Sri Lanka Journal of Social Sciences

VOLUME 5 No. 1

THE NATURAL RESOURCES, ENERGY & SCIENCE AUTHORITY OF SRI LANKA

JUNE 1982

SRI LANKA JOURNAL OF SOCIAL SCIENCES

Publication: The Sri Lanka Journal of Social Sciences is published twice a year, in June and December, by the Natural Resources, Energy & Science Authority of Sri Lanka. The Journal will publish articles covering the entire range of Social Sciences and relating mainly, but not exclusively, to Sri Lanka.

Subscriptions: Foreign: $ 8.50, Local Rs. 25.00 per issue (Postage free) Remittance in favour of the Natural Resources, Energy & Science Authority of Sri Lanka.

Manuscripts: Manuscripts should conform to instructions given at the back of this issue.

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SRI LANKA JOURNAL OF SOCIAL SCIENCES

Vol. 5 No. 1 June 1982.

V. Nithyanandan 28/12/84

Contents :

Published by
The Natural Resources, Energy & Science Authority of Sri Lanka.
and Printed at
M/s Frewin & Co. Ltd.,
36, Mudalige Mawatha, Colombo 1.

Being Realistic About Age At Marriage and Fertility Decline in Sri Lanka*

DAYALAL ABEYSEKERA

Abstract

THE paper examines the validity of utilizing an indirect measure such as the Singulate Mean Age at Marriage (SMAM) to estimate the central age at marriage in Sri Lanka where the proportions never married have expanded substantially during the past two decades. By tracing the age at marriage of 20 successive birth cohorts from the sample of women in the World Fertility Survey of Sri Lanka itself, it demonstrates that the female SMAM of 25.1 years as claimed in the same Report is unacceptably high and that the median age at marriage of the cohorts are well within 20 years of age. It is submitted that cohort data provide a more robust measure for estimating prevalent trends than SMAM.

The recent fertility decline observed in the country, it is surmised, is due primarily to the increasing numbers who 'postpone' marriage rather than to a dramatic increase in the age at marriage. The latter has been quite moderate at best. Speculating that these 'postponements' are engineered mainly through economic constraints rather than due to a substantive normative charge in society, the paper expects to observe a 'marriage boom' and a 'baby boom' at the first signs of a sustained recovery in the economic realm.

Introduction

Changes in the dynamics of population growth are of prime importance to any society, more so to the societies of the Third World which tread a very delicate balance between allocating its all-too-scarce resources to the development efforts on the one hand and to the general welfare priorities on the other. In Sri Lanka, the death rate which fluctuated considerably during the first four decades of this century has stabilized in the aftermath of the conquest of malaria and now exert minimal influence on the growth of the population. Some marginal impact has been felt on population

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*I gratefully acknowledge the encouragement extended my way by Prof. George W. Roberts, the former UNDP Expert and Director of the Demographic Training & Research Unit of the University of Colombo, in writing this paper. It was his initial suspicion of the high age at marriage figure for Sri Lanka that stimulated me to undertake the secondary analysis of the published tabulations contained in the World Fertility Survey, Sri Lanka Report.

growth through the repatriation programme of the Estate Indian Population. The fertility component has thus assumed the role of the 'pace-maker' in the changing population dynamics of Sri Lanka. The on-set of fertility is signalled with the contracting of a marriage, at least in social terms. In the context of the much publicized fertility decline in Sri Lanka (Fernando, 1979; 1972; Wright, 1968; ESCAP, 1976) and in several other less developed countries, the rise in age at marriage has occupied a central place. This discussion will concern itself primarily with the issue of the age at marriage of females and its relationship with the fertility decline in Sri Lanka.

Marriage is of importance to the fertility issue because of one biological fact and an attendant assumption in the social realm. The fecund period of a woman is between menarche and menopause, generally restricted to the 35-year span between 15 and 49 years of age. It is assumed that the overwhelming majority of births occur within wedlock. When this fact and assumption are juxtaposed the age of entry into matrimony assumes critical importance in determining fertility at both the individual and the societal levels. The higher the age at marriage, the shorter the period available to fulfil the fertility commitment, **ceteris paribus.**

This is perhaps why there has been an apparent 'over-exposure' of delayed marriage in Sri Lanka and one begins to wonder whether the milage gained in publicity has outrun its legitimate share of credibility. It is in this context that we will try to examine some of the evidence more closely.

The Measures

Four measures are commonly used in the estimation of the central age at marriage. They are,

(1) Singulate Mean Age at Marriage (SMAM) as developed by Hajnal (1953),

(2) Average age of registered marriages supplied by the Registrar-General's Department,

(3) Mean age at marriage, and

(4) Median age at marriage.

Items (3) and (4) refer to the entire married population and are not restricted to registered marriages only. (Estimates can also be derived from nuptiality tables but will not be discussed herein.)

Singulate Mean Age at Marriage (SMAM) is an indirect summary measure of the age at first marriage "based on the percentage of never-married within each age group at a specific point in time ..... and makes no use of the known ages of marriage. The SMAM is interpreted to be the mean age at marriage of those women who marry by age 50, estimated by piecing together the age groups as though they referred to a single cohort"

(World Fertility Survey, Sri Lanka 1978 : 58). Although SMAM is only an indirect measure it has enjoyed a circulation of a much higher magnitude than the Registrar-General's figures provided on an yearly basis.

Two factors may have stimulated this over-consumption of SMAM. First, the fact that most developing countries do not have effective vital registration systems renders the researcher to fall back on indirect measures; it is relatively less demanding to know what proportion of the population is married or not along with their current age than have an effective recording system of marriages. The use of one simplified statistical procedure to estimate the central age at marriage further facilitates the comparability across nations.

Secondly, in Sri Lanka SMAM has demonstrated 'galloping' qualities, especially since the early 1960s and the legitimacy derived from a statistical procedure has apparently been harnessed by the academic and administrative communities to achieve an element of sensationalism and forge into the limelight in the international arena.

The Evidence from Cross-Sectional Data

Casual perusal of the SMAM of females during the seven census years of this century reveals that until 1953 there was hardly any monotonic increase worthy of mention. During 1911—53 SMAM oscillated between 20.7 and 21.4 years (ESCAP, 1976; Table 85). From 1953, however, SMAM increased from 20.9 to 22.1 in 1963 and to 23.5 in 1971. The World Fertiiity Survey of Sri Lanka conducted in 1975 reveals a figure of 25.1 years which is referred to in their report as a 'very high value for SMAM' when compared cross-nationally.

Unlike SMAM which is based on the never married proportions 15—49 years, the Registrar-General bases his estimates on persons who have actually married during a particular year. The Registrar-General provides average age at marriage figures under three categories, viz., general, Kandyan, and Muslim marriages. The range of these figures for every year between 1963—73 exhibits a fair degree of variation, least of which is recorded within general marriages (between 23.2 and 24.7 years) and the most among Kandyan marriages (between 20.0 and 26.7 years). Muslim marriages, as might be expected, depict very much lower ages at marriage (between 18.0 and 19.7, Registrar-General's Reports). These figures compare tolerably well with the two SMAM estimates of 22.1 and 23.5 in 1963 and 1971, respectively. However, when contrasted with the Registrar-General's unpublished figures for 1977 which stand at 22.9 years in respect of all three types of marriages (23.4, 21.7 and 19.9 years for general, Kandyan and Muslim marriages, respectively), the SMAM figure of 25.1 in 1975 appears suspiciously high.

The Registrar-General's figures in their turn do not account for all females who marry during a particular year. The women who marry according to custom are left out. If one may speculate on the characteristics of these females, it is very likely that they as a group marry at relatively younger

ages than those contracting either general or Kandyan marriages since they are apt to be drawn disproportionately from amorg the less educated, poorer segments of the society as well as from more rural areas.

The positive association between educational attainment and age at marriage is well documented (Population Reports, 1979) and is evident in the Sri Lankan situation as revealed in Table 1.

TABLE 1

Mean and median age at marriage of females in Sri Lanka 1971 by educational attainment

Educational Attainment		Age at Marriage Mean	Median	No. of Cases	Per cent
No schooling	...	17.9	17.8	2,247	2.9
Grades 1—5	...	19.1	18.9	29,386	37.9
Grades 6—9	...	20.4	20.2	16,538	21.3
G. C. E. (O.L.) & (A.L.)	...	22.9	22.9	5,542	7.1
Higher	...	26.6	26.8	757	1.0
Unspecified	...	18.6	18.6	23,144	29.8
All educational attainments	...	19.5	19.4	77,614	100.0
Age at marriage not reported	...	——	——	8,047	10.4

Source: Based on the analysis of 10 per cent sample census tapes, 1971.

Unfortunately there are no readily available estimates of yearly prevalence of customary marriages. The closest estimates are found in the figures of the 1971 census which gives a breakdown of marital status, including registered and customary marriages. Amorg the 15—49 age group of females, 17.6 per cent of all currently married women were customarily married. Within each of the seven five-year age groups, this proportion ranged from 24.1 per cent (among 15—19) to 14.8 per cent (among 25—29) (unpublished data from the analysis of the 1971 sample census tapes undertaken by the writer). Since a minimum of 15 per cent of the currently married are customarily married and are likely to have entered into unions at much younger ages, the Registrar-General's figures on average age at marriage might be considered as substantial over-statements of the 'true' average age at marriage of females in Sri Lanka.

This is the evidence which emerges from both the third and fourth types of measures mentioned earlier. Both the mean and median age at marriage are based on census or survey investigations and data obtained in response to a retrospective question, viz., 'what was your age when you first got married' or a variant of this. It must be noted that data collected from such a question may be subject to errors arising from memory lapses. However, they constitute the only alternative source to the Registrar-General's records from which direct information on age at marriage on a current basis is obtained.

Table 1 provides the mean and median ages of marriage of females according to educational attainment. The data are derived from the analysis of the 10 per cent sample tape of the 1971 census of Sri Lanka undertaken by the writer. From these figures one finds that a central (mean or median) age at marrige of 23.5 years (i.e. SMAM of 1971) could only be experienced by a sub-sample of the ever-married female population who would have had at least 10 years of education. Table 1 also shows that this is a mere 8.1 per cent of the female population. With more than one half of females over 15 years possessing an education of less than five formal years, the attainment of a central age at marriage of 23.5 (1971) or 25.1 years (1975) as is derived from SMAM calculations, it must be held, is a gross over-statement if not an expression of fantasy.

There is evidence in the same World Fertility Survey Report to reject or cast serious doubts on its own figure of 25.1 years as the SMAM. Of the women who ever-married before the age of 25 in the WFS Sample, the mean age at marriage ranged from 17.7 to 18.9 years while the median age ranged from 16.8 to 18.5 years. Similarly, among those women who ever-married by age 30 the mean age ranged from 19.0 to 19.8 and the median age from 17.7 to 18.5 years (World Fertility Survey, Sri Lanka, 1978: Tables 4.2 & 4.3). Thus, by no conscionable stretch of imagination can we possibly say that half the women (who will ever-marry by age 50) will marry by 25.1 years; this mark is reached much earlier in life.

Age-specific marital status data for all women screened for the WFS reveal that all girls whose current age was 14 years were never married. These proportions (by single year) decrease monotonically to 72.1 per cent at age 20, 37.4 per cent at 25, and 18.3 per cent at age 30. If these women start marrying as per the proportions entailed then, one quarter of the women will be married by 19.8 years, one half by 23.4 years and three fourths by 28.2 years. In comparison to the median age of 23.4, the SMAM of 25.1 years still appears high but the gap has narrowed to a level of relative compatibility.

Evidence from Cohort Data

We obtain a very different picture, however, when the sub-sample of women who are actually married is examined. Table 2 reveals that one quarter of the single-year birth cohorts of ever-married women from 1926 through 1945 have married between the ages 14.8 and 17.1 years; one half between 17.5 and 19.9 years; three fourths between 20.9 and 24.6 years. Compared with the figures in the preceding paragraph for all women, the actual situation experienced by the large majority of women during the recent past reveals that the former are gross over-estimations by at least 4 to 5 years vis-a-vis the central age at marriage.

The implications of suggesting a SMAM of 25.1 years have apparently not been considered by those who use this figure. Marriage in Sri Lanka signifies the on-set of socially accepted sexual relations between man and wife leading to the birth of the first child. Do the proponents of this figure suggest that in Sri Lanka, the central age at which a woman has her first child is around 26 years? This is, once again, an unacceptably high age to have the first child.

TABLE 2.

Central ages at which one fourth, one half and three fourths of women marry in Sri Lanka, estimates from birth cohorts (1926—1945) and during calendar years (1956—1975)

Birth Cohort (B.C.)	Calendar year (C.Y.)	Number of Cases		Central age at marriage of					
				One fourth		One half		Three fourths	
		B.C.	C.Y.	B.C.	C.Y.	B.C.	C.Y.	B.C.	C.Y.
1926	1956	152	150	15.1	14.7	18.2	17.7	20.9	21.1
1927	1957	220	177	15.2	15.4	18.0	18.1	21.3	21.1
1928	1958	169	220	16.4	15.5	19.0	17.7	21.9	20.8
1929	1959	144	237	15.6	15.1	19.4	18.2	24.1	21.7
1930	1960	292	239	14.8	15.1	17.5	18.0	21.6	22.0
1931	1961	102	223	17.1	15.9	19.4	18.8	22.1	22.6
1932	1962	232	206	15.8	15.9	18.4	18.2	21.9	21.3
1933	1963	150	218	16.3	16.4	19.3	18.8	24.4	21.5
1934	1964	169	191	14.8	16.2	18.3	19.3	21.5	23.1
1935	1965	253	227	14.8	16.1	17.6	19.2	21.7	22.4
1936	1966	200	202	15.2	16.4	19.1	19.4	23.8	23.2
1937	1967	260	214	15.4	16.9	19.1	19.3	22.4	24.4
1938	1968	168	267	16.4	17.0	18.8	19.9	24.0	23.6
1939	1969	215	266	15.7	16.8	19.9	19.8	24.6	24.4
1940	1970	304	272	14.9	17.9	17.8	20.5	21.8	23.7
1941	1971	167	257	16.5	17.7	19.4	21.1	23.8	25.5
1942	1972	310	231	15.9	18.7	18.8	22.0	22.8	24.0
1943	1973	207	260	16.4	19.0	19.1	22.4	23.7	25.5
1944	1974	230	274	15.5	18.5	18.4	21.0	23.3	23.6
1945	1975	293	173	15.7	19.6	18.8	23.2	22.9	26.3
Minimum value				14.8	14.7	17.5	17.7	20.9	20.8
Maximum value				17.1	19.6	19.9	23.2	24.6	26.3
Range (in years)				2.3	4.9	2.4	5.5	3.7	5.5
Standard deviation				0.67	1.41	0.67	1.61	1.16	1.62

Source: Computed from World Fertility Survey, Sri Lanka 1975. 1978 Appendix Table 1.1.2

A small survey conducted in Puttalam District by the Demographic Training and Research Unit of the University of Colombo during late 1980 revealed that while the mean age at first marriage was 19.6 years, the first child was born at the central age of 21.0 years (unpublished data). This sample, however, does not necessarily represent the national population. It has been documented elsewhere that one half of the same sample of ever-married women of the WFS in Sri Lanka (whose median age at marriage ranged from 17.5 to 19.9 years) went on to have their first child between 19.4 and 22.1 years of age (Abeysekera, 1981).

Unfortunately there is almost a total absence of national data collected on a current basis that pertain to the mother's age at the birth of her first child. In a country where a fertility decline has been observed concurrently with the operation of a National Family Planning Programme for the past 15 years, it is imperative that marital fertility be monitored closely in order to ascertain the changes in the beginning, timing and termination of child bearing among successive cohorts of women. This will also provide the acid test for judging the efficacy of the National Family Planning Programme as well as provide invaluable feed back on the deficiencies and strengths of the Programme that can, in turn, be utilized to reorganize its strategy. In this regard, the need for incorporating parity (birth order) data on the birth registration form cannot be over-emphasized. (In cognizance of its importance the Registrar-General has since 1981 instructed his district registrars to include birth order in each of the birth registraton forms. However an adequate space for this is still to be provided on the official form.)

One major limitation of SMAM is that it assumes the current age-specific proportions never married would have prevailed for the multitude of women who form the bulk of those marrying around the period of inquiry. Within a context of delayed marriages, this is an assumption that is best not made. What SMAM captures is a cross-sectional feature (a still photograph, if one may use the analogy) at one point in time but interpreted as if it were monitoring the process of change over time (as if it were a movie). The cross-sectional picture one may project may very well be a chancy occurrence which does not do justice to trends that have prevailed. It is no secret that many eminent demographers have erred by taking this 'easy-way-out' in using cross-sectional data to assess the prevalent 'trends' and to prognosticate future patterns of change.

Table 2 displays that the range of variation in the estimation of the central age at marriage is sometimes more than double when using calendar year statistics (i.e. cross-sectional data) in comparison to the estimates using birth cohort (i.e. by following the performance of women born in a single year through the better part of their lives).

The performance of each birth cohort is compared with the calendar year's situation that is 30 years away from the cohort's year of birth (1926 cohort compared with marriages taking place in 1956, and so on), thus giving each cohort 30 years of life, a period within which more than 80 per cent of all women enter matrimony according to the World Fertility Survey.

Estimates of the central age at which one quarter, one half and three fourths of ever-married women enter marriage arrived at by the two procedures reveal that during the mid-1950s to early 1960s the yearly estimates at the three percentiles were generally lower than the estimates arrived at through cohort data; this pattern changed dramatically in the opposite direction during the late 1960s to mid-1970s (see Table 2). This was due to larger proportions marrying at later ages. While there was a comprehensive fluctuation of only 2.4 years in the median age at marriage for 20 successive birth cohorts, the twenty calendar yearly estimates manifested a fluctuation of 5.5 years, well over double the variation of the former. The cohort performance also indicates that over the twenty-year period which purports to have registered an unprecedented rise in the age at marriage there was remarkable consistency in the age at which women got married and gave signs of only a very moderate increase.

It must also be pointed out that the mean is not the best suited measure of central tendency to assess the 'matrimoniality' of the population because it is susceptible to the influence of extreme values. In a context as in Sri Lanka where the age at marriage distribution is noticeably skewed towards the higher ages, the mean tends to be biased upwardly. The median, estimating the age at which one half of the women marry, is a much better measure of central tendency avoiding this bias. While the median age at marriage of females in 1975 according to the WFS data is 23.2 years, the mean age from the same source is 23.9 years; in calculating SMAM the estimate escalates to 25.1 years. All these estimates, however, are derived from cross-sectional data and are ill-suited as dependable sources for assessing trends.

It is submitted that the estimates based on the birth cohorts' 'performance at the altar' are much more robust and dependable for monitoring trends. One half of (20 successive birth cohorts of) ever-married women who were at least 30 years of age at the time of the World Fertility Survey of 1975 had married between the ages of 17.5 and 19.9 years.

Accordingly, we firmly hold that the central age at marriage which prevailed in Sri Lanka during the mid to late 1970s is within 19 to 20 years rather than 25.1 years as is suggested through the calculation of SMAM. It is suggested that the 19 to 20 year range be taken as the more realistic estimate of the central age at marriage of females for all practical purposes relating to planning and development in Sri Lanka.

Implications

Within a context of declining fertility, the over-exposure of a SMAM of 25.1 years for females in Sri Lanka may have the disastrous effect of generating complacency among policy makers. They might be led to think that delayed marriage and declining fertility are mutually reinforcing social behaviour signalling the emergence of a steady trend indicative of a preference for smaller families. The fact that the evidence from cohort fertility performance suggests that the median age at marriage of ever-marrying women has but increased moderately and that it has been within the limit of 20 years indicates a sufficient contradiction worthy of deeper probing as to the causes responsible for the fertility decline.

The most striking observation during the recent past is perhaps the growing proportion of population who remain unmarried through their early 20s to their mid-30s. The 20—24, 25—29 and 30—34 age groups of females who had only 29.4, 11.8 and 6.6 per cent, respectively unmarried in 1946 had increased to 53.2, 24.6 and 10.9 per cent, respectively by 1971 (ESCAP, 1976: Table 89). The World Fertility Survey of 1975 depicts a further increase in the same trend. The writer has documented elsewhere that the 'problem' of having unmarried sons and daughters past their mid-30s is much greater in the wet zone areas than in the dry zone areas of the country (Abeysekera, 1979: 423—425). It is to be noted that the wet zone exerts greater pressure of population on land and it is the wet zone peasantry who eagerly sought and secured the 'driblets' of extra-agricultural employment opportunities as a means of adapting their life styles to the fast diminishing land/man ratio (ESCAP, 1975).

Whether this 'postponement' of marriage is willingly pursued or 'thrust upon' from without is of crucial significance to the understanding of the fertility decline. Based on the evidence of cohort fertility which suggests that the change in the timing of nuptiality in Sri Lanka during the recent past has only been raised moderately, one is willing to speculate that no drastic change has occurred in this respect.

The normative expectation as well as the predominant nuptiality behaviour of the society still demands that its young adults be married and initiate the process of forming their respective families of procreation. Then why are the young adults postponing marriage? It is submitted that marriage demands the satisfaction of certain prerequisites among which is the economic viability of the family unit to be formed. With growing unemployment especially among the youth (Srivastava & Selvaratnam, 1972) this has proved to be an increasingly difficult condition to satisfy by otherwise marriageable persons.

Basing our observations on these factors we would expect a substantial rise in the proportions marrying as well as a consequent 'baby boom' resulting in a fertility up-turn at the first signs of a mass-based recovery in the economic realm. Unpublished birth statistics with the Registrar-General's Department for 1979 and the first half of 1980 are already indicative of this trend. One might stretch further to speculate that the 'middle-east money' that is finding its way into the lower strata of society might be performing the same role although it would not necessarily indicate a concomitant indigenous economic recovery.

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The Cities of Medieval Sri Lanka (A. D. 1000-1250) Centres of Dynastic Power, Religious Authority and Commercial Activity

S. PATHMANATHAN

The Polonnaruwa period constitutes a most remarkable phase in the development of inland towns in pre-colonial Sri Lanka. It also witnessed the last and perhaps the greatest phase of constructional activity before the Portuguese conquest. While Polonnaruwa developed as the principal centre of dynastic and military power, many other towns developed in different parts of the island during the eleventh and twelfth centuries. Besides, Anurādhapura and Māntai although on the decline, continued to retain their importance in the economic and cultural life of the country. An investigation on the development, nature and functions of these towns may provide valuable insights on different aspects of the social history of the island. A study of these cities is indeed an essential requisite for a proper understanding of the politics, economy and culture of traditional society.

The characteristics of urbanism which is a modern and contemporary global phenomenon cannot be attributed to Medieval Sri Lankan cities.[1] Superficiality, transciency and anonymity which are sometimes considered as the principal features of urbanism could not have been the characteristics of life in medieval Sri Lankan cities. Polonnaruwa and other towns had many characteristics in common with most of their counterparts in the predominantly aggrestic societies of contemporary Asia. Yet, there were some distinctive features which were the expression of environmental peculiarities and the orientation in cultural expression.

Sri Lankan tradition as found in literature and epigraphic records consistently classified all human settlements into three categories, namely *gama*, *niyangama* and *nagara*. Yet no effort was made to define each of these units in relation to others or on the basis of prevailing life-styles and other considerations. It would however, be unrealistic to assume that these terms had no distinctive connotations for the people by whom they were applied. Some Indian texts seek to define similar categories of human settlements on the basis of territorial size but such traditional explanations are of doubtful validity.[2] The terms *gama*, *niyangama* and *nagara* as found in Sri Lankan literature and inscriptions had the following respective general connotations: village, market town and town or city.

The village community was predominantly an agricultural one and generally all South Asian villages had many characteristics in common despite ethno-linguistic differences and variations in the patterns of cultural institutions. The noticeable differences among village communities were to a large extent the product of ecological factors. Rural life and

organizations were dominated by land holders through whom the State maintained its links and exercised authority over the countryside where stability and continuity were maintained to some extent through tradition. The pattern of economic activity in the village restricted mobility and the limited needs of the village community that could not be produced or gathered locally were supplied by itinerant traders operating from market towns and cities that were in proximity to them. Villagers lived in houses mostly clustered together over inhabited sites surrounded by open fields often skirted by uncleared woods over most parts of the island. Paddy cultivation and cattle rearing were the two principal sources of sustenance and wealth. The pressure of population could never be felt acutely as new fields and habitation sites could be raised by clearing adjacent jungle land. The fertility of the soil and the supply of water assured by the development of irrigation facilities contributed towards a large surplus of agricultural produce and under such conditions there was no compelling need for peasant cultivators to leave their lands in search of a better living. For them the towns had little or no attraction.

The *Niyangama* or market town was a relatively small unit where traders, artisans and villagers congregated and exchanged commodities; such towns were sited at central places in the countryside so as to facilitate the easy movement of people, vehicles and commodities. They were also reckoned as distinct units for purposes of administration and revenue collection and were generally under the control of mercantile communities. Its principal function was providing facilities for the exchange of commodities produced in the countryside. The relationship between these towns and the villages in economic terms was one of interdependence. The growth of these towns was dependent on the degree of agricultural prosperity in the country as a whole.

The city which had some characteristics in common with the market-town was fundamentally different from the village. It was by no means associated with agricultural production but was almost entirely dependent on the agricultural hinterland for its food supplies. It continually drained the villages of their agricultural produce. In the traditional South Asian societies surplus food production in the countryside was an essential requisite for the development of inland cities. Those cities whose development was stimulated by trade also became centres of craft-production and generated in some measure the supply of money and the flow of goods. The growth of a city like Polonnaruwa also presupposes the development of craft-production but the degree of its development and its relative importance in city life are matters for future archaeological exploration and investigation.

The units called *gama*, *Niyangama* and *Nagara* had a recognizable geographical identity and were reckoned as separate and distinctive units for purposes of social control, land management and revenue collection. The people settled in these units were to some extent differentiated by their economic pursuits, opportunities for securing and accumulating wealth and access to sources of power and authority. The relative isolation of

villages contrasted with the life in the towns which were focal points of spatial mobility and were linked with far away places in the countryside by routes of communications which tended to radiate from the city to the agricultural hinterlands that surrounded or skirted them. There was another important respect in which towns and cities differed from the villages; they lacked the social cohesion and cultural homogeneity of the villages and as will be seen subsequently the towns in the north central plain of the island had composite populations and two distinct cultures articulated by two different religious traditions. The composite character of their population and their peculiar environment made the towns receptive to new social and cultural influences and they served as centres for the assimilation of new ideas, values and techniques through a variety of channels.

Although there could be a wide gap between the people living in the towns and those in the countryside in terms of wealth and access to sources of power and authority they were almost alike in their social outlook and attitudes. The people in the towns could not be alienated from their traditional ways. In technological skills they were in the same stage of development and even in towns there could be little or no upward social mobility. Even the settlement patterns in the villages which were governed by considerations arising from the hierarchial scheme of social organization were reproduced in the towns with the difference that the preponderance of peasant cultivators in the villages was substituted by that of other functional groups in the towns. The villagers and townsmen cherished the social values and cultural traditions which they inherited from their ancestors with an equal degree of concern. The towns and cities which drained the surplus produce from the countryside naturally became the centres of constructional activity and dveloped also as focal points of religious activity and cultural expression. The surplus wealth accumulating in them was partly devoted for the construction and maintenance of religious institutions, works of art and public utility. The cities and towns witnessed a considerable extent of commercial activity which generated some measure of money supply and this contributed substantially to their prosperity. The cities that were the centres of dynastic power never developed corporate forms of organization or association and could never develop a citizen ideal. The population consisted of separate layers and segments performing diverse functions and were kept together and under control through the authority of dynastic power that mobilised their resources.

The information relating to the development of towns is primarily derived from archaeological sources and the Pāli chronicle. The evidence from such sources, although substantial, has its own limitations and has the effect of limiting the scope of our enquiry. They do not shed any light on the demographic pattern or the specific location of the settlements of various functional and social groups. Palace records which may provide some clues on these matters have all been lost and there was no tradition of recording statistical information relating to population by the chroniclers. The Pāli chronicle provides interesting information about the different phases of development of the city but such information is confined only to the capital city of the time. Among the cities of

pre-colonial Sri Lanka, Polonnaruwa occupies a position of pre-eminence in the historiographic traditions; the *Cūlavamsa* devotes three long chapters for the description of constructional activity in that city whereas such activity even in Anurādhapura which had a much longer duration is only incidentally referred to in connection with the activities of some of the most noteworthy rulers. Nevertheless, the descriptions of the city as found in the chronicle are often exaggerated and conventional and no care was taken to present details regarding social life, administration and settlement patterns about which the social historian may be concerned.

Archaeological explorations and excavations which have been in progress, although intermittently, for nearly a hundred years have until recently been conducted haphazardly and amateurishly without due concern for the problems relating to the social and economic aspects of city-life. The architectural remains are primarily confined to the royal and monastic establishments and as such our perceptions about the cities and the social life characteristic of them would tend to be lopsided. Such establishments certainly dominated the landscape of the capital city. The immensity of the dimensions of such establishments and the glowing descriptions of the city as found in the chronicle pre-suppose that there were large numbers of people of various functional groups engaged in the performance of services required for the maintenance of such establishments.

Polonnaruwa

The development of dynastic power and the expansion of trade resulting from agricultural prosperity and the growth of new settlements in the outlying provinces led to the development of many towns during the eleventh and twelfth centuries. The larger towns were still confined to the north central plain while a number of small towns were emerging in the south western and southern parts of the island which acquired an increasing importance in the political and economic life of the country on account of the growth of their material and manpower resources. Polonnaruwa was in a most flourishing state as it was the principal centre of dynastic and military power while Anurādhapura was on the decline although it retained its pre-eminence as a sacred city. Among the other towns of this period were Mātota, Padaviya, Vahalkada, Panduvasnuvara and Mahanāgakula. The first three among these towns owed their importance to the growth of trade and were dominated by mercantile interests while the last two were regional centres of dynastic power and owed their development to the confluence of political and military events in the island.

The city of Polonnaruwa which came into prominence in the eleventh century flourished for a period of nearly two centuries and as a centre of dynastic power it had a short duration in comparison with the earlier capital. It had its origins in the late Anurādhapurra period and as suggested by its alternate name *Kandavuru nuvara* it had its beginnings as a military outpost of the Anurādhapura rulers. It also served as a secondary capital for the Kings of the late Anurādhapura period some of whom chose to live in that city whose surroundings, presumably,

provided them with a relatively greater measure of peace and security. The earliest reference to it in the Pāli chronicle is found in the account of Aggabodhi III (628) who is credited with the construction of Mahāpānadīpa vihara at Pulatthinagara.[3] Aggabodhi IV (667—683) and Aggabodhi VII (772—777) spent the last days of their respective reigns at Polonnaruwa.[4] Towards the end of the eighth century Mahinda II (777—797) is said to have constructed in this city two monasteries, the Dāmavihāra and the Sannīratittha.[5] Udaya I (797—801) moved out of Anurādhapura and took up residence at Polonnaruwa after suppressing the rebellion organized against him by the *Senapati* and *Yuvarāja*.[6] The chronicle records that he constructed halls for accommodating cripples, the blind and sick persons in Pulatthinagara. Pulatthinagara is again mentioned in the Chronicle in connection with some occurrences in the reign of Sena I (833—853). Udaya, one of the princes at the court of Anurādhapura seized a princess under the King's protection and fled with her to Pulatthinagara. Later a reconciliation was effected between this prince and the king who had fomerly disapproved of Udaya's action.[7] In the early tenth century Kassapa IV (898—914) is said to have constructed hospitals at Anurādhapura and Pulatthinagara for combating the upasagga disease.[8] As testified by the Pāli chronicle Pulatthinagara which came into the limelight in the seventh century continued to acquire an ever increasing importance. Yet it did not develop into a big city until it became the centre of political authority in the eleventh century. In the later Anurādhapura period it had royal residences, some monasteries and hospitals, the architectural remains of which have not been brought to light so far.

The development of Polonnaruwa as a political and military stronghold was prompted by strategic and perhaps also by economic considerations. The eastern portion of the northern plain had acquired a relatively greater importance since the construction of Minneriya, Kaudulu wewa, Giritale, Kantaḷāi and other large tanks. It had become the most favoured area for development and the exploitation of the immense resource potential in that region by the state, demanded direction from a centre that was much closer than Anurādhapura. The development of this part of the country which enriched the king's resources and enhanced his power enabled the rulers of Anurādhapura to make determined efforts to control the south eastern principality of Rohana, the rulers of which sought to assert their independence whenever opportunity availed. The physiographic features of the land were always to their advantage.

The strategic importance of Polonnaruwa lay in the fact that it controlled access into Rohana and from Rohana into the northern plain through the passes at Dastota and other nearby centres where two routes of communication from the southern principality one running along the littoral and the other through the inland tracts converged. Considerations of military strategy demanded a concentration of military power in and around Polonnaruwa for defending the northern plain from attacks directed from the south and for maintaining some semblance of authority over Rohana. As such a need was felt in greater measure during the period of Chola rule than in earlier times, the Cholas naturally made Polonnaruwa the principal centre of their administration in the

island. The Cholas seem to have realized the strategic advantages of Polonnaruwa to a greater extent than the local rulers of the preceding period and chose it in preference to Anurādhapura as the principal base of their political and military power in the island. Its proximity to the eastern littoral with its port of Gokaṇṇa which assumed some significance in the context of the development of Chola sea power and its involvement in seaborne commerce was perhaps another vital consideration.

The fact that Polonnaruwa became the principal political and military stronghold of Chola power in the island is well attested by historical and archaeological evidence. The *Cūlavamsa* asserts that 'with Pulatthinagara as base, the Cholas hold sway over Rajarata as far as Rakkhapāsāna kaṇṭha.[9] This claim is further supported by other references to Chola military activities in the island.[10] The claim made in the Pāli chronicle regarding the status of Polonnaruwa is corroborated by archaeological evidence. Chola presence in Polonnaruwa in sufficient strength is attested by the provenance of Chola architectural monuments and inscriptions which are among the oldest antiquities from Polonnaruwa which acquired the new name of *Jananāthamangalam*, after one of the epithets of the Chola King Rājarāja I.[11] Among the architectural monuments of Polonnaruwa, Siva devales 2, 5. and 6 belong to the period of Chola occupation. The Chola inscriptions from Polonnaruwa which include those of Rajendra I and Adhirajendra record the names of a number of Chola dignitaries and officials who were present in the city.[12] Another noteworthy record which could be assigned to the period of Chola occupation is a brief Tamil inscription which testifies that the South Indian mercantile group called Ayyāvole were settled in a quarter of the city and had constructed within it a Buddhist monastery.[13] The composite character of the society and cultural traditions of Polonnaruwa had its roots in the period of Chola occupation. The military and mercantile communities of South Indian origin which were established in the city during the early eleventh century became an important and influential element in the city. References in the *Cūlavamsa* suggest that Polonnaruwa was a fortified walled town provided with gates which commanded access into it when it was stormed by the armies of Vijayabāhu I in 1070.[14] The traces of Chola fortifications have not hitherto been brought to light through archaeological excavations.

Vijayabāhu I celebrated his coronation in the old city of Anurādhapura after having vanquished the Cholas but after a brief sojourn of three months there, he returned to Polonnaruwa where he settled down permanently. The city was rebuilt and fortified again by the new ruler. In relation to Vijayabāhu's undertakings in this respect the Chronicle asserts:

> "In Pulatthinagara he had a high and strong wall built, provided with a long, broad deep trench and equipped with high parapets difficult for the foe to reduce." [15]

The remains of the walls and fortifications raised by Vijayabāhu, like those of the Cholas, cannot be identified. In the reign of this monarch the city acquired a new dimension by developing the characteristics typical of the capital city of a Sinhalese Kingdom. The capital cities of the Sinhalese monarchs always had a dual character; they were not merely the strongholds of dynastic and military power but also were the centres of religious authority. The close connection that had existed between the monarchy and the Buddhist monastic institutions since pre-Christian times had resulted in a conception of kingship which represented the monarch as a custodian of Buddhism and its institutions. The idea that the island of Lanka belonged to Buddhism was encouraged and this was further accentuated by the development of large monastic institutions maintained with revenues of government and land grants. Some of the monarchs even claimed that they underwent the royal consecration for the sake of defending the alms bowl and ascetic robes of monks. All this meant a large concentration of monastic establishments in the capital city. The process of establishing large monastic institutions in Polonnaruwa was initiated by Vijayabāhu I and almost completed by Parākramabāhu I and some of his immediate successors.

The city of Polonnaruwa reached the highest stage of development during the reigns of Parākramabāhu I (1153—1186) and Nissankamalla (1187—1196) whose reigns together constituted a most remarkable phase of constructional activity in the island. Under them dynastic power which attained the highest level of development displayed a measure of efficiency and competence that was seldom rivalled in the whole range of the island's pre-colonial history. The system of artificial irrigation was developed to its peak and functioned to the full measure of its capacity. A major achievement of Parākramabāhu was the giant Parākramasamudra which put into shade all earlier hydraulic constructions. The vastly accumulated resources of the state were diverted towards the enlargement of the city and for the provision of public amenities. An attempt was made in the twelfth century, with some measure of success, to revive the tradition of monumental architecture that was characteristic of Anurādhapura up to the end of Mahasena's reign. Under Parākramabāhu and his successors, court life at Polonnaruwa was characterized by a degree of sophistication, luxury and grandeur that was seldom rivalled in Sri Lanka.

Polonnaruwa which was rebuilt and enlarged by Parākramabāhu was about twice as large as Anurādhapura and was crowded with a number of buildings belonging to the royal and religious establishments. It is claimed that the city which was renamed as Parākramapura under him encompassed an area which was seven *gāvutas* long and four *gāvutas* broad.[16] The excavated architectural remains of Polonnaruwa are mainly confined to what are known in modern times as the promontory, the citadel and the quadrangle of which the last was occupied, as suggested by architectural remains, almost exclusively by monastic establishments while both monastic and royal establishments were to be found scattered over the other two segments of the city.[17] The architectural remains of the royal palace and other establishments are very imposing and occupy

a prominent position among the excavated ruins. The secular aspects of the city were not so thoroughly and completely overshadowed by religious establishments as in Anurādhapura.

The constructional activity undertaken by Parākramabāhu I in the city about which a detailed account is found in the *Cūlavasmsa* was very extensive and encompassed both the royal and monastic establishments. The account of the rebuilding of Pulatthinagara is of considerable historical importance as it provides detailed information on the major architectural undertakings of the reign.[18] The account is by no means altogether reliable as the main aim of the Chronicler was the glorification of the King rather than the presentation of historical information. Exaggeration and poetic embellishments have found their due place in this account and no attention was paid to precision and accuracy of historical details. As could be expected the details relating to monastic establishments are fuller and relatively more precise than those relating to secular monuments. It should, however, be noted that in its essential points the *Cūlavamsa* account, in this instance, is substantially corroborated by archaeological evidence. It provides an insight into the measure of Parākramabāhu's competence and resources and the magnitude of his architectural undertakings.

The royal establishments of Parākramabāhu and his successors were complex and vast and were spread over the citadel area and the promontory. In the chronicler's opinion Polonnaruwa was rebuilt and embellished in such a manner as to reflect the extra-ordinary power and glory of the King. The palace he erected is said to have consisted of seven storeys with a thousand chambers and supported by hundreds of columns and was named Vejayanta.[19] In its immediate neighbourhood were such edifices like the *Hemamandira*, *Dhāranighāra*, *Mandalamandira* and the *Pañcasattimandira* for conducting religious ceremonies and expiatary rites for the royal household.[20] The structure called *Sarassatimaṇḍapa* was in the form of a theatre for staging musical performances and dances for audiences comprising the royalty and other members of the court. Another notable monument which is said to have been constructed by Parākramabāhu is the *Rājavesiyabhujanga mandapa*.[21]

Among the architectural remains of the royal establishments of Parākramabāhu which are mainly confined to an oblong area roughly 440 yards by 246 yards within the citadel only those relating to the palace and the *Rājavesiyabhujanga mandapa* have been identified.[22] The palace was certainly a solid structure of monumental proportions provided with upper storeys as suggested by its remains. The central edifice of its architectural complex is 650 feet square and the area enclosed by galleries is of proportionate dimensions. The main flights of steps facing east leads to an imposing pillared hall which is 102 feet by 42 feet in dimension. There are in the palace over fifty small cells ranged in two or three rows surrounding the apartments other than the main hall. There are still the remains of a broad flight of granite steps which led to the upper storeys of the palace. The walls of the palace are extraordinarily thick in the central block and still stand to a height of 30 feet in some places.[23] The 'pavilion' called *Rājavesiyabhujanga*, the remains of which are imposing

was a stately building designed as an audience hall. It was raised on a stone stylobate of three receding tiers of high elevation and was provided with four rows of stone pillars.[24] Parākramabāhu had a second palace in the city. It was located in the Dīpuyyāna, far outside the citadel, and intended as a pleasure resort. It was a minor version of the main palace in the citadel. For some reason unknown to us Nissankamalla decided to move out of the palace of his great predecessor and took up residence at a one erected on the embankment of the Topawewa. It consisted of a number of buildings arranged without a general plan and among its components the council chamber and the audience hall are noteworthy. It has been designed on the same lines as the pavilion in the citadel, than which it is slightly larger. The inscriptions indited on its pillars are of unusual interest as they indicate the places reserved for various high dignitaries of state when the King held council while he was seated on his lion throne.

Parākramabāhu is also credited with having laid out two large parks, the Nandana and the Dīpuyyāna, which were provided with all kinds of trees, creepers and flower plants. A number of pools including the *Silāpokkharani* were among the major attractions of the Nandana park. The *Silāpokkharani* presently known as Kumara pokuna, is situated outside the citadel wall near its south-eastern corner. This bath which was approached from the citadel by a flight of steps leading towards it was filled with water conducted along the underground passages from the moat by spouts and whenever necessary, it was emptied by an underground passage on the eastern side.[25] The Dīpuyyāna occupied a stretch of land between the two branches of a stream and was made most pleasant and delightful on account of its natural surroundings.

Parākramabāhu is also credited with having surrounded the fortified portion of the city with a succession of four walls of which each outer one was of a lower elevation than the inner one.[26] The three suburbs, Vijita, Rajakulāntaka and Rājavesibhujaṅga [27] which he is said to have created in the vicinity of the city have disappeared without leaving behind any traces and even the sites where they were located cannot be identified. In the words of the chronicler 'the all wise King had different kinds of streets laid down many hundreds in number, adorned with many thousands of dwellings of two, three and more storeys and provided with various bazaars where all wares were to be had and in which, day by day there was incessant traffic of elephants, horses and chariots.[28] Although this description is an exaggerated one it could not be totally discarded on the grounds that it is not corroborated by the find i c of archaeology.

The large royal, military and monastic establishments concentrated in Polonnaruwa presuppose an abundance of material and manpower resources at the disposal of the state. The extensive constructional and acquisitive activities required an impressive organizational infrastructure under central direction. Such a structure seems to have existed under Parākramabāhu and Nissankamalla in a most developed form. Specific areas of governmental activity were traditionally placed under what may loosely be described as 'Departments' under the direction of

dignitaries appointed by the King but these were not well defined and there was no clear demarcation of functions. Most of them were involved in some way in constructional and acquisitive activities which were the two principal concerns of the state. A re-valuation of the evidence relating to them and a definition of their functions in terms of constructional and acquisitive activities may shed new light on some aspects of government and life in the capital city.

There are a few incidental references in inscriptions to constructional activities undertaken by dignitaries some of whom were in the service of the monarchs of Polonnaruwa. The slab inscription of the Veḷaikkāras from Polonnaruwa records in its introductory portion that the Tooth Relic Temple was constructed under the direction of Senapati Deva on the orders of the King, Vijayabāhu.[29] The recently discovered Tamil slab inscription of the Veḷaikkāras from Mayila wewa (Mayilaṅkulam) testifies that the general Kaṇṭan Kaṇavati constructed a Buddhist temple named *Vikkirama calāmēkan perumpaḷḷi* and placed it under the protection of the Veḷaikkāra army settled at the locality of Uṭuturai [30] during the time of Vikramabāhu.

There are at least three such references in the inscriptions of Nissankamalla. The Ruvanvelisaya inscription of this ruler states that the Ruvanvelisaya was placed by the King under the charge of a dignitary called Loke Arakmena who was instructed also to restore the *Mirisaweti* and other monuments in Anurādhapura.[31] Another inscription of the same King, from Polonnaruwa states that the great general Tāvarunāvan constructed a priceless circular relic house called Ratnagiri on the orders of the King.[32] Yet another inscription of Nissankamalla, the Tamil inscription from Panduvasnuvara, records the construction of a monastery by a certain Matimān pañcaran who is described as a Senapati.[33] That military commanders and ministers were involved in directing the construction of irrigation works is attested by two inscriptions dated in the regnal years of Queen Kalyāṇavati. The Miṇipe slab inscription of her eighth year which eulogizes the general Bhāma and records some work he had undertaken for the restoration of irrigation works at Miṇipe provides the important information that the irrigation channel at Miṇipe was formerly constructed under the direction of the minister named Mē Kit nā. [34] The Badalagoda slab inscription provides interesting information about the constructional work undertaken at the town of Mangalāpura in Dakkhinadesa under the direction of the general Ābo (navan). The irrigation tank in the locality which had its embankment breached at three places was restored on his initiative. Besides, he had the canals restored and constructed a new sluice called the Adhikāra sluice. After the restoration of the tank and its canals the lands in the neighbourhood were brought back under cultivation.[35] It is clear from these epigraphic references that military commanders and other dignitaries of high rank were entrusted with the task of directing constructional activity within the limits of the capital city as well as in other localities. A considerable number of dignitaries assisted by a large number of functionaries serving in a subordinate capacity must have been engaged in supervising and directing constructional activty in Polonnaruwa. Such work also involved the

collection and transportation of granite boulders, bricks, timber and other building materials in enormous quantities. Building materials had to be obtained from sites which were located at considerable distances from the city. The Galpota inscription, for instance, states that the stone on which the text of the inscription was indited was transported from the locality called Sāgiri by the King's warrior under the direction of Adhikārin Jaṭa danavu Mand Nāvan.[36] This evidence from the Galpota inscription is of utmost importance as it testifies that warriors in the service of the King were involved in constructional activity and transportation. That there was some institutional arrangement for providing transport facilities is suggested by the designation Yān-tān-nāvan occurring in an inscription of the Polonnaruwa period. The expression Vahananāyaka, [37] the Sanskrit equivalent of this designation, recorded in the concluding portion of the same epigraph confirms that the dignitary who had this designation was the head of a group of functionaries specifically concerned with the provision of transport facilities required for the constructional and acquisitive activities of the state. Such activities in the city of Polonnaruwa required the mobilization of skilled and unskilled labour in monumental proportions but we have no means of determining precisely the means and extent of such mobilization. It may be assumed on the basis of slight evidence from the *Cūlavamsa* that compulsory service or *corvee* was an important source of labour supply for the great establishments of the city.[38] Large numbers of artisans and workmen who took up temporary residence at building sites had to be provided with food supplies and accommodation.

The city of Polonnaruwa undoubtedly supported a large population the size of which cannot, however, be determined. The chronicles provide little information on social conditions and archaeology sheds no light on social stratification. The city had to be provisioned with grain and other items of food but textual descriptions of the city and architectural remains do not give any idea about storage facilities in the city. The establishments in the city were almost entirely dependent on the surrounding hinterland and other regions within the kingdom for food supplies. Surplus agricultural production from almost all divisions within the kingdom were transferred to the city in the form of royal dues but little is known about the processes of collection, transportation and re-distribution of agricultural surplus production.

The land revenue which was the mainstay of the economic strength of the dynastic state was collected both in kind and money. The details of the revenue settlement effected by Nissankamalla may provide some hints about the potentialities of agricultural production as a source of revenue for the government. He stipulated that the tax on an *amuṇa* (sowing extent) of field of the highest productivity should not exceed one *amuṇa* and three *pälas* and a cash payment of six *madaran* coins. Fields of middling quality had to pay to the state one *amuṇa* and two *pälas* of paddy and four *madaran* for the yield of every *amuṇa*. The corresponding levy on the least productive field was fixed at one *amuṇa* and one *päla* and three *madaran*.[39] By such an arrangement large quantities of grain and money may have been obtained as land revenue. Besides, customs and tolls on

merchandise at ports and market centres were an additional source of lucrative income for the government. The monetary resources of the state were augmented by the supply of coins and precious metal, the flow which was generated by a well balanced external trade. A considerable degree of monetary circulation in the economy was sustained by agricultural prosperity and a flourishing trade. As the minting of coins was a royal prerogative the monarch could enhance his monetary power in proportion to the quantities of precious metals at his disposal. The discovery of coins issued by the rulers of Polonnaruwa in prolific quantities and epigraphic references to the extravagance of rulers in expenditure testify that the monetary power of the rulers of Polonnaruwa was most remarkable in the latter half of the twelfth century which significantly constituted the peak period of constructional and cultural activity in Polonnaruwa. The coins turned out of the royal mints of Polonnaruwa in the twelfth century were almost entirely of copper. Although the minting of coins in gold practically ceased after the reign of Vijayabāhu I, there are several references in inscriptions to the supply of coined and uncoined gold in substantial quantities. Inscriptional references to the use of *Kāmbodin* gold may suggest that Cambodia and the adjoining countries could have been the sources for the supply of gold required in the island. The enhancement of the monetary power of the state may partially explain the unprecedented extravagance and splendour of courtlife, the steady growth of military power and extensive constructional activity in Polonnaruwa especially during the reigns of Parākramabāhu and Nisssankamalla.

Monastic Establishments and Religious Monuments

As the monarch was represented as the custodian of Buddhism and its institutions he was obliged to construct and maintain temples and monasteries and protect centres of pilgrimage. He was expected to support the fraternities of monks and provide them with the four requisites and conduct festivals. A major portion of the resources at the King's disposal was committed for the cause of Buddhism and its institutions. Monks belonging to the various fraternities were assembled and accommodated at exceptionally large monastic dwellings in the city premises. The Tooth Relic and the Alms Bowl, the most venerated relics, were almost always under the custody of the monarch and had by this time become a sort of national palladium, symbols for the legitimation of political authority. The Tooth Relic temple was mostly constructed in close proximity to the royal palace. Chronicles and inscriptions claim that three successive temples were constructed respectively by Vijayabāhu I, Parākramabāhu I and Nissankamalla. The *Wata dāge* and the *Hata dāge*, two of the finest and imposing monuments of Polonnaruwa were presumably designed as temples for enshrining the Tooth Relic.

The process of constructing large monastic establishments at Polonnaruwa was begun under Vijayabāhu I. He is said to have constructed a number of monasteries in the city and invited many members who belonged to the three fraternities to reside in them [40] but the only monument of his reign, the architectural remains of which are still preserved is the so-called Atadāge identified as the temple of the Tooth Relic by means of the Tamil inscription set up by the Velaikkāras who were charged with the responsibility of protecting and maintaining it.[41]

Parākaramabāhu I is credited with the construction of eight monasteries of which the Jētavana was presumably the largest. 'Within its precincts were a round stone temple for the Tooth Relic, the Tivanka image house, a stupa, three sermon halls, two libraries, seventy-five parivenas and a hundred and seventy eight small residences. Eight ponds were built for the use of inmates. In all, there were five hundred and twenty buildings within the monastic grounds'. Apart from these buildings Parākramabāhu I is credited with the construction of eight mansions, each three storeys in height within the precincts of the Jētavana monastery.[42] Another mansion complete with chambers was built for the thera Sāriputta who lived, together with the incumbents of the eight fraternities at the Jētavana monastery.[43]

Another monastic complex of large proportions completed by Parākramabāhu I was the Ālahaṇa parivena which included within its precincts the monumental stupa now known as the Kirivihāra. It is said to have consisted of forty long pāsādas, eight small pāsādas and six gate towers and was surrounded by outer walls. The five-storeyed image house called Laṅkātilaka which was embellished with ornamental work of high quality and the two massive cetiyas each of which was named respectively after the two queens, Subhadda and Rūpavati, are said to have been among the outstanding monuments constructed within the premises of the Ālahaṇa parivena.[44] The Gal Vihara, Rankot Vihara, Potgul Vihara and the Satmahal pāsāda were among the other monumental edifices constructed in Polonnaruwa during the twelfth century.

The monasteries in Polonnaruwa as suggested by their architectural remains and descriptions in the chronicle undoubtedly accommodated several hundreds of monks but there are no means for determining even roughly their numbers. The vast monastic establishments of Polonnaruwa in comparison with those of Anurādhapura had only a very brief period of existence. They were in occupation at most for only a period of three generations since the coronation of Parākramabāhu in Polonnaruwa. When arrangements were made to hold a synod for the purification and re-unification of the fraternities under a single leadership it would appear that there were not many monks in the capital city. Most of them had evacuated the modest monastic centres established by Vijayabāhu I in consequence of the hostility of Vikramabāhu who deprived the monasteries of all their endowments. There was no constructional activity of any significance after the twelfth century and the years of strife and instability that followed the demise of Nissankamalla were not conducive for a peaceful and comfortable life in the monasteries. Māgha's conquest of Polonnaruwa resulted in their abandonment and destruction. There is no evidence of their re-occupation in the subsequent period and when efforts were made to undertake restoration work in Polonnaruwa during the late stages in the reign of Parākramabāhu II (1236—1271) the monasteries in the city were in an advanced state of dilapidation.[45] The final abandonment of the monasteries of Polonnaruwa presumably provided a fresh impetus to the development of regional monastic centres which had their origins in earlier centuries.

The inscriptions of the Polonnaruwa period do not provide any information about land grants made to monastic establishments in the city. Besides, there is no evidence of any kind about the institutional arrangements the monastic establishments had for the management of their resources. In the *Cūlavamsa*, however, there is a solitary reference to an endowment made by Vijayabāhu I to one of the monasteries established by him at Polonnaruwa. It records: "For the provision of food, he granted to the community of monks the whole district of Aḷisāra together with its residents and canals".[46] It is possible that some of the other monastic establishments were also endowed with similar grants of land. It would appear that the monastic organizations of Polonnaruwa did not have the solid economic foundations and the institutional framework for the management of property which provided an element of stability for the monastic establishments of Anurādhapura. The close connection between the monarchy and the monastic establishments and the concentration of such establishments at the capital was not always to their advantage. On account of such a relationship institutional Buddhism was heavily dependent on state support. The monastic establishments could become vulnerable particularly in times of invasions, dynastic instability and whenever the Kings withheld support.

The architectural remains of no less than sixteen Hindu temples scattered over the city suggest that Hindu communities formed an important element in the population of Polonnaruwa since the eleventh century.[47] The Hindu monuments which have survived in different states of preservation are of modest proportions by contemporary South Indian standards but still they claim our attention on account of the quality of their architectural design and artistic merit. The two most noteworthy example are the ones designated by modern archaeologists as Siva devales No. 1 and 2 of which the second named Vānavanmādevi īsvaram was a Chola foundation as testified by the inscriptions of Rājendra Chola I (1014—1044) and Adhirājendra (1067—1070) found indited on its walls.[48] The details found in these inscriptions show that this temple was provided with adequate arrangements for regularly conducting rituals and religious services as well as for the management of its affairs. The larger of the two monuments, Siva devale I, which is architecturally more evolved than its Chola counterpart could be assigned to the twelfth century on the considerations of its architectural style. The contents of an inscription found inside this temple suggest that King Nissankamalla (1187—1196) had performed the lustral bathing in connection with the ceremony of *Navagraha sānti* propitiating the nine planetary gods.[49] The *Cūlavamsa* records that King Parākramabāhu I constructed thirteen temples for the gods and restored nine (Hindu) temples which were in a state of disrepair. The same chronicle, however, in another instance states that this King had caused to be renovated twentyfour temples of gods.[50] But, no Hindu temple, the chronology of which could be attributed to the reign of Parākramabāhu has hitherto been recognized among the architectural remains of Polonnaruwa. Architectural remains do not suggest a strict residential segregation of the Hindu communities from the rest of the city population as in Anurādhapura. The bronze figures representing the deities of the Saivite pantheon discovered in substantial numbers, mainly

from the premises of Siva devales No. 1 and No. 5,[51] suggest that a local school of bronze casting deriving inspiration from the Chola tradition of metal sculpture had flourished in the city. The bronzes unearthed from the architectural remains of Polonnaruwa represent the largest single collection ever found in the island. Besides, they are most remarkable on account of their artistic quality and the level of craft production attained by artisans involved in metal casting.

Polonnaruwa, like Anurādhapura, stood in the open plains and had no natural defences. A large standing army had to be maintained for providing security and for asserting royal authority over the whole Kingdom. The vast resources in monetary power and the accumulation of grain in the capital city enabled the rulers to maintain large armies in the twelfth century. The gradual and unprecedented growth of the military establishment was a characteristic feature of the Polonnaruwa period. The great army of the Veḷaikkāras established in Polonnaruwa was a large one consisting of many divisions and the revolt of this army in the reign of Vijayabāhu I had resulted in the King's flight and the eclipse of royal authority in Polonnaruwa for a brief period.[52] The incident highlights the enormous strength of the military establishments especially when we consider that the Veḷaikkāra army was only one among the many large armies which were maintained by the King.

The gradual and unprecedented growth of the military establishments had begun to strain the resources of the rulers. In the early twelfth century, for instance, Vikramabāhu and his cousins were forced by circumstances to levy excessive taxes in order to support their armies. Moreover, Vikramabāhu is said to have misappropriated the properties that belonged to the Buddhist religious institutions in order to maintain his armies. The wars of unification and conquest waged by Parākramabāhu I had led to a further development of the military establishment. The reigns of Pārakramabāhu I and Nissankamalla constituted the peak period in the development of military establishments in Polonnaruwa. The imposition of excessive taxation by Parākramabāhu, a measure for which he was condemned by his successor, was doubtless prompted by a need to enhance monetary resources required to support large armies involved in campaigns in foreign lands. The military establishment was also a source of instability and contributed to the erosion of state power as in the last days of the Anurādhapura Kingdom. The over-growth of the military establishment undermined royal authority in Polonnaruwa towards the end of the twelfth century and the influential and powerful generals who became over mighty subjects began to play the role of King makers and their activities contributed to the fall of Polonnaruwa.

The Lesser Dynastic Centres.

Besides Anurādhapura and Polonnaruwa the most important towns that flourished during the Polonnaruwa period were Mātota (Māntai, Mātoṭṭam), Paḍaviya, Vahalkada, Mahānāgakula and Uddhanadvāra. The last three among these were regional centres of dynastic power and they owed their origins and development to the confluence of political and military

events in the island during this period. They were of modest proportions and relatively had a short duration. Mahānāgakula, on the banks of the Walawe Ganga came into prominence when it was occupied by Vijayabāhu I after he evacuated the town of Kajāragama in consequence of a raid by the Chola armies.[53] When Vijayabāhu took up residence in Polonnaruwa after his consecretion as ruler of Lanka the prince who had the rank of *Ādipāda* was sent to Mahānāgakula to exercise authority over the principality of Rohana. Jayabāhu and Vikramabāhu who held that position successively in the reign of Vijayabāhu I were living at Mahānāgakula.[54] When Vikramabāhu occupied Polonnaruwa after dislodging the monarch Jayabāhu and his nephews from there, they occupied the southern and western portions of the island. The monarch Jayabāhu and his sister Mitta lived at Mahānāgakula from where Kit Siri Megha, the second son of Mitta, administered the south-western half of the principality of Rohana.[55] When he took charge of the government of Dakkhinadesa on the death of his elder brother, his younger brother Siri Vallabha was left to rule over the reunited principality of Rohana, from Mahānāgakula.[56] He was succeeded by his energetic son Mānābharana II who made a strong but unsuccessful attempt to secure for himself the throne of Polonnaruwa. Even after Parākramabāhu's conquest of Rohana, Mahānāgakula retained its position as a centre of political authority. The general Adhikārin Bhūta who was appointed to govern Rohana took up residence in that town.[57] In his inscriptions Nissankamalla claims to have constructed royal palaces there. In the absence of any architectural remains it is not possible to form any idea about the size of this town and its population. The constructional activities of the rulers established at Mahānāgakula were negligible.

Pāṇḍuvasnuvara, established by Parākramabāhu I as the capital city of the principality of Dakkhinadesa during the second quarter of the twelfth century seems to have been an important town in the island during the twelfth and thirteenth centuries. It occupied a central position in the principality and the flourishing agricultural communities in its neighbourhood contributed in no small measure to its prosperity. The efficient exploitation of the resources of Dakkhinadesa by Parākramabāhu when he was the ruler of that principality favoured the speedy development of the town. The constructional activities undertaken by Parākramabāhu while he was ruling from Pāṇḍuvasnuvara appear to have been impressive and archaeological evidence suggests that it was a large and prosperous town. The major constructions of Parākramabāhu were the royal palace and the large tank referred to in the Pāli Chronicle as Parākramasamudra. The reservoir was constructed by means of enlarging the original tank called Pāṇḍavāpi.[58] Parākramabāhu is credited with having enlarged the town after he had secured the throne of Polonnaruwa. In connection with his constructional activities at Parākramapura the chronicle asserts:

> 'Hereupon the all-wise prince laid the foundation of the town called Parākramapura. It was furnished with gates and towers, with walls and moats, streets, pāsādas and shops and adorned with parks which were embellished with pāsādas erected there for the shelter of many hundreds of bhikkhus who strove after moral discipline and other virtues. It was superb, prosperous and wealthy like Ālakamandā, the town of the gods, and ever crowded with people".[59]

The foregoing account is undoubtedly an exaggerated one. Nevertheless, it suggests that Parākramapura was a town of considerable importance and that it received sufficient attention from Parākramabāhu even after he had moved out of it since his conquest of the northern principality of Rajarata. There is some archaeological evidence which partially corroborates the *Cūlavamsa* account. The royal palace was built within a walled citadel in the neighbourhood of the tank. Its ground plan which is similar to that of Polonnaruwa consists of a rectangular area enclosed by galleries with an entrance on the eastern side of the hall. Its galleries measure 268 feet east to west and 168 feet north to south. The dimensions of the ground plan suggest that the palace was one of very large proportions.[60]

Pāṇḍuvasnuvara was in its essential features a small version of Polonnaruwa supporting military and monastic establishments of considerable size and had a composite population. That there were some Tamil Buddhist monks is suggested by the Tamil inscription of Nissankamalla from Pāṇḍuvasnuvara which testifies that the general called Matimān Pañcaran constructed a Buddhist monastery.[61] The Tamil mercantile community called Aññurruvar seems to have played an important role in trading activities in and around the town. The evidence from the inscription of the Ayyāvoḷe from a locality close to Pāṇḍuvasnuvara which refers to the pathway leading to the paṭṭinam seems to suggest that they had a settlement referred to as paṭṭinam in the city of Pāṇḍuvasnuvara.[62]

Uddhanadvāra came into prominence on the division of Rohana between the two brothers Kit Siri Megha and Siri Vallabha during the early twelfth century. Siri Vallabha ruled over the eastern half of the principality from Uddhanadvāra which was of some strategic importance.[63] When the principality of Rohana was re-united under Siri Vallabha on the death of Mānābharana I in Dakkhinadesa, Uddhanadvāra was abandoned as a political and administrative centre but it continued to be a major military outpost of the rulers of Rohana until Parākramabāhu's conquest of the south-eastern principality.[64] There are no architectural remains of any significance at Udundora which is identified as Uddhanadvāra mentioned in the chronicles.

Commercial Centres: Padaviya, Vahalkada and Māntai.

The growth of the two towns, Padaviya and Vahalkada, was largely connected with the development of trade. They rose to prominence on account of their central position in the eastern belt of the north central plain. They were surrounded by a number of agricultural communities which owed their prosperity to the Padaviya and Vahalkada tanks. The architectural remains of Buddhist and Hindu religious establishments spread over a considerably large area testify that Padaviya was a large town enjoying remarkable prosperity during the eleventh, twelfth and early thirteenth centuries. The oldest among the inscriptions at Padaviya was set up in the reign of Kassapa IV (896—913) and it records the grant of certain immunities to lands irrigated by the waters of the Padonnaru tank.[65] Another inscription, which could be assigned to the reign of Parākramabāhu I

on the basis of its palaeography and contents, claims that this tank was restored by that monarch.[66] It may therefore be assumed that this tank was utilised for providing irrigation facilities to the full measure of its capacity in the latter half of the twelfth century. A major portion of the architectural remains of the ancient town that have been brought to light so far is mainly to be found below the tank bund, at a site now known as Moragoda. In the opinion of Brohier 'the focal point of ancient habitation under Padaviya would appear to be the site still buried in forest on the down-stream slope on the eastern section of the bund and west of the modern sluice'.[67] The archaeological remains show that Padaviya had a mixed population during the Polonnaruwa period and these remains represent two cultures, Hindu and Buddhist, which flourished together in general harmony. The archaeological remains which include inscriptions, remnants of temples and monasteries and statuary are remarkable on account of their artistic quality and historical importance.

It would appear that Padaviya became a military outpost and administrative centre during the period of Chola occupation. Besides, it became a market centre of considerable significance. Architectural remains suggest that there was a considerable extent of constructional and cultural activity in this town which had as its nucleus a walled enclosure about 8 acres in extent, seemingly laid out in streets.[68]

The Ayyāvoḷe, a composite body of itinerant traders of South Indian origin, were well established at Padaviya. Two Tamil inscriptions which record their activities testify that their settlement at Padaviya was sufficiently large and important so as to be constituted as a *nakaram*, 'town'.[69] One of these inscriptions testifies that this town was known as Ayyampoḷil paṭṭinam. Although one of the epigraphs in fact refers to the establishment of this *nakaram* the details relating to that process are not clear as the relevant portions of the text are badly damaged. As these inscriptions refer to markets and shops it may be assumed that the township established by the Ayyāvoḷe at Padaviya had a market centre organized and controlled by them. Among the trading communities which are said to have played a prominent role in the activities of the *nakaram* are the *patineṇpūmi* ceṭṭis, Virakkoṭi and the Ticai Āyirattu Aññūrruvar. Besides, these inscriptions refer to military bodies and soldiers who were associated with the Ayyāvoḷe.[70]

The mercantile and military communities settled at Padaviya were closely associated with the foundation and maintenance of religious institutions during this period. The fragmentary inscription of the twenty sixth year of Rājarāja testifies that the temple of Iravikula Māṇikkesvaram was endowed with several kinds of lamps, vessels and money by merchants, soldiers and a few others some of whom could be identified as Chola officials.[71] One of the benefactors of this shrine is referred to as a Nānādesi merchant. One of the short Tamil inscriptions found among the remains of Siva devale No. 1 at Padaviya records that a foundation stone was laid by a certain merchant, Teci Ticaiyāyic ceṭṭi.[72] Another epigraph mentions a similar stone laid by another merchant from Padaviya (Padiyil Vaṇikan).[73] One of the two long inscriptions of the Ayyāvoḷe at Padaviya

records that the people of the *nakaram* were dedicated to the service of Siva.[74] Besides, reference is made to the temple dedicated to the goddess Kāḷi as well as the gift of an image (of a deity) made by the Ayyāvoḷe. There was at Padaviya, as at Kantaḷāi, a Brahmin settlement during the twelfth and early thirteenth centuries. The Sanskrit inscription on a recently discovered seal describes Padaviya as a locality inhabited by Brahmins.

The Buddhist architectural remains at Moragoda consist chiefly of a dagaba mound, with steps leading to it flanked by very plain balustrades rounded at the end. The figure of a large standing Buddha and a mutilated sedant Buddha are among the principal iconographic remains at the site. There is yet another coterie of Buddhist ruins in the jungle to the east of the modern sluice. On this site there are the ruins of a dagaba and buildings in an advanced state of ruin.[75] A Sanskrit inscription indited on a slab serving as a platform of the dagaba outside the ancient walled city of Padaviya, and which could be assigned to the late thirteenth century on palaeographic consideration records the construction of a Vihāra by Lokanātha, a general of the Vēḷaikkāras.[76] The monastery was named after the Vēḷaikkāra regiment and placed under its protection. The evidence from this inscription suggests that the Vēḷaikkāras were settled at Padaviya. As Lokanātha is referred to as a Daṇḍanāyaka in the inscription it may be inferred that the Vēḷaikkāra army under his leadership was a large one. The architectural remains of religious monuments and epigraphic references to cultural activity suggest that there were many religious establishments spread over a considerably large area at Padaviya. It would appear that it was a relatively big town supporting a large population which comprised several communities some of which enjoyed a high degree of affluence. This is remarkable as dynastic power was not involved in its development to any considerable extent. It would appear that it was the largest among the inland towns developed in the island outside the centres of dynastic power during this period. Its development may to some extent indicate a change in patterns of demographic distribution and trade in the north central plain. Such an impression seems to be strengthened by the evidence relating to another town, Vahalkada, which flourished during this period.

Agricultural prosperity in the surrounding localities generated by the adequate supply of water from the Vahalkada tank and its location where many pathways converged favoured the growth of Vahalkada as a mercantile town of modest proportions. In the eleventh century the Ayyāvoḷe who had established themselves at Vahalkada gained control over the town. It was converted into a Nānāteciya Vīrapaṭṭinam and the government at Polonnaruwa seems to have acquiesced with this sort of arrangement. This Vīrapaṭṭinam of the Ayyāvoḷe was a corporate organization having the characteristics of an autonomous town as in the case of its counterparts dotted over a number of localities in contemporary Deccan and South India. Significantly the inscription set up by the Ayyāvoḷe at Vahalkada does not mention the name of the King or even his regnal year. Instead it commences with a brief *prasasti* of the Ayyāvoḷe.[77] They were presumably left to themselves with little or no interference from the court and its officials.

One of the inscriptions left behind by the Ayyāvoḷe seems to record some steps taken by a representative gathering of the many component groups of the town. Among the notables who participated in the proceedings were 'the chief of "the guild" of boatmen at Māntai', 'the chief of the customs post', a certain Vikkan Iḷapiyānai who was the superintendant of the streets', Vikramātittan, 'the leader of the workmen of the mint', the leader of the army of Vaḷañceyar and the leader of the army of the Valaṅkai division.[78] Apart from the Ayyāvoḷe the other mercantile communities that were represented were the Vaḷañceyar and the Vīrakkoṭi, the Ceṭṭis and Ceṭṭiputras. South Indian inscriptions testify that many groups of commodity producers were gathered under the leadership of the Ayyāvoḷe and other mercantile communities in the townships called Vīrapaṭṭinam. There is no means of determining whether such artisan communities and others involved in commodity production were settled in the townships called Vīrapaṭṭinam established by the Ayyāvoḷe in Sri Lanka. The reference to Vikramātittan of "the mint", *akkasālai*, in one of the inscriptions from Vahalkada is intriguing as no specimens of coins issued by the Ayyāvoḷe have hitherto come to light. It is unlikely that the *akkasālai* mentioned in this inscription was intended for minting coined money especially because the minting of coins was a royal prerogative. In the circumstances one has to think of other more plausible explanations. It is possible that this *akkasālai* was intended for assaying gold or for smelting metal and if this explanation is accepted it has to be presumed that there were artisans engaged in production in the Vīrapaṭṭinam at Vahalkada referred to as Kaṭṭanēri in the inscription. Another explanation, is that Vikramātittan who belonged to one of the communities grouped under the Ayyāvoḷe, could have been involved in the supervision of work regarding the issuing of coins from a local mint. Such an explanation presupposes that the Ayyāvoḷe had close connections with the monarchy. The inscriptions of the Ayyāvoḷe from Vahalkada shed little or no light on their trading activities. Their inscriptions from other localities show that spices, elephants and horses were among the commodities handled by them.[79] The Vīrapaṭṭinam at Vahalkada was not the only township that was established by the Ayyāvoḷe in the island. There were some other such units as testified by the evidence from the inscriptions of the Ayyāvoḷe from Padaviya, Viharehinna and Detiyamulla but the details about their organization have not been preserved in the inscriptions that have been discovered hitherto.[80] The existence of corporate units called Vīrapaṭṭinam endowed with military power raises some serious doubts about the generally held assumption that the administration of the Polonnaruwa Kingdom was a highly centralised one.

Māntai, which owed its initial development to its location on the mouth of the Malwatu Oya or Aruvi Āṟu and its proximity to the pearl banks, had gradually developed as the principal emporium of the island and a flourishing centre of international seaborne commerce and attained the peak of its development by the eighth century. Archaeological evidence suggests that the city of Māntai continued to prosper until the twelfth century owing to the flourishing commerce which had been the mainstay of its economic support. Archaeological excavations have not been undertaken systematically and extensively at Māntai and the available information is

too vague and fragmentary that it is still not possible to make a proper assessment of the settlement pattern and social and cultural life characteristics of the city in the days of its prosperity. Archaeological artifacts in the form of pottery and other wares brought to light in recent excavations show that between the eighth and eleventh centuries which represent the ultimate phase of its prosperity it had been a centre of great commercial activity owing to the extensive seaborne trade in which traders having ramifactions with commercial centres in West Asia and the Far East had participated. Such an impression is supported by the presence in almost equal quantities of artifacts of West Asian and Far Eastern origin. Besides, it was a centre of great importance in the Indo-Ceylon trade as suggested by the provenance of coins issued by the rulers of the Deccan and South India in substantial quantities.

In the eleventh century the city of Matoṭṭam seems to have been an important stronghold of the Cholas. It was renamed as Rājarājapuram after Rājarāja and constituted as a separate unit for purposes of administration and the port-dues, customs and tolls levied on markets and merchandise on transit were an important source of revenue for the government.

The population of Māntai was a composite one and partly a floating one. Although life in the city was doubtless dominated by mercantile interests its population consisted of diverse elements which included artisans, weavers and sea-faring communities. The mercantile communities established at Māntai were of several categories. Some of them, cargo-shippers and those who were involved in the import-export trade that passed through the Indo-Ceylon straits, had a sort of dual domicile as in much later times. There were others like the *Caṅkarapaṭiyar*, *Vāḷaikkāy Vāṇiyar*, *Veṟṟilai Vāṇiyar*, groups of petty traders, who were permanently settled in the town and were supplying specific commodities to the local residents and religious establishments.[81] Māntai seems to have maintained close links with the principal dynastic centres and other inland towns in Rajarata through groups of traders involved in the distribution and collection of merchandise. The reference to the chief of the "guild" of boatmen at Māntai in an inscription set up by the Ayyāvoḷe at Vahalkada may suggest that the mercantile communities who were established in some of the inland towns had close links with the traders and cargo-shippers of Māntai.

The discovery of beads, potsherds, ornaments of gold and silver, iron implements and sawn pieces of conch shell and many other artifacts may, perhaps, suggest that it was once a great centre of craft production. The references to taxes on looms in a Chola inscription implies that there were at Māntai a community of weavers engaged in the production of cloth.[82] Trade and craft production generated some measure of prosperity and there is some evidence to show that some of the residents of Māntai lived a life of luxury and comfort. One of the Chola inscriptions incidentally mentions a certain Kunran Kāman who owned a house, a mansion and a garden.[83]

The ancient and famous shrine of Tirukkēṭīsvaram which enjoyed the support of mercantile and seafaring communities had developed into a great centre of pilgrimage and Saivite religious tradition. It was presumably rebuilt and renamed Rajarājesvaram during the period of Chola rule[84] Another Saivite temple that flourished at Māntai during the eleventh century was Tiruvirāmēsvaram. Both these temples were maintained partly with endowments made by government officials. The maintenance and administration of the endowments made to one of these temples was entrusted to three groups of Tamil traders settled in the city.[85] On account of the brisk trade between Māntai and the ports of the Malabar and the Coromandel, several groups of traders, artisans, warriors and sea-faring communities from the neighbouring South Indian Kingdoms reached Māntai in successive waves and in ever increasing numbers and spread over the hinterland behind it. Archaeological evidence suggests that Māntai lost its pre-eminence as a major centre of transhipment and sea-borne trade by the end of the eleventh century. There are no monumental remains that could be assigned to the period that followed the fall of Chola power in the island; nor are there any textual or epigraphic references to commercial and cultural activities in the twelfth and thirteenth centuries. Accumulation of silt and other geographical changes, the changes in the pattern of international trade, the confluence of political and military events, significant changes in the pattern of demographic distribution and the development of entrepots on the eastern littoral may have been among the factors that were responsible for its decline. Māntai lost its pre-eminence and steadily declined after the twelfth century and since the late thirteenth century the great-road which had linked it with the inland cities of Anurādhapura and Polonnaruwa, for the most part, became covered with impenetrable jungle. Yet on account of the pearl fishery and the coastal trade with South India, Māntai was not entirely abandoned but its importance as a commercial centre had greatly diminished.

In conclusion it may be stated that the eleventh and twelfth centuries witnessed the last and the greatest phase in the development of towns in the whole range of the island's history before the European Colonial conquest of the island. Polonnaruwa which was established originally as a military outpost of the Anurādhapura Kingdom gradually developed as the principal centre of dynastic authority and military power. It attained the peak of its development during the latter half of the twelfth century when as a result of extensive constructional activity royal and monastic establishments were created on an impressive scale. There was an unmistakable inter-connection between the development of dynastic power and the growth of the city. It served as the centre for the direction of organizational, acquisitive and constructional activities which involved the process of collection, transportation and redistribution of surplus agricultural produce.

The growth of the military, monastic and royal establishments which at times over-strained and exhausted the resources of state and contributed partially to its decline was made possible by an agricultural and commercial prosperity generated by the development of major irrigation works based on the river valley systems and a well balanced exernal trade.

The growth of the other inland towns, particularly in Rajarata, may be explained against the background of great advances made in agricultural production and internal trade. Their general prosperity and the affluence of the mercantile interests established in them was reflected to some extent by the construction of many elegant monuments of modest proportions and the establishment of religious and cultural institutions. The growth of such towns was symptomatic of a phase of societal change characterized by the development of local centres of power. These towns were in some cases autonomous units where the socially dominant groups maintained armed retainers for purposes of defence and made arrangements for the provision of public amenities. Military power was no longer a monopoly of dynastic power. Such developments undoubtedly represented an initial stage in the erosion of central authority. It would appear that there were considerable changes in the pattern of demographic distribution. The development of Polonnaruwa and other inland towns seems to suggest a much larger concentration of settlements in the eastern half of the north central plain.

NOTES :

1. Nel and Anderson, *The Urban Community*, London, 1960, p. 2.
2. A. Appadorai, *Economic Conditions in Southern India* (1000—1500 A.D.) Vol. I, University of Madras, 1936, pp. 345—6.
3. *Culavamsa* (*CV*), 44 : 122.
4. *CV*, 46 : 44; 48174.
5. *CV*, 48 : 134.
6. *CV*, 49 : 5 — 9.
7. *CV*, 50 : 8 — 9.
8. *CV*, 52 : 25.
9. *CV*, 55 : 22.
10. *CV*, 57 : 66; 58 : 4.
11. *South Indian Inscriptions* (SII), Vol. IV, No. 1388.
12. Ibid.
13. *Ceylon Tamil Inscriptions*, ed. A. Velupillai, pt. II, Peradeniya, 1972, pp. 9—12.
14. *CV*, 58 : 51 — 53.
15. *CV*, 60 : 2 — 3.
16. *CV*, 73 : 60—61.
17. A. M. Hocart, 'The Topography of Polonnaruwa', *Memoirs of the Archaeological Survey of Ceylon*, Vol. II, pp. 3—5.
18. *CV*, 73.
19. *CV*, 73 : 60—61.
20. *CV*, 73 : 71—73.
21. *CV*, 73 : 82—90.
22. *Memoirs of the Archaeological Survey of Ceylon*, Vol. II, p. 3.
23. *University of Ceylon, History of Ceylon* (*UCHC*) ed. S. Paranavitana, Vol. I, pt. 2, Colombo, 1960, p. 60.
24. Ibid p. 602.
25. Ibid p. 603.
26. *CV*, 73 : 57—59.
27. *CV*, 73 : 151—160.
28. *CV*, 73 : 148—150.
29. *SII*, IV : No. 1398.
30. S. Gunasingham, 'A Tamil Slab Inscription from Mayilawewa (Mayilaṅkuḷam), *Trincomalee Inscriptions Series*, No. 3, Peradeniya, 1980, p. 32.
31. *Epigraphia Zeylanica* (*EZ*), Vol. II, No. 13, pp.82—83.
32. *EZ*, II, No. 29, p. 176.
33. K. Kanapathypillai, 'A Tamil Inscription from Pāṇḍuvasnuvara', *UCR*, XVIII, (July-October, 1960), pp. 157—162.
34. *EZ*, V, No. 12, p. 161.
35. *EZ*, IV, No. 10, p. 80.
36. *EZ*, VI, p. 123.
37. *EZ*, V (2), No. 17, p. 204.
38. *CV*, 68 : 25—27.
39. *UCHC*, Vol. I, pt. 2, p. 548.
40. *CV*, 60 : 9—13.
41. *UCHC*, Vol. I, pt. 2, p. 591.
42. R.A.L.H. Gunawardene, *Robe and Plough, Monasticism and Economic Interest in Early Medieval Sri Lanka*, The University of Arizona Press, 1979, p.329.
43. Ibid.
44. *CV*, 78 : 48—55.
45. *CV*, 88 : 92—100.
46. *CV*, 60 : 14, *Robe and Plough, Monasticism and Economic Interest in Early Medieval Sri Lanka*, pt, 82.
47. *Archaeological Survey of Ceylon, Annual Report* (ASCAR), 1902, pp. 7—8; *ASCAR*, 1908, pp. 3—10; *ASCAR*, 1909, p. 17; *ASCAR*, 1934, pp. 16—17; S. Pathmanathan, 'Hinduism in Sri Lanka, Circa A.D. 100—1250', paper presented at *The World Hindu Conference Seminar*, April, 1982.
48. *SII*, IV, Nos. 1388, 1389.
49. 'Polonnaruwa—Siva Devale Slab Inscription', *EZ* II, No. 25, p. 146.
50. *CV*, 79 : 21—22; 79—81.

51. *Archaeological Survey of Ceylon, Annual Report* (ASCAR), 1908, p. 8; P. Arunachalam, 'Polonnaruwa Bronzes and Siva Worship and Symbolism', *JRASCB*, Vol. XXIV, No. 68, 1915—16, pp. 189—222, C. E. Godakumbura, 'Bronzes from Polonnaruwa; *JRASCB* (New Series), Vol. VII, pt. 2, 1961, pp. 239—245.
52. S. Pathmanathan, 'The Vēḷaikkārar in Medieval South India and Sri Lanka', The Sri Lanka Journal of the Humanities, Vol. II, No. 2, Dec. 1976, pp. 125—126.
53. *CV*, 58 : 39.
54. *CV*, 60 : 90.
55. *CV*, 61 : 23, 27.
56. CV, 63 : 1—4.
57. *CV*, 75 : 196.
58. *UCHC*, Vol. I, pt. 2, p. 555.
59. *CV*, 74 : 15—17,
60. *UCHC*, Vol. I, pt. 2, p. 601.
61. K. Kanapathypillai, 'A Tamil Inscription from Pāṇḍuvasnuvara', *University of Ceylon Review*, XVIII (July-October 1960), pp. 157—162.
62. *CTI*, pt. II, p. 16.
63. *CV*, 65 : 25.
64. *CV*, 74 : 85, 113.
65. R. L. Brohier, 'Antiquarian Notes on Padaviya', *Journal of the Royal Asiatic Society, Ceylon Branch* (JRASCB), (New Series) Vol. VIII, pt. 2, p. 255.
66. Ibid.
67. Ibid.
68. Ibid.
69. *Ceylon Tamil Inscriptions*, pt. I, ed. A. Velupillai, Peradeniya, 1971, pp. 54—55; *CTI*, pt. II, pp. 19—20.
70. Ibid.
71. *Epigraphia Tamilica* (ET) ed. K. Indrapala, Jaffna Archaeological Society, 1971, p. 34
72. *CTI*, pt. II, p 24.
73. Ibid.
74. *CTI*, pt. I, pp. 54—55.
75. *JRASCB*, New Series, Vol. VIII, pt. 2, p. 266.
76. *Ibid*, pp. 261—264; S. Pathmanathan, 'The Sanskrit Inscription of the Vēḷaikkārar from Padaviya', Gnanapragasar Centenary Commemoration Volume, Colombo, 1975, p. 29.
77. CTI, pt. I, pp. 55—56.
78. Ibid.
79. S. Pathmanathan, *The Kingdom of Jaffna*, pt. I, Colombo, 1978, p. 72.
80. Ibid.
81. *SII*, IV : No. 1414B
82. *SII*, IV : No. 1412.
83. Ibid.
84. *CTI*, pt. II, p. 49.
85. *SII*, IV, No. 1414B.

The Role of the Federal Party in the Parliament of 1965-1970

by

AMBALAVANAR SIVARAJAH

INTRODUCTION :

The Federal Party originated as a by-product of the Tamil nationalism which emphasizes the separate identity of the Tamil-speaking people in Sri Lanka, an idea fostered by leaders like Sir P. Ramanathan and later by G. G. Ponnambalam. In turn the Federal Party (FP) appealed to the national consciousness of the Tamil-speaking people. Its objectives were formulated with this fact in mind and its organization has been shaped by these considerations. However, "The immediate pretext" as A. J. Wilson has observed, "for the Federal Party's emergence in December 1949 was the objection of two TC MP's and a TC (Tamil Congress, the immediate predecessor of the FP) senator to the legislation of 1948 and 1949 against the Indian Tamils"[1] The Tamil Congress (TC) members who voted against the legislation resigned from that party as a protest and formed an organization, the *Ilankai Thamil Arasu Kadchi*. In English it was called the Federal Party of the Tamil-speaking people. The four basic objectives of the party were as follows:

(i) Adoption of a federal constitution to Sri Lanka

(ii) Parity of status for Tamil language with Sinhala Language.

(iii) Amendment of the citizenship laws to provide citizenship to the people of Indian origin on the basis of residency in Sri Lanka, and

(iv) "The immediate cessation of colonizing the traditionally Tamil-speaking areas with Sinhalese people". [2]

These basic objectives of the FP were directly concerned with preservation of the separate existence of the Tamil-speaking people in Sri Lanka. The party came into being in order to safe-guard the interests of these people.

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* These legislations disfranchised the overwhelming majority of Indians in Sri Lanka, and made it difficult for those Indians and Pakistanis who wished to become citizens to qualify.

1. A. Jeyaratnam Wilson, Politics in Sri Lanka 1947 — 1973. (London, Macmillan Press, 1974) p. 164.

2. The Federal Party of Ceylon, Ceylon Faces Crises. (Colombo, Sutantiran Press, n.d.), pp. 31—32.

It was not until 1956 that the FP became a dominant force in Tamil politics. However, with the crises on the official language issue the FP became the leading political party in the Tamil areas and since then it has maintained its position as the principal spokesman of the Tamil-speaking people in Sri Lanka. The FP adopted extra-parliamentary methods of agitation (on Gandhian lines of non-violent resistance) and attempted to utilize a pivotal position in Parliament to bargain between the Sri Lanka Feedom Party (SLFP) and the United National Party (UNP).

The balance sheet on the strategies and achievements of the FP during the period from 1956 to 1965 shows that on the credit side its only worthwhile achievement was the Bandaranaike-Chelvanayakam Pact of 1957. Although this pact was later repudiated by Bandaranaike in April 1958, it recognized the claims of the FP and provided some legitimacy for its future agitations. Next to this pact, the Tamil Language (Special Provisions) Act of 1958 was credit. However, this Act was not implemented because this Act did not have the necessary regulations framed under it to give it effect. The next item on the credit side is the Sirimavo-Sasthri Pact of 1964 (Indo-Ceylon Agreement of 1964), which attempted, at least partly to settle the citizenship problems of the people of Indian origin.

From the above discussions, it is clear that the FP could not achieve complete success in its objectives or come to a lasting solution regarding the Tamil problem during the period from 1956 to 1965.

The Strategy of the Federal Party in Government (1965—68) and as an Independent Group in the House of Representatives (1968—1970):

The Formation of the National Government and the FP's Strategy.

The political situation in Sri Lanka underwent a change with the general election of March 1965. "New political trends and significant shifts in governmental policy",[3] followed this election. The governing coalition composed of the SLFP and the LSSP was defeated in this election and a new government was formed by the UNP leader Dudley Senanayake. M. R. Singer noted this change in the context of the Sinhala-Tamil relationships in the following terms:

> "If the Election of 1956 can be said to have signalled the 'Official' beginning of the Sinhala-Tamil conflict in Ceylon, the Election of 1965 can be said to have marked the 'Official' termination of those hostilities."[4]

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3. R. N. Kearney, "New Directions in the Politics of Ceylon". *In: Asian Survey* (Vol. VII, No. 2, February 1967).

4. Marshall R. Singer, "National Government in Ceylon: A Year of Reconciliation *In: Asian Survey* (Vol. VI, No. 2, February 1966), p. 90.

To a certain extent the second part of the above statement is a reflection of the new government's point of view of the inter-ethnic relations of the country. For the first time since 1956, it had become possible for a Sri Lankan Prime Minister to include Tamils in his government. Moreover, a Ceylon Tamil, the FP's representative was included in the Cabinet. In fact there was a marked change in the campaign that preceded this election. When compared to the preceding three election campaigns, communal questions were submerged or played a small role at this election. The main issues in this campaign were the "socialist aims" of the SLFP-LSSP coalition parties and the alleged "dictatorial actions and designs" of the coalition parties by the UNP. Another important issue in this election was the question of the "monopoly press". The SLFP and its allies campaigned for the nationalization of the press. They maintained that the press owned by priviledged families, backed by business interests was unsympathetic to the national aspirations of the Buddhist and Sinhalese people and they insisted that this monopoly should be broken. The UNP on the other hand warned that this would be the first step towards the setting up of a "Marxist dictatorship".[5] The SLFP and its partners said that "they were the poor man's party ranged against "big business" and 'Anglo-American' capital".[6] The UNP on its side warned against increasing state intervention in the economic life of the people. It maintained that the "island faced its last opportunity to preserve democracy and the rule of law."[7]

The FP in its election campaign emphasized the need for a single party to be returned from the Tamil-speaking areas so that a party like itself be in a position to bargain for the "rights" of the Tamil-speaking people with the two major parties in the event any of them not being returned with a decisive majority. For instance in the party's 1965 Election Manifesto it was stated:

> There is no doubt that the next General Election is going to be a very important event in the history of Ceylon. The left and the right wing allies are engaged in an unprecedent contest for power in the South.... As a result we can expect that an opportunity would arise after this election to change the fate of the Tamil-speaking people, at least to a certain extent. To make use of such an opportunity to regain our lost rights, it is necessary that representatives of the Tamil speaking people should be elected from a single organized party.[8]

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5. Wilson, *Electoral Politics in an Emergent State: The Ceylon General Election of May* 1970. (London, Cambridge University Press, 1975), p. 29.

6. Ibid. p. 29.

7. Kearney, *Communalism and Language in the Politics of Ceylon* p. 128.

8. Ilankai Thamil Arasu Kadchi, *Therthal Vingnapanam*, March 1965. (Colombo, Sutantiran Press, 1965), p. 1.

Party propagandists pointed out their record of struggles against the previous two governments and pledged that they would continue to struggle for the party's objectives.

The result of the 1965 General Election was inconclusive. None of the predominantly Sinhalese parties gained an overall majority to form a government. The UNP emerged as the largest single group with sixty-six seats (See Table I,). The SLFP and its allies, the LSSP and the CP secured fifty-five seats(SLFP — 41, LSSP—10, and CP — 04). This made the FP's support crucial for the formation of a government. The coalition leaders and Dudley Senanayake approached the FP leader for assistance. The FP decided to back Dudley Senanayake in the formation of a government. On the FP's side the feeling that the SLFP had gone back on its understandings especially that of 1960 prompted it to opt for alliance with the UNP.

As a part of the FP's strategy, its leader Chelvanayakam negotiated with Dudley Senanayake for its "minimum demands" in exchange for his party's support. As a result, a pact was drawn up between the FP leader and Dudley Senanayake. This pact was not made public for political reasons, particularly "to blunt opposition criticism". Wilson has recorded the terms of this pact on the basis of information from the FP leaders:

TABLE I

Party Positions at General Election, 1965

Parties	*Candi-dates*	*Seats won*	*% seats*	*Votes polled*	*% votes*	*Votes per candidate*
UNP	116	66	43.7	1,579,181	38.93	13,614
SLFP	100	41	27.2	1,226,833	30.24	12,268
LSSP	24	10	6.6	302,095	7.45	12,587
CP	9	4	2.6	109,744	2.71	12,194
MEP (Philip Gunawardane)	60	1	0.7	110,388	2.73	1,840
SLFSP	32	5	3.3	129,986	3.20	4,062
TC	15	3	2.0	98,726	2.43	6,582
FP	20	14	9.3	217,986	5.37	10,899
JVP	10	1	0.7	18,791	0.46	1,879
Independents	96	6	4.0	237,805	5.86	2,477
Others	10	0	0.0	24,932	0.61	2,493
Total	492	151		4,056,467		
Total no. of Votes				4,710,887		
Percentage polled				82		

SOURCE: A. J. Wilson, *Politics in Sri Lanka, 1947—1973,* p. 172

Senanayake agreed to (*a*) a scheme of district councils under the direct supervision of the Central Government, (*b*) preference being given to the people of the area in any colonization scheme in the Northern and Eastern Provinces, (*c*) Tamil being made a parallel language of administration with Sinhala in the two Provinces mentioned, (*d*) amending the Language of the Courts Act by providing for the use of the Tamil Language in judicial administration in these two provinces in addition to Sinhala and (*e*) relief for Tamil public servants who had failed to gain proficiency in the official language.[9]

Dudley Senanayake also came to an understanding with the Ceylon Workers Congress (CWC). The CWC is the largest trade union representing Indian workers in the plantation areas. This organization had supported the UNP in these areas. The points of this agreement were :

(i) no hardships would be created for Indians who were to be repatriated under the Indo-Ceylon Agreement of October 1964.

(ii) the element of compulsion in repatriating Indians would not be enforced.

(iii) Indians obtaining Ceylonese Citizenship would be included in the general electorate. [10]

If Senanayake had not agreed to these concessions to the CWC, the FP would not have backed Senanayake, because that party has always been concerned with the citizenship problem of people of Indian origin in Sri Lanka.

In addition to the FP and the CWC, Senanayake was able to obtain the support of four other political groups. They were the Tamil Congress (TC), the Sri Lanka Freedom Socialist Party (SLFSP)., the JVP and the MEP. Senanayake called his administration the "National Government" because of the inclusion of representatives from Ceylon Tamil, Indian Tamil and certain Sinhalese nationalist groups. As Wilson has commented, Senanayake "was able to weld together these diverse and sometimes warring interests into a coalition of 'democratic forces".[11]

Although portfolios in the new Cabinet were offered by the Prime Minister to the FP, none of its elected members were willing to accept office in the "National Government". It is a policy of the FP not to accept office in any government until it achieves its objectives. However, the FP nominated one of its leading party members, M. Tiruchelvam as its representative in the Cabinet. Consequently, Tiruchelvam was appointed

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9. Wilson, *Electoral Politics in an Emergent State*, p. 31.

10. Ibid. d. 31.

11. Ibi l. p. 31.

to the Senate by the Government and named Minister of Local Government. This portfolio was of interest to the FP because, it expected the drafting of the "District Councils" bill would be entrusted to him. Two members of the CWC, including its leader S. Thondaman, were nominated as Appointed Members[12] of the House of Representatives. Speaking at the debate on the Address on 25th April 1965, Amirthalingam, the present leader of the party said:

> "Let not Honourable Members opposite or anyone else in the country think that, because we have decided to support this Government, we have in anyway surrendered or given up the principles and policies for which our party stands".[13]

Basically the "National Government" was a UNP-FP coalition. If the FP had withdrawn its support, the Senanayake administration could not have lasted for long. The FP's strategy in the "National Government" centered around this critical support. The FP therefore sought to exploit the situation to gain its "minimum demands".

The Tamil Language (Special Provisions) Regulations — 1966.

The FP's participation in the "National Government" brought its first dividend in January, 1966. The government enacted regulations in 1966 for the implementation of the Tamil Language (Special Provisions) Act of 1958. The original act enacted by the Bandaranaike Government in 1958 did not have the necessary regulations framed under it to give it effect.

The regulations specified that the Tamil Language should be used in "the Northern and Eastern Provinces for the transaction of all government and public business and the maintenance of public records"[14] and for correspondence between government officials and private individuals who have been educated in the Tamil Language. Furthermore, it provided for the use of the Tamil language in communications between local authorities in the Northern and Eastern Provinces and the Central Government. Further, all orders, proclamations, rules, regulations and all other official publications issued or used by public bodies were required to be translated and published in the Tamil language. These regulations asserted that the use of the Tamil language for the above purposes was to be "without prejudice to the operation of the Official Language Act No. 33 of 1956, which declared the Sinhala Language to be the one official language of Ceylon"[15].

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12. Under Section 11 (2) of the Soulbury Constitution the Governor General was empowered after a General Election to appoint on the advise of the Prime Minister, not more than six members to the House of Representatives.

13. A. Amirthalingam, *Parliamentary Debates (Hansard) House of Representatives. Official Report*, (Vol. 60, No. 5, Colombo, Government Press, 1965), column 685,

14. Kearney, *Communalism and Language in the Politics of Ceylon*, Appendix IV, p. 150.

15. Ibid. 150.

These regulations fulfilled one of the "minimum demands" of the FP. Speaking at the debate on this Bill, Chelvanayakam said:

> .....the Sinhala Only Act deprived the Tamil speaking people of their self respect in this country. By passing these regulations and thereby implementing the Tamil Language (Special Provisions) Act, this lost self-respect is restored in some measure[16].

However, the FP leaders indicated that they accepted this only as a temporary solution and insisted that they had not abandoned their ultimate objective of parity of status for the Tamil language with the Sinhala language.

The coalition parties (the SLFP, the LSSP and the CP) which formed the opposition made a joint statement charging that the regulations "undermine the Official Language Act and will prevent Sinhala from becoming in fact the official language throughout Ceylon".[17] They organized a political strike and a demonstration on the day the Bill was introduced in the House. Police action against the demonstrators resulted in the death of a Buddhist monk. As a result of the disorders in Colombo the Government declared a State of National Emergency. Nevertheless, the regulations were approved by Parliament on 11th January 1966.

Concessions to the Tamil Public Servants.

On the basis of the pact between the FP and the Prime Minister, a resolution was passed in the Cabinet in 1965 which provided some relief to the Tamil Public Servants who had failed to gain proficiency in the Official Language, Sinhala. The Cabinet decision on this subject was stipulated in two Treasury Circulars (Nos. 700 and 701).

The Circular No. 700 stated that the notices of compulsory retirement of public servants who had failed to gain proficiency in the Official Language, served before the election should be withdrawn. Circular No. 701 declared that those who joined the public service in 1956 and after on the basis of examinations conducted in Tamil would be required to pass the proficiency test in the Sinhala Language within three years of appointment. The requirements of the Proficiency Test in Sinhala was lowered from Senior School Certificate level to Junior School Certificate. It also provided for new entrant Tamil public servants to take up their promotion test in the Tamil Language[18].

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16. S. J. V. Chelvanayakam, *Parliamentary Debates (Hansard) House of Representatives, Official Report* (Vol. 64, Colombo, Government Press, 1966) Column 132.

17. Kearney, *Communalism and Language in the Politics of Ceylon*, p. 133.

18. *Parliamentary Debates (Hansard), House of Representatives Official Report* (Vol. 87, Ceylon Government Press, September 1969), Columns 878—879. *See also* Ilankai Thamil Arasu Kadchi, *Election manifesto* 1970. (Colombo, Sutantiran Press, 1970) pp. 3—4.

These concessions made to the Tamil public servants, saved thousands of them from the threat of dismissal for their failure to gain proficiency in the Official Language. This was another achievement of the FP's strategy in Government.

The Indo - Ceylon Agreement (Implementation) Act of 1968.

The "National Government" in its second year of office presented another Bill in the House dealing with the question of people of Indian origin in Sri Lanka, namely the Indo-Ceylon Agreement (Implementation) Bill. The original Indo-Ceylon Agreement was concluded between India and Ceylon in October 1964. This agreement provided for the repatriation to India of 525,000 persons of Indian origin in Sri Lanka, together with their natural increase, and for the absorption of 300,000 as Ceylon citizens over a period of fifteen years. It was agreed that the political status of the remaining 150,000 persons of Indian origin would be negotiated later.[19]

In a statement on November 10, 1964, the then Prime Minister Sirimavo Bandaranaike stated that she had intention of introducing "a separate electoral register for people of Indian origin registered as Ceylonese citizens as well as compulsory repatriation for Indian citizens.[20] This interpretation given by her to the agreement evoked opposition from both CWC and the FP.

Dudley Senanayake,[21] in keeping with his agreement with the CWC, removed the element of compulsion and dropped the earlier intention of placing Indians registered as citizens of Sri Lanka in a separate electoral roll, in a Bill he presented in 1968 for the implementation of the Indo-Ceylon Agreement. The opposition coalition parties vigorously opposed this Bill. Their opposition was focused on the government's intention of removing the element of compulsion in the repatriation of Indians and of giving citizenship immediately to all Indian Tamils who became citizens. The earlier intention was to delay the grant of citizenship until such time as those who were repatriated equalled the number qualifying to Ceylon citizenship.[22] One of the principles of the original agreement was to maintain a seven to four ratio tying the grant of Ceylon citizenship to Indians qualified for it to the physical repatriation of Indians opting for Indian nationality. The opposition maintained that the Indo-Ceylon Agreement of 1964 was not being properly implemented and alleged that the interests of the Kandyan Sinhalese were overlooked in implementing the agreement.

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19. Urmila Phadnis, "The Indo-Ceylon Pact and the Stateless Indians in Ceylon". In: *Asian Survey* (Vol. VII, No. 4, April 1967), p. 228.

20. Ibid. p. 229.

21. Dudley Senanayake was the Prime Minister of the "National Government" from 1965 to 1970.

22. Kearney, "Ceylon: Political Stresses and Cohesion". In: *Asian Survey* (Vol. VIII, No. 2, February 1968), p. 105.

After bitter criticism and attack by the opposition, the Bill was eventually approved by Parliament in early 1968. Enactment of this legislation was another success for the FP's strategy in Government. It had been a consistent demand of the FP that the citizenship laws of the country should be amended so as to enable qualified Indians to obtain Ceylon citizenship.

Proposals for the Establishment of District Councils.

In November 1967, the General Council of the FP met to review the benefits derived from the participation of the party in the "National Government". A section of the General Council members who were dissatisfied with the benefits gained by the party, brought a resolution demanding the party to quit the government. This resolution was however defeated. But the meeting resolved to request the Prime Minister to fulfil the promises given to the party by the end of January 1968.[23]

Dudley Senanayake, in keeping with his promises to the FP, presented a White Paper comprising the proposals for the establishment of District Councils in June 1968. In fact the cardinal purpose of the FP joining the government was on the promise of the establishment of District Councils. Because the FP "hoped that these Councils would be a step in the direction of their objective of obtaining regional autonomy for the Ceylon Tamil areas .[24]

The Clause 74 of the White Paper stated that:

> Every District Council shall function under the general direction and control of the Government. The appropriate Minister may, from time to time issue general or special directions to the Commissioner to carry out such direction.[25]

The reference to Central Government control in the above clause was intended on the part of the Government to clear the doubts of the opposition that the Councils would not be wholly autonomous bodies.

However, the opposition coalition parties made it known in no uncertain terms that they were opposed to the proposed District Councils. Their main opposition was that the District Councils would disrupt national unity and divide the country. They argued that it would threaten the welfare of the Sinhalese and Muslims living in the Tamil-speaking areas. They maintained that these Councils would lead to the formation of a Tamil state in the North. Even the TC, the second Ceylon Tamil group backing the government opposed this proposal. Speaking at the debate on the White Paper, T. C. leader Ponnambalam said that:

> "The principles of this Bill, as we see in the White Paper, are bad for Ceylon and worse for the Tamils. [26]

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23. Information based on interviews with FP leaders.
24. Wilson, *Electoral Politics in an Emergent State*, p. 36.
25. *Parliamentary Debates (Hansard), House of Representatives Official Report* (Vol. 78—Ceylon, Government Press, 1968), Column 3100.
26. Ibid. Column 3010.

The opposition was successful in rousing public opinion against the Bill. They boycotted the debate on the White Paper and organized a rally in Colombo and burnt the proposals at the meeting. Moreover some fifteen members within the UNP parliamentary group, threatened the Prime Minister that they would vote against the proposals, if he presented the Bill. Faced with growing popular opposition, Dudley Senanayake abandoned the proposed Bill.

Despite the failure of Dudley Senanayake to keep with his promise, the FP continued to support him, because they were convinced of the Prime Minister's sincerity. They realized that it had not been possible for him to have the Bill to establish District Councils enacted, for causes beyond his control. Tiruchelvam later in a statement in the Senate said:

> The Honourable Prime Minister tried his best to honour his promises... I want to pay tribute to him, he tried his best to introduce the District Council Bill as was agreed upon between him and the members of the Federal Party[27].

The Koneswaram Hindu Temple Issue and the Federal Party's withdrawal from the "National Government".

Historically, the Koneswaram Hindu temple at Trincomalee in the Eastern Province of Sri Lanka has been a place of religious worship for the Hindus. It is also a place of pilgrimage for people and particularly a "place venerated by the Saivaites (a sect in the Hindu religion) of Ceylon."[28] From 1954 onwards, various requests have been made by Hindu religious bodies to the government for the creation of a sacred city round this temple.

When the Prime Minister visited Trincomalee in May 1967, a memorandum was presented by the people of Trincomalee requesting him to declare the Koneswaram temple area as a sacred area for Hindus. The Prime Minister on his return to Colombo referred this request to the Ministry of Local Government.[29]

Consequently, the Minister of Local Government appointed a committee to report on the areas to be included in the sacred city. Meanwhile, representations were made by the Chief *Sanga Nayake*

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27. M. Tiruchelvam, *Parliamentary Debates* (*Hansard*) Senate Official Report (Ceylon, Government Press, Vol. 26, 1968), Column 786.

28. Ibid. Column 790.

29. Ibid. Columns 791—795.

(Buddhist High Priest) of Tammankaduwa, Eastern Province objecting to the decision of the Minister of Local Government. The High Priest stated that an ancient place of Buddhist worship was situated in that area which would "get into the hands of those who are neither Sinhalese nor Buddhist".[30] The Prime Minister in a reply to the High Priest wrote that he had asked "the Minister of Local Government to suspend the Committee appointed in this connection".[31] Thereafter, the Prime Minister requested the Minister of Local Government not to take any action on this matter. When Tiruchelvam (Minister of Local Government) again discussed the matter with the Prime Minister on 13th November 1968, the Prime Minister stated that it was his duty as Minister of Local Government to have consulted with him before he appointed a committee.

This misunderstanding between the Minister of Local Government and the Prime Minister led to the resignation of Tiruchelvam from his portfolio and to the withdrawal of the FP from the "National Government". In a statement to the Senate on 16th November, referring to the letter written to the High Priest of Tammankaduwa, Tiruchelvam said that:

> "The effect of this letter is a public announcement to the Hindus of Ceylon that upon the request of a Buddhist priest, however well-intentioned or ill-intentioned the request — the unanimous wish of all Hindu religious bodies, of the Tamil local bodies, of various people of this country for the declaration of this area ..... as a sacred area should be set at nought. This is the atmosphere in which I found it difficult to continue to be a Member of this Government.[32]

The FP disenchanted with the Government on the District Council issue, chose this as an issue to sever its connection with the "National Government".

The Federal Party as an Independent Group in the House of Representatives (1968—1970):

The Strategy of the FP (November 1968 — April 1969).

The FP, despite its disappointments with the Government over the District Councils Bill, and the Koneswaram Hindu temple question, announced its intention to function as an independent group in the House of Representatives and continued to support the Government "in all issues which do not adversely affect the Tamil speaking people".[33]

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30. Ibid. Column 799.

31. Ibid. Column 801.

32. Ibid. Column 802.

33. Ralpha E. Pretty, "Ceylon: Election-Oriented Politics". *In: Asian Survey* (Vol. IX, No. 2, February 1968), p. 102.

The FP's strategy during this period had been to allow the Prime Minister time to fulfil the party's requests. The FP's 1970 Election Manifesto had outlined the reasons for its continued support of the "National Government" to obtain the following:

(i) establishment of a full-fledged University at Trincomalee (Eastern Province);

(ii) full implementation of the Tamil Language (Special Provisions) Regulations of 1966; and

(iii) economic development of the Northern and Eastern Provinces:

(*a*) development of Kankesanthurai Harbour.

(*b*) an industrial plant in Jaffna.

(*c*) improvement of the Eastern Province public transport facilities.[34]

During this period FP MPs had appealed to the Ministers in charge of the above subjects on several occasions to take action regarding their requests. But they had failed to get any response from the Ministers.

The Strategy of the FP (April 1969—March 1970)

In April 1969, the FP had its Annual Convention at Uduvil, Jaffna. The convention resolved that the party should function as an independent group in opposition, because the government had failed to concede the party's demands. It was decided that the party should not support the government any longer. The FP's strategy during this period had been parliamentary opposition to the Government.

The FP's criticisms of the government from the opposition benches paid some dividends. The Prime Minister visited the Jaffna peninsula in mid-November 1969 to lay the foundation for a 25 million rupee harbour in Kankesanthurai. The Minister of Education announced that the Government would establish a full-fledged university soon in the North or East. Further he declared that the "new entrant Tamil public servants who had failed to gain proficiency in the Official Language (Sinhala) by the deadline would be allowed a further year within which to qualify.[35]

However, before the government could put the above promises into practice, parliament was dissolved in March 1970 and a General Election was fixed for May 1970.

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34. Ilankai Thamil Arasu Kadchi, *Theerthal Vingapanam* 1970. (Colombo, Sutantiran Press, 1970), p. 5.

35. Wilson, "Mr. Senanayake's Remarkable Record: Stability and Rapid Economic Growth" in *Round Table* (Vol. 60 — Nos. 237—240, 970), p. 208.

An Evaluation of the Federal Party's Strategy in Government (1965—1968) and as an Independent Group in the House of Representatives:

The FP's strategy as a constituent partner in the "National Government" was to render it conditional support on the basis of the pact it had entered into with Dudley Senanayake, before the formation of the government. The first three years of the FP's three and a half year participation in the "National Government" proved to be of limited success. Durng this period the party succeeded in gaining three of its minimum demands. They were:

(1) the enactment of regulations for the implementation of the Tamil Language (Special Provisions) Act of 1958 by the "National Government" in 1966;

(2) the National Government's decision to withdraw notices served by the previous government compulsorily retiring public servants who failed to gain proficiency in Sinhala;

(3) the Indo-Ceylon Agreement (Implementation) Act enacted by the Government in early 1968.

However, it failed to gain its most important one, namely, the establishment of District Councils which were to inaugurate centrally supervised local autonomy.

The question why the party failed to achieve the rest of its demands needs to be answered. The main reason for its failure to obtain District Councils might be attributed to the well organized opposition of the SLFP and its marxist allies, the LSSP and the CP. After the formation of the "National Government" in 1965, the opposition parties launched a campaign alleging that the Prime Minister Dudley Senanayake had betrayed the Sinhalese people by entering into a "secret pact" with the FP. They opposed without success, the regulations framed under the Tamil Language (Special Provisions) Act in 1966 as well as the Indo-Ceylon Agreement (Implementation) Act enacted in 1968. But they met with considerable success in the opposition they organized against the proposed District Councils Bill. They boycotted the debate on the White Paper on District Councils and held a mass rally in Colombo to denounce it.

The Prime Minister "had done all he could to honour his pledge"[36] to the FP but the opposition parties were able to stir up so much controversy on this Bill. The TC, the second Ceylon Tamil group backing the Government also opposed this Bill. The FP, later alleged that the TC's stand on this Bill helped to evoke opposition among the members of the Government Parliamentary group. Some members of the UNP Parliamentary group indicated to the Prime Minister that they would vote against the Bill leaving the Prime Minister with no option but to abandon the proposed Bill.

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36. Wilson, *Electoral Politics in an Emergent State*, p. 37.

The FP's request for the precincts around the Koneswaram temple at Trincomalee to be declared a sacred area failed because of objections from the Buddhist High Priest of Tammankaduwa in the Eastern Province. Furthermore an extremist Sinhalese Buddhist stalwart, R. G. Senanayake, declared his opposition to the committee appointed by the Minister of Local Government to look into the question. The Prime Minister thereupon directed the Minister of Local Government to refrain from taking further action on the matter. This led to the eventual withdrawal of the FP from the National Government.

The FP during its oppositional phase from 1956—65 had opposed and obstructed the MEP and SLFP governments of the period in those of their policies which adversely affected the interests of the Tamil-speaking people. For instance it campaigned against the Sinhala Only Bill in 1956 and against the implementation of the policy of Sinhala Only in the Northern and Eastern Provinces in 1961. The party used extra-parliamentary methods on these occasions. In contrast, when in the ranks of government (1965—68), the party tended to support the "National Government" in its efforts to remedy some of the grievances of the Tamil-speaking people. For example the party was all in favour of the Tamil language (Special Provisions) Regulations of 1966 and Indo-Ceylon Agreement (Implementation) Act of 1968. Thus while in the ranks of government the party used conciliatory tactics and parliamentary pressure towards achieving its objectives. The party's change in strategy during this period (1965—70) was explained by the party president in his address in 1969:

> In the history of our party, we have been using different methods to liberate our people. By being in opposition from the beginning, we had been opposing governments through our agitations. After the 1965 election we joined the government as a constituent partner. We were able to obstruct some dangers like the imposition of Sinhala on us, through our earlier methods of opposition. During the last four years we were able to gain some rights, if not all of what we expected, through the method of co-operation.[37]

As the party president claimed in 1969, the FP by following different strategies in government and opposition had been able to gain some of its demands. In comparision to the period of 1956—65, the party was more successful in the period 1965—70.

Conclusion

The role of the Federal Party in the Parliament of 1965—70 can best be assessed by reviewing its position in the period after 1970. The United Front (UF) comprising the SLFP, the LSSP and the CP was returned with an overwhelming majority at the General Election of May 1970, and

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37. S. M. Rasamanickam, *Thalaimai Perurai*, Ilankai, Thamil Arasu Kadchi, 11th Annual Convention (Colombo, Sutantiran Press, 1969), p. 11.

formed a government. In 1971, this UF government convened a constituent assembly to draw up a new constitution with the intention of declaring Sri Lanka a republic. The FP was invited to participate in the deliberation of the constituent assembly. It submitted a memorandum setting out its own constitutional scheme based on the federal principle. The memorandum was rejected by the assembly and the FP withdrew from the body in protest.

Thereafter, the FP in a special convention in the Jaffna Town Hall in January 1972, passed a resolution rejecting the new constitution. It was resolved at this convention to consult other Tamil political parties so as to take a unanimous stand against the new constitution. This all-party conference decided to submit a memorandum for the amendment of the constitution on the basis of a six-point formula drafted by Tamil leaders. Following the all party conference in Jaffna, the several Tamil political parties and Trade Unions met in Trincomalee in May 1972 and formed a Tamil United Front (TUF). The UF Government did not give serious consideration to the TUF's six-point formula nor did it invite the TUF leaders to discuss these demands. As a result the FP (TUF) began to talk about the establishment of an independent Tamil State.

In the light of the political development in Sri Lanka after 1970, it is evident that the FP's role in the Parliament of 1965—70 was more productive and positive.

An Investigation of the Swing from Arts to Sciences in Sri Lanka

by JAYAMPATI WANASINGHE

Sri Lanka has given a very prominent place to education especially since the inauguration of the Free Education Scheme in 1945. However, as education is an agent of social mobility, it grew mainly under the impetus of social justice and equality of educational opportunity[1]. At first the pressure for more education was absorbed by the rapid expansion of Arts studies. This type of education imparted in the schools soon became ineffective in relation to national needs, thus creating grave socio-economic problems.

The government that came into power in 1956 took some firm measures with the intention of rectifying this situation. Steps were taken to popularise the study of science in the secondary schools. A policy decision was taken to teach General Science to all pupils in the Junior Secondary Schools[2]. Further, the provision of more opportunities to study specialised sciences at the Senior Secondary Level, the introduction of science scholarships, the establishment of laboratories in rural areas, the granting of special posts to science graduate teachers, and the introduction of new science curricula were some of the far reaching measures taken to encourage more and more students to study science[3].

These efforts had their impact in the student enrolment for science. The early sixties saw a slow but steady growth in the enrolment for science studies especially at the Senior Secondary level. Statistics[4] reveal that, from 1960 onwards, there was a very sharp rise in the enrolment for science at the G.C.E. (A.L.) classes. Today more and more students join the science classes irrespective of whether they have the aptitude to study science or not.

It is also possible to observe that a large majority who are committed to science fail at the G.C.E. (A.L.) Examination[5]. However these failures sit the G.C.E. (A.L.) Examination again and again with the intention of gaining admission to the universities. Tuition in Science Education is now a booming business and private tutories are reaping rich benefits by catering to the G.C.E. (A.L.) failures. It is true to say that more and more students join the science classes to end up as early school leavers. Apparently, there is a severe loss of potential scholars in the field of Arts.

Using the G.C.E. (A.L.) enrolment as the criterion, one can observe a steadily growing swing away from the Arts to the Sciences. This is in sharp contrast to the situation in Western countries where there is a swing from the Sciences to the Arts[6]. The present study attempts to analyse and interpret this swing away from the Arts to the Sciences in Sri Lanka.

Method of Study.

Barnard and McCreath[7] have suggested a method of studying such a situation. "What actually happens to any particular pupil depends not only on his motivation and ability, but also on the opportunities offered to him at different stages during the time at particular schools and the particular entry requirements for courses at any higher education institutions to which he may apply".[8] In specific terms, they suggest that such a study "starts from the pupil and traces his progress through the system, through particular schools and higher education institutions".[9]

To sharpen the foci of investigation, one can put forward a hypothesis relevant to the situation. This hypothesis could be that the system of education in Sri Lanka does not select the correct type of student and it may also be said that the system has imposed almost insurmountable obstacles as the student progresses through the education system. To test this hypothesis, one can pose questions such as the following. Are the aspirations of the students high? Do they aim to go to the university or leave school at 16 or 18? Are they all academically oriented to follow a science course leading to the university? What obstacles, if any, stand in their way as they go through the system?

Experiments were conducted to find the answers to these questions. Educational psychologists agree that any selection for a course should be based on the children's ability, aptitude, interests and motivations. In order to assess these and to answer the above questions the writer —

(1) Obtained measures of aspirations, general interests and motivations of students by means of:

(*a*) their ratings of 15 careers
(*b*) their ratings of 8 school subjects
(*c*) two separate questionnaires were administered to

(i) G.C.E. (O.L.) students (Pre-specialization group)
(ii) science students in G.C.E. (A.L.) classes (Specialization group)

(*d*) an essay on "What I expect to be doing in 5 years time".

(2) Made use of a battery of intelligence tests designed for use in Sri Lanka.

(3) Obtained teachers' estimates of ability of students to enter the university.

Selection of the samples.

The samples were selected from among the schools in the Western Province. To draw these samples the schools in the Western Province were classified into three categories on the basis of availability of laboratories.

These are:

(1) Schools with laboratories to teach science up to G.C.E. (A.L.) classes.

(2) Schools with laboratories to teach science up to G.C.E. (O.L.) classes.

(3) Schools with science rooms only.

The pre-specialization group of 450 students was drawn from G.C.E. (O.L.) students by randomly selecting 150 students from each category of schools mentioned above.

The G.C.E. (A.L.) sample of 302 students was selected at random from 15 schools that taught G.C.E. (A.L.) science.

Aspirations and preferences of the pre-specialization group.

It is relevant to study the aspirations and the degree of preference for science among the students who are not yet committed to science. The main aim of such a study is to find out how their aspirations and preferences are influenced by their home and school environment.

R. G. Rowlands[10] has conducted some experiments to find out the influence of the type of school and the home background on the aspirations and preferences of the students for science studies. He administered a questionnaire to find out the aspirations, preferences and goals of the students studying in different types of schools in England. He classified the sample into three groups on the basis of their responses. These three groups are the scientists (S), non-scientists (N) and the early leavers (E). The science group (S) was further divided into two groups S_u and S_o where.

S_u — represents those who intended to go to the universities and

S_o — represents others in the group.

He devised three mathematical formulae to indicate —

(1) the level of aspiration,

(2) the preference for science, and

(3) university preference.

These formulae are given in the Appendix.

The writer drew up a questionnaire based on that drawn up by Rowlands and administered it to the pre-specialization group.

The questionnaire was designed to bring out the aspirations, preferences and goals in the field of science. The Table below gives the three ratios for the three types of schools.

TABLE 1

Level of aspiration, university and preference ratios for the pre-specialization group classified according to type of school

	Level of aspiration ratio	*University ratio*	*Preference ratio*
Schools with science rooms	75	42	48
Schools with G.C.E. (O.L) laboratories	80	68	64
Schools with G.C.E. (A.L.) laboratories	87	75	72

It can be seen that the level of aspiration ratio for science is quite high for all three types of schools. The minimum value of 75 is for schools without laboratories to teach science. In Rowland's study only two types of schools exceeded this value. This shows that, in Sri Lanka, the aspirations of the students are relatively high even if adequate facilities are not available in the schools. It is interesting to note that in the two types of schools with science facilities, the preference ratio and university ratio are relatively high. This shows that the students are realistic although all the students have the aspiration to take to science. The students in the schools without science facilities seem to be aware that their chance of studying science and gaining admission to the university are relatively low. The low preference ratio for those in schools without facilities is indicative of this realistic attitude. When the preference and university ratios are compared with those for England, it is seen that on the average these two ratios are higher for England but compare very favourably with those schools in Sri Lanka with science facilities.

TABLE 2

Level of aspiration, university and preference ratios classified according to urban and rural sectors in Sri Lanka

	Level of aspiration ratio	*University ratio*	*Preference ratio*
Urban ...	86	74	64
Rural ...	72	53	58

Table 2 brings out the fact that although the rural students had a fairly high aspiration ratio, the university and preference ratios were comparatively low. The schools without adequate facilities for teaching science are situated in rural areas and it is seen that the preference and university ratios are low in comparison with those for other schools. This again is a reflection of the realistic attitude of the students in the rural areas. They appear to be aware that even if the aspirations are there, the chances of studying science and then entering a university are very remote.

Fathers' occupational status is closely linked with the aspirations and preferences of students. The occupation of the father is a crude but reliable index of the socio-economic status as he is the sole breadwinner in the majority of the families. Table 3 below indicates that the children of professional and administrative officers have the highest level of aspiration and university ratios but the preference ratio is highest for the office and non-manual category. If not for this, the values for the three ratios drop successively along the occupational scale.

TABLE 3

Level of aspiration, university and preference ratios classified according to the occupation of the father

	Level of aspiration ratio	*University ratio*	*Preference ratio*
1. Professional and administrative	93	88	64
2. Office and non-manual	91	76	71
3. Skilled manual	81	60	51
4. Unskilled manual	73	56	43

The relatively low preference ratio for the professional and administrative category could be attributed to the fact that the students may have other interests in business, law or in the administrative service.

The results of this survey show that the aspirations and preferences of the students are highest in the students who study in developed urban schools and whose fathers' occupational status and, therefore, the income, are high. The occupational scale is generally connected to the degree of education. It could, therefore, be said that the aspirations and preferences are greatest for those children whose parents are well educated with a reasonably good income.

Decision to take to science

A questionnaire was administered to 302 students in G.C.E. (A.L.) science classes. This group consisted of 160 boys and 142 girls drawn from the first and second year classes. As all are science students, they have taken the irreversible decision of remaining in the field of science for the rest of their educational career.

The most influential factor in their decision to study science was the father or the mother. 36% said that the father was influential but only 7% said that the mother was influential. Thus for 43% the parents had taken the decision for them. 27% said that they took the decision themselves while 18% expressed that their reading led them to take to science. A noteworthy feature that emerges is that the encouragement given by the school staff is very low. The teachers and the principals have been influential only to a very small extent and only 8% had taken to science as a result.

It is heartening to find that the aim of 81% of the students was to take to higher studies. Nearly 2% wanted to give up studies. Although the reasons for giving up studies were not given, this minority could be those who will inherit property and businesses from the parents. 17% said that they would go in search of jobs after the G.E.C. (A.L.) examination. This indicates that nearly a fifth of the students would definitely give up studies after the G.C.E (A.L.).

Out of the students who wished to go for higher studies as much as 84% aimed to join the university. The teacher training colleges were preferred by 15.34%. Only 0.66% stated that they hoped to pursue higher education in a foreign university.

A startling revelation is that the ambitions of these students are not stable. In their essay on "What I expect to be doing in 5 years' time" they expressed the concern that they may not be able to achieve their aims. The writer structured the essay with the intention of guiding their responses. Some had suggested alternative ambitions in the event of their failing to get through the examinations. They were aware that it was very difficult to get through the G.C.E. (A.L.) examination and then qualify to enter the university.

As much as 58% said that in the event of their failing to gain admission to the university, they would seek employment. The rest aimed to continue studies in other tertiary institutions. It is quite clear that the G.C.E. (A.L.) examination hinder their interests and motivations. They face this examination with utmost uncertainty and dread. This has to be expected as only 12.46% of the total number who qualified at the G.C.E. (A.L.) examination in 1980 were in fact admitted to the universities.

The questionnaire also aimed at bringing out the other obstacles to their education. Almost 51% of the sample expressed the desire to change their school if they were offered a school of their choice. All of them wished to go to developed schools in urban areas.

They appear to have a good knowledge of a 'developed school' in science and where these are situated in Sri Lanka. While 23% said that they would like schools in Colombo, another 16% wished to go to schools outside their educational region. The rest (12%) expressed the desire to go to the nearest urban school in the same educational region. It is interesting to note that as much as 49% wished to remain in the same school. However 13% felt that although they wished to go to developed schools, they were forced to remain in the same school as their parents could not afford to send them to schools outside their area. None wanted to go from an urban school to a rural school.

The reasons given for their decisions were many. As requested in the questionnaire, they gave three reasons on order of importance. Judging only from their first preference, their decision rested mostly on the availability of resources for science teaching. 13% said that they wanted to go to other schools in the urban areas as the facilities were better. 17% said they preferred the urban schools because of the availability of better and experienced teachers. 10% preferred the schools mentioned as they were 'popular' schools. Only 11% of the sample felt that they should go to urban schools as they produced better examination results. The students are aware that better facilities and better teachers are the most important factors to achieve success. The concept of a 'popular' school is linked with success at public examinations. They were indirectly referring to the same factors when they said that they wanted to go to 'popular' schools.

Influence of socio-economic status on the education of students

It is true to say that the socio-economic status of the parent contributes to education of the children to a great extent. A Departmental survey that investigated educational wastage in Sri Lanka schools showed that 48.79% of those who gave up schooling did so because of poverty. Another major reason given for non-attendance was that the poor parents "would not wish their children to be the subject of scornful comment of other children or teachers".[12]

According to the socio-economic survey conducted in 1969—70; it is found that the general level of household income of the urban sector is much higher than that of the rural sector. Table 4 gives the statistics.

TABLE 4

Average income of household for one month in Sri Lanka

	All island	*Urban*	*Rural*
Average income in rupees	289	453	264

Source: Report of the preliminary survey, 1969—70, Department of Census and Statistics, Sri Lanka.

The same survey shows that the general level of education of the urban sector is higher than that of the rural sector. Table 5 below shows that the disparity is very great indeed.

TABLE 5

Level of education according to urban and rural sectors, Sri Lanka.

	Urban			*Rural*		
Level of Education	*Male*	*Female*	*Total*	*Male*	*Female*	*Total*
1. No schooling ...	7.2%	15.7%	11.4%	10.4%	21.2%	15.8%
2. Primary ...	39.1	36.5	37.8	48.3	42.4	45.4
3. Middle school ...	38.4	37.3	37.9	34.0	29.0	31.7
4. Passed G.C.E. (O.L.) ...	12.9	9.1	11.0	6.5	6.2	6.3
5. Passed G.C.E. (A.L.) and over ...	2.4	1.4	1.9	0.8	0.8	0.8

Source: Report of the preliminary survey, 1969—70; Dept. of Census and Statistics, Sri Lanka.

This shows that, economically, the urban child is better placed than the rural child. Moreover, the general level of education of those who live in urban areas is higher than that for the rural sector. As the parents in the urban sector are better educated and have better financial resources, they take more interest in the education of the children. This fact is amply demonstrated from the responses to the questionnaire given to the pre-specialization group. The urban child lives in an educationally better environment created both by the school and the more educated parent. It is an accepted fact that the urban schools have better facilities and

produce better results. Therefore, it is true to say that the urban schools serve the social elite of the nation. The poor child is handicapped and he is deprived culturally, socially and economically.

Interests and motivations for science among science students.

It is an accepted fact that interests and motivations towards science are basic to success in any field of science. To assess the students' interests and motivations the writer conducted an experiment which consisted of:

(1) ratings of 15 careers
(2) ratings of 8 school subjects
(3) an essay on "What I expect to be doing in five years' time".

The writer used the following 15 careers

(1) Research scientist
(2) Engineer
(3) Journalist
(4) Lawyer
(5) Doctor
(6) Science teacher
(7) Priest
(8) Bank clerk
(9) Personnel Manager
(10) Craftsman
(11) Factory worker
(12) Social worker
(13) Secondary school teacher (other than science)
(14) Farmer
(15) Government clerk.

The students were asked to rate the careers using six different criteria.

These criteria are:

(1) How much they like such a career.
(2) How interesting each career would be.
(3) How high an initial salary would each career draw
(4) The prestige each career would bestow.
(5) How high would be the qualifications needed
(6) The usefulness of each career to the society.

A five point scale was used to rate the careers. The following guidance was given to indicate the direction and meaning of the ratings.

I would like it very much.....4 points
I like it but not to a great extent.....3 points
I like it a little.....2 points
I don't think I like it.....1 point
I don't like it at all.....0 points

The teachers who conducted this experiment saw to it that the students rated all careers on one criterion before they proceeded to the next.

Table below shows the ratings of the 15 careers on the six criteria.

TABLE 6

Ratings of 15 careers

		CRITERIA					
		Liking	*Interest*	*Initial salary*	*Prestige*	*Qualifi-cations*	*Useful-ness*
1. Research Scientist	Boys	3	5	3	10	4	10
	Girls	4	8	4	9	3	11
2. Engineer	Boys	1	2	4	3	2	3
	Girls	5	9	5	3	2	2
3. Journalist	Boys	7	8	6	12	7	11
	Girls	8	10	6	10	6	13
4. Lawyer	Boys	5	3	1	1	1	2
	Girls	9	2	1	2	4	3
5. Doctor	Boys	2	1	2	2	3	1
	Girls	1	1	2	1	1	1
6. Science teacher	Boys	6	6	7	4	5	4
	Girls	2	3	8	4	5	4
7. Priest	Boys	15	15	15	6	15	8
	Girls	15	15	15	7	15	6
8. Bank clerk	Boys	4	11	5	13	9	12
	Girls	3	5	5	12	9	10
9. Personnel Manager	Boys	8	4	8	11	10	14
	Girls	11	12	3	13	10	12

10.	Craftsman	Boys	11	13	12	15	13	15
		Girls	13	13	14	14	14	14
11.	Factory worker	Boys	14	12	11	14	12	9
		Girls	14	14	10	15	13	15
12.	Social worker	Boys	12	14	13	5	11	7
		Girls	6	7	12	8	12	5
13.	Secondary school teacher	Boys	10	9	9	8	6	5
		Girls	7	4	9	5	7	8
14.	Farmer	Boys	13	7	14	7	14	6
		Girls	12	11	13	6	11	7
15.	Government clerk	Boys	9	10	10	9	8	13
		Girls	10	6	11	11	8	9

Among the boys, the careers of engineer, doctor, lawyer, research scientist and personnel manager rank high in all six criteria. The place given to the research scientist is relatively high except under the 'prestige' and 'usefulness' criteria. This is because of the absence of a research tradition in Sri Lanka and the few discoveries made by the researchers are not known to the boys. The ratings indicate that boys are more interested in science-based occupations than girls. It is obvious that occupations with less remunerative attractions and prestige and those that involve manual work such as farmer, factory worker, craftsman are disliked by the boys as well as the girls. The boys and girls have ranked high the occupations of science teacher and secondary school teacher.

The girls like the occupations of doctor, science teacher, bank clerk and research scientist but they do not like and show no interest in becoming personnel managers. It could well be that they feel they are temperamentally not suited for this post and it could be attributed to their culture.

The writer checked the initial salary scales of the above careers with the rank order indicated by both boys and girls. Their rank order is remarkably accurate. However, the salary scale of the lawyer is ranked first by both groups. A lawyer is in general a private practitioner and his income varies with his popularity. Well established lawyers in fact draw a very large income. Students' awareness of this fact may have prompted them to rank it first.

This study reveals that the careers of engineer, doctor, lawyer and science teacher are liked by the students and they agree that these are not only more useful than the others to the society but also carry prestigious value.

This is reflected in the rank ordering of the school subjects. The students have rank ordered the eight subjects in the following manner.

Subject	Rank
Mathematics	1
Chemistry	2
Physics	3
Biology	4
Sinhala Language	5
English Language	6
Religion	7
Agriculture	8

It is seen that the students like science subjects more than the others. Although Sri Lanka is an agricultural country, agriculture is disliked by the students. It is partly a reflection of a dislike for manual work. This lack of interest is in fact reflected in the number of agriculture graduates produced by the universities in Sri Lanka.

Analysis of the essay

The students were restricted in their freedom of expression in the ratings of careers and school subjects. An open-ended essay was given to the students so that their interests and aspirations would come out freely as they were allowed free expression. The students, however, were guided in the essay by structuring it in order to bring out their interests, aspirations and likely obstacles.

The essay reveals the same sort of interests and ambitions discussed earlier. The essay was analysed by finding the frequency of reporting a career as a first choice or second choice. The frequency distribution of the careers is shown in the Appendix. The results are very similar to those obtained under the rating of 15 careers. Students' ambitions are centred around the professions of doctor and engineer. As remarked earlier, their aims are not stable and they have indicated alternative careers in the event of failing to gain admission to the university. Some had even commented that "I am even prepared to face failure at the G.C.E. (A.L.) examination as I feel that the chances of getting a permanent job are greater".

It is now possible to interpret the observations on careers and school subjects in the Sri Lankan context. Vocational attitudes and ambitions not only reflect the interests but also reflect the social structure which is moulded by the past history. It is obviously true that the economic

returns play a very important part in determining vocational ambitions and attitudes. Out of the 15 careers, the first ten, except that of lawyer and bank clerk, selected by both boys and girls are government jobs. These careers carry relatively high salaries and therefore the society identifies these with security and prestige. The ratings under the 'prestige' criterion support this theory. Among the non-government jobs, the prestige of the farmer is regarded more than the others such as craftsman and factory worker. The farmer belongs to a high caste than the craftsman and hence occupies a higher place in the social scale. However, both are not liked by the students as the economic returns are comparatively low. According to the traditional caste system the manual work is done by the low caste people. The productive occupations bring low economic returns and also enjoy low prestige. The traditional value system is amply demonstrated by the ratings of the careers. All careers involving manual work are rated low. Thus it can be concluded that the aspirations and interests of the students are moulded not only by their interest in science but also by economic rewards, historical and cultural forces that are alien to the country's needs. Therefore aspirations and interests give prestige to a narrow band of occupations. All students aim for these careers. Hence their education is channeled along narrow lines with the intention of achieving them. The ranking of school subjects offers evidence in support of this view. The older generation and especially the parents are influential in perpetuating this social pattern and the fact that 43% of the parents influenced the choice of science is evidence in support of this fact.

Abilities and aptitudes of the students.

It is true that aspirations and motivations play a very important part in the success in education. Of equal importance or more are the abilities and aptitudes of the children for science. Especially in an underdeveloped country like Sri Lanka, only those who have the ability and aptitude should take to science and it is the duty of the school to guide and direct the students based on objective criteria. If students who are unfit for science are chosen, then they will not be able to cope with the education and will end up as failures. Further, if such a system exists, it is injurious to the education of the children and to the development of manpower resources of the country.

To date, the Department of Education has not issued a clear cut circular governing the selection of students for various courses. Selection is in the hands of the heads of schools and the various methods of selection vary from school to school. In general there are outside pressures, parental and political, to get children admitted to the science stream. Although the Department of Education expects the students to have a specific number of credit passes at the G.C.E. (O.L.) for various courses, there is provision to collect them at subsequent sittings. The heads of schools misuse this privilege and allow those who are academically unfit, to join the G.C.E. (A.L.) class. T.L. Green [13] highlighted this as follows: "Uncontrolled educational expansion is of limited value and Sri Lanka has suffered from the lack of clear directional basis in

education whereby pupils were guided in terms of aptitudes and abilities. The result, in relation to social needs, is well known. To overcome this situation education needs to be controlled, organised and given direction in the light of national needs, not sectional interests".

It is therefore quite clear that Sri Lanka has suffered due to the lack of adequate and sound criteria of selection into various courses. It is quite possible that large numbers of students without the aptitude and ability for science are specializing in this field in the schools of Sri Lanka today.

From an educationist's point of view, economic, social and other factors are irrelevancies and selection should be based on individual ability and aptitude. Dempster[14] put it thus: "Throughout the child has been kept in the forefront, for it is the child that matters, not any system or theory and it is upon the happiness and progress of every child that all selection must ultimately be judged". It is in the best interests of the child and the country that we should select those few who have the aptitude and ability for science.

This brings us to the theoretical aspects of the selection procedures adopted to select students for science studies. Such a study will enable us to estimate what proportion of the science students without the necessary aptitude and ability are in the G.C.E. (A.L.) science classes today.

The Schools Council Curriculum Bulletin[15] No. 3 devotes a whole section to discuss the intellectual differences and science ability. The findings of research workers such as Berridge, Khan, Jog, Lewis and Larwood are analysed and it arrives at the conclusion that "A clearly defined association emerges between scientific aptitude and the general verbal-factor of intelligence and reasoning factors, but the evidence for practical and social factors is rather inconsistent and the case for factors of imagination and memory also needs to be verified further".[16] The overall conclusions reached from this brief survey supports Vernon's[17] interpretation of mental factors for science. He suggests that factors of scientific ability cut across the verbal-educational and kinaesthetic-motor classification and in his diagrammatic scheme 'science' ability is represented as being linked across the verbal-educational, kinaesthetic motor, and numerical group factors.

A recent study by Liam Hudson[18] on the relation of psychological test scores to academic bias gave the following qualitative summary. This is in agreement with Vernon's findings.

Qualitative summary of test scores

	General intelligence	*Accuracy*	*Spatial ability*	*Vocabulary*	*General knowledge*	*Cognitive bias*
Arts specialists	poor	poor	poor	good	fair	verbal
Science specialists	very good	good	very good	good	good	numerical and spatial

He concludes that "academic bias of clever school boys does reflect itself in test scores with surprising clarity".[19] This study shows that 'verbal', 'non-verbal', and 'combined' intelligence tests can be used to predict the science aptitudes of students. Research conducted in the U.S.A. by Brandwein[20], Roe,[21] too support this view.

It is found that those who get high scores in the intelligence tests do not necessarily take to science. This is because they have no interest for science and they are not motivated. Therefore research workers point out that high intelligence alone should not be the criterion for selection. Students' interests, aspirations and motivations should also be taken into consideration.

Research work carried out in the U.S.A. points out that "high ability will be expressed most favourably in the most favourable environment"[22] In order to gain an insight into the most favourable environment, research workers have studied research scientists at work and also their early life, especially that period when they were in the schools. They have thus delineated two other factors for success in science. These are classified as 'predisposing factor' and 'activating factor'. The predisposing factor is linked with the personality traits of the individual scientist. These traits consist of attitudes and characteristics such as persistence, diligence and an inquiring mind. The activating factor is "concerned with opportunities for advanced training and contact with an inspirational teacher".[23] "Without activation, potentialities may be lost or turned to other areas".[24] To sum up, high ability in science is dependent on the interaction of three factors—'intellectual', 'predisposing' and 'activating'. All three factors are necessary but no factor in itself is sufficient to develop high ability in science. In this context, the findings of Margaret Mead and Rhoda Metraux on the image of the scientist, reinforce the importance of the above mentioned factors. "He is a very intelligent man.....He has long years of expensive training.....during which he studied very hard. He is interested in his work and takes it seriously. He is careful, patient, devoted, courageous, open-minded. He knows his subject. He records his experiments carefully, does not jump to conclusions, and stands up for his ideas even when attacked".[25]

From this brief survey it is clear that several validated instruments are necessary to assess the ability and aptitude for science. Among these are the intelligence tests to measure above mentioned mental abilities, a personality questionnaire and other means of measuring interests, aspirations and motivations. The writer used an intelligence test battery specially validated for Sri Lanka. The writer devised means to measure interests, aspirations and motivations. These have already been discussed. He was handicapped to some degree due to the lack of a validated instrument for Sri Lanka to measure personality characteristics like the one designed by Cattel.

This was overcome to some degree by the use of teachers' estimates of ability in science. The teacher's estimate is based on day to day work in the classroom and gives to some extent a subjective but fair picture of the students' abilities in science. The teachers were instructed to take into consideration such factors as persistence, questioning attitude, diligence, in their estimate.

No doubt the main weakness in such scores is the wide variation of the standards of assessment from teacher to teacher but the statistical analysis shows that there is a high correlation between those estimates and intelligence test scores.

As pointed out earlier, the teachers were asked to assess the chances of each child gaining admission to the university. This was expressed as a percentage. It is clear that their estimate is mainly based on the students' present achievement in the science subjects. If we assume that only those who score more than 50% are likely to gain admission to the universities, then these estimates predict that only 31% will be successful. However, the teachers were told that a pass at the G.C.E. (A.L.) was around 40%. On taking 40% as the 'cut-off point', they estimated that only 46% would pass the G.C.E. (A.L.) examination. These estimates show that teachers admit the fact that a large number of those who do not have the aptitude for science have taken to science. According to the teachers estimate as much as 54% would be unsuccessful at the G.C.E. (A.L.) examination. The teachers' estimates when correlated with intelligence test scores give the following correlation coefficients.

Correlation of intelligence test scores with teachers' estimates.

	Correlation coefficient
Verbal with teacher's estimates	+0.812*
Non-verbal with teachers' estimates	+0.613*
Combined with teachers' estimates	+0.724*

*$p < .05$

These correlation coefficients show that the teachers' estimates, although subjective, correspond to a great extent with the intelligence test scores.

The teachers' estimates showed that at least 54% who are unfit for science are in the G.C.E. (A.L.) science classes. A more objective figure could be arrived at by using the intelligent test scores. To get this figure the writer used the Combined Intelligence test scores. The writer decided to use this combined test score as this test includes items under 'verbal', 'spatial', 'reasoning', and 'numerical' factors. The norms of the intelligence test for this class of students are a mean score of 59.89 and a standard deviation of 17.25.[26]

As a characteristic feature of science prone students is high intelligence, the writer wished to select only those students who had a score of more than one standard deviation above the mean. This is undoubtedly an arbitrary but a valid 'cut-off point'. According to the American norm, the 'cut-off point is higher.'[27] Thus, those who score below 59.89 belong to the average and below average group. According to our assumption those who score 77.14 (one standard deviation above the mean) and above can be considered as the students who have the ability to study science. As much as 62% score below 77.14 and 34% score below the mean. Therefore out of the students studying science only 38% have the aptitude for science and 34% too receive the same academic education that the others receive and compete for the same examination. An academically biased education is not suitable for the average and below average students. It is almost certain that these students will not be able to pass the G.C.E. (A.L.) examination. Undoubtedly, it is a colossal waste of valuable resources.

All the students who are to sit the G.C.E. (A.L.) examination have to reach a certain standard with a minimum number of credit passes earned at the G.C.E. (O.L.) examination. It is an accepted fact that a very large number of science students fail the G.C.E. (A.L.) examination. In some science subjects as much as 45% fail this examination. This study too shows that 38% of the G.C.E. (A.L.) science students belong to the average and below average category. This fact is a very bad reflection on the validity of the G.C.E. (O.L.) examination as an instrument of selection for further studies. We may safely conclude that the G.C.E. (O.L.) examination has a low predictive validity.

As remarked earlier, university admissions are based on the results of the G.C.E. (A.L.) examination. Every year an increasing number of students sit this examination and a large number obtain passes in all four subjects. The number of students who qualify for admission to the universities shows a steady increase but an ever increasing number of students fail to gain admission due to the limited number of places available in the universities. Although the statistics for 'science' are not given separately, the progressively worsening situation can be assessed from the Table given below. Today, as much as 88% of the students who qualify for admission are shut out from the universities.

TABLE 7
University admissions 1972—1980

Examination Year (G. C. E.—A. L)	*Admission Year*	*Number Eligible*	*Number Admitted*	*Percentage Admitted*
1972	1973	10747	3420	31.82
1973	1974	12961	3532	27.25
1974	1975	15446	3789	24.53
1975	1976	15023	3942	26.23
1976	1977	19045	4150	21.79
1977	1978	27582	4996	18.11
1978	1979	26918	4661	18.42
1979	1980	29698	4857	16.35
1980	1981	40300	5020	12.46

Source: U.G.C. Annual Report, 1981.

The problem of gaining admission to the universities gets still more aggravated, especially from the point of view of the science prone student, as the University Grants Commission selects only 55% of the students on merit as the sole criterion. Table 8 below compares the actual university admissions for 1975 with the hypothetical situation when students are selected on merit.

TABLE 8

University admissions 1975

Distribution of students by their Districts of origin

District	*Population Percentage*	*Medicine & Dental Surgery*		*Engineering and Sciences*	
		Actual selection on District basis	*Hypothetical selection according to merit*	*Actual selection on District basis*	*Hypothetical selection according to merit*
Colombo	21.03	110	132	70	129
Kalutara	5.76	15	11	20	16
Kandy	9.34	24	17	31	11
Matale	2.49	8	3	8	3
Nuwara Eliya	3.57	2	2	6	—
Galle	5.80	29	18	20	24
Matara	4.63	8	5	15	20
Hambantota	2.68	1	—	8	—
Jaffna	5.54	29	61	20	56
Mannar	0.61	1	1	1	—
Vavuniya	0.75	—	—	—	—
Batticaloa	2.03	6	4	7	2
Amparai	2.14	—	—	1	1
Trincomalee	1.51	3	1	5	5
Kurunegala	8.09	12	3	26	9
Puttalam	2.99	3	2	10	2
Anuradhapura	3.06	2	1	4	1
Polonnaruwa	1.29	1	—	1	—
Badulla	4.84	2	1	7	2
Moneragala	1.51	—	—	2	1
Ratnapura	5.21	11	7	10	5
Kegalla	5.13	8	6	18	3
SRI LANKA	100.00	275	275	290	290

Source: Planning and Research Unit, University of Sri Lanka.

We may therefore conclude that the limited number of places available in the universities has so far not served as an adequate warning to those who take to science. Today the G.C.E.(A.L.) Examination acts as an almost insurmountable barrier built into the system to stem the ever increasing flow of students who seek to gain admission to the universities. At present there aren't sufficient institutions at the tertiary level to absorb even a part of those who qualify for admission to the universities but are rejected. Further, the rejected cannot find employment easily. Their future is very bleak indeed. Thus an ever increasing number of students take to science to join the ranks of unemployed and frustrated. Needless to say, such a situation must also be considered a colossal waste of national resources.

The government will have to recognize very soon that concrete action will have to be initiated to absorb all those who qualify but fail to gain admission to the universities. Further, this study clearly shows that selection for science will have to be based on adequate and sound criteria. The G.C.E. (O.L.) Examination has failed miserably as an instrument of selection for further study in the sciences. The students will have to be given adequate direction and guidance based on the latest techniques in psychometrics so successfully adopted in other countries. If this problem is neglected indefinitely it might lead to social chaos even exceeding the proportions experienced in 1971.

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8. Ibid., p. 361.
9. Ibid., p. 361.
10. Rowlands, R.G., "Some differences between prospective scientists, non-scientists and early leavers in a representative sample of English Grammar School boys", *British Journal of Educational Psychology*, Vol. 31, 1961, p. 21—32.
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16. Ibid., p. 40.
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23. Ibid., p. 168.
24. Ibid., p. 170.
25. Margaret Mead and Rhoda Métraux "Image of the scientist among High School students; A pilot study" *Science CXXVI*, August 1957, p. 195.
26. Kariyawasam, T., *The development of a technique for selecting students for different streams in the secondary schools of Ceylon*, unpublished Ph.D. thesis, University of London, 1968, p. 136.
27. Brandwein, P.F., Watson, F.G., and Blackwood, P.E., op. cit, p. 171.

1. R. G. Rowlands's formulae

1. $\frac{S+N}{S+N+E} \times 100$ = Level of aspiration ratio

2. $\frac{S}{S+N} \times 100$ = Preference ratio

3. $\frac{S_u}{S} \times 100$ = University ratio

Where S denotes scientists

,, N ,, non-scientists
,, E ,, early school leavers
,, S_u ,, those who intend to go to the universities
,, S_o ,, others in the science group.

2. Career choices reported in the essay

BOYS		GIRLS	
Career	*No. of times reported*	*Career*	*No. of times reported*
1. Engineer	80	1. Doctor	75
2. Doctor	73	2. Science teacher	40
3. Research Scientist	23	3. Bank clerk	40
4. Bank clerk	20	4. Engineer	28
5. Graduate Scientist	15	5. Lawyer	23
6. Lawyer	14	6. Hospital nurse	20
7. Veterinary scientist	14	7. Teacher-not science	15
8. Science teacher	13	8. Clerk	13
9. Administrative Officer	12	9. Graduate scientist	12
10. Businessman	10	10. Stenographer	12
11. Dentist	10	11. Air Hostess	6
12. Architect	6		
13. Clerk	6		
14. Apothecary	6		
15. Technician	5		
16. Engine Driver (Railway)	5		
17. Motor Mechanic	4		
18. Pilot	4		

Spatial Polarization of Colombo-A Study of Regional Inequality

VIDYAMALI SAMARASINGHE

Spatial inequality, its processes and dynamics is a major concern of students of regional analysis and of regional planners. The perusal of the literature on the subject indicates that regional inequality persists in all countries, but that the degree of inequality is less in developed countries and more in developing countries.[1] A sharp disparity in regional levels of development would result in the "polarized" development of the favoured region in relation to all other regions of a given country. It is argued that complex phenomena centred on socio-economic and demographic activities are associated with the occurrence and persistence of such regional imbalances or polarization over a period of time. The main thrust of such an argument is centred on the premise that a historical imbalance will form the basis for a further intensification of the same pattern. i.e. that the concentration of economic activities in the favoured or the polarized region will show a decided tendency to increase over time relative to the less favoured regions. Within this framework the objectives of the present analysis are two fold; (1) Study the process of spatial polarization of the district of Colombo in the regional development of Sri Lanka since independence and; (2) Analyse the intensity of such polarization over time.

The beginning of the process which eventually led to the development of polarization of the Colombo district* may be traced back to the time when Sri Lanka came under the influence of Western powers – namely the Portuguese, the Dutch and the British. The Portuguese in the sixteenth century were responsible for shifting the capital from Kotte to the port city then known as Kolontota.[2] Their successors, the Dutch, were also a maritime power and the coastal location of Colombo was equally important

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1. See Williamson, J.G., (1965) Regional Inequality and the Process of National Development: A Description of Patterns, *Economic Development and Cultural Change*, 13, (4), Part II.

   UN Minsk Conference (1968), Industrial Location and Regional Development, *Proceedings of the Inter Regional Seminar* ID/50

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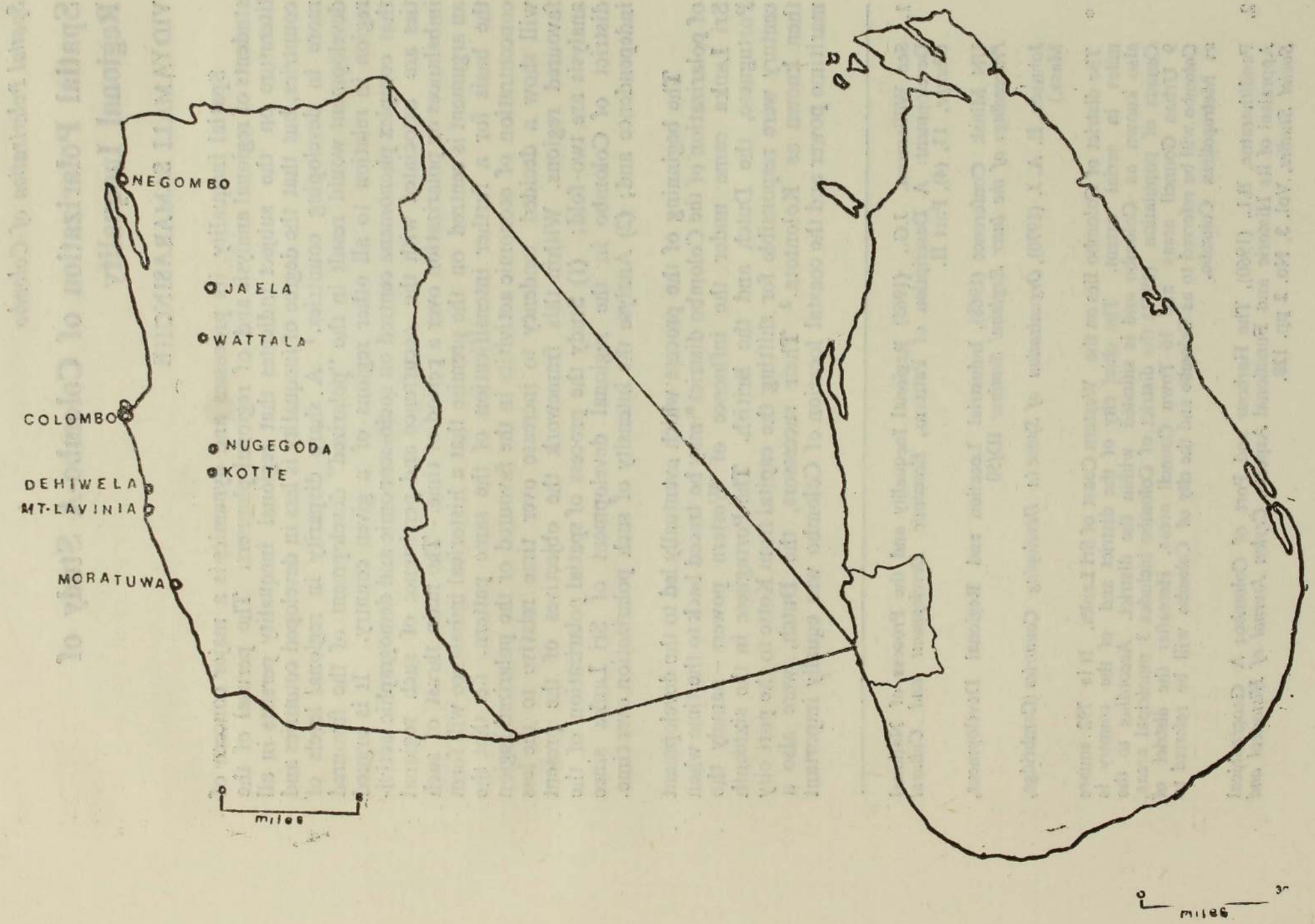
* The district of Colombo lies on the Western Coast of Sri Lanka. It is 792 square miles in aerial extent. The chief city of the district and of the country is also known as Colombo and is situated within the district. According to the Census of population (1971) the district of Colombo includes 3 municipal areas, 9 Urban Council areas and 16 Town Council areas. Hereafter the **district of Colombo** will be referred to as **Colombo** and the **city of Colombo** will be referred to as **Metropolitan Colombo.**

2. Panditharatne, B.L. (1960), The Harbour and Port of Colombo; A Geographical Appraisal of its Historic and Functional Aspects. *Ceylon Journal of Historical and Social Studies*, Vol. 3, No. 2 pp. 128.

MAP. I

Sri Lanka and the District of Colombo



to them. Neither the Portuguese nor the Dutch were able to bring the Kandyan Kingdom in the central highlands under their rule and consequently Colombo remained the centre of activity only in relation to the maritime provinces. However, the British who followed the Dutch to Sri Lanka were able to bring the entire country under their control and the island was thus integrated under a colonial administration. Colombo continued to function as the administrative capital of the unified country. The administrative functions in turn triggered a process which gradually enveloped a larger area than just the city. Subsequently the impact of colonial economic policy had a profound influence in shaping the pattern of spatial polarization of the district of Colombo. (See map No. 1).

The Portuguese and the Dutch who were mainly concerned with trade in cinnamon did not introduce any radical changes in the pattern of agriculture existing in Sri Lanka at the time. As Snodgrass makes it clear, it was the introduction of commercial agriculture in coffee plantations that made Sri Lanka a classic example of an export economy of a Colony.[3] Its success is also manifested by the very high proportion of crown land sold for the purpose over a comparatively short period.[4] Although the spread of a leaf disease brought to an end the "Coffee mania", tea and rubber were successfully introduced as new plantation crops. These merely took over and enlarged the structure that coffee had engendered, and in the years that followed, plantation agriculture continued to exert a decisive influence on the regional economic development of Sri Lanka.

In fact, the steady expansion of the plantation agriculture has had far reaching effects on the incidence of polarization of Colombo. The dependence of the produce on foreign markets necessitated the provision of efficient transportation to the port(s) and from the port(s) to the foreign markets. The emergence and development of Colombo as the major commercial area is attributable largely to the fact that Colombo with its geographical location on the western coast of the country was in a position to forge this essential link between the foreign "metropole" and the actual producer areas. Indeed, each new facility provided for the improvement of the plantation economy has had a cumulative effect on the development of Colombo, as the polarized region. The very nature of development of the plantation economy brought in its wake a "duality" to the economy. Duality of an economy may be explained as a situation where a modern dynamic sector exists side by side with a stagnant subsistence agricultural sector with the minimum of interaction between them. Spatial polarization of Colombo could well be explained as a regional manifestation of this dual economic structure, where the more favoured modern sector of the economy has had its greatest impact. It may be also surmised that in the case of Sri Lanka the nature of management of the commercial

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3. Snodgrass, D. (1966) *Ceylon: An Export Economy in Transition*, p. 17. (Economic Growth Centre, Yale University).

4. Gunawardena, E. (1963) *External Trade and the Economic Structure of Ceylon 1900—1955*, p. 27, Table 2.1 (Colombo).

plantations too was responsible for the polarization of Colombo. The plantations were mostly foreign owned and managed. The unskilled labour force was also of south Indian origin. Consequently, the interaction in the central plantation districts between the modern sector and the local population, if not totally absent, was very minimal. Furnival in tracing the colonial policy observed that "..... the Liberals (in England at the time) regarding freedom as the key to progress and welfare, released economic forces, which for the time furthered economic progress, but at the same time preyed on social welfare, setting bounds to progress, leading to stagnation."[5] The "economic forces released" created a capitalist who owned the plantations and the merchant who managed the commercial aspects. It was very much in relation to the commercial aspect of the plantation economy that Colombo achieved its centrality. Local population from Colombo was drawn in to provide various functions connected with the plantations.[6] Hence, in the development spectrum it was the population of Colombo, much more so than those in the tea/rubber producing areas which gained from the expanding plantation economy. Snodgrass observed that the other areas, not drawn into the plantation economy as producers or traders were left virtually untouched.[7] It was not the producer areas that developed as the polarized region. It was the area(s) that formed the trading and administrative links between the Colonial 'metropole' and the colony which displayed the incidence of spatial polarization.

The developing link between the plantation areas and Colombo is very clearly seen in the development of the transport network in Sri Lanka. The apex or the central node was firmly based in Colombo from where the important road and rail net-works spread. The mode of transport during the nineteenth century was improved from bullock cart to railways mainly in response to the powerful lobbying on the part of a strong section of the Planters' Association — thus linking by a more effective mode of transportation the main plantation districts of the hill country to Colombo on the western coast. It should be noted that although the transport network of both roads and railways displayed a marked bias towards plantation districts and Colombo, non-plantation areas like Anuradhapura and Jaffna in the North-Central and Northern provinces were also connected to Colombo, mainly in response to administrative and military demands. By 1946, on the eve of independence Sri Lanka had a fairly well developed network of roads and railways with Colombo as its central node. While the spatial link between mainly the plantation districts and Colombo was forged, the steadily increasing foreign trade, mainly the export of plantation produce, demanded a larger and safer port. Among three alternative locations of Trincomalee, Galle and Colombo, the last was decided upon. The locational advantages it already had as the admi-

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5. See Furnival, J. S. (1956), *Colonial Policy and Practice*. pp. 285—286 (N.Y.).

6. See Panditharatne, B.L. (1960) *Colombo: A study in Urban Geography*, unpublished Ph. D. dissertation, (London), p. 116.

7. Snodgrass, D. (1966), op. cit., p. 56.

nistrative capital of the colony, by virtue of its better accessibility to the plantation districts and due to the location of commercial institutions, were indeed strong. The development of the commercial aspect of Colombo was further evidenced by the operation of several banks by the end of the nineteenth century. Several commercial firms were established and a share market for tea also developed[8]. Indeed, by the end of the second world war such service activities had come to wield an important influence in the development pattern of Colombo. In relation to other areas in Sri Lanka, Colombo was certainly more commercialized and "urbanized". This type of spatial polarization under colonial rule is not restricted to Sri Lanka, as empirial evidence from other countries demonstrates.[9] However, there seems to be one difference between Sri Lanka and certain African countries such as Nigeria or Ghana. The export commodities in such countries were produced mostly by peasants.[10] In the case of plantation exports of Sri Lanka, the foreign participation covered not only capital investments and skilled management but also in many cases unskilled labour as well. Hence, the degree of duality was more pronounced in Sri Lanka, and consequently the incidence of initial spatial polarization sharper.

The polarization of a region manifests itself in the magnitude and quality of its population. Comparable regional data on population of Sri Lanka are available from about the third quarter of the nineteenth century. These have been used to guage the relative population of Colombo, its claims on primacy, its rate of urbanization, its occupational structure and the general trends in population movements. The district of Colombo claims 3.2 per cent of the total land area of Sri Lanka (See map 1) and its proportion of population has been over 19 per cent for every decennial since 1891. The density per square mile of 1758 recorded for Colombo in 1946 was considerably higher than the average for the country which stood at 268. Kandy district with 768 per square mile recorded the second highest density. In general, the increase in population of Colombo during the British colonial period has been higher than the average increase in population for the country. The only exception being between 1921 — 1931. It is possible that the worldwide depression at that time could have affected Colombo more than the other regions.

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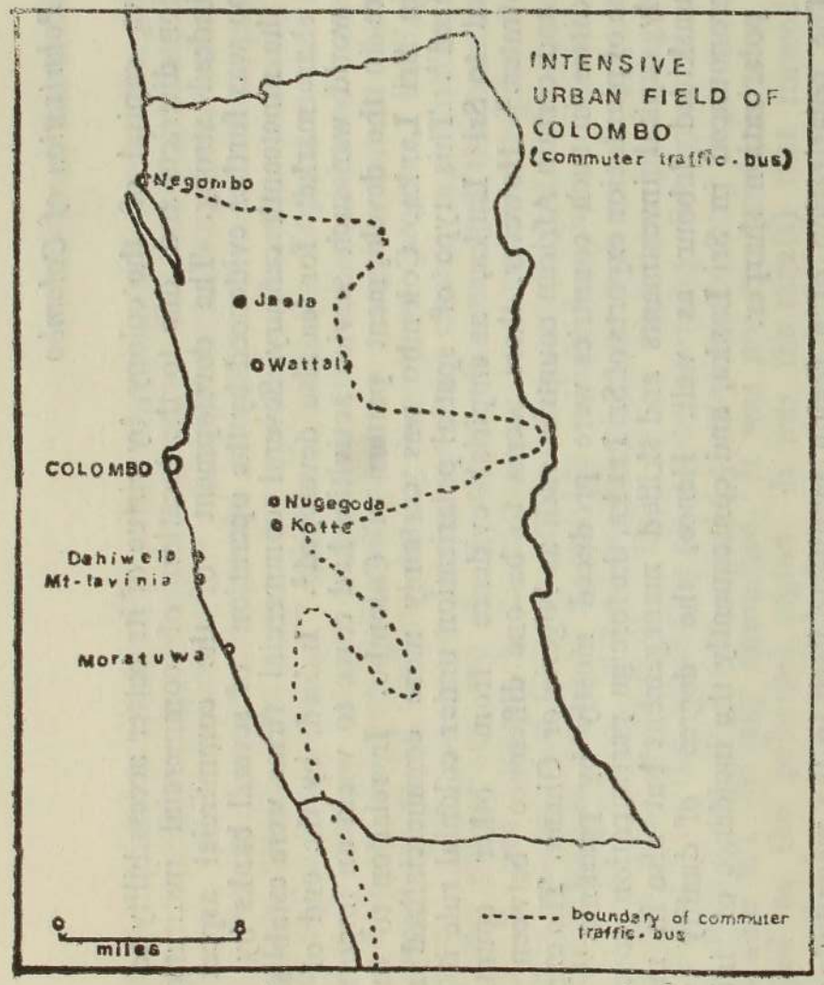
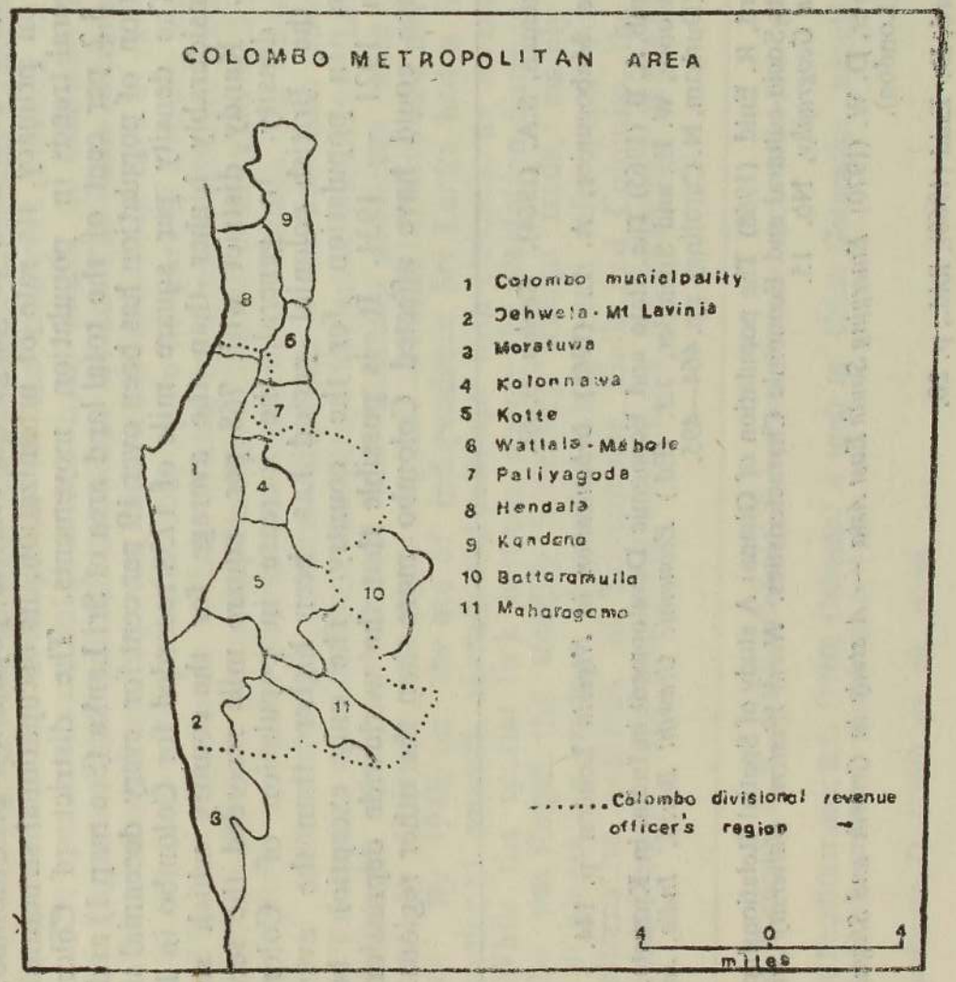
10. Ford, D. Enid (1968), ibid., p. 20.

MAP. II



Source — Panditharatne, 1960

MAP. III



Source — Selvaratnam and Jones, 1970 p. 207.

It will be appropriate to find out how justified it's claims to primacy were at the eve of independence. Jefferson in 1938 explained primacy by indicating that such a city region should stand out alone in a different order of magnitude in relation to population numbers.[11] His example was London which was seven times as large as the second largest city in the country. Berry in 1961 also adopted an index of primacy similar to that used by Jefferson.[12] However, Berry calculates the index of primacy by comparing the total population of the largest city region against the cumulative total of the next four large cities. So far in our analysis we have been studying the impact of, and on, the entire district of Colombo. Primacy is an indicator of urbanization. Hence, the city region of Colombo has to be isolated in order to assess its claims to primacy. However, a problem arises as to the accurate demarcation of the city region. The official municipal boundary of the city of Colombo would not give an accurate picture of the trends in Colombo's metropolitan population over time. At best this is only a local government administrative unit. No adjustments have been made to officially incorporate, the fast growing "spillover suburbs" to the official city units. Panditharatne in his pioneering work on the structure and development of the city of Colombo has clearly indicated that the actual metropolitan field of Colombo is far wider than the official city limits.[13] He explains that this "spillover" effect from the city to the suburbs is a result of commuter traffic and spread of educational and health services. This is confirmed by Selvaratnam and Jones who at a later date (1970) demonstrated that adjacent suburbs of the municipality were indeed commuter suburbs.[14] They suggested that the adjacent suburbs of the municipal area should also be included in order to arrive at a realistic approximation of the actual city region. A comparison of the commuter suburbs of Panditharatne and Selvaratnam and Jones indicates that they coincide to a great extent (maps ii and iii), making allowance for growth during the two time periods. Hence for the purpose of this study the metropolitan city demarcation adopted by Selvaratnam and Jones will be used, in order to assess the level of primacy of Colombo.[15]

The Jefferson primacy rate for metropolitan Colombo in 1946 indicates that it was 9.9 times as large as the second largest city — which was Jaffna. According to the Berry method it was three times as large. It is quite clear that towards the end of colonial rule in Sri Lanka metropolitan Colombo could be justifiably classified as a primate city. The

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11. Jefferson, M. (1939) Law of Primate City, *Geographical Review* XXIX, pp. 226—232.
12. Berry, B.J.L. (1961) A Statistical Analysis, In Ginsburg Norton (*ed*) *Atlas of Economic Development* Part 8 (Chicago).
13. Panditharatne (1960) op. cit., pp. 128—144;

    Panditharatne, B. L. (1961) A Geographical Description and Analysis of Ceylon Towns, *Ceylon Journal of Historical & Social Studies*, Vol. 4, No. 1, pp. 71—81;

    Panditharatne, B. L. (1961) The Functional Zones of the Colombo city, *University of Ceylon Review*, Vol. XIX, No. 2.
14. Selvaratnam, S. Jones, G. (1970) Urbanization in Ceylon, 1946—1963, *Modern Ceylon Studies*, Vol II, No. 1, pp. 200—202
15. Selvaratnam and Jones (1970), Ibid., Table No. 2 p. 207.

results of a cross-sectional analysis of primacy in several countries undertaken by Berry suggest that although Colombo has a primate city distribution, primacy was reached relatively sooner and that the primate city is relatively smaller.[16] The primate city development seen in Sri Lanka compares well with the pattern of development for certain South-East Asian countries.[17] Very much associated with the primacy is the incidence of "urbanization". In general, countries of South Asia are known to have relatively low levels of urbanization.[18] Sri Lanka is no exception. In 1901 the rate of urbanization in Sri Lanka was 11.8 per cent of the total population. By 1946 it had only increased to 15.3 per cent. However in 1946, metropolitan Colombo claimed 8.7 per cent from a total urbanized population of 15.3 per cent. Hence, although it is generally true to say that Sri Lanka is "predominantly a land of village dwellers",[19] a sizable proportion of what little urbanization it has was claimed by Colombo.

The colonial city being essentially a colonial intermediary — "a middleman between the metropolitan power and the colony"[20], it is to be expected that the occupational structure would display a strong bias towards the tertiary sector. The history of the development of the western city suggests that the growth of a large tertiary sector is synonymous with increased specialization and economic development. This theory is generally not applicable in the case of city growth in most Asian countries. It is precisely this that prompted Bert, F. Hoselitz to call some of them "parasitic cities".[21] Buchanan observes that in colonial countries those employed in the tertiary sector out numbered those in the secondary sector by 2 to 1, and in many parts of the Third World, especially in the newly independent countries of Africa and South East Asia the proportion exceeds 2.5 to 1.00.[22] In Sri Lanka the occupational structure of metropolitan Colombo during the British colonial era developed a strong bias towards the tertiary sector. The rate was 1.5 to 1 in favour of the tertiary sector.[23] Industrialization in Sri Lanka at this time was indeed negligible but the location of the few industries in existence showed a strong bias towards Colombo.

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16. Berry, B. J. L. (1961) op. cit.

17. See Mcgee, T. G. (1968), *South East Asian City* (London) Fryer, D. W. (1970), op. cit.

18. See Siddeque, A. A. (1971) Urbanization in Asia, *Land Economics* (Nov.) pp. 389—900.

19. Panditharatne, B.L. (1960) op. cit., p. 70.

20. Mcgee, T. G. (1968) op. cit.

21. Hoselitz Bert, F. (1955) Generative and Parasitic Cities, *Economic Development vnd Cultural Change*, Vol. 3, pp. 278—294.

22. Buchanan, K. (1971) Profiles of the Third World in Mountjoy Alan, B. (Ed.) *Developing the Under Developed Countries.* P. 30.

23. Computed from *Reports of the Census of Population*, 1946.

The intensity and magnitude of spatial polarization is also manifested by the volume and type of internal net migration flows. The net migration statistics computed for 1946 show that Colombo had the highest volume of internal net migration. Abeyratne and Jayawardena had computed an "index of attraction" which is the sum of the percentage of migrants from every other area coming into the receiving area divided by the total number of areas.[24] The index for Colombo was 19.9 per cent which was the highest for any district of Sri Lanka in 1946. An analysis of the flow of immigrants into Colombo reveals that, with the exception of Jaffna the larger flows of immigrants were from adjacent districts and the western coastal districts.[25] It is generally believed that the "pull" and "push" factors affecting migration flows are attributable to economic conditions, social aspirations and the mental perception of the advantages and disadvantages of migration among the migrants. Empirial studies on both Western and Asian countries on migration suggest that generally the volume of migration is in inverse proportion to distance between the district of origin and the district of destination. In Sri Lanka internal migration constitutes only a small proportion of the increase in population of a given region.[26] However, within the country, the degree of attraction of a region over others may be assessed by the relative volume and intensity of the migration flows

Thus the spatial polarization of Colombo on the eve of independence was very evident. The primate development of Colombo obviously gained strength during the British colonial rule, where a reorientation of the economy into an import-export structure is reflected by the development of Colombo as the major commercial centre. It was also the chief administrative capital. In the absence of any counter-acting force to trigger similar developments in any other areas of Sri Lanka, active commercialization manifestirg itself in various forms have contributed towards spatial polarization of socio-economic and demographic factors in Colombo. This is well illustrated by the type and form of diffusion of welfare and educational facilities as well. Free education was introduced in 1945 and the state made concerted efforts to provide all regions with good educational facilities. But the momentum of an earlier start has had its impact on the spread of better educational facilities in Colombo. The better private fee levying and assisted schools were in fact concentrated in urban areas.[27] Amorg them Colombo had the majority. The literacy rate of Colombo was higher than the average for the country (Literacy rate

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24. See Abeyratne, C.E.R. and Jayawardena, C.H.S. (1965) Internal Migration in Ceylon, *Ceylon Journal of Historical and Social Studies*, Vol. 8, Nos. 1 & 2, pp. 69 — 70.

25. Vamathevan, S. (1960) Internal Migration in Ceylon *Monograph No.* 13, *Departmen of Census and Statistics*, (Colombo).

26. See Vamathevan, S. (1965) Some aspects of Internal Migration in Ceylon, *Worldt Population Conference*, U. N., p. 588.

27. See *Ceylon Sessional Paper* XXIV, 1943. (CSP)

for Colombo in 1946 was 65.4 per cent, for Sri Lanka 57.8 per cent).[28] Thus in the educational sphere Colombo did enjoy a decided advantage. In health services, too Colombo was better provided for. Most of the specialized hospital facilities were located in Colombo. The district had a ratio slightly over five beds for every thousand population, the average for Sri Lanka was less than four per thousand in 1946. Thus it seems that the process of polarization of Colombo was established and strengthened during the colonial rule of the British. It will be of interest to analyse whether or not the same pattern has continued since independence.

Development being more often than not a continuous process, an event such as the achievement of independence cannot be expected to result in an immediate change of direction of a pattern developed over a comparatively longer period, given that there is no radical change in political or development ideology of the "new" nation. Hence, it is important to remember that in the case of Sri Lanka, the economic legacy of colonial rule was inherited and continued through independence and after. An analysis of spatial polarization or continuing spatial convergence indicates, by definition, an assessment of the relative performance of all regions of a given country. In general it seems that the economic structure developed during the colonial period was in fact carried into the early years of independence.[29] If we were to go by past experience in understanding the connection between the general economic structure and the spatial development pattern of Colombo, it seems logical to expect a continuation of the same basic pattern as in the pre-independence period. The boom conditions brought in by the Korean war for two of the export commodities (i.e. Rubber and Coconut) though shortlived, occurred during the early 1950s. The commercial sector located in Colombo obviously benefitted from this. Indeed the commercial aspect of the plantation economy continued to play a leading role in the polarized development of Colombo. In fact the increasing volume of imports and exports resulted in an increase in work load assigned to the port of Colombo. Although both Trincomalee and Galle were considered auxilliary ports, the bulk of all imports and exports were channelled through Colombo. However, by 1963 the tonnage Colombo handled had dropped slightly alhougth still ninety five per cent of all imports and more than eighty five per cent of all exports continued to be handled by Colombo.[30] Thus the commercial functions of Colombo continued to be

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28. See *Reports of the Census of population*, 1946.

29. See Kelegama, J. B. (1957) The Ceylon Economy in the War and Post-war Years, *Ceylon Economist*, (May) pp. 318—370.

Table I

30. **FREIGHT RATE TRAFFIC, 1953 (IN METRIC TONS)**

	Colombo Port	Other Ports
Imports	 2,956,000	80,000
Exports	 879,000	150,000

(*Source:* Principal Collector of Customs, 1954: *Administration Report, customs and shipping*, 1954).

significant. The development of commercial functions were closely linked with the development of the transport network within the country linking specifically the main producer areas with the port city. In substance, the interaction among regions brought about by the development of the roads and communication network, continued to function in the same fashion as during the pre-independence period. Colombo continued to function as the point of convergence for the bulk of rail traffic and also road traffic. It was the main receiving centre for export commodities and the distributing centre for import commodities. Apart from the freight traffic, the volume of passenger traffic undoubtedly contributed towards its process of polarization. Passenger traffic by rail for 1953 was about 18.4 million passengers and transport of passengers to and from Colombo constituted the major share.[31] Since an integrated bus transport system was not available during the early fifties, long distance travel by bus was limited. However, modality via bus transportation within the Colombo district and also between Colombo and certain selected centres as Kalutara (28 miles) Kandy (72 miles) Kurunegala (56 miles) and Galle (72 miles) were available.[32] The majority of these routes connected Colombo to each of these provincial centres whereas the connection between these towns with each other independent of Colombo was either totally absent, or at best very low[33]. The internal transport network displays no noticeable change during the subsequent period. However, large tracts of the North, North Central and Eastern provinces were provided with minor roads. The pattern in the Western province, particularly within the area of Colombo developed a more dense network. The major roads linking Colombo and the South and also Colombo and Kandy were widened. With the nationalization of bus transport in 1958, the drive towards integration was given a further boost. If the volume and frequency of haulage is directly proportional to the demand, then the fact that Colombo with its higher volume and frequency within its own region, and with outside regions would be the transport pivot of the country. Indeed when a new route is opened between Colombo and another region, or when frequencies are stepped up mobility is increased in both directions. However, since the outer regions were not so efficiently linked to other outer regions by way of transport and since all important routes seemed to converge on Colombo, polarization of

Table II

OCEAN FREIGHT OF CEYLON, 1963 (in 1000 metric tons)

		Imports	Exports
Colombo	....	2,792	526
Trincomalee	....	362	194
Galle	....	59	53

(*Source: Ceylon Sessional Paper XXIII*, 1967, pp. 61—65)

31. *Ceylon Sessional Paper XIII*, 1967; and Panditharatne, B. L. (1960) op cit. p. 213.

32. See Panditharatne, (1960) ibid.

33. See Panditharatne, (1960) Ibid, pp. 235—240.

it became all the more evident. Although an effort was made to spread public transport facilities especially bus transport to provincial areas,[34] the "head start" Colombo enjoyed in this sphere enabled the region to keep ahead and continue to function as the pivot of transport.

As discussed earlier during the colonial era the main emphasis on the part of the state was on plantation agriculture, and its impact on the polarization of Colombo was significant. An important question that may be asked is whether the link between the export crop producing areas and the commercial base of Colombo which was strengthened due to the duality of the economy was beginning to be eroded especially after independence by the implementation of a set of government policy measures directed towards drawing the hitherto neglected subsistence sector and the dry zone region into the main stream of the economy. These measures popularly known as the "dry zone colonization schemes" originated with the land ordinance of 1935. The development of the dry zone agriculture would bring in its wake certain implications in relation to the degree of polarity of Colombo. To begin with would Colombo as the chief port city be of less importance as a link area because production in the subsistence sector would be mainly for local consumption? Secondly, would the development of other regions act counter to any increase in the degree of polarization of Colombo? Since regional polarization demonstrates an increase in regional inequality levels, any successful effort to develop the peripheral regions would, almost by definition mean a lessening of that inequality. However, the relatively long term process of polarization would carry a momentum which could sustain the importance of the region vis-a-vis other regions. In the case of Colombo, the development of the dry zone in itself could lessen its degree of polarity. On the other hand it could continue to be polarized if the plantation economy which originally sustained it continued to be strong in the economic structure of the country. Moreover, the relatively better established tertiary sector would still wield an influence. Furthermore, the introduction of a new economic sector, for example manufacturing industries in Colombo, could also help counteract the effects of peripheral development on its polarity.

Although the plantation sector continued to play a leading role in the economy of the country, the vulnerability of the three plantation crops in relation to the world market situation was increasingly felt by the mid-fifties. In terms of employment and acreage only a slight increase was observed on all three major plantation crops.[35] By 1957 the government had launched on a programme of industrialization. By the 1960s a certain degree of achievement was experienced. Indeed its impact was most significant on Colombo. In general, the industrial policy in the early 1960s was geared towards reserving large scale enterprises as cement, sugar, fertilizer, etc. in the hands of the state and permit the private sector to undertake relatively small scale consumer industries. Private industries thus started were mostly

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34. See *Annual Report of the Ceylon Transport Board*, 1971.

35. See *Census of Agriculture*, 1962

import substitution type for which incentives such as protected market and tax concessions were given.[36] Superior port facilities in Colombo gave easy access to the importation of essential raw materials and machinary. Colombo commanded a wider pool of labour — both skilled and unskilled, credit institutions and also government officers from which "permits of approval" had to be obtained were also in Colombo. Furthermore, the biggest single consumer market was also found in the more populated region of Colombo. The aim of the government appears to have been to provide the private enterpreneurs with the incentives for industrial development and let them decide on the location. Since the advantages Colombo offered were many, the majority chose Colombo. Hence in the noteworthy absence of a regional policy on dispersion of private industry, more than 70 per cent of all such industrial units and about 80 per cent of employees in the private sector industries were in Colombo.[37] On the other hand a sizable proportion of large scale public sector industries were located away from Colombo. But in employment alone, nearly 50 per cent were still claimed by Colombo. This is mainly due to the fact that state industries located even in the provinces have the head offices in Colombo and consequently most of the administrative functions were concentrated in Colombo. Moreover, the type of industries thus dispersed do not seem to be "the propulsive type" which would stimulate the growth of other industries.[38] The industrial sector in Colombo was certainly not very large but significant enough to make an impact on the economic structure.

An analysis of the structure of gainfully employed in Colombo demonstrated the continuing importance of its tertiary or service sector in its development process. The ratio of tertiary employment to secondary employment had actually increased over the immediate post-independence period. In 1953, manufacturing of secondary employment accounted for 89,137 jobs in Colombo while the services sector claimed 415,524. The ratio was 4 to 1 in favour of the services sector.[39] Apart from the strong influence of the plantations sector on Colombo, even from the angle of administrative functions Colombo is likely to have experienced a decided advantage, with the transfer of all powers from the colonial ruler at independence. There would have arisen a further need for more government offices and consequently employment. The tertiary sector accounted for nearly 50 per cent of the total gainfully employed in Colombo, in 1953.[40] The average for the country was 25 per cent. The secondary sector claimed

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36. See Karunatilake, H.N.S., (1971) *Economic Development in Ceylon* (N.Y.).

37. See *Preliminary report of manufacturing in Sri Lanka* 1975/76.

38. See Samarasinghe, V. (1980) Impact of Government Policy on Regional Development in Sri Lanka *Ceylon Studies Seminar Conference on Post-War Economic Development* (mimeographed).

39. See *Reports of the Census of Population,* 1954.

40. Ibid.

10.1 per cent of the gainfully employed in Colombo in 1953.[41] This was the least important in terms of numerical value. By 1963 the impact of industrialization seemed to have been felt on Colombo. Manufacturing industry claimed 14.3 per cent of the gainfully employed, the average for the country was 8.1 per cent.[42] Although the tertiary sector continued to be predominant in the occupational structure of Colombo throughout the period of 1953—1971, the growing demands of the manufacturing sector would certainly have called for certain adjustments in the services itself. In fact the main increase in the tertiary sector recorded in employment in construction, commerce, banking, electricity, gas, transportation and communications would undoubtedly have strengthened the infra-structural facilities needed for industries. Indeed there also had been a relative decrease in personnel services such as domestic servants in the structure of tertiary employment of Colombo by 1971. The ratio of tertiary employment to secondary employment was 3.3 to 1 in 1963 and had decreased only very slightly by 1971 [43]. The share of manufacturing had increased but that of agriculture had decreased further by 1971.

The regional impact of policy decisions where a diffusion of egalitarian welfare facilities was effected, would undoubtedly contribute towards a lessening of regional inequality. Spread of free education, better health facilities, malaria control and use of the swabhasha medium of instruction in schools, establishment of more government schools were some of the measures thus undertaken. Indeed the so called backward areas did benefit as manifested in the lower death rates, higher birth rates and increase in literacy rates. However, the early start Colombo enjoyed for better and more facilities, continued unabated.

Table III

LITERACY RATES

1953		1971	
Colombo	Sri Lanka	Colombo	Sri Lanka
72.16	64.1	88.1	78.1

(*Source: Reports of the Census of Population, 1953, 1971*)

41. Ibid

42. See *Report of the Census of Population*, 1963.

43. See *Reports of the Census of Population*, 1963, 1971.

Table IV

EDUCATIONAL LEVELS — COLOMBO AND SRI LANKA

Pupil Teacher ratio 1971		*Proportion of GCE A/L Science students for every 1000 GCE A/L Students*	
Colombo	Sri Lanka	Colombo	Sri Lanka
26.1	26.93	500 (*Approx.*)	331

NUMBER OF SCHOOLS PER SQUARE MILE

Colombo	Sri Lanka
2.70	0.34 (*Approx.*)

(*Source: Computed from the report of the Ministry of Education, 1976*).

In terms of health facilities Colombo continued to enjoy better and also specialized facilities.[44]

Table V

BIRTHS, DEATHS AND HOSPITAL BEDS PER 1000 COLOMBO AND SRI LANKA.

Birth rates 1971		**Death rates 1971**		**Hospital beds per 1000**	
Colombo	Sri Lanka	Colombo	Sri Lanka	Colombo	Sri Lanka
27.9	32.7	7.0	7.5	5.4	3.2

(*Source: Report of the Census of Population* 1971.)

It seems apparent that despite attempts by the state to spread welfare facilities over the country, Colombo had remained ahead of the other regions in terms of health and education. The opening of 3 new universities within the areas of Colombo, (Vidyodaya, Vidyalankara, and Katubedde) obviously enhanced the importance of Colombo. Although with the wider spread of educational and health facilities the provincial regions benefitted, they had a tremendous amount of "catching up" to achieve in order to come on par with Colombo.

In terms of population numbers, density and degree of urbanization, Colombo was ahead of all other regions. Its density per square mile increased to 2114 persons in 1953, and 3306 persons in 1971.[45] However, its percentage increase of 88.1 per cent over the period 1946—1971 was less than the average for the country which stood at 90.6 per cent. The numerical increase of the population in Colombo has always been the highest. Although Anuradhapura and Polonnaruwa in

44. See *Administration Report, Director of Health,* 1954, 1967.

45. See *Reports of the Census of Populations,* 1953, 1971.

the dry zone recorded a lesser population than in Colombo, their rate of increase at 295.9 and 309.7 per cent respectively during the period 1946—1976 illustrate a higher growth rate.[46]

The Jefferson and Berry methods were used to measure the rate of primacy of Colombo. Metropolitan Colombo in 1953 recorded a primacy level of 9.1 according to the Jefferson method and 3.1 according to the Berry method. This indicates that primacy of Colombo had increased only slightly during the immediate post-independence era. The urban areas of Sri Lanka are demarcated by statutory order. Hence, there is a strong possibility that certain areas that ought to have been delimited as urban areas were not actually granted urban status by 1953. This is further explained by the fact that in the subsequent period, 1953—1963, where there was a "spurt" of granting urban status and among the five new urban areas which had a population of 20,000, four were suburbs of the city of Colombo. Consequently the Jefferson primacy index reached 10.9 and the Berry primacy index was 3.37 for Colombo in 1963. By 1971, Jefferson primacy index was 10.4 and Berry primacy index 3.6 for Colombo.* The sudden "spurt" in granting urban status during the period tends to distort the actual trends in urbanization and demonstrates a sudden increase of urban growth which in fact did not take place.[47] Colombo accounted for 43.8 per cent, 46.1 per cent and 55.2 per cent of the urban population of the country in 1953, 1963 and 1971 respectively.[48] The comparable figures for the country were 15.3 per cent, 19.1 per cent, and 22.4 per cent over the same period. Throughout the period 1946—1971 the district which had the largest proportion of its population resident in urban areas was Colombo. This made it quite distinct from other areas and also reflected the different structure of the area with its bias towards services, trade and industry.

One of the best indicators of regional inequality levels is the rate and nature of internal migration. It was clearly seen that on the eve of independence Colombo attracted the largest number of net-migrants. Indeed, even in the subsequent period it continued to be a net migration region. The index of attraction was 22.36 per cent in 1953. Colombo was leading all other regions in terms of absolute number of migrants. However, its rate of 1.16 was less than the figure recorded for certain dry zone regions over the same period (1946—1953).[49]

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46. See *ESCAP — Monograph No.* 4 (1976)

* The method of the demarcation of metropolitan Colombo used by Selvaratnam and Jones (1972) was used with 1971 data. See Table 55 in *ESCAP Monograph No. 4* (1976).

47. See Ibid

48. See *Reports of the Census of Population*, 1963, 1971.

49. See Vamathevan, S. (1960) op. cit.

The hitherto malaria ridden, sparsely populated areas in the dry zone were released for habitation with the successful efforts to control the disease. This coincided with the land development and colonization schemes of the eastern and north central provinces. The government policy of selecting a proportion of colonists from certain densely populated wet zone districts changed the pattern of migration to a certain extent. An alternative area, other than Colombo was now available to the would-be-migrants. For instance Kalutara, adjacent to Colombo pushed 45.94 per cent of its migrants to Colombo in 1946. In 1953, although the total number of outmigrants from Kalutara had increased, Colombo's share had fallen to 40.30 per cent. On the other hand the migrant flow from Kalutara to Batticaloa in the eastern province (distance 223 miles) had increased from 0.32 per cent in 1946 to 3.97 per cent in 1953, and the flow to Anuradhapura in the North Central Province from Kalutara had increased from 1.47 per cent to 7.60 per cent over the same period.[50] Likewise, Matara, Galle and Kegalle — outmigrant areas of 1953 —show remarkable increase in the volume of flow to the dry zone districts, although Colombo continues to be a receiving centre. It is reasonable to argue that the deliberate policy measures adopted by the state in relation to the development of subsistence agriculture via colonizaton schemes and the diffusion of better health facilities have resulted in a change of the pattern of migration. It should be re-emphasized that migration did not account for more than 20 per cent of the increase in regional population. However, a comparatively high stream flowing into the new colonization schemes demonstrates the attraction of a new economic venture on a new area. Another feature in relation to the flow of migrants to Colombo is illustrated by a relatively high flow of migrants from the plantation districts of Badulla, Kandy, Ratnapura and Kegalle. All four districts had changed from net-migrant districts in 1946 to outmigrant districts by 1953.[51]

The internal migration pattern over the period 1953—1971 strongly suggest the continuing attraction of Colombo, although the proportion of its net-migrants as a share of the total shift had decreased. The largest numerical shift was claimed by Colombo.* In 1963 Colombo received a total net-migration flow of 22,972 people, while Polonnaruwa received 15,694 and Anuradhapura 21,500.[52] When we take into account the comparative sizes of the districts (Colombo 3.2 per cent of the land area, Polonnaruwa 5.3 per cent, Anuradhapura 11.1 per cent) and also the prevailing density per square mile (Colombo 2207, Polonnaruwa 114, Anuradhapura 294, in 1963) the continuing attraction of Colombo for would-be-migrants seems remarkable, despite its relative size and density. Its rate of migration was 1.16 per cent whereas the North Central Province recorded a rate of + 16.58 per cent. Its index of attraction was 23.32 per cent during the period 1953—1963. This illustrates the point that although Colombo

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50. See Vamathevan, S. (1960) op. cit.

* Includes Gampaha

51. Ibid.

52. Computed from *Reports of Census of Population*, 1963.

continues to attract migrants the emerging new areas of the dry zone were also wielding a strong pull. The period between 1963—1977 also records a net migration to Colombo of 39,237 people which is the largest number attracted to a single region, but the migration rate to Polonnaruwa at 11.31 was over seven times the rate of Colombo at 1.6%. The index of attraction was 21.61 for Colombo during 1963—1971.[53] The pattern of internal migration clearly demonstrates that although Colombo remains an attractive region for population convergence the attraction of other areas also have been significant enough to draw the migrants.

It seems that the rate of increase of population and also migration have shown a relative decrease over time in relation to Colombo. Polarization of Colombo, which gathered momentum in response to the needs and demands of an import-export oriented colonial economy seems to have been consolidated during the immediate post-independence period. However a general change in this spatial order is observed since the mid 1950s. Although the export economy remained the mainstay, the attempts at diversification with peasant agriculture and manufacturing industries has had an impact on the development of the spatial order. On the one hand the diffusion of egalitarian welfare policies and dry zone colonization schemes contributed towards reducing the spatial disparity with its bias towards Colombo, on the other hand the newly created manufacturing sector with its location mainly in Colombo had, if not enhanced the development level had helped at least maintain a lead in development for Colombo. Its early polarization was a function of trade and commerce. Its industrial base later has helped not so much in sharpening the degree of polarization further, but in the face of massive investment channelled towards the hitherto neglected regions, in introducing a new venture to Colombo in order to counter balance the impact of peripheral development.

Lack of data after 1971 at the time of doing this study did not warrant the continuation of the present analysis. But certain observations may be made in the light of certain policy decisions of the 1970s. The Divisional Development Councils — popularly known as the DDCs — reflect a new way of thinking in the sphere of planning where emphasis is laid on the regional point of view in development strategy. The aim was to effect development planning at the grass root level. The basic assumption of the DDC policy was that the rural sector would continue to be the mainstay of employment. Although later studies suggest that this was not a qualified success[54] it established the principle that the state is expected to strive towards the achievements of regional balance. By implication it emphasises development away from Colombo. The accelerated Mahaweli programme, the integrated rural development programme

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53. Computed from *Reports of Census of Populations*, 1963 and 1971. See—ESCAP Monograph No. 4 (1976).

54. See Karunatilake, H. N. S. (1978) An Evaluation of the Development programme under Divisional Development Councils in Sri Lanka, *Sri Lanka Journal of Social Sciences*, Vol. I, No. 1.

(IRDP) and the Export Promotion Zone (EPZ) of the Greater Colombo Economic Commission (GCEC) form the new strategies of economic development after 1977. It is clear that the Mahaweli programme is aimed at stimulating further growth in the paddy sector based on the dry zone, and the IRDP is a package programme planned for selected districts tkaing into consideration the totality of the district problems and its resource potential. The IRDP Programmes being implemented at the moment are based on Kurunegala, Vauniya, Mannar and Hambantota. It is indeed quite clear that these two strategies are geared towards spreading development to areas outside of Colombo. Would this bring about an effective de-polarization of Colombo and a reduction of spatial disparity? Or would the industrialization programme of the GCEC and the impact of the new growth industry — namely tourism, still help Colombo to maintain its present level of development vis-a-viz the other regions?

Tourism, which has been classified as the fastest growing industry in Sri Lanka, no doubt should have significant spatial implications. This is basically a tertiary service industry. Evidence suggests that Colombo has the largest number of hotels although the attraction of other areas of scenic beauty and of historic interest are also significant.[55] Among facilities for accommodation, car hire firms, tourist agencies, etc. Colombo as a single region leads all other regions. Hence, it seems that as far as Colombo is concerned tourism would strengthen the already strong service sector, but its spread effects are certainly not exclusive to Colombo.

Colombo, may register a significant impact by way of the new industrial policy centered on the GCEC. The GCEC was established by act of parliament in 1978, and it spells out the specific location of a foreign investment zone in Katunayake, 20 miles to the north of the city of Colombo. Hitherto specific locations in relation to private industries were not stipulated by the state. Indeed a concerted effort was made by the state to disperse public sector industries away from Colombo to the

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55 **Table VI**

ACCOMMODATION CAPACITY (Rooms) IN GRADED HOTELS, GUEST HOUSES AND REST HOUSES.

	1974	% of Total	1979	% of Total
Colombo City	841	50.6	1332	42.2
Greater Colombo	629		1046	
Other regions	1425		3321	
Total	2895		5599	

Source: Statistical Pocket Book of Sri Lanka 1980 p. 137

provinces.[56] The new industrial venture under the auspices of the GCEC encourages private industrial investment in a specific location close to Colombo. The Katunayake zone is earmarked largely for export oriented foreign investments but outside this zone within the Greater Colombo area, medium and small scale industries were to be encouraged. An important question to be posed is whether the Export Promotion Zone and the Greater Colombo Economic Commission will foster inter - regional links by way of growth industries and will these be able to attract more migrants to the area. Although it is early to pass judgement conclusively, evidence at the moment does not indicate that any "growth" or "propulsive' industries have been located within the area. 54 per cent of all industries within the EPZ are garment industries and they cannot be classified as "growth" industries which are those types of manufacturing activities that lead to the establishment of other industries which should feed them and be fed by them. Such industries as chemicals, electrical, metal goods, etc. are not yet located within the area. However the importance of the EPZ as an avenue of direct employment is significant. Also the demand for services created by the EPZ would also lead to more employment. If the industrial zone manages to get a firm foothold its attraction for would-be-migrants would surely rise. The analysis of population increase in colonization schemes of the dry zone indicates that the actual colonists were only a small fraction of the migrant flow. More went in response to demand for trade and services. Likewise the success of the GCEC industrial programme may be assessed at a future date by the volume and type of population movement it encourages. The fact that there is a deliberate government policy of encouraging private industrial location in the greater Colombo zone could have a tremendous impact on the pattern of future development of Colombo.

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56 Rasanayagam, Y. (1980) Large Scale Public Sector Industries in the Industrial Development of Sri Lanka. *Ceylon Studies Seminar Conference as post-war Economic Development in Sri Lanka* (Mimeographed)

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Vol. 4 No. 2 December 1981

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