as the socially and economically deprived rural scheduled caste population.

Table 1. Worker emigrants as per cent of adult males by education level

<table>
<thead>
<tr>
<th>Subgroup</th>
<th>O</th>
<th>1-4</th>
<th>5-7</th>
<th>8-10</th>
<th>10+</th>
<th>All household</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agricultural labourers</td>
<td>1.4</td>
<td>1.7</td>
<td>1.6</td>
<td>2.4</td>
<td>6.3</td>
<td>1.6</td>
</tr>
<tr>
<td>Artisans</td>
<td>1.1</td>
<td>1.9</td>
<td>2.3</td>
<td>3.3</td>
<td>10.0</td>
<td>1.8</td>
</tr>
<tr>
<td>Marginal Farmers</td>
<td>1.5</td>
<td>1.0</td>
<td>2.8</td>
<td>7.9</td>
<td>15.2</td>
<td>2.3</td>
</tr>
<tr>
<td>Small Farmers</td>
<td>1.6</td>
<td>1.4</td>
<td>2.4</td>
<td>6.6</td>
<td>11.5</td>
<td>2.5</td>
</tr>
<tr>
<td>Medium Farmers</td>
<td>1.1</td>
<td>0.9</td>
<td>1.1</td>
<td>3.1</td>
<td>9.5</td>
<td>2.0</td>
</tr>
<tr>
<td>Large Farmers</td>
<td>1.1</td>
<td>0.5</td>
<td>0.8</td>
<td>0.9</td>
<td>3.2</td>
<td>1.3</td>
</tr>
<tr>
<td>Trade/Commerce</td>
<td>1.8</td>
<td></td>
<td>1.1</td>
<td>2.3</td>
<td>2.4</td>
<td>1.6</td>
</tr>
<tr>
<td>Salaried/Professional</td>
<td>2.7</td>
<td>1.8</td>
<td>3.7</td>
<td>5.8</td>
<td>7.0</td>
<td>4.6</td>
</tr>
<tr>
<td>Scheduled Castes</td>
<td>2.0</td>
<td>1.2</td>
<td>3.2</td>
<td>7.1</td>
<td>14.8</td>
<td>2.6</td>
</tr>
<tr>
<td>All households</td>
<td>1.4</td>
<td>1.3</td>
<td>1.9</td>
<td>4.6</td>
<td>9.5</td>
<td>2.2</td>
</tr>
</tbody>
</table>
The emigration rate is also associated with educational level. More pronounced increase occurs when the members of households achieve a schooling of over 8 years, which further increases sharply with additional years of schooling. Small exposure to initial schooling does not seem to make any impact on out-migration. This association can be observed individually in almost all of the sub-groups of population.

A statistical treatment of this association using tetrachoric correlations (see appendix) between successive levels of education and probability of emigration indicates the low degree of relationship (Table 2). However, it is apparent that the critical educational level at which the relationship is significant is 8-10 years of schooling. This level of schooling consistently emerges with significant values among most of the sub-groups. One may also note a slightly better degree of association between educational attainment and propensity to out-migrate among marginal farmers.

Table 2. Tetrachoric correlations between successive educational level and rural out-migration

<table>
<thead>
<tr>
<th>Sub-groups</th>
<th>No schooling and 1-4 years of schooling</th>
<th>Below 4 years of schooling and 5-7 years of schooling</th>
<th>Below 7 years of schooling and 8-10 years of schooling</th>
<th>Below 10 years of schooling and above 10 years of schooling</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agricultural labourers</td>
<td></td>
<td></td>
<td></td>
<td>.05</td>
</tr>
<tr>
<td>Artisans</td>
<td></td>
<td></td>
<td></td>
<td>.09</td>
</tr>
<tr>
<td>Marginal Farmers</td>
<td></td>
<td>.12</td>
<td>.13</td>
<td>.10</td>
</tr>
<tr>
<td>Small Farmers</td>
<td>.10</td>
<td></td>
<td></td>
<td>.11</td>
</tr>
<tr>
<td>Medium and large Farmers</td>
<td>.06</td>
<td></td>
<td></td>
<td>.14</td>
</tr>
<tr>
<td>Salaried/ Professionals</td>
<td>.09</td>
<td></td>
<td></td>
<td>.08</td>
</tr>
<tr>
<td>Scheduled Castes</td>
<td>.08</td>
<td></td>
<td></td>
<td>.11</td>
</tr>
</tbody>
</table>

Notes:
1. Trade/commerce group has been omitted because of very low incidence of emigration. Large farmers have been merged with medium farmers, for the same reason.
2. Only those values where Chi-square values are significant at 1 per cent level are recorded.

Despite such increased propensity of educated rural population to migrate, about 40 per cent of the emigrants are without formal schooling and the proportion reaches beyond 60 per cent in the case of scheduled caste members (Table 3). A substantial proportion of emigrants in each group is constituted by people with over 8 years of schooling.
Table 3. Percentage distribution of adult emigrants by educational level

<table>
<thead>
<tr>
<th>Subgroups</th>
<th>0</th>
<th>1-4</th>
<th>5-7</th>
<th>8-10</th>
<th>10+</th>
<th>Adult Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weaker sections*</td>
<td>47.9</td>
<td>5.9</td>
<td>9.2</td>
<td>23.5</td>
<td>13.5</td>
<td>100.00</td>
</tr>
<tr>
<td>Farmers**</td>
<td>29.9</td>
<td>5.0</td>
<td>7.0</td>
<td>24.8</td>
<td>33.2</td>
<td>100.00</td>
</tr>
<tr>
<td>Trade/Commerce</td>
<td>46.7</td>
<td>-</td>
<td>13.3</td>
<td>33.3</td>
<td>6.7</td>
<td>100.00</td>
</tr>
<tr>
<td>Salaried/professionals</td>
<td>15.8</td>
<td>3.2</td>
<td>11.6</td>
<td>42.1</td>
<td>27.4</td>
<td>100.00</td>
</tr>
<tr>
<td>Scheduled castes</td>
<td>61.4</td>
<td>3.0</td>
<td>6.4</td>
<td>17.7</td>
<td>11.4</td>
<td>100.00</td>
</tr>
<tr>
<td>All households</td>
<td>39.6</td>
<td>5.6</td>
<td>8.8</td>
<td>25.8</td>
<td>20.3</td>
<td>100.00</td>
</tr>
</tbody>
</table>

* Includes Agricultural labourers, artisans, marginal and small farmers.

** Includes medium and large farmers.

Over 60 per cent of the adult male population in the sample village is without any formal schooling, whereas among the emigrants the corresponding proportion is less than 40 per cent. On an educational scale the distribution of rural out-migrants is less skewed compared to the negatively skewed distribution of village population. Consequently, despite increased emphasis on rural education, the rural-urban disparities in educational level would continue to persist and the villages would continue to lag in maintaining the stock of educated population. Such a trend may particularly be valid for an agriculturally backward region.

CONCLUDING REMARKS

The higher propensity of the schooled rural population to migrate is also largely due to the inability of the underdeveloped economy to absorb them. On the other hand since the level of schooling that is involved is not attuned to skill formation, such out-migrants tend to flood the urban tertiary sector, which is already overblown and disfunctional.

REFERENCES


APPENDIX

Explanatory note on tetrachoric correlations

Classification in a contingency table is based on attributes of events. The degree of dependence of these attributes with occurrence or non-occurrence of events is correlation of attributes. When the contingency table is of dimension 2 X 2 the correlation is called tetrachoric correlation. Let us consider as an illustration the following data in order to explain the way in which we have used the tetrachoric correlations.

<table>
<thead>
<tr>
<th>Year of schooling of adult males</th>
<th>0</th>
<th>1-4</th>
<th>5-7</th>
<th>8-10</th>
<th>10+</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of adult males in marginal farming households</td>
<td>5692</td>
<td>727</td>
<td>578</td>
<td>558</td>
<td>151</td>
</tr>
<tr>
<td>Number of adult males who migrated</td>
<td>87</td>
<td>7</td>
<td>16</td>
<td>44</td>
<td>23</td>
</tr>
<tr>
<td>Number of adult males who did not migrate</td>
<td>5605</td>
<td>720</td>
<td>562</td>
<td>514</td>
<td>128</td>
</tr>
</tbody>
</table>

This data has been arranged in four contingency tables as follows:

<table>
<thead>
<tr>
<th>Year of schooling</th>
<th>Non-migrant</th>
<th>Migrant</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>5605</td>
<td>87</td>
<td>5692</td>
</tr>
<tr>
<td>1 - 4</td>
<td>720</td>
<td>7</td>
<td>727</td>
</tr>
<tr>
<td>Total</td>
<td>6325</td>
<td>94</td>
<td>6419</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year of schooling</th>
<th>Non-migrant</th>
<th>Migrant</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than four years schooling</td>
<td>6325</td>
<td>94</td>
<td>6419</td>
</tr>
<tr>
<td>5-7 years of Schooling</td>
<td>562</td>
<td>16</td>
<td>578</td>
</tr>
<tr>
<td>Total</td>
<td>6887</td>
<td>110</td>
<td>6997</td>
</tr>
<tr>
<td>Year of schooling</td>
<td>Non-migrant</td>
<td>Migrant</td>
<td>Total</td>
</tr>
<tr>
<td>------------------</td>
<td>-------------</td>
<td>---------</td>
<td>-------</td>
</tr>
<tr>
<td>Less than four years schooling</td>
<td>6325</td>
<td>94</td>
<td>6419</td>
</tr>
<tr>
<td>5-7 years of Schooling</td>
<td>562</td>
<td>16</td>
<td>578</td>
</tr>
<tr>
<td>Total</td>
<td>6887</td>
<td>110</td>
<td>6997</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year of schooling</th>
<th>Non-migrant</th>
<th>Migrant</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than seven years schooling</td>
<td>6887</td>
<td>110</td>
<td>6997</td>
</tr>
<tr>
<td>8-10 years of Schooling</td>
<td>514</td>
<td>44</td>
<td>558</td>
</tr>
<tr>
<td>Total</td>
<td>7401</td>
<td>154</td>
<td>7555</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year of schooling</th>
<th>Non-migrant</th>
<th>Migrant</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than ten years schooling</td>
<td>7401</td>
<td>154</td>
<td>7555</td>
</tr>
<tr>
<td>Over ten years of schooling</td>
<td>128</td>
<td>23</td>
<td>151</td>
</tr>
<tr>
<td>Total</td>
<td>7529</td>
<td>177</td>
<td>7706</td>
</tr>
</tbody>
</table>

The tetrachoric correlation for each of the four tables can be computed for 1 degree of freedom. The chi-square values and the tetrachoric correlations corresponding to the four tables are:

<table>
<thead>
<tr>
<th></th>
<th>$X^2$</th>
<th>Correlation</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>1.67</td>
<td>.02</td>
<td>$(N = 6419)$</td>
</tr>
<tr>
<td>2.</td>
<td>6.02</td>
<td>.03</td>
<td>$(N = 6997)$</td>
</tr>
<tr>
<td>3.</td>
<td>108.76*</td>
<td>.12</td>
<td>$(N = 7555)$</td>
</tr>
<tr>
<td>4.</td>
<td>138.39*</td>
<td>.13</td>
<td>$(N = 7706)$</td>
</tr>
</tbody>
</table>

$X^2$ significant at per cent level
TRANSPORT PATTERNS, RURAL DEVELOPMENT AND MIGRATION - A THEORETICAL APPROACH WITH REFERENCE TO MYSORE DISTRICT

K.N. UDAYAKUMAR

The objectives of this paper are two fold. First, an attempt is made to outline the growth and development of road network that would be necessitated by the rural development. Second, the likely impact of road network development on migration as a part of the rural development process is outlined. In dealing with these two aspects, rural development as it has come to be evolved at the national level has been regarded as the backdrop. Further the two aspects have been examined in Sections I and II respectively.

THE CONCEPT OF RURAL DEVELOPMENT AND ITS IMPLICATIONS ON ROAD TRANSPORT

In the literature on development economics, 'rural development' is a concept that has given rise to semantic controversy. Broadly, rural development is a comprehensive concept that encompasses a number of social and economic activities like agriculture, livestock, farming, rural industries, rural electrification, rural housing, rural health and others which have direct bearing on the standard of living of the rural masses. In short rural development is multi-level, multi-sectoral programme, that has significant impact on productivity, employment and income in the rural areas.

In the wake of the strategy of direct attack on poverty, rural development programme has become an all-too important parameter in India's development planning since mid 1970s. A number of programmes such as, MNP, NREP, RLEG, TRYSEM and IRDP have been in operation for the uplift of the poor in rural areas. These programmes have been aiming at 'asset creation' and improvement of skill-base of the so-called target groups such as small and marginal farmers, landless labourers, rural artisans etc. With the progress of various rural development programmes, there exists an imperative need for the expansion of transport facility and for the improvement of road network. All the more some of the rural employment programmes have included road construction as one of the activities. Thus road network
development has assumed importance both as a consequence and as a cause of rural development.

The implications of rural development on the road development may be outlined as follows:

1. Demand for transport being a derived demand, various rural development programmes and tend to increase, the demand for expansion or re-adjustment in the existing road network.

2. With the expansion of the social and economic activities in rural areas, exchange transactions are likely to increase and hence the pressure on the existing road network will increase. This in turn necessitates an expansion in road network so as to minimise the cost of road transport.

3. Rural development through increasing the resource and product flows between rural areas will tend to increase the passenger traffic and freight traffic. As a result, transport infrastructure (road network development) - facility will have to be expanded.

4. In the wake of expansion of rural activities under rural development programme, improvement in accessibility becomes essential to conserve time and cost in the movement of people and goods between rural areas.

In the background outlined above, the impact of rural development on the road transport system -road network and other aspects- is attempted in relation to the district of Mysore, which is an important district in Southern Karnataka. The district's present size and shape came into being on 1st November 1956 along with other eighteen districts of Karnataka during the reorganisation of States on a linguistic basis.

ROAD NETWORK AND ROAD TRANSPORT IN MYSORE DISTRICT

Road transport is the key factor in the transportation system of Mysore district, since the length of the total railway line is negligible (being only 120 kms). Hence roads have to cater to the needs of transportation. The district has a total network of 8867 kms (1986) with an average of 68 kms per 100² kms of area. This is slightly above the
state average but much below the achievement of the developed neighbouring districts like Mandya with 130 kms per 100\(^2\) kms and Bangalore with 74 kms per 100\(^2\) kms. An examination of road development in Mysore District between 1956 and 1981 shows that there is an increase of 2,867 kms of road length in Mysore District.

Mysore District with an area of 11,947 sq. kms has a total road length of 8,867 kms, which includes the State Highways, major district roads, other district roads and a great majority of village roads. There are no National Highways in the district. The existing length of roads in the district is much above the All India Plan target. But in respect of higher category or roads like National Highways, State Highways, major district roads and other district roads, the district’s position is far less, as compared to the targets fixed. Not only that the road length in higher categories is inadequate in the district, there is a lot of regional disparity with regard to road length. It should also be noted that even after the completion of the two road development plans and the various Five Year Plans, even today 26 villages in the study area are still in isolation, and they are not connected by any road. This clearly shows that adequate attention is not paid by our road development agency to bring all the villages in the district on the road network of the region. Category wise distribution of road length indicates that village roads are more in Mysore District and now they need to be upgraded to other higher categories.

It is needless to say that the network structure and the transport requirements of the Mysore district during the next two decades viz., 1991 and 2001 A.D. depend on the rural population growth, the growth of population nodes, and the aggregate projected demand for passenger and freight traffic. The futurological study in this paper is to a great extent related to a long range transportation plan. It is only a broad based indicative framework of the road network and traffic flow of 2001 A.D. The predictive model suggested here is based on simplistic speculative analysis rather than any model building econometric methodology. The estimates of network development are related to the population growth and rural development, which forms the basis for the predicted network geometry and traffic growth.

In the past, the road length in the district had a tendency to increase at an average annual rate of 200 kms during the sixties, and 260 kms in the seventies. Hence on an average the present growth rate of the road network works out to 2300 kms per decade. This rate of growth especially in the higher categories of roads and surfaced roads is most inadequate for the network development, although it fulfils the numerical length of roads of 38 kms per 100\(^2\) kms of area aimed at by
the plan of 1961-81. Therefore, there is a big need for accelerating the pace of road development particularly in the higher categories of roads, all the more so since population projections made for the district suggest that all those villages which have a projected population of 2000 and above at present will become vertices of a network in 1991 and 2001 A.D.

ROAD NETWORK AND MIGRATION

The fact that rural development enjoins alterations and readjustments in road network is non-controversial. The question of migration may look as an exogenous variable in the discussion of rural development programmes and their implementation. But the impact on migration likely to be brought about by the road network development consequential to rural development cannot be predicted in specific terms, but can only be outlined in general terms. Migration in rural areas may be permanent or transitory in nature. Keeping in view of the fact that rural population is rigidly tied to the land as an asset and to the social customs, the possibility of migration engendered by the growth and development of road network is to be dealt with. In the rural setting intra-migration between rural-rural and rural-urban presents a peculiar picture. Urge for intra-rural migration, is intense, and has come to depend on several factors, like (1) Efficiency of road network, (2) Improvement in accessibility, (3) Cost of transport, and (4) Technological changes in the means of road transport.

1. Improvement in road network will bring into its fold inaccessible areas and widen the labour market. Also new economic activities are likely to spring up in certain rural areas. As a result, islands of wage-differential may come into being depending upon the nature of economic activity, production distribution etc. Under such circumstances, migration from low-wage rural area to high-wage rural area and/or migration from rural to urban areas may take place.

2. Road network being largely governed by the topography and other physical constraints of the region, may tend to establish circuitous or direct routes with the distant urban centres. Thus the daily transport cost may be high or low. If the road network involves high transport cost, then migration on permanent basis may take place on a large scale.

3. Road network development largely affects the distance differential between rural areas and between rural and urban areas. Suppose the road network tends to increase the distance differential be-
tween regions, then the daily cost of transport will be high. Consequently, migration on permanent basis with a view to seeking economic improvement may take place. On the contrary, if the distance-differential is reduced by the road network, then migration may not take place at all.

The functionality between rural development and migration can be expressed as, Rd = f (Ag, T,K) where Rd = Rural development Ag = Asset generating programmes T = Transport network and K = Migration of people in rural areas.

whereas K itself can be a chain function in the form of K = K (Wd, Dd).

where K is migration of people into and out of rural areas, Wd = wage - differentials' from one rural region to the other, and Dd = The 'distance-differentials'. Wd, 'Wage-differential' which is a magnetic variable, attracts and releases wage-earners from one place to another depending both on wage structure and transport facility. Higher wage inter alia with good transportation facility always attracts labourers from neighbouring villages. But this sort of migration is transitory in nature since the labourers tend to return to their villages after work. The Dd which is complementary to Wd acts as a catalyst to migration. The higher wage pockets always attract larger migration, particularly when the distance between two or more vertices on a network are reduced.

Many side issues crop up as far as decision making is concerned with regard to the road network and migration. The cost of transportation, the pull power of the higher wage pockets and urban centers, the attitude of the people are cases in point. No generalisation can be made in this regard as the issues is case-specific.
Les dynamiques rurales au Karnataka
Actes de la table ronde des 29-30 Mars 1989

Le Karnataka est l'un des Etats indiens où les dynamiques rurales sont particulièrement remarquables, pour plusieurs raisons. La grande irrigation y dispose encore d'un large potentiel, et son expansion continue aujourd'hui à transformer des terres jusque-là sèches. Les réformes administratives y sont notables, en raison peut-être d'une profitable emulation entre Congrès et partis non-congressistes qui rivalisent pour l'accès au pouvoir. Enfin, l'histoire sociale de l'Etat -l'ancien Mysore- marque la récurrence de mouvements sociaux ou socio-culturels cherchant à promouvoir les démunis. Le présent recueil regroupe dans une présentation volontairement abrégée les communications présentées les 29 et 30 Mars 1989 par des chercheurs indiens et français sur le thème général des dynamiques rurales au Karnataka. L'Institute for Social and Economic Change de Bangalore, l'Université de Mysore, le Madras Institute of Development Studies, étaient ainsi représentés, aux côtés de l'Institut Français de Pondichéry, organisateur de la table ronde. Un premier ensemble de communications éclaire la dimension sociale des dynamiques en cours : lente avancée vers une homogénéisation accrue du corps social (M.V. Nadkarni); effets des programmes de développement sur la structure des communautés rurales (V.M. Rao); effets de la planification sur les groupes les plus défavorisés que sont Harijans et tribus (P. Hanumantha Rayappa). Un second ensemble de communications rend compte d'études de terrain portant sur les systèmes ruraux et villageois : diversité interne au système rural fondé sur la grande irrigation, autour de Mysore (J. Racine, P.J. Roca, F. Landy); particularisme des terres côtières, aux structures de type keralais, à la société mobile (K.Nagaraj); transformations socio-économiques d'un village sec, sous le double effet de la diffusion du mûrier et du travail de la pierre (A. Aziz); évolution d'un village du Coorg, implanté au XIXe dans les terres forestières bien dégradées aujourd'hui (Ph. Schar). Un troisième ensemble de communications porte l'attention sur la question migratoire : comparaison entre zones d'attraction contrastées, ici irriguée, là montagnarde (P.D. Mahadev); effets de la diffusion de l'éducation en milieu villageois (H. Ramachandran); relations entre réseaux routiers, développement rural et mouvements migratoires, enfin (K.N. Udayakumar).

Mots-clés : Inde, Karnataka
Dynamiques rurales, systèmes ruraux. Changement social.
Programmes de développement. Migrations.
Terres sèches, terres irriguées. Plantations.

Rural Change in Karnataka. A workshop. Proceedings edited by Jean RACINE.
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