CHAPTER I

THE ISSUE AND THE METHOD

Both in terms of area and population, Tamil Nadu, one of the states of the Indian Union, is predominantly rural. Ninety five percent of its area and 70 percent of its population is rural as against 98 percent and 80 percent respectively for the Indian Union. Urbanisation activity in such predominantly rural and agricultural countries has attracted attention and serious examination from about the fifties.1 Countries like this, found in the third world, which have had a history of colonial rule, and which on attainment of self government committed themselves to national development, presented rather a special case to students of urbanisation. The case of these countries, as far as urbanisation was concerned, seemed somewhat fresh and of some concern, compared to that of those in the

west where the majority of countries did not have such histories, at least in the modern period. The phenomenon has, therefore, prevailed upon urban analysts to modify and extend, if not to question altogether some of the generalisations in the standard theories of urbanisation. That is the background against which certain issues investigated in this study are to be placed.

While urbanisation in India may be viewed and debated against such a background, that of Tamil Nadu, one of its constituent states, appeared to be of special interest. This rather medium-sized state (130,069 sq. kms) in the peninsular part of the country's territory, put out during the decade 1960-1970 an extraordinarily large number of new towns. According to the 1971 Census, this state, one of the fourteen states of the Indian Union, accounted for as much as 35 percent of all towns that came up in the Indian Union during the preceding decade. This was clearly not in proportion either with the size or importance of this state.

It seemed worth while examining the case for more than one reason. Although the conditions in

Philip M. Hauser (Ed.) Handbook for Social Research
the state is compounded with those in other states for purposes of accounting at the national level, they could, by themselves, make a coherent situation and provide at least one counter example to generalisations based on the aggregate, national level. The differences in economic conditions that get averaged out at the national level could serve to differentiate the aggregate phenomenon into various modes of urbanisation. Such differentiation, if it could be made consistently, could bring in some useful discrimination in one's approach to urbanisation phenomenon in the countries of the third world.

At the operational level, data at the state level would be found more consistent than that at the national level, because of the wide differences in society, economy, culture and language that exist in this country. At the state level, one can hope for a rather discrete and somewhat coherent frame for the organisation and interpretation of data, particularly for a region like Tamil Nadu which is culturally more homogeneous with regions within itself than with territories in the Indian Union, outside the state. Further, the state is more accessible especially when it comes to qualitative data and data of greater specificity, than the country.
as a whole.

The extra-ordinary case of urbanisation of this state was therefore chosen for an initial exam-
ination. One investigation of it done in 1975, soon after the census results, failed however to find much significance in the size of the phenomenon, as reported by the census. The size of the phenomenon, as reported by the census, which made it to stand out, actually concealed, it turned out, the more significant aspects of it. Reviewing the phenomenon in terms of its spread over the territory of the state the study drew attention to "the extreme spatial concentration of the urban pheno-
menon (in the state) which looked so impressive in terms of the state level figures."

The investigation, instead, threw light un-
expectedly on a very different aspect of urbanisation. It showed up different 'styles' of urbanisation, each associated with an identifiable set of broad ecological


See also C.T. Kurien and Josef James: Economic Change in Tamil Nadu, Allied Publishers, New Delhi, 1979, pp. 142-163.

3 Kurien and James, op. cit. p. 361
conditions. It showed that the way the towns come up, the kind of towns that come up and the way they progress after they have come up, are all internally related. These three manifestations of urbanisation activity are, in fact, controlled, it is suggested, by an internal connection. The study went on to suggest that the kind of control varies according to the kind of broad ecological region in which the activity takes place. The size of the phenomenon, if it is of any importance, derives, it seemed to suggest, from the variety of controls that operate to make up the actual phenomenon.

If this could be confirmed, it was immediately clear, certain kinds of discrimination that are not usually made, would have to be brought into the available approaches to the phenomenon. The role of 'broad ecological or production zones' on urbanisation in developing countries is referred to in literature. But it is passed over with the remark that "Regional economies show relatively little

---

specialisation, since most of the population obtains its living from agriculture." And therefore, while "farming activities may be grouped into broad ecological or production zones," "the cities that organise the national economy show only minor functional distinctions." The point that arises out of the study is that the "broad ecological or production zones" do differ significantly among them to give rise to regional specialisation and that, therefore, population obtaining its living from "agriculture" is not an undifferentiated activity. The ecological differences give rise to different kinds of agriculture, to different kinds of activity including urbanisation activity as our study seems to suggest. If this could be confirmed, then approaches to urbanisation in rural agricultural areas, based on the assumption that agriculture is one undifferentiated activity, no matter what the ecological conditions are, would seem to be gross in relation to the phenomenon. This is the issue that is examined in the present study.

The nature of the issue makes an important requirement upon the method. Any method or methodology based on the assumption of homogeneous plain

5 ibid.
of agricultural activity even as an 'initial condition' will prejudge the issue. Such methodology would eliminate by assumption the differentiation that might exist in the phenomenon. This means the set of approaches that group around the rank-size rule, specifically, Christaller's central place approach, and those based on Stochastic distributions of city sizes will not serve the purpose. Beckman who developed the key model relating central place and market area hierarchies in the Christaller-Losch tradition starts, for instance, from a homogeneous plain over which resources are uniformly distributed. If this plain is agricultural, this amounts to assuming away the ecologies that arise from the particularity of resources and practices found in different parts of the 'plain'. Friedman's approach to urbanisation in developing countries, cited earlier, it can be seen, owes itself to the basic central place doctrine in urbanisation theory. The whole approach would prejudice the differentiations that are pursued in this study.

---


7 ibid. p. 171
The Stochastic approach also implies homogenization but more subtly. Firstly, it abstracts the city phenomenon from all geography and ecology and quantifies it harshly in terms of population size. Secondly, it compromises all discriminations by randomising all influences on the city phenomenon. Both these procedures, especially the randomisation, homogenizes, in a sense, the whole field of influences on the urban phenomenon. It is true that the departures from normality observed in actual size distributions – the case of primate cities is one such – can have an interpretation, in terms of some set of non-random factors, but these are necessarily viewed as departures or deviations, or generally residuals of an essentially random behaviour of the city size variable. It cannot entertain, except, perhaps residually, the non-random ecological factor whose influence in the urban phenomenon is the object of this study.

The difficulties relating to these approaches do not end with the above objections, but refraining from them even for the methodological reasons

8 ibid. pp. 169-171

given above could be hazardous. If, for instance, an association could be established with a pattern of urbanisation and a set of ecologies, very little can be placed on it, if it is not supported by adequate theory. The association could possibly be spurious and the interpretation merely contextual. Taking that contingency into account this study examines the phenomenon over a period of time long enough to observe any historicity to the kind of differentiations and associations that might exist in the phenomenon. While historicity, in the absence of ready theory, could serve to confirm observations and interpretations, it introduces a further set of methodological issues.

Observation of urbanisation over a period of time would require that the phenomenon be viewed more as a process than as a state or a condition. From the point of view of that requirement, one would immediately see that both the hierarchy approach and the distribution approach are essentially static. The loss of information entailed by approaching urbanisation as a static condition has been recognised. "There is no understanding" remarks Berry, "of the spatial organisation (of the United States
economy) that compares with our understanding of the static patterns, no functional regionalisation to match the uniform." And the matching is to be attempted by a systems approach to the definition and understanding of the space of that country. While the approach suggested points to the necessity of some differentiation viewed in historical regionalisation, it still does not serve to see urbanisation as a process or activity over time. A systems description of flows between functional regions is still a state or a condition of activity and, therefore, lacking in history.

Some who have attempted a historical study of urbanisation have found that the static framework is overcome by making certain important distinctions. Brian T. Robson in his well-known study of growth of cities in England and Wales in the nineteenth century starts by making an important distinction between 'urbanisation' on the one hand and 'urban process' on the other. "Reference has


already been made" he writes, "to Tisdale's definition of the former as a process by which increasing proportions of people are drawn into cities. One can define, the urban process, on the other hand, as that by which increasing proportions of people, irrespective of whether they actually live in cities, are involved in a way of life, modes of thought and types of activity, which are somehow 'urban' rather than 'rural'." \(^{12}\)

While the distinction between the place and the activity is important in itself what seems immediately to bear upon the issue is the conceptualisation of urbanisation as a process in historical time whereby "increasing number of people are drawn into cities" and/or "increasing proportion are involved in a way of life, mode of thought and type of activity which are somehow 'urban' than 'rural'." That clearly is a process in historical time, and not a static condition, nor a state at some given point of time.

This clarification has been most useful for the present study. Taking advantage of it, urbanisation activity in the present study is differentiated into two aspects: Change in the spatial

\(^{12}\) ibid. p. 7
configuration of urban activity, reckoned in terms of the way this configuration is extended by the formation of new towns; and, intensification of localised urban activity, reckoned in terms of the increase in population in an already established urban place. The growth of urban population over any period of time is reckoned in the above two measures, which denote what are clearly processes in historical time.

Robson's well-known study, after making careful reservations about the size distribution approach and the more general theoretical growth models which draw on micro-economics and the behaviour of firms, does eventually quantify urbanisation rather harshly into rate of growth of population and rely on distribution statistics like the mean, standard deviation and regression as the primary means of description and interpretation of the phenomenon. While they do serve to detect changes in the states between time points and do offer some interpretation, they cannot serve one who is looking for differentiation of the sort this study is

13 Brian T. Robson, op. cit. pp. 31-45

14 ibid. p. 87
concerned with. Information on that aspect is lost when the description of activity in an urban place is reduced to a single variate like the rate of growth and further, when the variations in the rate of growth are described by a summary statistical measure, the standard deviation. Viewed in this manner, the approach is a qualified application of the 'distribution' approach for the analysis of the phenomenon over a period of time which implies, as pointed out earlier, homogenization of a sort.

"Much of the problem" to quote Graham Chapman, "stems from the fact that variables are deemed superior to the observations." "More significantly" he argues, "can we be less hidebound by physical sensibility and say anything about the structures of the human world that are the backcloth to other forms of traffic?" Can we, in other words, know so little about the lie of the land and say anything of traffic (urbanisation activity, for one) that goes on over it? Statistical disciplines relieve us of the lie of the land by reducing it

15 Graham P. Chapman, "Lists of Capes and Bays and of Towns and Companies and Schools and. . ." A chapter for inclusion in British Quantitative Geography, Prospect and Retrospect, R.J. Bennet and N. Wrigley (Eds.), p. 9

16 ibid. p. 2
to a plain of equal a priori probability in which a distribution of some single variable, size of towns or rate of growth of towns are described summarily to convey the required information about the traffic that goes on. The methodology this study needs to have is one that would, instead, bring up the lie of the land and to view urbanisation activity as a traffic over that landscape and to some knowable extent as controlled by it. Such a relation between the 'backcloth' and the traffic is not summarised by a procedure which would have the 'backcloth' homogenized and abstracted out of the picture. Chapman's solution to this problem is a method of structuring the 'backcloth' and consequently of the 'traffic' using principles of topology.

This study takes advantage of Chapman's most useful contribution to the methodology of empirical investigation. For the study of the controls and associations in urbanisation activity, determined, presumably by the set of ecologies in a predominantly rural and agricultural territory, it is essential that the set of ecologies stay in

ibid. p. 21 and p. 2
the picture as the 'backcloth' for the urbanisation activity in the territory. For purposes of struct-
uring the 'backcloth' a regionalisation of the terri-
tory of the state is attempted. The objections to 18
regionalisation are well known. The objections organise themselves basically around two views.
Firstly, it is argued that if regions are in fact 'objects' it should be possible for researchers to agree on the set of criteria for describing them. 19
This has not been possible. This has led many
scholars to believe that outside the deterministic frame, regionalisation would always be arbitrary and sensitive to the idiosyncracies of the indivi-
dual researcher. Secondly, that regionalisation amounts to and implies 'environmental determinism'. This is objected to on the argument that it, in principle, leads to the denial of the freewill, purposive action, and of the historically determined social forces that go to make the actual state of affairs.

18 For a concise historical account of the debate on regionalisation see Amitabh Kundu, Measure-
For a discussion of the philosophic basis of region-
alisation, see Michael Chisholm, op. cit. pp. 32-45.

19 Michael Chisholm, op. cit. p. 34

20 Kundu, op. cit. p. 10
The regionalisation attempted in this study can be defended, perhaps not in principle but by the particular context in which it is attempted. While it might be possible to maintain that regions are 'mental constructs', it cannot be taken to imply that no region can therefore exist as objects. It can well be maintained that such regions as do, in fact, exist but that in the present state of knowledge, they cannot be described unambiguously in a generally acceptable manner. The context in which regionalisation is attempted in this study is one, where the whole territory is predominantly rural and agricultural. Agricultural regions, as the regions in such a territory will necessarily have to be, described in terms of cropping patterns, for instance, could be less unspecific, than the ones described in terms of value variables like per capita income, or levels of education or employment characteristics. If there are fairly well defined soil types, rainfall regions, types of terrain and irrigation systems, the regionalisation attempted in terms of 'primitives' of that sort can yield fairly well defined, space-exhausting regions, which are not purely 'mental constructs'.

As for the charge of 'environmental determinism' our defence, of course, is that it is
an extreme possibility. But more relevantly, the case can be relaxed; if one views it, as this study does, in terms of the backcloth-traffic paradigm. The backcloth, while it serves to give a context to the activity and to give it a structure cannot be said entirely to determine it. Purposive action, the operation of historically determined forces, is provided a physical context, which is not to determine it wholly, but only to give it the necessary logistics. Regionalisation of a predominantly rural and agricultural territory, it is contended, serves to give urbanisation activity over it, its required logistics. No claims beyond that is made for the regionalisation attempted in this study.

"The significance of this concept of structure" writes Chapman, "is that it does actually show the configuration of connections implicit in relation, while treating each simplex as a whole. It also shows the changing dimensional way in which the simplices are connected with each other. There is a landscape of connections and, in fact, it is possible to produce contour sketches of the structure (as in Figure 8). It is on this structure that traffic may flow and some kind of traffic require higher dimensionality than others." The import

21 Chapman, ibid. p. 12
of this argument for the present study is this:
Supposing the territory of the state of Tamil Nadu
is viewed as an undifferentiated featureless plain,
then one is left with just functions to describe
relationships between 'variables', say, between
size of the crop and marketed surplus. If the
regression does not fit the data very well, one
can either say that the deviations cancel each
other out, or else admit the model is inappropriate
and look for a better one. If, on the other hand,
the territory of Tamil Nadu is differentiated into,
say, agricultural regions each with a different
cropping pattern, land tenure system, and trading
patterns, the relationship between size of crop and
marketed surplus will have a great deal more of
complexity and information than what a simple regress-
ion model can handle. The relations between crop
sizes and marketed surpluses would differ according
to the crop - paddy, millet or sugar cane -; accord-
ing to the region in which it is grown, upon terms
of tenancy obtaining in the region; according to
transportation available and on the trading patterns.
The traffic of grain over the territory of the state,
or over the individualized regions into which it is
structured, is better described not by a simple one-
to-one association but by a configuration of connect-
ions as among the individualized regions of the state.

The complexity arises, quite clearly, out of the fact that the territory of the state is composed of distinctive regions, each of them individual enough to be viewed holistically. It would suit the present study to view the distinctive regions in the state holistically. An ecology is a holistic concept, and therefore ecological regions are better thought of as individuals that are never completely analysed. The cost in terms of complexity of relations and information, however, has to be borne.

The holistic view of regions does not permit it to be described in terms of some one 'variable'. "A single additive equation" observes Chapman, "cannot cope with the subtleties of regional individuality." More basically, any one 'variable' is at best only a partial description of an individual region and therefore cannot be equated with it. The best that can be done, is to increase the number of 'variables' and to carry them together in a vector of non-additive elements. Increased number of partial descriptions viewed simultaneously would,

22 Chapman, ibid. p. 21
it is hoped, convey more approximately, the idea of
the whole.

This is resorted to at three stages in the
study. Firstly, for purposes of regionalisation a
whole set of partial descriptions are considered
simultaneously. In other words, a region is defined
if a whole set of partial descriptions apply simul-
taneously. Each characteristic or description is
valued and cut-off points are decided in such a way
that differences between regions, if they exist in
that regard are indicated by a discrete division
in the range of values. This is done for each of
the variables in the set of partial descriptions.
It can be objected that the cut-off points may be
decided in order to create the required regions and
one is back with one of the well-known objections
to regionalisation. The only defence against
that criticism is to argue from the context. If
the partial descriptions of a region afforded by
the cut-off points are coherent and suggest a
familiar and recognisable ecology, then it is worthy
of recommendation. Also, if such a regionalisation

See page 15
has been arrived at independently by researchers whose purposes are very different from those of this study, then it surely is not wholly subjective creation. These two kinds of checks are exercised in the present study.

The second stage at which the method of a set of simultaneous partial descriptions is used, is in the description of the towns. The census gives a functional description like primary activity-cum-industrial-cum-trade. These descriptions are based on the proportion of working population in the town engaged in these activities, ranked according to the order of importance. This is viewed in this study as partial descriptions of the town and considered simultaneously. A method of using this on the lines suggested in Chapman's work, is used in the study.

The individualization of regions and of urban places leads logically to the problem of structuring the traffic over them and among them. The traffic in this case are the flows that account for the urbanisation activity over the domain. Some

24 Chapman, op. cit. p. 16
definition of the 'configuration of connections' and of its structure is possible in terms of the set transport network in regions and over them. Some indication of the traffic along them can also be had. But the problem of connecting that with urbanisation activity will still remain. One important requirement for making the connection is a proper description of urbanisation activity.

Urbanisation activity, for reasons stated earlier, is reckoned in terms of changes in the configuration of urban places together with the population changes in towns that make up the initial configuration, both these being observed over a period of time. Again, for reasons stated earlier, consistency and confirmation of the features of this process, if any, are to be sought in their historicity. If this activity in time, as reckoned above, is viewed as structured by the set of regions in the territory, it would be required initially to reckon it separately for each of the regions. That is, besides noting the changes in the configuration of urban places, one would also have to say which region is responsible for how much change in the

25 pp. 11-15

26 Ibid.
over-all configuration, and which region is responsible for how many instances of population changes in towns and of what strength in each case. That would amount to the description of the urbanisation activity over the territory by a set of partial but simultaneous descriptions. It would concurrently afford a view of the activity as structured by the regions. This is the third stage in the study at which the method of simultaneous partial descriptions is used.

Consistency and confirmation in historicity would, in this case, mean some persistence of some among the set of partial descriptions over time. If, for instance, the changes in the configuration of urban places are caused by one particular region sprouting urban places and no other, or that the instances of fast growth in urban places are found in another region and in no other and so forth, and this is consistently so for a period of, say, three to four decades, then we say that that urbanisation activity over the territory has a design to it. We call it accordingly the design of urbanisation activity in the territory. Such designs in urbanisation activity over historical time emerges out, in a sense, from the particular structure the terrri
tory is given in terms of the constituent, individualised regions.

This notion is crucial to the present study. Firstly, because it helps to connect the traffic and to make it to account for the urbanisation activity. This is an important advantage in analysis. More importantly, the existence of design, defined as above, makes the regionalisation quite meaningful for the urbanisation activity over the territory of the state in the sense that if the regionalisation has been wholly arbitrary it should be impossible to see any design in urbanisation activity.

Finally, changes of design, defined as above, in history can be taken to signify changes in the structure of traffic given constancy of the regions. Changes in the structure of traffic, in turn, can signify changes in the 'configuration of connection' such as when a new mode of transport is introduced and/or changes in traffic caused by changes in the aims, purposes, means, variety of opportunity, quality of enterprise, modes and institutions. It is therefore richer in terms of interpretation than, say, distribution statistics like the means, variance and slopes, as in Robson's study. This possibility

27 Brian T. Robson, op. cit.
is taken advantage of in the present study to link urbanisation activity, or changes in its design with changes in the economy of the state. It has enabled the present study to attempt to view urbanisation activity in the state as of a piece with the economic activity in the state. General economic activity in the state, presumably, is structured along the lines in which urbanisation activity in the same territory may found to be structured.

Towards this broad result the study proceeds in the following stages: Firstly, an attempt is made to identify and define the broad ecological regions in the territory of the state. The general physiography of the territory is described and the transport network over it is specified. In the same context, the configuration of urban places over it is studied as in the year 1900 which is the initial period in the study. Secondly, urbanisation activity in the territory for a period of seventy years, i.e., 1900 to 1970 is reviewed, accounting for it regionwise and in the manner explained above. In the review an attempt is made to identify designs; and such designs as are found are fitted with hypotheses generated from a summary understanding of the progress of a predominantly rural, agricultural
domains during the familiar phases of 'development'. These hypotheses are then used to interpret the historical changes that had, in fact, taken place in the state of Tamil Nadu. Urbanisation activity interpreted in terms of the historical changes in the state of Tamil Nadu, is then placed in the context of the current debate on urbanisation in the 'developing' countries.

The data requirements of such a study are indeed enormous, and they could not be met entirely with the resources available. One is, therefore, forced to rely on considerable amount of qualitative data, and such data as are available in yet unpublished mimeographed research monographs of scholars currently working on different aspects of the economy and society of Tamil Nadu. These have had to be used rather extensively in the study, to drive the arguments to a point of maximum possible suggestibility, if it has to stop short of actual confirmation for want of widely acceptable public data.