ECONOMIC REVIEW

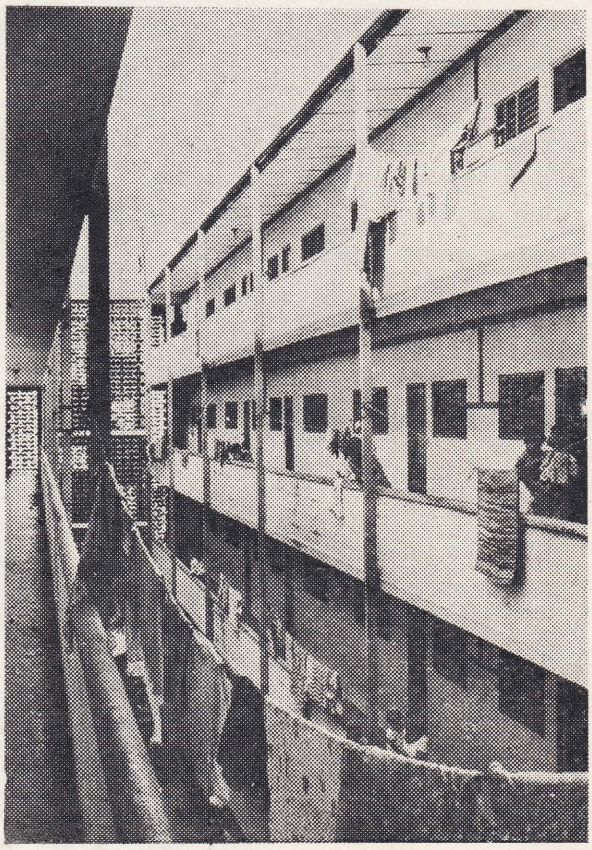
APRIL 1980

COLOMBO URBAN DEVELOPMENT

HOUSING IN COLOMBO

The problems of housing in overcrowded cities manifest themselves clearly in the slums and shanties that keep cropping up all over. Urban renewal schemes often miss the point that the poor can only afford to live in such conditions as these two pictures at the top illustrate.

The problem of urban housing has grown more acute in Colombo in recent years in the atmosphere of an intensified economic activity and heavy pressures on the existing housing stock in the city. The problem here, as in most Third World cities, manifests itself in its more acute form in the emergence of squatter settlements or slums in the urban centres. For many planners the established solution to this problem has been the construction of medium-rise blocks of flats even though governments in the West are demolishing their medium-rise flats of the 1960s and replacing them with simpler and more familiar forms of housing. Experience in Colombo too has revealed (as illustrated in the picture at bottom right) that the people of Sri Lanka have not quite adapted themselves to life off the ground. Public areas are full of litter, standards of upkeep are low and lack of privacy and no landscaping is evident in most of these high-rise schemes. Children, on the other hand, seem far more content with a garden to romp in and playing in the shade of trees as seen in this poorly constructed dwelling in Kolonnawa (pictured at bottom left). The search for a climatically and culturally appropriate, and at the same time economically feasible, mode of housing goes on in Colombo with various housing projects taking shape.



ECONOMIC REVIEW

Volume 6 Number 1 April 1980

Published by the People's Bank,
Research Department,
Head Office,
Sir Chittampalam A. Gardiner Mawatha,
Colombo 2
Sri Lanka.

CONTENTS

COLUMNS

FEATURES

SPECIAL REPORT

THE ECONOMIC REVIEW is intended to promote knowledge of and interest in the economy and economic development process by a many sided presentation of views & reportage, facts and debate.

THE ECONOMIC REVIEW is a community service project of the People's Bank. Its contents, however, are the result of editorial considerations only and do not necessarily reflect Bank policies or the official viewpoint. Signed feature articles also are the personal views of the authors and do not represent the institutions to which they are attached. Similar contributions as well as comments and viewpoints are welcome.

THE ECONOMIC REVIEW is published monthly and is available both on subscription and on direct sale.

NEXT ISSUE

- Energy—the current crisis, future trends, problem areas and possible solutions
- Sri Lanka's trade pattern—the impact of liberalisation
- The interest rate changes
- The fertiliser distribution problem—will Regional Warehouse Complexes provide a solution

COVER ARTIST

P. G. Munidasa a long standing commercial artist, at present art Director of a leading advertising agency, has won several awards for his work.

Diary of Events

February

1 The President, who toured parts of Colombo City on January 31, accompanied by the Prime Minister and Mayor of Colombo, inspected some of Colombo's ancient buildings and city development projects, and directed that historic buildings in Colombo should not be destroyed in the course of modernising the city, stated a press report.

An agreement was signed in Colombo for setting up a Sri Lanka Sheraton 500-room hotel at a cost of $55 million, according to an announcement in the press. The estimated cost per room is expected to be around $100,000 or Rs. 1.5 million.

Iran raised its crude oil prices by $2.50 a barrel, bringing the base contract price of Iran's light crude oil to a record $31 a barrel, reported the London *Financial Times*

World sugar prices climbed to their highest levels as the speculative upsurge continued with the London daily raw sugar price reaching $221 a tonne

6 Shippers' prices for sheet rubber in Colombo reached a record high of Rs 12.26½ per kg for RSS No 1. The earlier highest price of Rs. 12.17 per kg. was recorded in January.

Registration fees for private cars were raised sharply to S$1,000 (US$463) and company car fees to S$5,000. Previously the fee for both was S$15, according to the *Far Eastern Economic Review*.

9 The Government had appointed a seven-member committee to examine and report on the proposed Urea Project which is almost reaching completion at Sapugaskande. The cost estimated is about Rs. 2,700 million but the commercial viability of the project is now being questioned, according to press reports.

10 The 133 nation conference of the UN Industrial Development Organisation (UNIDO) ended in New Delhi after three weeks of deliberations with rich and poor countries failing to agree on a programme to speed up industrialisation in developing countries.

11 Sheet rubber in the Colombo market reached a new record when shippers' prices went up to Rs. 13.58½ per kilo for RSS No. 1.

12 The price of rubber, copper and other commodities soared to record levels in international markets as investors in search of safe assets turned their attention from gold, stated a *Reuter* report from London.

13 Rubber prices in Colombo reached a new high for the second time in three days with RSS No. 1 fetching Rs.14.59 per kilo.

The Government decided that the Tobacco Industries Corporation should be the Sri Lankan investor in the Taj Mahal Hotel project under which a five star hotel will be built facing Galle Face Green.

The Government approved a proposal from the Ministry of Rural Industrial Development to implement a large scale Swiss-aided project to increase milk and meat production, costing Rs. 25 million with Swiss aid to the value of $920,000.

Teachers in 366 estate schools will be taken into the cadre of teachers in the Education Department and become government servants in terms of a cabinet decision.

18 For the first time in eight years, India is projecting negative growth for its economy. The decline, estimated to be between 3 percent and 4 percent during the fiscal year that will end in March, is a major setback. Government officials had hoped to achieve average yearly increases of 4.7 percent, stated a *Newsweek* report.

19 A two-week inter-governmental meeting to study a global action programme to help the world's 30 poorest countries ended in Geneva without agreement on the size of aid targets, states a report in the Madras *Hindu*.

20 Government approved the authority sought by the Finance Minister to increase the authorised limit on the issue of Treasury Bills to Rs. 100,000 million.

The World Food Program will provide food assistance worth Rs. 12.7 million equivalent to US$820,500 to low income groups engaged in the construction of 12,000 low cost housing units of the Government's Aided Self-Help Housing Program, according to an agreement signed in Colombo.

21 Prices of cigarettes, arrack, beer and imported liquor were increased—cigarettes up by 4 cents and a bottle of arrack (all varieties) up by Rs. 4 per bottle and the price increase on a bottle of beer is about Rs. 1.50.

The Bangkok-based Dusit Thani Corp. has agreed to builda $25 million 500-roomed hotel in China a company spokesman stated in Bangkok, according to a *Asian Wall Street Journal* report.

22 The International Monetary Fund will grant Turkey 330 million dollars worth of credit in a major western effort to rescue the key NATO ally from economic collapse, monetary officials announced, according to a *Reuter* report from Washington.

The Government increased the price of bread and flour—a pound of bread upto Rs. 2.05 from Rs.1.35, and a pound of flour up to Rs. 2.37 from Rs. 1.50, and imported rice up to Rs. 4.34 a measure from Rs. 4.10.

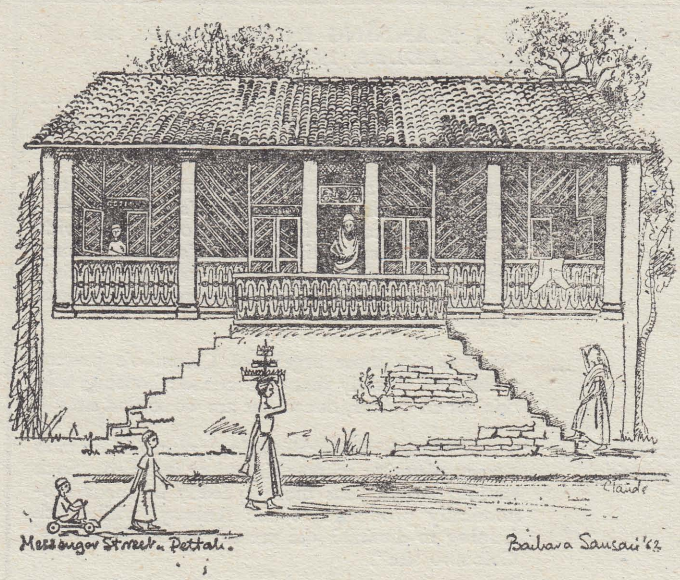
23 India has signed contracts for import of 15.5 million tonnes of crude oil as against the total import requirement of 16.5 million tonnes for 1980, according to the Bombay journal *Commerce*.

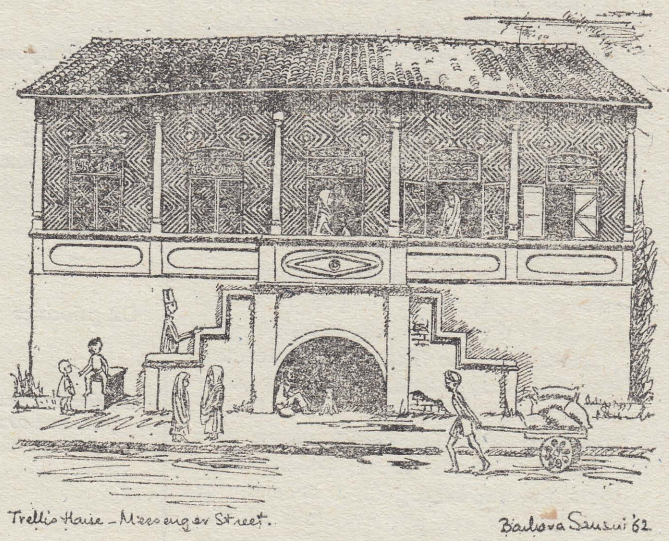
24 Algeria has increased its oil price by $4.21 to $34.31 a barrel in line with Nigeria, which only lifted its price to this level on Saturday February 22, both rises came into effect today. Libya, which has been charging $34.72, is now likely to raise its price further, and it is inevitable that North Sea oil prices will move well above $30 a barrel, stated a London *Financial Times* report.

26 The Minister of Trade and Shipping announced that all barriers on food imports by the private sector will be lifted and they will be free to import from any source.

27 Bus fares will go up by 40 percent and train fares by 36.3 percent from March 1, the Minister of Transport announced.

29 Four major tourist hotel complexes with a total of about 1,800 rooms are to be constructed in Colombo within the next three years, according to a Ministry of State official. The foreign collaborators in these projects are expected to be international hotel chain entrepreneurs—Hilton, Sheraton, Taj and Dusit Thani.





"There is a great deal of architecture both small and monumental, and also entire streets of old Colombo which cannot be dismissed as decrepit and accidental but must be recognised" (see pages 18–19). "These terraced houses in Messenger Street, Pettah, Colombo, raised high on Dutch platforms or steps, have beautiful trellis work, sometimes in complicated patterns. They were modest houses, but nevertheless a great deal of care went into the trellis designs. From the road, which runs alongside the houses, one can see nothing behind the trellises. Yet from within every passing person can be scrutinised. But another important quality of the screens is that they are like walls that breathe, letting through the air and breeze, while at the same time cutting out the glare of the sun, to provide cool useful living verandas behind". *Viharas and Verandas, Ceylon. Barbara Sansoni.*

COLOMBO URBAN DEVELOPMENT

THE PLANS

Earlier Plans for Colombo

Master Plans are not new to Colombo. In the 1920s, in 1940 and in 1950, eminent town planners were invited to Colombo to prepare plans for the city. Two of these—Sir Patrick Geddes and Sir Patrick Abercrombie—enjoyed international repute and not only reflected, but to a large extent determined, the most up-to-date thinking in the field.

The 'Geddes Plan' emphasised the 'garden city' concept with which he was closely associated in the early days of the new town movement in Britain. His plan particularly stressed the importance of the harbour and related facilities and recommended that these should largely determine the layout of the city. In many ways his work was far ahead of its time—and his writing contains much of relevance to modern planners (see box on page 4). His proposals, however, were not implemented to any great extent, largely due to lack of finance.

In 1940, Clifford Holliday prepared another plan for the city. His proposals, of which the majority were not put into effect, included :

* A green belt around the city,
* The development of a satellite town to induce out migration,
* The shifting of Fort and Maradana rail termini outside city limits,
* The construction of a new bridge across the Kelani Ganga,
* The realignment of major roads,
* Functional zoning of the city for different land uses.

In 1950, the 'Abercrombie Plan' extended the area of concern to the metropolitan region as a whole, containing over a million people. In some ways his plan resembled that of ten years before, recommending, among other things :

* The resettlement of about 100,000 people who could not be accommodated within the city,
* The development of three new satellite towns at Ragama, Ratmalana, and Homagama, each containing 35,000 people,
* The decentralisation of certain industries and Government offices to the satellite towns,
* Land-use zoning for the city.

Since 1961 the Abercrombie Plan has remained legally in force in virtually all areas of the designated region. But it was never translated into detailed and specific proposals, and has had little effect on the nature and extent of Colombo's growth.

A number of reasons may explain why these plans remained on the shelf—lack of finance, lack of political will, lack of an institutional mechanism for implementing them, rapidly changing situations which rendered the plans outdated, etc. These problems are not peculiar to Colombo. Cities all over the world have suffered the same experience (see box on page 5). Nor was Sir Patrick Abercrombie's last attempt at preparing a Plan for the city.

The Colombo Master Plan

The Colombo Master Plan also dates back many years. The idea was

The assistance of Desmond McNeil in preparing this Special Report is acknowledged.

originally conceived in the mid 1960s, by the then Head of the Town and Country Planning Department, who became the Director of the Master Plan Bureau. Support for the idea grew, although there was also resistance from a number of officials who were unwilling to emphasise the development of Colombo at the possible expense of the rural areas.

In the early 1970s the possibility of obtaining United Nations support was mooted, and in 1974 negotiations reached the point of detailed discussions of the Terms of Reference for the study. After lengthy deliberations, agreement was finally reached, and financing under the United Nations Development Programme was arranged. A special unit was to be set up, attached to the Town and Country Planning Department, assisted by U.N. advisers. The preparation of the Plan was to be undertaken by a consortium of consultants. The three consultancy firms selected formed an unusual combination—one Czechoslovakian, one British and one Russian.

The U.N. Project Manager arrived in early 1975, followed shortly after by the team leader of the consultants. This, after a lengthy gestation period, marked the official beginning of the project. The task of the consultants was to undertake analysis at national, regional and metropolitan level, present alternative 'strategies' for development, and hence draw up a Master Plan for the future of Colombo.

Liaison with Government was to be maintained through a Steering Committee and the Central Planning Council. The latter met only once during the lifetime of the project, but the former met regularly at such times as decisions were required. At that time the Ministry of Housing was separate from that of Local Government (to which the team was attached) and formal co-ordination with this agency was minimal.

On the basis of their work the consultants proposed four alternative strategies for Colombo :

(i) Allow a continuing high concentration of people and non-agricultural activities in the Western Province,
(ii) Establish one alternative 'growth pole',
(iii) Establish a series of 'growth centres',
(iv) Establish a 'growth corridor'.

QUOTES FROM "TOWN PLANNING IN COLOMBO" BY PATRICK GEDDES, 1921

On the purpose of town planning	...	"The task of town planning may thus here be viewed as that of the development of a magnificent estate, albeit one temporarily embarrassed..."
On financial embarrassment	...	"Yet this (the Great Drainage Scheme) has been the main source of the Corporation's financial embarrassment, and it is impossible not to agree with the view expressed in the Chairman's Memorandum, that under the financial circumstances of the city, both then and now, this great undertaking has been overpressed".
On priorities	...	"What is the most urgent of Colombo's present problems? Plainly that of increased housing, and this for all classes, but where are we to find sites"?
On the link between transport and town planning	...	".....at all such stations within easy reach of Colombo a town planning scheme should be initiated. Such stations would thus more speedily be made economically profitable to the Railway, while each helping to diminish the pressure upon the limited Colombo site".
On demolition	...	"I can hardly recall any great industrial, maritime or commercial city, which has as yet adequately succeeded in providing housing, and which has not in too many quarters at least, done its working people more harm than good by demolishing ahead of reconstruction".

The first of these (in a sense, the 'do-nothing' alternative) was favoured by the consultants, and agreed to by the Government. The next stage of the study was to work out the implications of this decision for the metropolitan area.

The consultants remained, on and off, for three years. When they left, in early 1978, they did not submit a Plan to the Government. Although a certain amount of the information and analysis remained in Colombo, even as late as the beginning of 1980, no final document had been presented. Meanwhile, the situation had changed dramatically. Firstly, there was the change of Government in July 1977. This resulted in a policy shift from long-term planning to an emphasis on projects, and a new attitude to urban development, as described below. Secondly, it was proposed that a Free Trade Zone be set up and a new capital be built at Kotte. These had never been envisaged by the planners and formed no part of their proposals. Nevertheless, between July 1977 and their departure the consultants were not required to make any more changes in their work, beyond preparing a few 'action projects' such as shanty upgrading in Kolonnawa, on which implementation could be quickly started, and making recommendations as to the best site for the Free Trade Zone.

While the Government awaited the production of the Master Plan a major institutional change occurred—the formation of the Urban Development Authority.

INSTITUTIONS

The Urban Development Authority

The Urban Development Authority could be interpreted as a manifestation of the philosophy of the new Government, since it was set up to promote the economic use of urban land by undertaking, on a self-financing basis, the development of strategically located and valuable land in Colombo and its environs.

The Urban Development Authority Law No. 41 of 1978 was certified on September 6, 1978, just over one year after the election of the new Government. The powers and functions of the Authority are considerable, ranging widely over the fields of planning and development. This spectrum of functions reflects both its origins (in the Colombo Master Plan Bureau) and its intended new direction (the development of the city on a self-financing basis). Thus, on the one hand, the UDA could be regarded

simply as an extension of the Master Plan Bureau. On the other hand it could be viewed as the embodiment of a radically different approach to urban development, in which the state takes an entrepreneurial role, undertaking commercially profitable ventures—whether to swell the public purse, or to subsidise other activities in the city.

The initial capital of the Authority was set at Rs. 20 million, a very small sum in relation to the scale of the developments that were expected to take place, but a reflection of the financial autonomy which it was intended to maintain. This figure was later raised to Rs. 100 million.

Throughout 1978 and 1979 the personnel of the UDA remained virtually the same as those of the former Master Plan Bureau. Indeed, remarkably few changes had occurred even in the earlier years. Apart from the replacement of the U.N. Project Manager in 1977, the senior staff remained from the inception of the project in 1975. There were additions, both in local as well as foreign staff, and as some of these were in senior positions, a gradual change did begin to come about. The UDA also continued to occupy the same building as the Master Plan Bureau had, although major extensions and improvements were finally made, and the growing staff necessitated expansion into other accommodation.

For both these very down-to earth reasons the UDA remained in many ways simply an extension of the Colombo Master Plan Bureau, both in terms of how others saw it, and perhaps also in terms of its own view of its nature and function. But this

DEVELOPMENT OF PLANNING

Patrick Wakely

In the nineteen fifties city designers were producing **Master Plans** which now would be branded as utopian and impertinent. The sixties may be characterised by **Development Plans** that made proposals for the ordering of urban growth on the basis of more analytical appraisals of the social and economic structures of cities. And the last decade has seen the introduction of pragmatic **Integrated Action Programmes** within the framework of loosely guiding **Structure Plans**.

Urban master plans, in the tradition of Ebenezer Howard and his disciples and interpreters, concerned themselves with the "quality of life" in cities which was seen to depend almost exclusively upon good urban design and generous environmental standards. Compromise was unacceptable to the visionaries of this movement whose labours therefore largely remained on paper. The Corbusier/Sert plan for Bogota recommended the demolition of virtually the whole city in order to replace it with a system of interlinking open spaces and pedestrian walls. The MARS plan for London was more a diagram summarising the prevalent theories of city design than a plan for the renewal of a war damaged metropolis.

However, in the construction of new cities, the master planners were afforded a chance to realise their visions and it is in such monuments as Chandigarh and Brazilia that the full intentions of the master plan movement can best be appraised.

Immediately apparent is the planners' disregard for all but the most generalised economic and social activities of the citizens and of their cultural and political heritage. In reaction to this, planners belatedly turned to the writing and practice of Patrick Geddes, the founder of what here is called Development Planning. Geddes, a biologist by training, introduced two fundamental concepts to urban planning, that of the city as an organism composed of a complex system of interacting "nuclei", "cells" and "circulation flows" in a delicate ecological balance with its regional hinterland, and stemming from this, the concept of "conservative surgery" in urban renewal, as opposed to "wholesale slaughter" as a prelude to re-construction. But the most influential, and most misinterpreted of Geddes principles was that summed up by his dictum "survey before plan".

The need to review and understand past and existing conditions and their trends to change cannot be challenged as a starting point for planning. However, development plans have become typified by extremely elaborate surveys that often have but little relevance to the recommendations that they precede. The information that in many cases has taken three or four years or more to gather, analyse, and project, has frequently become obsolete before it can be used, thereby seriously limiting the credibility of the plan. And the contradiction between the essentially static nature of Development Plans, and the context of rapidly and radically changing urban conditions that have characterised the last two decades, has also been a major reason for their habitual shelving. But the principal failure of Development Plans has been due to the lack of political will or courage needed to make them statutory, or the lack of administrative ability to enforce such legislation.

Nevertheless, over this period nearly every rapidly growing city in the world has been subjected to a development planning study, and in several cases a succession of such studies, in an attempt to control rampant spontaneous use (misuse) of urban land. In India for instance, of some ninety cities that have had planning studies, only nine have become statutory and can be considered in any way effective.—(Delhi, Bombay, Madras, Bangalore, Hyderabad, Poona, Visakhapatnam, Calicut and Calcutta). In numerous other countries—not only of the Third World—lengthy and expensive exercises have been carried out, often by local or foreign consultants, to produce Master Plans to little or no purpose. The apparent futility of these exercises led to a reappraisal of plans and planning. One alternative approach termed Action Planning adopts two basic principles :—

(a) The role of the public sector should be promotional and should anticipate, lead to steer private sector investments rather than follow and attempt to control private sector initiative. Therefore,

(b) planning must be seen as a continuous process of initiating programmes of action within the framework of a consistent policy or structure plan that is flexible enough to be able to respond to changing economic situations and changing social and political demands of society, but at the same time, is well enough defined to ensure uninterrupted continuity of action.

These principles imply two radical changes in urban planning practice and administration. Firstly, the replacement of the one-off static survey of the Development Plan by the establishment of a continuously updated data bank and monitoring system. This is essential in order to keep planners informed not only of "external" changes in the urban structure due to changing rates of growth, social demands and economic conditions, but aso of "internal" changes brought about by planning activity itself.

The second implication is that planning can no longer remain aloof from urban management and administration as it has done in the past. This may well prove to be the Achilles heel of the new planning movement as in many cities of the world it will demand a radical restructuring of local government administration and procedures, a redefinition of roles and responsibilities and a new form of corporate decision-making. And such fundamental changes do not come easily to urban bureaucracies!

situation was very different from that envisaged by the Government, according to which the UDA would play an aggressive, entreprenuerial role—building a new Colombo in collaboration with the private sector.

In theory there is a possible compromise position between these two extremes whereby the UDA is responsible for initiating and guiding the implementation of the Master Plan. But this proved difficult for a number of reasons : firstly, the Master Plan had still not been presented, even as late as the beginning of 1980. (Drafts had been prepared and discussed, and negotiations with the United Nations had continued, but no document submitted to the Government). Secondly, the plan was not in any case based on the new proposals for Kotte—despite the magnitude of the project. Thirdly, it was questionable whether the UDA as an institution was capable of fulfiling the role of driving force, given the nature of its expertise and experience, and in view of the numerous other agencies also involved. These may be now described in some detail.

Other Public Sector Agencies

One of the major problems in urban development is invariably that of coordinating the activities of the numerous agencies involved. The recent situation in Colombo is, however, remarkable in two aspects : firstly, that immediately following the creation of the Urban Development Authority (UDA) three other agencies with rather similar areas of concern were either set up or revitalised; secondly, that a large number of the agencies concerned come under the Ministry of Local Government, Housing and Construction—which includes not only those evident in its title but also, for example, the National Water Supply and Drainage Board and the Common Amenities Board.

One of the new agencies formed in early 1979, is the National Housing Development Authority (NHDA). Its powers and functions include, for example :

> 'To formulate schemes to establish housing development projects in order to alleviate the housing shortage' and

THE NEW URBAN SOCIOLOGY

Kingsley Garbett

By the sixties, dissatisfaction within sociology with the structural-functional paradigm which had been dominant for over thirty years had become widespread. A number of sociologists, particularly and significantly, in continental Europe turned to historical materialism as providing an alternative paradigm. Through the sixties, particularly in France, a reappraisal of Marx's classical analysis of capitalism was carried out in the light of more recent theoretical and empirical research (see Althusser, 1969). Whilst this reappraisal of historical materialism was of a general nature (and had an impact within anthropology and history as well as in sociology) it had as one of its most significant effects the emergence of what has become known as "the new urban sociology". The new urban sociology is essentially macro in its perspective and structural in its mode of analysis.

Those urban sociologists influenced by this new movement began to consider the critical question as to how exactly their field of study was to be defined in both empirical and theoretical terms (see Castells, 1976). How is a city to be defined? What are the boundaries of a city? Are urban processes in some clearly definable sense different from other social processes? Whilst these issues have by no means been finally resolved, much work in France and elsewhere, stimulated by the tumultuous political events of May, 1968 and drawing upon a revised and invigorated historical materialism, is proceeding on the assumption that there is a uniqueness about the city in western, industrial, capitalist societies. Basically, the city is seen as being central to capitalism. Processes within the city are viewed as being directed largely to two ends: one, the reduction of the circulation time of capital (to which Marx himself gave some attention), the other, the production and reproduction of labour power. In terms of the first, much research has been devoted to the location of industries and their related commercial and financial institutions and, in terms of the second, attention has been concentrated on modes of collective consumption: the means by which, in the production and reproduction of labour power resources for housing, education, health, transport, leisure and so forth, are differentially distributed. Finally, to test the general argument comparatively, work is now beginning on an analysis of cities in socialist states.

A central assumption of the new urban sociology is that resources allocated for collective consumption reflect the class structure of the society. It is argued that capitalists are either unwilling or unable to provide the considerable resources necessary for collective consumption, hence, the state has to intervene to provide these resources. From this perspective, the state is seen as acting in terms of the long-run interests of the dominant class, although its actions may be screened by various justifying ideologies which serve to mask its essential purposes. Thus, class, which for so long among sociologists of the U.S.A. and of the U.K. has languished as an analytical concept, is brought once more to the centre of analysis (see Giddens, 1973) and the city is viewed as an arena in which class interests work themselves out in dialectical fashion in terms of the competition for space and for the control of the resources available for collective consumption.

Whilst a great deal of attention is given to the differential allocation of resources within the new urban sociology this is not simply to answer the question "Who owns what"; but to answer the more critical questions as to who controls resources and how this control is produced and reproduced within a particular social formation. Detailed attention is given, therefore, to the role of planners, bureaucrats and politicians in the production and reproduction of the ideological superstructure which both justifies and masks the control of space and the control of the means of collective consumption by the dominant class.

Change within urban structures is seen as arising from the contradictions within urban processes themselves or from the operation of disparate modes of production, some of which are viewed as historical residues. These contradictions are manifested in urban social movements in which groups seek to wrest control of the means of collective consumption from the dominant class. Controversy still surrounds much of this analysis. Castells, for example, argues that only social movements which ultimately produce radical change are worthy of attention while others (see Pickvance, 1976) argue that to adopt such a rigid theoretical stance leads to the neglect of much of significance in urban life.

Whilst it is much too early to make any final judgement on the new urban sociology it is clear that it has given a considerable impetus to urban research in capitalist societies. Its application to urban processes in Third World countries is still in its infancy but holds out considerable promise.

References

Althusser, Louis, *For Marx*, London, 1969.

Castells, M., "*Is there an Urban Sociology*" in Pickvance, C. (ed.), 1976.

Giddens, A., *The Class Structure of the Advanced Societies*, London, 1973.

Pickvance, C. (ed.), *Urban Sociology: Critical Essays*, London, 1976.

RESIDENTIAL DISTRIBUTION: PATTERNS AND SOCIAL STRATIFICATION

Abhaya Attanayake

Figure 1 summarises the conclusions of statistical analysis carried out on data from the 1971 census.* The technique used was 'cluster analysis' using 70 socio-economic, demographic and housing variables. This revealed a definite social stratification and residential distribution pattern within the city which may be broadly summarized (see Figure 1).

Wards in Group I depict an area occupied mainly by lower income groups together with a significant proportion of squatter settlements. It has a predominantly Sinhala population and records the highest dependency ratios and low percentage of high rents and large housing units. Relative to other groups, this region has the lowest percentage of houses with brick/stone/kabook/cement outer walls. It also has the largest percentage of housing units with no toilet facilities and a fairly significaht proportion of housing units using water from wells.

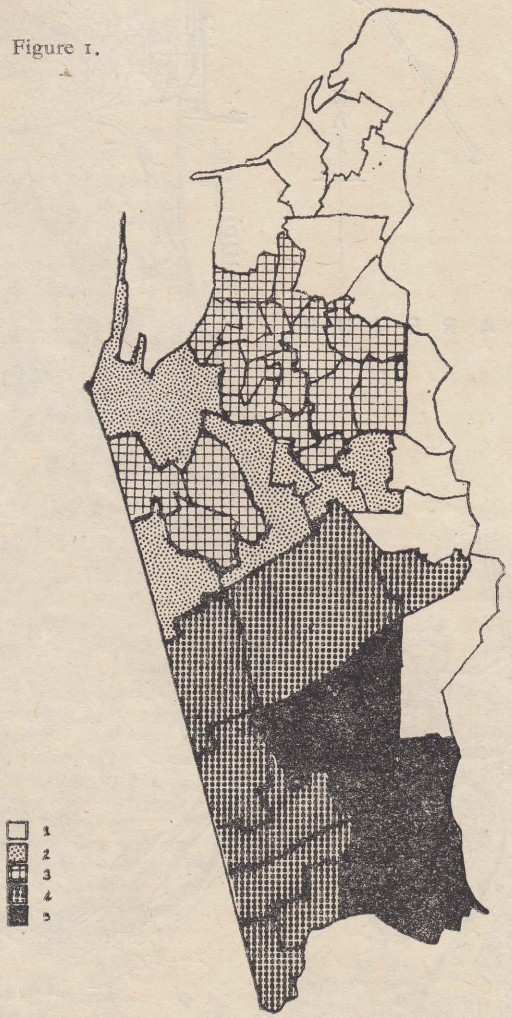
Group II shows an area with smaller but well-established housing units paying low rents. This area also records high dependency ratios.

Group III is also a low rent area with a high dependency ratio and non-Sinhala majority. These wards also exemplify an area of smaller housing units with fewer rooms and smaller floor spaces.

Group IV is an area of larger and more permanent housing and higher rents. The dependency ratio shows low values and few housing units lacking toilet and water facilities.

Finally, Group V is a predominantly Sinhala area. Considering housing characteristics, this is a mixed area with a significant percentage of housing units with higher rents, larger floor spaces and more habitable rooms, but there are also equally significant numbers of housing units with no toilet facilities and housing units which use water from wells.

Figure 1.



* *These conclusions are extracted from a paper by Dr. Abhaya Attanayake of the Department of Geography of Sri Jayawardenapura Campus, based on research carried out by the author on a post-graduate assignment at Wisconsin University, U.S.A.*

'To cause the clearance of slum and shanty areas and the redevelopment of such areas'.

These may be compared with similar ones for the UDA :

'To formulate the clearance of slum and shanty areas and to undertake the development of such areas'.

In addition, both have powers of compulsory acquisition under the Land Acquisition Act (at July 1977 value in the case of the NHDA, and at the value at the time of gazetting of the area concerned in the case of the UDA).

Since the NHDA has set out to construct some 36,000 houses and flats in the period 1978 to 1983, mostly in Colombo, this agency is not only a major user of land but also of crucial importance in determining the nature and extent of Colombo's development.

The second new agency is the Greater Colombo Economic Commission (GCEC) set up in 1978. This was to have authority over the Free Trade Zone in an area which extended south of the international airport to the northern boundary of the city of Colombo. Thus the northern suburbs of the Colombo Urban area became part of the GCEC area.

The third agency of importance is the Colombo Municipal Council (and to a lesser extent the other neighbouring local authorities such as Kotte and Dehiwala–Mt. Lavinia). This institution is not new, but until the local government elections of mid–1979 was administered by the Special Commissioner, answerable to the Ministry of Local Government, Housing and Construction. Following the elections, however, the Mayor and councillors became responsible for decision making. This did not result in any major shift in overall policy from that of the government, but did introduce a new dimension in the form of a further agency intimately concerned with Colombo's development, led by members directly answerable to their electorate.

In this situation the Prime Minister, as Minister of Local Government,

SOME MAJOR PROJECTS IN COLOMBO

Housing and Construction, is uniquely placed to assume a dominant role. Not only does the UDA come under his Ministry, but also many of the other agencies concerned. The Colombo Municipal Council is closely linked, and his position as first member for the Colombo Central constituency is also crucial. It is therefore, not remarkable that the initiative for determining the nature of Colombo's development is largely with him and not with formal planners.

In institutional terms, the limitations of the UDA and the power of political decisions have thus combined to bring about a situation in which Colombo's development is not proceeding on the basis of a Master Plan, but rather as a series of projects.

It may be appropriate here to describe, in brief, the main projects now proposed or underway in Colombo.

THE PROJECTS

Sri Jayawardenapura—Kotte

The Kotte project funded entirely by local capital envisages :

* Erection of a new Parliament building on a 13-acre island in the centre of a 300-acre artificial lake formed by the dredging of a large marshy area,
* Reclamation of approximately 800 acres of new land around the lake to accommodate other official buildings and infrastructural installations,
* Construction of a comprehensive drainage scheme to dispose of flood waters in the former marshy area,
* Construction of approach and access roads for the complex, and the construction of a retaining wall around the central island of Duwa.

Detailed planning for the project, in which the President is taking a personal interest, began in 1978. Reclamation work began in 1979 and work on this and other aspects is proceeding on a very tight schedule, with the target date of completion of the Parliament building set at

February 4th, Independence Day, 1982. Foreign contractors have been called in to undertake much of the reclamation work, the construction of the new Parliament designed by Geoffrey Bawa—and the two office complexes (each of 500,000 sq. ft.) to be built at Palewatte and Battaramulla.

Echelon Square

This site in the centre of Fort is presently occupied by Army and Police barracks, by playing fields and a number of small government buildings such as the Quarantine Department. It is to be cleared, serviced and redeveloped. The estimated cost of infrastructure including car parking is Rs. 267 million (according to the 1980 Budget Speech). Seven plots are to be disposed of on 99-year leases. One site has already been handed over to the Bank of Ceylon for the construction of a 30 storeyed office building, for which the UDA has received a premium payment of Rs. 25 million. The Commercial Bank and the Hilton Hotel are in varying stages of negotiation, and discussions with other interested parties are in progress. The new buildings will be multi-storey in the range of 15 to 25 floors providing a total of about 2 million square feet of space. It has been reported that the lease of the 32 acre block of land will bring in Rs. 375 million or approximately Rs. 12 million per acre.

Lotus Centre (Chalmers Granaries)

This site, between Fort and Pettah is bounded by Lotus Road on the west, Front Street on the east, Main street on the north and Olcott Mawatha on the south. It is presently occupied mainly by Chalmers Granaries and is divided by the canal into two unequal portions. The warehouses and other buildings are to be demolished and a new national square and medium-rise complex are to be built. The complex is planned to include commercial and office space, a hotel and a theatre, with a total floor area of about 2 million square feet. Negotiations concerning the site are in progress.

Pettah Market Complex

The complex has been divided into three stages.

(a) The former St. John's Fish Market was demolished in July 1975 and the occupants allocated stalls in the transit market at the Gas Works Street. It was decided to rebuild at the old site. Buildings along St. John's and adjoining lanes were demolished and construction is now in progress to provide over 68,000 sq. ft. of space for about 400 mixed uses including wholesale and retail sale of fish. The earliet estimated cost was Rs. 60 million and the proposed rent per sq. ft. Rs. 25/- per month, but subsequent cost increases have tripled these figures.

(b) The Old Town Hall, hitherto used as a market is being restored as a building of historic and cultural value. The Edinburgh Market, of unique design, is also being restored and will be used in keeping with the original objectives.

(c) A new multi-storeyed supermarket will be built at Kachcheri Road so as to reduce the present congestion. It will occupy the existing site plus the open area extending to Saunders Place. It will provide 1,300 stalls and 200 external spaces for markets. The cost at 1979 prices is estimated at Rs. 138 million, and the average rent to be charged is proposed at Rs. 21 per sq. ft. per month.

Other Markets

Plans are also underway to develop or modify a number of markets e.g. at Kotahena, Nagalagam Street, Bambalapitiya, Borella and Dematagoda. Some are partly pre-financed by the future users under a new arrangement whereby interested parties were invited to pay in an advance for space in the new building (e.g. at Borella) where 340 spaces were booked for a financed commitment of Rs. 5.8 million.

New Housing Projects

A number of housing projects in Colombo are planned by the National Development Authority. Some are now underway such as those at Stace Road, St. Joseph's Street, Sanchiarachchi Garden, Wolfendhal Street and Mihindu Mawatha. In many cases the developments include shops as well as flats. At certain sites (e.g. Duplication Road opposite Liberty Cinema and in Bambalapitiya) where it is proposed to build luxury housing units, potential occupants have been invited to give a down-payment to the NHDA in advance of construction but have not yet been informed as to the final terms of payment. Tentative costs supplied to applicants range from Rs. 800,000 to Rs. 900,000 per unit for the two schemes—off Duplication Road, Kollupitiya.

LANDS VALUES

In recent years, and particularly during 1978, land values increased dramatically, generally by a factor of five, and in some cases by a factor of ten, as the figures below indicate:

Area	*April 1979 Price (Rs. '000) per perch*	*Previous Peak (Rs. '000) per perch*
Fort	150–300	100
Pettah	200–500	125
Cinnamon Gardens ...	50–60	5–6
Hulftsdorp	20	4
Dehiwela	7	1

Source: *Chief Government Valuer, quoted in the Ceylon Daily News of April* 1979

In global terms, these price rises are enormous. The total value of residential and commercial land in the city of Colombo increased by approximately Rs. 30,000 million roughly equal to the total national income in 1977.

In specific terms also they are massive. At these prices the cost of land generally accounts for more than half the total cost of a new house. In Cinnamon Gardens a six-perch plot (the minimum area allowed for building) costs over Rs. 300,000 and even in the suburbs of Dehiwela the plot would cost over Rs. 40,000.

According to the Chief Valuer, the previous peak occurred in 1969, after which the market contracted. The factors responsible for the present buoyancy are the 1978 budget proposals and optimism in private business. The activities of the newly constituted Urban Development Authority, the National Housing Development Authority, the GCEC and the development of the Parlamentary complex at Kotte are likely to cause further pressure on land both in the city and the suburbs.

Slum and Shanty Upgrading

Pilot projects are nearing completion to upgrade slums in Steuart Street, and shanties in Kolonnawa by providing better infrastructure and assistance in structural improvements to a total cost of about Rs. 2 million. Toilet blocks and improved water supplies are being provided in a number of tenement gardens, and other projects are underway in Kirillapone, Abdul Hameed Street and elsewhere largely with foreign assistance. Some include health, community development or employment generating activities, but total expenditure on this programme is small. (See box on page 15)

Peliyagoda and Other Industrial Areas

Reclamation work has started in Peliyagoda to make available 500 acres of marsh to enable warehousing and industries to be shifted from more central sites. Hokandara/Homagama and Ratmalana are also to be developed to accommodate industries.

Other Developments

Apart from the above projects, there are a number of individual developments with varying degrees of public sector involvement. The old Employment Exchange Site in the Fort has been leased by the UDA to private development and the Registrar General's Office will be replaced by a high-rise building for the People's Bank.

EMPLOYMENT AND INCOME GENERATION IN COLOMBO

Rex A. Casinader

In recent years there hasbeena growing. recognition of the importance of employment in planning urban development. One extreme view is that the only important factor in urban planning is employment and income generation, and when this is taken care of and successfully implemented the rise in incomes will automatically lead to improved housing. demand for more civic amenities, etc, However, in most Third World countries a balance is struck between the physical aspects of planning and the socio-economic facets, employment and income generation being the major component in the latter. In Colombo the UDA appears to favour this type of approach. The recognition of social aspects is seen in the slum and shanty upgrading projects. Yet, even in these projects the major thrust seems to be on housing and infrastructural aspects though employment and income generation aspects are not totally ignored.

A brief review of the nature of employment and unemployment in Colombo reveals some interesting features. Table 1 shows the structure of employment. The contrast between urban areas and the island as a whole is marked, and typical. But there is remarkably little difference between Colombo and the urban areas of Sri Lanka as a whole.

Table 2 shows the level of unemployment and of educational attainment. Here it is significant that the level of unemployment in Colombo is higher than in urban areas as a whole. However, it appears that the level of educational attainment (those with GCE O/L) is lower in Colombo, than in urban areas nationally, in the case of those in employment; and much less in the case of those unemployed. The National problem of the educated unemployed would appear to be markedly less severe in Colombo.

Table 3 shows the distribution of income. Urban areas generally have higher income levels than the country as a whole, although the differential is far less than in most Third World countries. What is significant is that Colombo appears to have slightly lower incomes than urban areas generally. This fact is, of course, related to the higher level of unemployment in Colombo. The educational attainment levels of the unemployed also suggest that the lower income groups may have less access to education. A recent study by H. L. Hemachandra, of the People's Bank, Research Department, interestingly points out that the access of the bottom income groups of the city to a socially and economically preferable science education, is less than even the Rural sector. All these factors together suggest that the poor of Colombo constitute one of the most underprivileged sections of the country.

There is generally a close correlation within a city, between unemployment and low income, on the one hand, and inadequate housing and services on the other. In Third World cities, this often coincides with the dichotomy between what is termed a 'formal sector' and the 'informal sector' employment. Generally those in the latter category inhabit housing that is classified as slums or shanties. Colombo does not have this typical pattern, for many slum and shanty dwellers have formal sector occupations and as a recent Marga Study on "The Informal Sector in the City of Colombo" indicates many participants, particularly in higher income brackets of the Informal sector activity, have residence in middle class neighbourhoods. Yet broadly in Colombo too there is the tendency for the unemployed and low income groups to be concentrated in the slums and shanties.

It would be useful at this point to identify a little more closely what we refer to as slums and shanties in the Colombo context. Slums are located mainly in the ring round Fort and the Western part of Pettah. This ring stretches from Slave Island via Maradana, parts of Pettah, Hultsdorp, Ginthupitiya, and large sections of Kotahena and Grandpass. They are either old tenement or old residential buildings converted into slum houses. The former built in the late 19th and early 20th century to accommodate the influx of the new labour force into the city catering to the warehousing labour needs of the plantation industry. Tenement units

Table 1 **EMPLOYMENT BY INDUSTRIAL CATEGORY** 1971

(% of Total Employment)

	All Island	*Urban*	*Colombo**
Agriculture, Fishing etc.	50.4	9.3	8.3
Mining and Quarrying	0.4	0.2	0.1
Manufacturing	9.6	12.4	13.5
Utilities	0.3	0.6	0.6
Construction	3.1	3.6	3.1
Trade and Commerce	9.5	20.7	18.7
Transport, Storage and Communication	4.3	8.7	12.2
Finance, Insurance etc.	0.7	1.9	2.1
Services	13.5	28.2	29.2
Not adequately defined	8.2	14.3	17.2
	100.0	100.0	100.0

Source: 1971 *Census*

* Urban Areas of Colombo District

In addition, and in quantitative terms perhaps of more significance, there are innumerable private sector developments—housing, hotels, shops offices etc. as a journey along the Galle Road, for example, will immediately demonstrate. Or approvals of private building plans by the Colombo Municipality at bottom of page 12, which indicates an upsurge of activity with an almost 100 percent increase in 1979.

All these projects will make heavy demands on the resources available—land, construction capacity, finance etc.—and their viability will be dependent upon the level of demand. These may now be assessed.

CONSTRAINTS TO DEVELOPMENT

Land

Land is in many ways the key to urban development. The phenomenon of land shortage, manifested in congestion or as high land values, is often cited as the major problem to be solved by the urban planner, and many people consider this applies also to Colombo.

Yet by comparison with other Asian cities, Colombo has a low density of population. This is largely due to an even rural-urban balance in Sri Lanka which prevented the mass migration to the city from the rural areas on a scale seen in many other third world countries. The factors

Table 2 **Employment and Unemployment by Educational Attainment—1973**

	All Island	*Urban*	*Colombo City*
Unemployed	24.0	30.3	38.8
% with GCE O/L—of those employed	8.8	18.4	12.2
of those unemployed	25.0	23.7	6.6

Source; *Central Bank Consumer Finance Survey* 1973.

usually consist of a single bed room, a verandah with common water taps and latrine facilities. They are usually built in rows and form clusters in what is commonly referred as to "Watte" or gardens. According to the UDA there are nearly 700 such tenement gardens in the city with 17,000 units accommodating about 22,500 families. The old residential houses converted into slum houses are similar to the slums in social character though their physical conditions could be even more adverse. They are the once palatial mansions of the elites of Colombo who having moved out to more salubrious neighbourhoods and suburbs, let their old residences be converted to ghettoes. Shanties on the other hand are clusters of small improvised structures constructed illegally on state or private land usually with no regular water, sanitary or electric supply. The nature of most vacant lots where they have been built makes them subject to frequent flooding. In Colombo city there are 16,000 shanties spread over 750 locations mostly in the Northern and Eastern parts of the city and they provide shelter for nearly 20,000 families.

Although Colombo largely follows the pattern of other cities in that the problems of unemployment and low incomes tend to be concentrated in these areas, the residents of slums and shanties are frequently of many years standing, and their employment status is often more secure than in other Third World capitals. This is borne out by the Marga Study on the informal sector which, on the basis of the definition adopted for the purpose of its survey, found that of a total of 178,594 employed in Colombo City only 24,000 were engaged in the informal sector. One specific factor that has led to the Sri Lanka experience being different is that tenements initially catered to the new labour that was being drawn into the city in the late 19th and early 20th century for work in the plantation warehouses. A good many of them had continued in this occupation in the succeeding generation and this contributed to a fair degree of formal sector employment among the slum dwellers.

The UDA policy on slums and shanty upgrading in the city takes cognizance of the informal sector as a "valuable current and potential asset for development, with considerable labour absorption capacity". They believe that "resources allocated for their benefit will beget both increased productivity for the informal sector and assist in solving Sri Lanka's unemployment problem". While it is not certain to what extent this policy decision has percolated down in actual planning and implementation, one observes that in the context of Sri Lanka's lively political system and political economy, the informal sector participants through the mechanisms of the political parties as well as the wider web of our political system can do much to ensure that urban development does not dislodge them from their informal sector activity in the city. In fact at times they have even by such mechanisms ensured the growth of their activities as the city developed. However, in the light of the Marga Study finding that entry into the informal sector is not easy due to clearly defined structures and powers which jealously guard access to employment and entry into income earning opportunities within their particular trade or activity, one has to be cautious in describing as positive the informal sector participants' capacity and mechanisms to influence urban development. Urban planning then can become as in some Third World countries, a smoke screen of privileged groups to ensure a desired pattern and distribution of resources in the city.

This possibility should urge the urban planners to look more closely at some of the social consequences of their projects in the city. For example, in the central market planning they should look into the effects that the new market, both in terms of its physical and social character, would have on the lower echelons of their informal sector activity, viz. on the trolley men and basket or "Watti" carriers. Similarly the shifting of warehouses to Peliyagoda may have some social consequences. The warehouse labour now resident in the slums of Colombo North would find their work places outside the city. This could have positive results in some of them shifting out of the city to better housing, but it might be a traumatic experience to some of them, especially where other members of the family are active in informal sector activities in the city.

Table 3 **Distribution of Income 1973 Percentage of Total Income Receivers**

Income Group (2 Months Income)	*All Island*	*Urban*	*Colombo*
Rs. 0–250	34	19	21
Rs. 250–500	34	30	38
Rs. 500–1000	75	38	31
Rs. 1000*	6	14	10
	100	100	100

Source; *Central Bank Consumer Finance Survey* 1973

that have led to the rural urban balance has been identified in a recent Marga Study as being due to the lack of marked rural-urban income disparities; colonization schemes that syphoned a good part of the excess population from the more densely populated Wet Zone to the Dry Zone; the small size of the country and the fair network of roads which permitted short term migration and prevented, at the same time, permanent rural urban migration; and the comparatively limited industrial expansion in Sri Lanka which was not confined strictly to Colombo. In Colombo city, overall densities are about 70 persons per acre and residential densities average about 140 per acre. This is less than half of central Calcutta, and far less than Singapore or Hong Kong. These low densities are largely the result of inefficient land use and could easily be raised. (There was a remarkable regulation, in force until recently, that private house plots should be a *minimum* of 15 perches, equivalent to only about 6–8 dwellings per acre). The problem of land in Colombo is not one of congestion, but rather of flooding (in certain areas) and high land values (in recent years—see box on pages 12 and 13).

The present size, shape and land use pattern of Colombo are the outcome of numerous inter-related factors spreading over a number of years—physical, social, political, economic, etc. The major physical factor is water : the sea (and hence the port), Kelani river, and the marshes. A glance at a contour map shows that if the water level rises only a few feet, the city takes on the appearance of a number of peninsulas and islands.

(*Continued on page* 14)

APPROVAL OF BUILDING PLANS BY COLOMBO MUNICIPALITY*

Period	*New Houses*			
	Houses	*Flats*	*Other*	*Total*
1971	124	31	610	757
1972	240	22	516	778
1973	148	26	590	764
1974	230	12	485	687
1975	263	20	471	754
1976	351	23	448	822
1977	338	37	503	878
1978	343	75	517	929
1979	580	212	984	1,776

Source ; *Colombo Municipality and Central Bank of Ceylon.*

* Excludes Government and Corporation building plans.

Alternative Building Forms for Low Cost Housing in Colombo

David Robson

Medium-rise blocks of flats have become established to the exclusion of all alternatives as the preferred form of public sector low cost housing in urban Colombo. Many such blocks have been completed in every part of the city and more are currently under construction or on the drawing board. At a time when governments in the West are demolishing their medium rise flats of the 1960s and replacing them with simpler and more familiar forms of housing, and when financial resources for all purposes are scarce, it is appropriate to review the flat building programme not only in terms of whether cheaper and more appropriate forms of housing are available, but also in terms of its physical planning implications.

In Colombo the typical flat has an internal area of 400 sq. ft. and comprises 2 or 3 rooms with a small rear balcony of about 60 sq. ft. which serves a w/c shower cubicle and a cooking space. Blocks are normally of four storeys and are served by horizontal access balconies at each level, or by staircases which serve two flats at each floor. In many schemes (e.g. Ratmalana) blocks have been linked to economise on staircases with the result that they are uncomfortably close together, and laid out as parallel rows running east-west to avoid solar heat again. Construction has been either of load-bearing blockwork or of reinforced concrete frame. The overwhelming effect of most schemes is one of regimented dullness and rarely has any attention been given to the quality of the spaces between buildings.

The protagonists of medium-rise housing have argued its principal advantages as being :

1. adaptability to mechanised and serial construction techniques
2. rapid construction
3. cheap construction
4. higher densities with corresponding savings of land

These advantages are interrelated but they are dealt with separately below :

1. Increased mechanisation of building operations reduces the unskilled and traditionally skilled labour component but increases the need for capital intensive plant, skilled labour and imported energy. This was arguably an advantage in the Europe of the 1960s when labour was scarce and expensive, and energy cheap, but in the Sri Lanka of the 1980s there will be unemployment amongst unskilled workers, a continuing shortage of skilled labour caused by migration to the Middle East, and a desperate need to cut back on energy consumption.

2. Experience in the West had shown that high-rise housing built with non-traditional methods is rarely constructed more quickly than traditional housing, and a recent study in Sri Lanka has produced a similar conclusion.

3. Medium-rise housing necessarily involves the use of building materials like cement and steel which are scarce and expensive in Sri Lanka. It also requires expensive foundations and complex servicing arrangements (sumps, pumps, overhead tanks, refuse chutes etc.). Flats require balconies, access balconies and public staircases, all in addition to the net area of the flat itself. A typical balcony access design requires 600 sq. ft. of gross building of every flat of 400 sq. ft. net area. The costs per square foot of multi-storeyed construction are double those of single storey, but as the gross area is 50 percent greater, the final unit cost is actually three times higher. Thus a typical single storey house might cost Rs. 40,000 (for construction alone) but a comparable flat Rs. 120,000.

4. The ultimate cost of a dwelling is the sum of the construction cost, the site preparation and infrastructure costs, and the cost of the land. High-rise flats achieve higher densities, and, where land is sufficiently scarce and expensive, the savings in land can off-set higher construction costs. There are two arguments against this in Colombo. Firstly, land costs have to be extremely high in order to offset the higher costs of construction. Secondly, the resulting densities may be unacceptable for other reasons. These two points—costs of alternative housing forms and appropriate residential densities—may now be elaborated upon.

Costs of Alternative Housing Forms

In order to illustrate the nature of the relationship which exists between building form, density, land cost and ultimate unit cost, five schemes have been conceived for an imaginary square flat site of 5 acres, bounded on one side by a, main road. The schemes range in density from 246 to 624 ppa (person per acre). The net dwelling size in every case is 400 sq. ft. The comparison between the five schemes is summarised in Table 1. From the table it can be seen that, if construction costs only are taken into account, the unit costs vary in the ratio 6 : 1 i.e. every medium-rise flat built would finance six courtyard houses. Even when land costs are included the argument for low-rise is strong. All of the schemes considered achieve the relatively high density of 250 people per acre, but at land costs upto Rs. 40,000

TABLE 1 **A Comparison of Unit Costs for Alternative Housing Forms**

(400 sq. ft. Dwellings on a 5 acre site)

Scheme	*Total Number of Dwellings*	*Density (people per acre)*	*Construction & Infrastructure Costs per Unit (Rs)*	*Total Unit Cost (Rs.) Including Land at*		
				Rs. 10,000 *per perch*	*Rs.* 20,000 *per perch*	*Rs.* 40,000 *per perch*
1. 4-storey balcony access flats	408	486	134,000	153,500	173,000	212,000
2. 5-storey cruciform blocks	520	624	118,000	133,000	148,000	178,000
3. 2-storey row houses	250	300	69,500	101,000	133,500	197,500
4. 1-storey row houses	298	360	25,000	52,000	79,000	133,000
5. 1-storey court houses	206	246	22,500	61,500	100,500	178,500

per perch the low-rise alternatives are still cheaper. This is quite apart from the environmental and social arguments which lead to the conclusion that schemes 4 and 5 which offer flexibility, extendibility, privacy, and a courtyard garden, are the most appropriate forms of housing, of those considered, for urban Sri Lanka.

Appropriate Residential Densities in Colombo

A given population will always require land for recreation, social activities and commerce, and this will be a constant requirement whatever the density of its housing. It has been suggested that a total of 4 acres would be a reasonable allocation of amenity land for every 1,000 of Colombo's population. It is widely recognised that increases of density beyond a certain limit will provoke serious social problems, and in a city like Colombo, create unsupportable localised pressure on infrastructure.

Many people have come to regard Colombo as a vast urban concentration beset with near insoluble problems of over-crowding. Of course over-crowding does exist in Colombo, and it is true that, in relation to the other urban centres of Sri Lanka, Colombo is a big city. But when it is viewed on a world scale it appears as a city of modest proportions and relatively low densities. The population of the municipality is the same as that of Madurai, a 'small town' in South India. From the roof of the Ceylinco Tower it is obvious that green is still the predominant colour in Colombo, and that in most parts of the city the trees are taller than the buildings.

Table 2 shows the gross density in Colombo Municipality and in concentric rings round it. The three inner zones lie respectively within 5, 10 and 20 miles of the Colombo Fort. Within Zones 1 and 2, 25 percent of the land is undeveloped, and 53 percent is in residential use. Thus the residential density for the whole inner ring is 51 ppa, and for the Colombo municipality 131 ppa. The highest residential densities are encountered in Kotahena but are never more than 600 ppa.

What should be the target average residential density for the inner ring? At an average of 100 ppa an existing residential land, a population of 2.35 million would be accommodated. No official guidelines have been issued regarding residential densities, although various upper limits have been proposed by individuals in papers on the subject. Kingsley proposes 200 ppa, Joachim has suggested 180 ppa, Robson has argued for a range from 125–225 ppa for public housing within the municipality, Ganesan considered 175 ppa to be a normal maximum which could be exceeded under special circumstances to an upper limit of 250 ppa. But none has argued for a density of greater than 250 ppa (40 dwellings per acre), a density which can be easily achieved with a wide range of alternative housing forms (as Table 1 shows).

TABLE 2

Densities in the Colombo Metropolitan Region

Zone	*Area (Sq. Miles)*	1971 *population (Thousands)*	*Population density people/acre*
1. Colombo Mun. ...	14.4	562.4	61
2. Inner Ring ...	54.55	643.8	18
3. Suburban Ring ...	217.45	757.1	5
4. Outer Ring ...	1,125.85	1,438.6	2
Total CMR ...	1,412.26	3,401.9	3.8

Conclusion

There are two main criticisms of medium-rise housing. The first is on the grounds of construction costs. A dwelling of Rs. 120,000 can never be financed out of an income of Rs. 1,000 per month (which is more than the poorest 2/3 o Colombo's households earnings). Even if a family could set aside Rs. 50/- per month for rent this would only finance a house costing Rs. 6,000 (at 9% annual interest). Through its medium-rise housing programme the government offers a home with heavy subsidies to only a small, but fortunate, minority of Colombo's lower income group.

But criticism on environmental and social grounds is just as significant. A visit to any recent scheme will reveal that people have not adapted themselves to life off the ground. Public areas are full of litter and standards of upkeep are very low. There is almost no landscaping and the few trees which existed have been chopped to provide firewood. Service installations receive little maintenance and refuse systems rarely seem to be adequate. Within their dwellings many people still cook with firewood but chimneys are seldom provided, with the result that walls are stained with soot and the rooms are permeated with the smell of woodsmoke. Flats are difficult to alter and impossible to extend, so that the tenant is denied any sense of participation in the construction of his home. Noise and lack of privacy, everywhere a problem are particularly bad in those schemes employing double blocks with balcony access.

The climate and culture of this country have given rise to a way of life which is strongly oriented towards the outdoor. Such a life-style cannot be accommodated within the context of multi-storey flats. Alternative forms of urban housing do exist, however, and these can be more appropriate both from an economic and planning point of view.

FINANCING CITY DEVELOPMENT

G. K. K. S. de Silva

Financing had been a major constraint in most of the city development programmes envisaged from time to time from about the year 1952, when concrete proposals were put forward to develop the city of Colombo. The present city development projects that are designed would therefore need carefully prepared financing programmes if they were to be effectively implemented. The Urban Development Authority, (UDA) and the National Housing Development Authority (NHDA) are the major executing agencies responsible for today's city development, and it is perhaps relevant to examine in outline the problems and constraints vis-a-vis the policies and projected programmes of these two institutions.

Hitherto, the city development projects had been mostly concerned with the construction or designing of infrastructure facilities of the city, such as construction of office blocks for government departments, roads, bridges, hospitals, public parks, stadiums etc. Financing of these projects had been mainly by the allocation of public funds voted through the national or municipal budget. The actual spending was done by the executing agencies such as the relevant government departments and the Municipal Council.

The UDA, on the other hand is committed to larger involvement in city development and proposes re-designing of streets, large scale construction, and shop and office blocks and also infrastructure development. The proposed financing procedure is multifaceted:

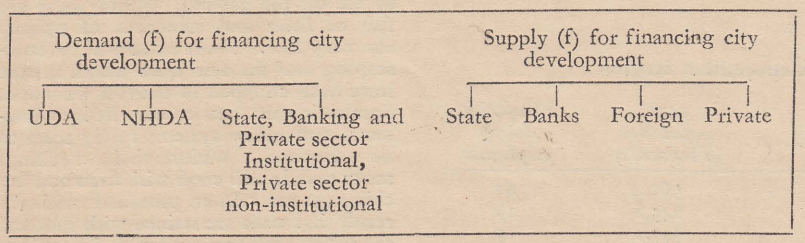
1. Direct financing by state agencies for projects which they would undertake directly or through executing agents (e.g. contractors) not necessarily for their own use.
2. Private sector financing, (local and foreign) in the projects given over to the private sector firms/individuals, especially for constructing high-rise blocks, intended for sale, lease or rent.
3. Construction projects of state, banking or private sector establishments/individuals for their own use, such as the proposed office buildings of the People's Bank, Commercial Bank, Bank of Ceylon, and the Central Bank.
4. Direct financing by individual small scale house builders, mainly those in the categories in the substandard housing groups—including city slums.

It is too premature to attempt a detailed cost estimate of the city development programmes as concrete project proposals and their changing costs are not known as yet. Another difficulty in attempting such an estimate is that the private sector participation expected to emerge within the 'wave' of construction is still an unknown factor. However, from the information available regarding city development programmes, the following projects are expected to invoke investments of considerable scale.

1. Echelon Square Project,
2. Pettah Market Complex,
3. Hotel projects,
4. Bank buildings,
5. Liberty Circus and other upper middle class apartment schemes in the city, and
6. Multi-storied shop and office complexes in the city.

The total investment in these projects alone could be very broadly estimated to be in the region of Rs. 3,000 to Rs. 5,000 million per year. The state sector financing of construction is given in a document of the Ministry of Finance and Planning titled "Public Investment Programme, 1979–1983". The total allocation from the government's capital budget for housing, water supply and urban development projects was estimated at Rs. 5,725 million. A major part of this was expected to be utilised for Colombo city development and urban renewal programmes. The urban development allocation was Rs. 1,320 million, almost half of which is to be utilised for the Sri Jayawardenapura–Kotte development project, the amount voted being Rs. 330 million and a further Rs. 320 million for reclamation of 788 acres in this area. The other major project under this scheme is the construction of city markets and the Lotus Centre, the estimated cost of which was Rs. 188 million (part of which was to be met by private sector investment). Another Rs. 180 million was to be spent on improvement and development of slums and shanty areas in the city.

Housing Construction Projects were allocated Rs. 2,685 million of which the National Housing Development. Authority was allocated Rs. 300 million.



Over the years certain areas have been reclaimed, or at least partially protected against flooding, and there have been numerous studies for further reclamation.

The economic function of the city, as major port, commercial and administrative centre, has led to its continued growth over the years,

Under the same scheme (1) 36,000 new flats and houses were to be constructed at an estimated cost of Rs. 1,766 million. (2) Under an Aided Self-Help Scheme 50,000 houses were to be constructed at an estimated cost of Rs. 346 million. (3) A further 14,000 houses estimated to cost Rs. 322 million were to be constructed under a loan scheme to be operated by the NHDA.

These figures will indicate that the state contribution to the construction sector's demand for finances is however not substantial. The five year Public Investment Programme of the Ministry of Finance had not made provisions for all construction within this period as it was hoped that the local authorities, concerned, the private sector and the government corporation sector will be financing a sizeable part of construction industry. Further, all the investment projects that have been already enumerated above have not been taken into consideration in the Ministry's Capital Expenditure Programme. Under the prevailing enthusiasm in all sectors concerned, it may be reasonably argued that financing from the state sector will not account for anything more than 15–20 percent of the total requirements. Further (on a pessimistic note) it may be expected that another 15–20 percent will be forthcoming from the private sector individuals firms as financing for construction. there remains another 60–70 percent of the total demand for finances for construction to be met by the banking or foreign sources. The local banks themselves (includes Central Bank) are undertaking construction of sizeable proportions for their own uses. Hence provision of finances for the construction industry is going to have a major impact on the portfolio arrangements of these banks. The local banks in addition are very liquidity-conscious and will not be out going into financing construction which is medium-term/long-term credit. Short-term lending is their forte. There had been unofficial complaints about a tight money situation in banks from various quarters.

Foreign investment or foreign borrowing from private and bank sources, is another option available to the construction industry. But with the present thinking on conversion of foreign funds conditioned by the prevalent inflationary tendencies there apparently is a constraint, even if it is assumed that the funds would be forthcoming.

although immigration has been remarkably slow (see box on Income and Employment Generation). The spatial nature of this development has been similar to many cities elsewhere, sometimes described as the 'doughnut form'. This refers to a pattern where the centre of the city—the hub of commercial area and activity remains the same, but the circle of residential areas tends to move out with time. A gap is created between the commercial centre and the outer ring of new residential areas, thus giving it a doughnut form. This gap

(*Continued on page* 18)

SLUM UPGRADING

Sunil Bastian

Colombo, other than being the residence of administrators, planners and politicians is also the home of a large population living in shanties and slums. Although made to feel unwanted by the municipal authorities in many ways, subjected to many prejudices, and dumped here and there to please the eyes of our foreign visitors, not only have they managed to stay on in the city, but also have increased their numbers over the years steadily. A Survey in 1975 revealed that the population in slums and shanties constituted around 43 percent of the population in Colombo municipality area. Their average conditions of living were revealed in an earlier survey done in 1973, which showed their average income to be Rs. 104/- per month with 73 percent of income earners to be labourers and another 22 percent earning their living by odd jobs. Around 69 percent of these households did not have latrine facilities and more than 9 percent of households obtained water from a source outside the house. On the average for the whole city one tap was used by 50 or more families. It is not unusual to see pavements of the city being used by this population as dwelling places.

In the Colombo Master Plan slum upgrading is included as one of the 8 action projects. Detailed Plans for the upgrading of a tenement garden at No. 35 Steuart Street is given in the project plan. This is to be a pilot project from which it is possible to get an idea of the benefits the people will get once an upgrading programme is completed.

According to surveys carried out for the project in this tenement garden there are 103 houses with 131 households. On the average there are 7 persons per household. Percentage of unemployment between ages of 15–55 was found to be 70 percent; for the male population this dropping to 35 percent. About 50 percent of the employed were in permanent employment. Average income for an household was below Rs. 300/- per month.

Some of the other data revealed the aspirations of the people. For example 84 percent preferred to have a tap in the house for cooking and washing and 78 percent for bathing facilities as well. 86 percent wanted toilet facilities too in the house. While this data clearly indicates that these people too have the usual hope of any human being for a decent standard of living, when it comes to housing conditions the planners have concluded that "the majority of the houses to be upgraded need only re-rendering of floors, replastering of walls and re-laying of existing tiles." For obvious reasons people's preferences have not been questioned in this regard. Probably for the planners such questons were not included in their methodiology.

All in all the project which is to be completed in 3½ months involves reconstruction of 22 houses, repairing 65 houses and building 27 new houses. 114 houses will be improved in this fashion, while 16 households will be resettled in another place.

The other facilities are to be improved by erecting 8 new lamp posts, 20 toilets, 8 halls, 6 street lights and 22,800 sq. ft. of gravel road.

The expected benefits are summarised in the following table.

Item	*Before Up-grading*	*After Up-grading*
Population Density—		
Persons per acre ...	737	635
Water Supply—		
Persons per standpost	128	51
Sewerage Disposal—		
Persons per toilet ...	36	18
Garden Lighting—		
Street light per acre	1.64	6.56

It is obvious from these figures that what the most down-trodden 43 percent of Colombo's population are going to get from this elaborately drawn out plan is very meagre. At the end of the upgrading programme population density still remains at a very high level and yet 50 people have to share one tap and 18 one toilet. The so called "improvements" for these houses are on the basis of planners' priorities and not those of the people.

The plan envisages, an increase in rent from the occupants of the upgraded slums to cover the costs. The total cost of the project is estimated to be Rs. 480,000 or Rs. 4,200 per housing unit. By payment of a rent of Rs. 34/- per month the people have to pay back for these meagre improvements in their conditions, to the government.

While the Master Plan hopes for the marginalised is a slight improvement with one tap extra or one toilet more for which they'll be paying through the increased rents, the same plan has different goals for the more affluent. To quote from the proposed Marine Drive housing project—"The Marine Drive area is an excellent candidate for specialized residential development consisting of 300–400 units of housing. They would range from 900 sq. ft. apartments for single people to 1500 sq. ft. apartments for families the average area of a house in the Steuart Street slum is 291 sq. feet where the average 7 persons live. (This means in a single person apartment in Marine Drive a person is expected to occupy approximately the floor space occupied by 21 people in a slum.) A third site would be developed as terrace housing. The residential areas would be 20 or 30 feet above Marine Drive and would be separated from traffic.

The recommendation for such utilization of this site is based on the fact that the large foreign community now based in Colombo is a ready-made market for privately developed housing. With the development of the Free Trade Zone, demand for modern accommodation that would be convenient and easy to maintain is likely to be strong. There are also affluent Sri Lankans who would welcome residences in a convenient central location with adequate amenities and without the responsibility of maintaining a single family residence".

It is usual for the plans to be given in highly technical language, with elaborate diagrams and mathematical formulae giving the costs etc. The attempt is to present the plan as a pure scientific and rational solution to the problems faced by society. Specially in urban planning where the facilities to be constructed are modern, the objectives of the plan are given in the usual jargon of efficiency, rapid communication, linking up with the world etc. The indirect result is to conceal the implicit ideology behind the plan and the interests served by the Plan. The Colombo Master Plan being implemented now,—the total costs including land from 1978–1985 is estimated at Rs. 4548 million and from 1986–2001 at Rs. 7,261 million,—has for the affluent Sri Lankans and the foreign community grandiose projects such as Marine Drive Housing projects, Lotus Shopping Centres and Supermarkets. In contrast the plan for the slum population constituting 43 percent of Colombo's population is a peripheral improvement in their conditions.

These priorities reflect the implicit ideology in the plan.

INTERDEPENDENCE OF TRANSPORT AND URBAN WEAL

J. Diandas

1.1 A city is, almost by definition, a conglomeration of interdependent activities, including residence, trade, manufacture, leisure, culture and movement. Without the movement, the other activities could not interact.

1.2 Cities may grow spontaneously, and the suppliers of transport react and follow the growth. Such expansion rarely leaves adequate rights-of-way for current transport technology, let alone future need.

1.3 On the other hand transport suppliers may move speculatively ahead hoping that urban growth will follow.

1.4 On the other hand again, cities may be planned ahead, (e.g. Rome, Canberra, Chandigarh) and transport may follow the planned growth with some advantage of foreknowledge.

1.5 Or transport may be planned ahead, civically rather than speculatively, with deliberate intent of stimulating specific types of urban development, in much the same way as industrial estates or parks are established.

1.6 More modernly transport and urban development may be planned integrally, the urban planning agency incorporating professional transport planning. However, until recently, most transport planners were essentially highway engineers who conceived roads to move vehicles rather than systems to move people and goods.

2. Some weaknesses in urban planning

Of course the normal goal of urban planning is to facilitate the interaction of various activities. and so enhance the quality of urban life.

2.2 Often however, planning does not achieve its stated goals.

2.3 For instance, new towns are planned to minimise transport by placing employment and residence in close proximity. But on maturing, more than half the next generation work elsewhere and half the local jobs are held by outsiders. The resultant two-way commuter flow may not always be a bad thing, but it was not what the planners aimed for.

2.4 Again planners build wide roads to cure traffic congestion, and end up first by enticing more traffic which keeps congestion constant, and second by severing the interaction of activities on the two sides of a road.

2.5 Yet again, perceiving that ribbons are bad,' (because travellers cannot see the countryside for miles on end) planners have encouraged off-artery residential estates, like Jayanthipura and Subathipura Battaramulla, into and within which it is uneconomic to provide public transport.

2.6 As a last example zoning seeks to segregate types of activities, yet can end up by preventing proximate multipurposefulness which is the bonding material of successful cities.

3. Why has urban planning strayed?

3.1 One should not conclude that all or even most urban planning has failed for such a conclusion prejudges that growth without any planning at all would have been better.

3.2 Nevertheless, much physical planning has strayed from its own stated objectives, and this has been primarily because early planning stood on purely utopian premises.

3.3 Conecpts like mixed or 'balanced' social settlements, (social mixing) have not worked because people have a proclivity to mix selectively.

3. Some planners proclaim out-dated objectives, such as complete segregation of pedestrians from vehicles, off-street parking for all comers, unimpeded speedy flow, slum raising etc. Upon proper analysis most of these are neither achievable nor desirable.

3.5 The fact that ex-post analysis is needed to establish undesirability, disutility or unachievability is itself an indication that many things are taken as self-evidently good (or bad) without proper reflection on what they will mean to whom.

3.6 To take just one example, widened roads are often proclaimed as improvements. Yet from whose point of view is a wider road better? Vehicular traveller yes, but resident, pedestrian, child, pensioner?

3.7 Or green belts. Why are these a virtue, when what is needed is an adequate proportion of greenery in relation to paved or roofed surfaces. The quanta and layout of pervious and impervious proportions can be configured by fingers and corridors or squares as much as by concentric circles, yet, "green belt" becomes the accepted slogan.

3.8 By contrast "ribbon development" got a bad name, but "corridors" or "linear cities" became respectable a few decades later.

4. Colombo's own mirages

4.1 In many ways Colombo is a fine city, with its expanses of artificial lakes (utilized and then abandoned by trade, and only now becoming unhidden,) its fan of roads spreading out from Vihara Maha Devi Park, its beautiful Bullers Road Avenue and so on.

4.2 Yet much planning talk and latterly planning action, is based on unproved goals and concepts, which because they are unlikely to fulfil their aims, may be described as mirages.

5. Marine Drive

5.1 This is a real nostalgic item for those who have personally witnessed the splendid ocean front in Bombay, Rio and many English seaside towns.

5.2 For Colombo the railway (south) and harbour (north) have pre-empted the site, yet many have advocated marine drive alternatives — 1. inland of the railway, 2. in lieu of the railway, 3. on the seaside of the railway.

5.3 Aside from cost, and the inherent present railway disadvantage of a one-sided catchment, few of the advocates have counted travel data or quantified the benefits for a city whose culture and climate do not induce seaworship.

6. Bus-stations outside city limits

6.1 Every five years or so somebody suggests shifting the bus stand to a site or sites outside city limits, in order to reduce visible congestion.

6.2 But unloading people from one bus and putting them on another will not reduce vehicular movement into the centre.

6.3 A variation of this proposal calls for intercity buses to run across the city to terminate on the opposite perimeter but this will increase vehicle travel and person travel for no gain.

6.4 The city core is a centre of attraction. This fact of life means that people need to reach it in one bus or another, and allowing them to reach it, and later depart, as comfortably as possible will help them and traffic.

6.5 Running across the city is something for local buses, but inept for long distance intercity buses.

8. Off-Street Parking

8.1 The cry was that a building should provide parking for all its inmates and visitors, thereby, "relieving" the adjacent roads of on-street parking. Hence the concept of "not less than" say two park-lots to be provided for every 10,000 square feet of internal office space, or for every 5,000 square feet of shopping space etc.

8.2 But such liberal parking facilities act as a magnet to induce more vehicles on the street. Hence the newer concept is "not more than" say 1 park-lot for every 5,000 square feet etc.

8.3 Yet, some planners here, as elsewhere, are thrilled by the vision of a 50-car underground parking garage, because they perceive a need to provide space for the cars to be dislodged from parking in the street.

8.4 This mirage will be understood as such only when congestion, according

to the Parkinsonian theory of traffic filling space permits. Only if oil shortages and prospective prices act to inhibit traffic growth, will this mirage evaporate.

9. Duplication Road

9.1 The idea that Duplication Road (not to speak of Marine Drive) will relieve Galle Road also ignores the iron law of traffic that every easement induces more. Duplication Road does bring a benefit to those who use it. But how many are they?

9.2 Many or few, there are planners who plan flyovers over the railway which already impose a speed limit to accommodate a reduced super-elevation at the level crossing on curved tracks.

9.3 But flyovers at the back of Oberoi and at Slave Island station would be an expensive substitute for a single canal bridge linking into Malay Street, and thus keeping movement to and from Parsons Road (Colombo Fort's present growth area) on the inland side of the railway all the way.

Traffic Management

10.1 Many vehicle drivers think that if only a particular piece of road were widened or otherwise "improved" or a traffic signal installed, or a footwalk narrowed, their problem would be solved. But such solutions merely shift the bottleneck a fathom further on or a quarter-hour earlier.

10.2 It is different of course if traffic measures are priority-designed to help buses along, because quicker buses can absorb travel from cars which, by virtue of much higher demands on space-time, cause congestion in the first place.

11. Bus or Rail for person travel

11.1 Proponents of a Marine Drive usurping the railway from Galle Face to Galkissa hold that displaced train riders could ride in buses. These advocates are sometimes joined by economists who think, because they do not count all the costs and benefits, that trains cost more than buses to run. But such proposers should first examine lane widths and bus stopping kerb-space required to absorb 12,000 morning peak train riders in 120 buses and again in the evening peak, not to speak of interchange arrangements at Ratmalana or wherever.

12. Lorry or Train or Boat for goods

12.1 Planners complain about lorry waiting and parking on the streets close to harbour and warehouses areas, and recommend dispersion of warehouses to sub-urban and even trans-Kelani territory.

12.2 However, proper understanding of the functions of the harbour, the holding warehouses, and the distribution networks (provided mostly unseen by the canal—Beira, links for inner Colombo and the railway for the rest of the country) would dictate other solutions.

12.3 In fact most planners have overlooked the existence of the rail/water interchange near Tripoli Market, the BCC Copra wharf on St. Sebastian Canal, the Beira-side warehousing on Vauxhall and MacCallum Roads and the vacant land through which the harbour railway-link passes at Bloemendhal-Mahawatte.

12.4 Furthermore, the severance of the rail link from Fort Railway Station through Chalmers Granaries to the harbour has precluded an alternative direct port exit for bulk cargo at the dead of night.

13. Pedestrian Bridges

13.1 Bridges, 16 feet high with 40 risers or so have become the costly panacea to keep vehicles moving, although safety has been invoked as a factor justifying cost.

13.2 The cost of such bridges is multiple, including scarce resources for construction, delay and effort to pedestrians at all times of day, railings and fences which destroy the contiguity of adjacent activity areas, and extra traffic police to enforce the climbing exercise.

13.3 Such bridges elsewhere, (mostly in Third World countries where people accept their lot) induce pedestrian route diversion to avoid the bridges and so transfer the problem elsewhere instead of solving it, or at least facing the reality that a road belongs to all its users including those on foot. Subways are no better unless associated with under-ground railway stations or shopping plazas.

14. Bus-stop spacing and catchments

14.1 Many planners use their own personal unmeasured subjective reactions and anecdotal evidence, to see a congestion-remedy in having less and wider spaced bus-stops.

14.2 Supporters of such planners then assert that bus riders (never car riders) are lazy, wanting to ride from door-step to door-step, and (wrongfully it would seem) even riding a bus for just two bus-stops.

14.3 Such theorists do not count the total distance walked throughout the bus-rider's day, but only the visible walk along the bus route to an immediate bus-stop.

14.4 However, equity aside, the traffic flow view-point alone dictates that too few bus-stops in busy areas will incur too many boarding and alighting transactions per-stop and per-stop-per-bus, and these will clog any intensive bus service as well as the flow of other traffic. Here again the remedy can make the total situation worse rather than better.

15. Some Conclusions

15.1 The examples given above show a lack of understanding, lack of study and lack of joint thinking about how a city best develops and prospers to the benefit of its people, visitors and hinterland.

15.2 Hence, the obvious conclusion that planning by bright ideas and execution by hunches ought to be substituted by integrated planning in which transport (include walking) is seen as the linking function between all other activities.

15.3 Since the establishment of UDA there has been a degree of dialogue or consultation with transport suppliers that never existed before, and UDA has also employed a few expatriate and local transport planners. However, it appears that such dialogue is intermittent, erratic and often post-facto.

15.4 One way to visualize the problem of transport in urban development is to imagine a Colombo totally devoid of motor cars.

15.5 There would likely be no congestion worth discussion at any place or time. Buses and taxis would run faster and be able to ply marginally more trips and thus absorb part of the off-loaded car-riders. The city would continue to exist, with enhanced convenience to many, albeit with reduced convenience to the decision-makers and planners.

15.6 Such condition might stimulate investment in better bus and rail stations, especially interchange and undercover walkways, but would at the same time eliminate the apparent need for large investment in, for example:—

–extending Duplication Road 'south
–Lotus Road flyunder Parsons Road
–new Kelani bridge near river mouth
–new roads in the city,
–more pedestrian bridges.

15.7 Of course such a careless condition will not happen, nor is it advocated, but thinking about such a condition helps us to understand that all the expenditure on infrastructure is not in order to keep the city moving, but merely to enable the present density of motor car traffic to have improved mobility.

15.8 The corollary of that understanding is that a policy of restraining the number of cars using the city streets will be just as effective in improving mobility as costly investment in infrastructure. The main questions are then:

1. how many cars should be restrained
2. how many allowed to use the streets (and perhaps parks)
3. what restraining means to use financial and/or physical)
4. how much improvement of public transport to take the off-loaded car riders.

15.9 If these questions are discussed openly by physical planners, urban economists, transport planners and transport operators, the best solutions can be found in integrated planning for improved city facilities and matching transportation.

is invariably filled in by lower income groups. This form of growth was seen in Colombo from the 19th century when the residential areas of Pettah, Hultsdorp, and part of Slave Island formed the immediate ring round the commercial and administrative centre of Fort. In time the residential ring moved out, initially to Mutwal, in the North, and subsequently Kollupitiya in the South. Due to the river, further expansion northwards was not possible and hence continued only south and south-east into the direction of Bambalapitiya, Cinnamon Gardens, Havelock Town and Borella. This trend continued into the suburbs viz. to Dehiwala, Mount Lavinia, Ratmalana, in the south, and Nawala, Nugegoda Maharagama in the south-east. In common with most cities of such physical patterns, the former residential areas were filled in by lower income groups and became areas of urban decay. This was very clearly seen in the older Colombo of today viz.

AN ESSAY BY A CITIZEN OF COLOMBO

Barbara Sansoni

What does the citizen of Colombo feel about the startling major changes taking place in the character of his city? What can he feel about the claustrophobic wall of cement coming up between him and his city's greatest natural asset, the Indian Ocean? What can he feel about architects and planners playing God with a city life that is at least as old as five centuries in the Pettah and as beautiful as the 19th Century Fort? I think he feels that there could have been much better planned thinking about the *real* needs of citizens and not only just the imagined needs of commerce and the tourist. Both these could have been well served away from the extreme edge of the Ocean, where old Colombo has been a commercial port on historical record since the 5th Century and probably longer. Its very nature is a part of the complex Indian Ocean culture as a trading junction between China, Indonesia, Arabia and Europe, East Africa and Bengal.

There is a great deal of architecture both small and monumental, and also entire streets of old Colombo which cannot be dismissed as decrepit and accidental but must be recognised, to quote Bernard Rudofsky "as an art form that has resulted from human intelligence applied to uniquely human modes of life-architecture produced not by specialists but by spontaneous and continuing activity of a whole people with a common heritage acting with a community of experience—an untapped source of inspiration for developed industrial man trapped in his chaotic cities".

Before looking further into the historical aspect of Colombo's architecture it would be as well to count her natural assets and decide whether man is really alien to nature or not, as seems to appear from the aggressive planning which chooses to ignore our fine skies, a good drenching blowing monsoon, mild nights luxuriant vegetation, a relaxed way of living and a low work ethos: (Paradise:) for a 20 storey high rise, air conditioned buildings which will throw long shadows (humidity makes for mould which in turn is dried by sunlight) block the breeze, have you seen how much of a wind break one small tree can be to a large area of tea?) In modern town-planning, buildings more than five storeys are *never* erected in an old city as they would alter the scale nor are highrisers built along the sea front!

Is nature an enemy that has to be fought and subdued or is man a part of it? Does progress or "development mean dispensing with nature which has become an alien luxury? Till ships are plying the ocean again because airplane fuel is unavailable and the Ocean becomes "commercially viable", Colombo will still need the fresh air, ozone, enormous sky, cleansing sea water and *space* which the pathetically small ocean front left by colonial railway planners gives her—free! It is called Galle Face. One is told that no less than 4 highrise banks are planned for Echelon Barracks Square plus the Hilton Hotel with its own private swimming pool and lawns at ground level. Another, or is it two, large hotels are planned on the Samudra site, dwarfing that delightful old building and from that point will continue unchecked, one can foresee, the continuous concrete curtain suffocating the hinterland of the entire length of the Galle Road to God knows what final end. Surely the role of life is not to destroy but to enhance through cycles of existence in which the goal is a steady cumulative experience of the spirit and its happiness—a Buddhist concept, difficult to respect when one's only values are the making of money for its own sake.

But if one can accept this concept then the creations of man have to be judged as part of nature with cycles of their own and when not "destroying" but enhancing, their existence has to be regarded as justified, enjoyed and respected. Therefore the value of a fine building does not lie only in its value as evidence to the architect and social historian or archaeologist. It lies directly in the building as it is, weathered and mellowed by passing time. It has an existence in its own right, as has a tree or a piece to the natural landscape. We tend to ascribe to architects/planners/specialists this exceptional insight when in truth most of them are concerned only with the problems of business (theirs), commercial development (their client's) and destruction of human progress (ours).

Understanding this gives value to the uproar of protest from the young citizens and young architects of Colombo over the wanton destruction of the Registrar General's building and the destruction planned for Upper Chatham Street and the Bristol Hotel.

To place the history of the Pettah in a wider historical context is to discover some astonishing facts. This old city of Colombo was described by the Arab scholar, Ibn Batuta in 1344 as "the largest and most beautiful city in Serendib". Kotte was founded later than this, 1360–74, which makes Colombo the older city. Colombo was thriving before Columbus discovered South America in 1498. It was trading with Indian sailing ships which ran between Malabar and Bengal when the Moghul Empire established itself and its limits in 1526. Akbar the Great's beautiful city, Fatepur Sikri, outside Agra was built in 1700 when the streets of the Pettah as we know them today (with their same buildings), Sea Street, Cheku Street, Messenger Street Jam Pettah Street and many others had been in use and standing for over a century. They were even there when the great Elizabethan age was at its height in Europe, the age of the discovery and settlement of the Americas, and when Shakespeare was writing his plays. It is interesting to note that the Taj Mahal, one of the most famous of beautiful architecture buildings in the world, was finished in the 17th century when Wolfendhal Church had already been standing for some years, beautiful in a different way and plain as a puritan. Until the arrival of the Portuguese in 1505 neighbouring Kelaniya City up the river was a much described, thriving city whose richly decorated streets and buildings I personally feel have been recorded in the murals of Kotte Rajamaha Vihare as I have traced almost identical buildings scattered around Kelaniya.

The proximity of Kelaniya ensured that the skill of craftsmen, masons and carpenters, would have been high and that much of the buildings were continued in what one might call the Sinhala Buddhist manner of living and building in the rest of the land i.e. maximum roof, minimum walls, cross ventilation and madamidulla. Buildings of the "high" Dutch period are very often directly evolved from this more simple pre-Dutch Sinhala house. After the Dutch arrived they took Sinhala craftsmen to the Cape in South Africa to build houses very much the same in plan but more European features like gables. There is also a good deal of Sinhala influence in Arab buildings round the Indian Ocean. Colombo's proximity to Kelaniya discourages the view that Colombo was an Arab "settlement of thatched huts".

Slave Island, Maradana, Hultsdorp, parts of Pettah and Ginthupitiya.

The centre of the city is still tending to expand, and this is putting pressure on the adjacent ring, mainly occupied by slums. This is now one of the major areas for redevelopment and consequently old houses in this zone are subject to demolition. (See box on Page 15) The second source of land for new development is that in what the planners term 'inappropriate use'. This includes industries and warehouses in central locations. Some of these are being moved out to accommodate other activities, often of a commercial nature. Finally as always in Colombo, there is the possibility of land reclamation, which becomes increasingly feasible as land values rise. Land that could be reclaimed at say, Rs. 5,000/- per perch may now be worth investing in. Rising land values are also at least in theory the mechanism whereby land uses are changed—as high prices

---

Thatched and woven buildings fit for the habitation of kings' no doubt, but not "thatched" in the modern idiom, which astonishingly is equated by developers with "shanty and hut". One can see a king living royally and with the greatest delight in a beautifully built cadjan house for an indefinite period of time, but not even for 24 hours in a concrete, asbestos roofed shack—the baking royal head would be forced to leave it for the shade of a tree but now-a-days the tree will have been bulldozed and nature's free roof removed.

We could still continue to learn from our early anonymous builders, some of their sheer good sense in handling practical problems. The shapes of these houses transmitted through endless generations seem eternally valid—the narrow entrance, the shop or house ventilated through the centre and stretching back in privacy and security for the full length of the block. Nor do we want our streets to be deserts—life has always gone in them shaded by trees or even the traditional oriental arcade which was once all over the Pettah and now only left in the Fort and the plastic awnings of the Pettah. My own theory is that the arcades of Colombo were always formed by trees which grow so easily in a hot humid climate, unlike the covers of more arid Indian Ocean ports and this must be why ancient travellers all exclaimed at the greenness of the city.

Our streets are a meeting place, a stage, a shopping way, a place where life is lived, though not necessarily slept, why should they be allowed to deteriorate into scorching pavements and parking lots? Why need "development" mean the lack of humanness in architecture and town planning? Tremendous cumbersome technology is planned for Colombo with "new" features that were actually invented centuries ago. The old Town Hall, now conserved for posterity, is an example of prefabrication, standardisation of building components, flexible and movable structures, natural air conditioning and flexibility of space—(or open plan). As for the Pettah, what can be more "developed" than when a man can take a couple of steps from his workshop to his living quarters instead of spending several hours travelling to work each day? To sum up—have we really become so stupid and so insensitive and so alien to nature that we have insured that this age of the 80s will be remembered as the Philistine and Vanda period? The 80s—when we finally destroyed our forests, became a desert, cut every tree that men could use for a shade and slumber, destroyed our beautiful natural architecture which ranked with the best in the world and became so indifferent to nature that we allowed concrete malignancy to spread over the land? And finally in one of the most beautiful and largest and unspoilt harbours in the world, Trincomalee, built a monument of concrete ugliness, an ugliness beyond belief that has dwarfed the hills and bays and harbour in which even the huge Queen E II, massive aircraft carriers, the flag ships of 7 nations and their accompaning fleets looked like beautiful toys In front of this giant harbour, as a rude gesture to all sense and sensibility, an island hill has had its head cut off and been stripped of every tree, bush and weed in order to build some houses on it..... There it stands, its red earth a disgrace to the conservation which we are trying to teach to our children. There are people who make money from sending foreigners to admire the natural archaeology of Sigiriya, Anuradhapura and Polonnaruwa and then do this sort of thing. Their double standards should put them high in the Guiness Book of records as master destroyers of the natural environment and our spirits. They can't plead they don't know, not with the surviving evidence of the ancient cities as one's historic background and if one does not know why; one should be taught at once the aesthetic and natural values of our ancient monuments or be sent to contemplate that sublime sculpture—Gal Vihare.

It is an astonishing fact that the Master Plan for new Colombo did not consider the historical or architectural aspect of old Colombo till private protests were made. And what have the self assigned developers of Colombo planned? To deprive the city of its last prized assets—in the name of development. Development of what? Of man, his personal skills, his well being, his health, his happiness? Or the development of commerce and profit making technology? There are vast concrete hotels and banks and business houses planned to rise on the destruction of present Colombo which will in no way better the quality of life and health of a single of its inhabitants. What a mix up: An early 16th century city is being destroyed for the purpose of commercial "progress". A city already destroyed and long since become a charming rural suburb is now crossed by massive highways and its marsh being drained to build a lake to take a reproduction 16th century Parliament building. An architecturally valuable 16th–19th century Fort which has only 2 approaches which both end in a bottle neck is being destroyed (in scale as well as by hammers) for modern banking and building. Both old cities could have been left, being as they are of priceless historical as well as architectural value, and a *new*, modern commercial and banking city built among the shanties on its immediate outskirts (or between Panchikawatte, Borella, Nawala and Nugegoda, all accessible by many, many roads). Dare one suggest then that the Dream capital could have grown up on the existing Beira Lake with Fort and its beautiful government building spread in an elegant and logical train behind it?

Colombo's Fort contains an extremely beautiful example of a small Indo-European Victorian business city. The streets leading from Chatham Street, the General Post Office and the President's House down to the harbour and across to the Fort Railway Station are as good as one could find of that period anywhere in the world. All they needed was tidying up, informed infilling of buildings in suitable proportions and plenty of painting and cleaning. Their planned destruction and obliteration of scale is an appalling piece of vandalism perpetrated on the citizens of this city without their knowledge but with the full knowledge of professional men and advisors. Professional courage and high ethics need not be confined to the bench and medicine. But it is climate that is the primary concern of architects and that is why good buildings are built as they are in different climates. The final humiliation of our beautiful ocean front will be when it is reduced to being a back drop for tourists enroute to see our only remaining planned cities, ancient cities several centuries dead. In the *leering* city no more will the immense span of sky and sea repair the physical and spiritual health of its citizens. Immensity will be experienced only in the 20 storey concrete monstrosities planned for the Fort which are already so out of date in city thinking that one can only guess at the futility of planning behind them.

squeeze out the slums and the warehouses (the laissez faire philosophy of urban planning).

In summary, there is a land problem in Colombo, but it is one of high land values rather than of physical lack of space. There is no land for house building at prices the average householder can afford; but in purely physical terms there is sufficient land in the Colombo urban area to accommodate a far greater population at densities which would still seem modest by the standards of other Asian cities (and could be achieved by low-rise development—see box on Alternative Building Forms on pages 12 and 13)

This constraint is therefore one which can be dealt with by appropriate public sector intervention. Laissez-faire land policies have been abandoned by countries of every political hue, and even in the U.S.A. the land market is subject to considerable controls. These may be financial e.g. taxes on betterment values, unused land or land sales; or physical e.g. zoning laws or planning regulations. In any event, the public sector can remedy the problem of land values by investing actively in the market.

Construction Capacity

In terms of manpower Sri Lanka is in a paradoxical situation. Despite the one million unemployed there is a shortage of skilled labour for construction—masons, carpenters, etc. This is due partly to the sudden increase in activity in the sector, but largely to the continued exodus to the Middle East. Despite wages for construction workers doubling in a year, the availability of skilled labour remains a problem, and more training is needed. This situation is exacerbated where modern technology requiring non-traditional skills is adopted.

Materials for construction is a significant constraint. Despite record levels of local production of cement, (575,000 tons in 1978) it has been necessary to import from abroad and prices of cement have doubled in a year. With the massive Mahaweli Programme, imports of cement will increase enormously in the near future, and shortages are likely to continue. Timber has also been in very short supply, and prices increased by nearly 100 percent between 1978 and 1979. Other items such as steel and asbestos sheets have not constituted so severe a problem, although prices of these items too have increased considerably, and even local products such as bricks have been in short supply. Local construction firms face other difficulties; the lack of finance and limited or outdated equipment being typical.

It is not easy to quantify the extent of all these constraints. They are manifested, however, in two major ways. Firstly, in rising costs. The costs of construction are rising so rapidly that estimates for budgeting purposes have proved meaningless. Official indices show costs rising by over 100 percent from 1977 to 1979, but these are probably under-estimated. The actual costs of construction of projects have sometimes been three times as much as the original estimates. For many years the construction industry in Sri Lanka was comparatively inactive. The sudden boom has resulted in a massive increase in prices.

This has been further aggravated by the replacement of competitive tendering by a system of price negotiation for public sector construction projects. In many cases, the Chamber of Commerce is asked to nominate a contractor who is paid a fee of 35 percent above the estimated basic cost, the rate upon which the basic costs are calculated being frequently revised to keep up with current prices.

The second result of the capacity constraint has been the use of foreign contractors, especially on major schemes. This has also had the effect of further increasing construction costs.

The lack of capacity of the construction industry is therefore an extremely important factor, but one which, through rapidly rising costs, is largely transformed into a financial constraint.

Finance

Where will the money come from to finance these projects? The direct housing projects of the NHDA will be paid for by the Treasury budget. In the case of certain luxury housing developments, prefinancing by potential occupants will to some extent offset the cost. The Treasury had also provided the modest initial capital (Rs. 20 million, later raised to Rs. 100 million) of the UDA, but the powers of the UDA to raise debentures are likely to prove a far more significant source of finance.

In general, however, the role of the UDA is to a very large extent to bring together the appropriate parties—financiers, developers, contractors—rather than fulfil these functions itself. What strains will these, and all the purely private sector construction activities, put on the national financing capacity?

It may be very roughly estimated that the annual expenditure on major construction activities in Colombo could average Rs. 4,000 million per year in the next few years. The major local banks are at present facing a stress on funds. The extent of foreign borrowing may be limited by the Central Bank's apprehensions about the inflationary trends that might result from the convertibility of the dollar. (See box on "Finances")

How great will the demand be for offices, shops, hotels, flats, car parks in the coming years? Will the market be able and willing to pay the ground rents required to make all these projects feasible? This is one of the biggest unknowns. To a large extent the demand for space will be determined by the general economic climate in Colombo. This in turn will be determined by the effect of the national economic policies and the developments now underway in the city. As an extreme, one could even picture a situation where the market for high income flats, modern shops and offices is itself created as a result of the expenditure on these and other similar developments.

Very few studies have been carried out to assess the demand for space. Apart from a Chamber of Commerce survey, among its members only, which identified a need for 250,000 square feet of offices, there is little available information; most plans are based on general estimates. And even space requirements, without a specification of the rents payable, are of little meaning. With rising costs, the rents payable will be much higher in future. A luxury flat costing Rs. 1 million to build would require a rent of upto Rs. 5,000 per month to repay at 15 percent interest over 30 years. For basement car parking averaging, say 200 sq. ft. per car and Rs. 350 per sq. ft. construction the rate charged

per working day (on the same repayment terms as above) would be Rs. 35 per car. In the new market stalls at St. John's and Kachcheri Road the proposed monthly charges of Rs. 20–25 per sq. ft. might have to be tripled to achieve viability. It is too soon to say whether at prices such as these the demand will exceed the supply. The projects described above will provide a huge increase in office and commercial space (well over 2 million sq. ft.) and a number of new hotels are also proposed. The supply situation will thus change markedly.

APPRAISAL

It is too early to evaluate all the proposed projects since most are still at the planning stage, or under construction; but they can be appra sed on the assumption that they will be completed as at present planned.

They can be appraised both individually and in terms of their total effect on the city and the country as a whole. Such appraisal can be not only in economic terms, but also in social, environmental and other terms.

One question that arises is: who will gain and who will lose by these developments in economic terms? The sums of money involved are huge. The state enjoys considerable powers (e.g. of land acquisition, planning controls, granting of tax concessions) as well as being a major land-owner. It is in principle perfectly possible for urban development to be run as a commercially viable venture yielding profits to the state and hence the taxpayers. Equally the state can lose this opportunity and allow most profits to accrue to individual contractors and developers. Such public sector losses are not readily evident, and depend on the specific terms and conditions granted to the private sector. So far, relatively few such agreements have been finalised and tax incentive schemes are still under discussion, but it is important to ensure that the interests of the public purse are not jeopardised in the attempt to attract development.

There is clearly a difficult balance to be struck between granting heavy subsidies to developers, at the expense of the public as a whole, and making conditions so attractive as to scare off all investment. The concept of a 'loss leader' has proved useful in supermarkets, where customers are induced to enter the shop by the promise of a good bargain. If the majority of items sold are 'loss leaders', however, the exercise is fruitless. It requires a good knowledge of the demand and supply conditions to assess the terms which shall be offered the potential developer—and these terms may well be made less favourable for the latecomers.

In the case of the new markets there may be a direct conflict of interest. The proposed charges (referred to above) might be so high as to discourage stall-holders, or result in higher costs being passed on to the consumer. On the other hand, lower charges would imply that the new building is subsidised by the taxpayers. Car parking and public housing are other examples where any subsidy is to the advantage of the fortunate beneficiary but at the expense of the general tax payers. And in many cases the beneficiary is from the middle or higher income groups—not the most needy groups.

A second question is: What are the priorities in Colombo's urban development? When finances and manpower are scarce it is not only important to choose the right projects initially, but also to ensure that some do not attract a disproportionate amount of time and resources. Thus, for example, programmes to generate employment amongst the poorest sections of the community should not be relegated to minor importance by more visible or prestigious projects.

A third question is: What are the planning implications on a national scale? The rapid development of Colombo could lead to increased rural-urban migration, further pressure on the primate city, and the decline of rural areas and other towns. Sri Lanka is a remarkable exception from the general rule of Third World countries where rural—urban migration, especially to the capital, is often very considerable. The Colombo experience has been attributed to a number of factors—particularly cheap transport, and the negligible urban-rural differentials in terms of incomes and services. And this situation is one which many countries would envy and advise strongly against changing. Another explanation, however, is the continued expansion of irrigated land—which has led to rural–rural migration being the most significant feature nationally. With the Mahaweli programme this phenomenon will continue. It may therefore be that while Colombo (urban area rather than city) will experience increased migration flows, there are also major shifts into new agricultural lands (and the employment generated in the GCEC, may also cause inward migration into that area). In sum, there are possible dangers of undue attention and hence undue concentration of activities in Colombo. The Urban Development Authority does now have jurisdiction ove all District Capitals, ana is preparing plans for these, but in this regard also the emphasis tends to be upon projects rather than planning at a national level.

A question is: what are the financial implications of these projects? A massive concentration of investment in construction in Colombo could have two undesirable effects. One is to limit the finances available for other, possibly, more productive purposes. This affects both the public and private sectors. There is only a limited quantity of finance available from the banks and other sources, and if this is unduly concentrated in these projects it will distort the pattern of investment nationally. Secondly, such activity will further increase costs of construction. The massive Mahaweli programme and the urban development projects will combine to cause materials and labour costs to escalate further. To the extent that this generates local employment and higher incomes it is beneficial, but there are other more deleterious results that also follow.

Thirdly, the tax incentives that are offered to attract investors may be so favourable as to reduce significantly the total tax revenues of the country. (Income Tax receipts in the 1980 budget are estimated at Rs. 1,172 million compared to Rs.1,159 million in 1979; an increase of only Rs. 13 million).

A fourth question is how these developments will affect the quality of life in Colombo. What will be the effects on employment and living standards? (See box on pages 10 & 11). Will the new and more expensive shops and market stalls change the clientele and the employees?

What will happen to the transport system? (See box on pages 16 & 17).

Will car parks be built in the central area, or will the emphasis be on public transport and pedestrianised shopping areas?

And how will the face of Colombo be changed? (See box on pages 18&19) Old buildings will be demolished—some of historic or aesthetic interest. What will replace them? Will the green and pleasant environment of the city be lost or enhanced by the new buildings that are constructed.

If the projects listed above are all completed as planned there can be no doubt that the face of Colombo will be drastically altered. The scale of these projects in physical terms is unprecedented in its recent history, and in economic terms their impact will be felt not only at the city level, but also at the level of the national economy.

CONCLUSION

Partly because of the limitations of master planning as an exercise, and partly because of the philosophy of the Government, the development of Colombo in the next few years will be determined by the outcome of the projects identified above—and of others which will no doubt be added—rather than by the contents of a Master Plan document. It is not yet clear where this path will lead.

It is possible that the boom continues, with land values remaining high, construction industry active and property developers flourishing but that this occurs largely at the expense of the public purse and the majority of the population. Speculative profits on land favour the individual developer, while the rest of the population face higher rates, rents and taxes.

Or it is possible that the constraints mentioned above, and particularly lack of finance, will prove too much, and that many of the projects won't get off the ground—or worst of all, that buildings remain half-built or abandoned at a stage where they cost much but benefit little. The bubble bursts, land value stumbles and the grass grows over half developed plots!

Alternatively, the boom may continue with wholly beneficial results—land values stabilise, the local construction industry grows rapidly ,generating further employment and stimulating the production of local building materials. Colombo is rejuvenated, housing and services improve, unemployment falls, and all at minimal cost to the citizens.

It is now too early to say which of these will prove the most accurate forecast. After a number of years of relative inactivity, there has been a sudden change of gear in Colombo, manifested in many ways all over the city. Managing an operation of this kind and this magnitude is a complex task and some of the possible, and actual pitfalls have already been identified. Urban development, in any country, is big business and to manage it requires very special skills. Management can be efficient or inefficient, equitable or inequitable, but every citizen should take an active interest in it and be encouraged to do so.

TRADE

USA Becomes Sri Lanka's Major Market

The USA emerged as the biggest market for Sri Lanka's exports last year. This is the first time that the U.S. has moved into leading position as buyer of Sri Lanka's produce; a position which had previously been held by U.K. and more recently China and Pakistan. Prior to this the U.S. has generally been about the third or fourth largest buyer of Sri Lanka's produce. A major factor responsible for propelling the US into this position was its large imports of ready-made garments and textile articles during 1979—purchases from Sri Lanka amounted to nearly Rs. 263 million. Tea, however, accounted for nearly 30 percent of the total value-

Table 1 **SRI LANKA'S PRODUCTS IMPORTED INTO USA**
(Value—Rs. Million)

Tea	426.3
Garments	262.9
Coconut oil	161.1
Rubber	120.7
Spices and spice oils ...	53.7
Gems and jewellery ...	35.4
Ceramic ware	35.4
Metalic ores	18.9
Graphite	18.6
Sub total ...	1,133.0
Others	452.2
Total	1,585.2

of US imports from Sri Lanka. The other major categories of local items finding a market in the USA were coconut oil, rubber, spices, gems and jewellery, ceramic ware, metalic ores and graphite. These accounted for about two-thirds of the value of total exports. (See table 1).

Nearly 50 other items, regarded as non-traditional exports, such as coffee, activated carbon, coconut products, fish and crustaceans, etc. accounted for the other one-third.

The value of Sri Lanka's exports to the US, according to the Customs Returns, reached a total value of Rs. 1,585.2 million out of a total export bill of Rs. 15,228 million in 1979. The next largest buyer of Sri Lanka's products last year was UK (Rs. 1,230.8 million) followed by Japan (Rs. 1,037) million and West Germany (Rs. 902.4 million.) These four countries turned out to be Sri Lanka's major trading partners in 1979 and accounted for nearly 33 percent of Sri Lanka's total volume of external trade which reached Rs. 37,788.5 million last year. As a source of Sri Lanka's imports the US took 7th position, the leading position being occupied by Japan, followed by India and the UK. Thus, in total volume of trade the leading position was held by Japan (Rs. 4,042.4 million), followed by UK (Rs. 3,245.7 million), US (Rs. 2,796.2 million), and West Germany (Rs. 2,124.5); three leading western countries and Japan becoming Sri Lanka's main trading partners. Japan continued for a second successive year to be the leading supplier of Sri Lanka's imports. The U.S. occupied the 7th position supplying mainly cotton (Rs. 190 million), machinery and parts (Rs. 130 million), fertilizer (Rs. 117 million), wheat (Rs. 95 million), insecticides and pesticides (Rs. 52 million), other chemicals (Rs. 50 million), vegetable oils (Rs. 31 million) and milk powder (Rs. 10 million).

A more detailed account of Sri Lanka's trading patterns will appear in our next issue.

Table 2 **SRI LANKA'S MAJOR TRADING PARTNERS IN 1979**
(Value / Rs. Million)

	Exports by Sri Lanka	*Imports by Sri Lanka*	*Total Value of Trade*	*Percentage Value of Trade*
Japan	1,037	3,005	4,042	10.7
UK	1,231	2,015	3,246	8.6
USA ...	1,585	1,211	2,796	7.4
West Germany ...	602	1,222	2,125	5.6
Sub-total ...	4,755	7,453	12,20	32.3
Others	10,473	15,107	25,58	67.7
Total	15,228	22,56	37,789	100.0

The need for a water users organization

Most Asian developing countries are investing a large amount of funds as well as their physical resources on the development of irrigation schemes In many cases the expected results in agriculture and land settlement have not been realized largely as a result water management problems. Water management in this country too is a controversial issue in the agricultural sector of Sri Lanka today: it no doubt occupies an extremely important place in expansion of crop area under paddy cultivation and it has often been the main factor limiting the potential for increasing agricultural productivity. The ultimate development of agriculture in Sri Lanka would therefore depend mainly on the availability of water and its optimum use.

Hitherto, the main emphasis has been laid on the supply of irrigation water rather than its effective management. Among the many adverse effects of this attitude has been the waste of irrigated water (which is expected to mainly supplement rain water supplies) which is made the only source of supply when available and used constantly; and the utilising of these channel irrigated lands exclusively for paddy cultivation. The obvious result has been an inefficient land and water use (highland plots being underutilized or neglected) which has been one of the major causes of the failure to rapidly improve food production in the country. In these circumstances the setting up and strengthening of appropriate water users' organizations has become an important pre requisite. This idea has received fresh impetus recently, especially in connection with the Mahaweli Development Scheme.

The success of an irrigation scheme depends on the active participation and co-operation of farmers. An irrigation 'bureaucracy' alone cannot satisfactorily operate and maintain an agricultural and land settlement scheme. Experience has shown that rules and requirements laid down from above have never been well received by farmers. It is accepted in all quarters today that it is necessary to organize collective thinking about water use and that if the authority came from within the village community itself the chances of success were greater.

At present, cultivation practices are based on individual enterprise. Thus on-farm delivery of irrigation water is inefficient. Farmers do not pay adequate attention to water course cleaning and maintenance. The Mahaweli Authorities too are aware of the need for the organization of farmers at the grass-root level. They have realized that it is not possible to solve the water management problem without getting involved with the farmers on a group basis. There is a need that farmers be taught the importance of group action and proper water use. It will also help to develop and strengthen social relationships and to regain some of the social cohesion that was found to have collapsed particularly among the re-settled colonists.

While there are organizations at the field channel level or turnout level which have been introduced by the Mahaweli Authorities, there are still probelms related to water use due to lack of social cohesion. There are already problems in some Mahaweli project areas of excess use of water, of illegal diversion of water and land use and irregular cropping patterns, of water wastage through leakages, of a lack of adequate supervision of an emerging income gap and a lack of co-operation among settlers. A study on "*Water Rights and Irrigation Practices*" in the Thorenagama hamlet of the Mahaweli Development area, by S. L. Tilakasiri of the Bank's Research Department has drawn attention to all these factors. The emerging income gap among the settlers in this area could be a cause for concern and one basic reason is the unequal access to water and other inputs. Tilakasiri maintains that here,

> "Farmers who have got sufficient water, have harvested well above the production of others".
>
> "The inadequacy of water supply has already developed a degree of disunity among the farmers, vis-a-vis a developing income gap. I observed various conflicts in different parts of the Thoranegama area. Complaints and quarrels were noticed instead of co-operation in the use of irrigation water. This situation appears to exist in both the inter-turnout areas and intra-turnout areas. This situation prevails because of the head and tail-end farms... unequal and insufficient distribution of water is due to the physical, constructional or operational set-up. This has resulted in a lack of co-operation. Some farmers have dammed their field channels (sometimes even during day-time) and procure a large quantity of water. Some have used irregular inlets. All of the farmers are not using water on an equal basis. They do not participate in cleaning and maintaining the channels equally either. As a result, one has started to fight the other, even close relations do so".

Studies of the earlier dry zone colonisation schemes have already revealed that resettlement programmes have created imbalances both at the regional level and within the Dry Zone. These schemes have created a class of well-to-do farmers who have not merely received a fully developed holding and other amenities at no cost but also continue to absorb a high proportion of benefits (from most of the incentive prices and subsidies) offered by the State mainly in the interest of the peasant sector. It has also been found that the colonists with larger holdings and assured irrigation suppliers) are in a better position to make use of credit and subsidised inputs and to benefit more from the various price incentives offered to paddy producers. These particular colonists have turned out to be the highest income earners in the rural sector while at the same time absorbing a large slice of government subsidy programmes.

The question therefore is how farmers might best organize themselves, and in the Mahaweli scheme avoid the pitfalls of the earlier colonisation schemes. It seems (in the course of experiment carried out) that there is a need that some steps should be taken to strengthen farmer's groups as follows :

(a) A strong, well-disciplined leadership is essential for enlisting the cooperation by

(*continued on page 33*)

FEATURES

The Nexus between Socio-Economic Factors and the New Brahmins : A Social Survey of University Students

H. L. Hemachandra

How equal are opportunities for education. A popular view is that education programmes in Sri Lanka have expanded fast and 'free' education had provided an equitable opportunity for all seeking education upto the University level. In this study, which probes the validity of this contention, the socio-economic background and lifestyles of students in different faculties at the Peradeniya University campus, are analysed. Mr. Hemachandra is on the staff of the People's Bank, Research Department.

Among the objectives in the introduction of free education from the Kindergarten to the University in the mid forties, was the desire to provide equality of opportunity for education to all sections of the population. While the free education system and the spread of state schools to the peripheral areas had a broad thrust towards the achievement of this goal, systematic attempts to appraise to what extent this objective has been achieved were few. This study is an attempt to contribute to such an appraisal. It seeks to identify any nexus between the socio-economic background of students at the University and the degrees they are reading for at the University.

During the last two decades, with the country's economy not expanding fast enough to absorb the students from the Universities, some structural imbalances had been created within the labour market, for instance the type of work people were willing and able to do were not matched by the pattern of opportunities.[2] In the pattern of employment opportunities the Medical graduates of the Universities had the best access, followed closely by the Engineering and Science graduates. In contrast the Arts graduates had little or minimum access to matching job opportunities. The trend was for the Medical, Engineering and Science students to be the emerging new brahmins.

All this naturally led to a selective process drawing the presumably better students to the science stream in the educational system at various points or levels. The terminal most sought after and which most selective processes led to were the Med cal faculties of the Universities, with Engineering a close second. This study attempts to identify the socio-economic background of University students of the two broad categories of faculties of Arts and Science, and uncover whether on a stratification or grouping on socio-economic criteria there is equitable access to all strata to the Science faculties. This is of critical importance because access to Science education means access to better job opportunities, life styles etc.

The spread of schools in the Jaffna District impressionistically permits a more equitable access for all forms of education to all sections and areas of Jaffna. For this reason it was felt that inclusion of Tamil students in this survey might distort the findings and its significance at a national level and for districts other than Jaffna. Hence the study is confined to only students who are Sinhalese by ethnicity as the objective is to identify whether among the Sinhalese there is an equitable access to preferred education and occupation.[3]

The methodology used is a quantitative analysis of a questionnaire administered to 363 Sinhalese University students of the faculties of Arts, Science and Engineering[4] at the Peradeniya University.

At the time of this survey there were 4,669 students at the Peradeniya University. Of this number 3,758 were in the faculties of Arts, Science and Engineering among them the majority were Sinhalese. The Sinhalese students of these three faculties were resident in seven men's halls and three women's halls. Using cluster sampling techniques the selection was confined to five men's halls and two women's halls. The selection of students among the Sinhalese in these halls was on a random sampling basis. The sample amounts approximately to 20 percent, 32 percent and 20 percent of the students in the Arts, Science and Engineering faculties respectively, and resident in the seven halls selected for this study. The number of students in the sample classified by faculties is given below.

TABLE 1

Sample Population in the Arts, Science and Engineering Faculties

	Arts	*Science*	*Engineering*
Arunachalam (M) & Jayatileka (M)	38	20	6
Akbar (M) ...	31	0	52
Hilda Obeysekera (M) ...	40	14	8
Marcus (M) ...	0	18	0
Wijewardana (f)	30	10	5
Ramanadan (F)	82	9	0
Total ...	221	71	71

Let us now look at the same characteristics of the socio-economic background of the students as revealed by this survey.

Residence

A large number of students in the Arts Faculty are from rural areas. Only about 20 percent were from urban areas. The majority of students from both the Science and Engineering Faculties were found to be from

(1) The writer had the benefit of discussions with Dr. H. D. Sumanasekera in designing of the questionnaire and in the choice of sampling techniques.

(2) "Matching Employment Opportunities with Expectations; A Programme of Action for Ceylon"—ILO Geneva 1971.

(3) The writer proposes to carry out a similar study of University Students who are Tamil by ethnicity to identify any similar or differing pattern in access to science education, taking into account socio-economic factors as well as regional variations viz Tamil students from other areas compared with those from the Jaffna District.

(4) The Medical faculty students were left out This, however, does not introduce any bias to this study whose main objective is to identify and differentiate the socio-economic background of the "Arts" and "Science" students, whose bifurcation in the educational stream occurs at secondary school level. The "Science" category feeds all Science faculties in the University, including Medical, Engineering and Science. Thus the inclusion of only Engineering and Science students adequately represents this entire group.

urban areas. Table 2 below categorises students in the three faculties according to the area of residence of their parents.

Findings of the Chi-Square test at 5 percent significant level indicated a relationship between Urban and Rural students and the faculties to which entry was obtained.

TABLE 2 **Students of the three Faculties classified by Area of Residence**

Type of Residence	*Arts Faculty* %	*Science Faculty* %	*Engineering Faculty* %	*All Faculties* %
Rural	79.6	49.93	46.5	67.2
Urban	20.4	50.07	53.5	32.8
Total	100.0	100.0	100.0	100.0

Parental Occupation

The fathers of nearly half (47%) the number of Arts Students were engaged in Agriculture. As regards the Science and Engineering Faculties, the percentage of students whose fathers were engaged in Agriculture was as small as 16 percent and 4 percent respectively. As regards the Arts students, the number of fathers working as skilled and unskilled labourers, drawing meagre salaries, was comparatively higher than the number of fathers of students of other faculties who were similarly employed. Only 7 percent of the fathers of Arts students were skilled labourers. In the Science and Engineering Faculties this amounted to only 3 percent. In the Arts Faculty the number whose fathers were working as unskilled labourers was 4 percent while the corresponding number for the Science Faculty was 1 percent and nil for the Engineering Faculty.

A higher percentage of parents of Arts students was engaged in occupations demanding excessive physical effort. The corresponding percentage for the parents of Science and Engineering students was much lower. A lower percentage of parents of Arts students and a higher percentage of parents of Science and Engineering students were engaged in occupations demanding more intellectual effort or capital investment. Half the fathers of students from Rural areas were engaged in Agriculture. As regards the Urban students their fathers were mainly engaged in occupations such as trading, and in the clerical, technical and teaching professions; the percentage engaged in Agriculture being as small as 5 percent of the total.

Family Income

The greater part of the students entering the Science and Engineering Faculties, are drawn from a comparatively higher income group than those entering the Arts faculty. Thus the average monthly income of the family of an Arts student was Rs. 484/- while this amounted to Rs. 733/- and Rs. 652/- respectively, in the case of the families of Science and Engineering students.

Abour 16 percent of the families of Arts students had incomes below Rs. 200/- per month, while the proportion of families of Science and Engineering students within this income group were 3 percent and 4 percent respectively. Only 9 percent of families of Arts students were earning an income over Rs. 1,000/- per month while families in this high income group for Science and Engineering Faculties were 30 percent and 17 percent respectively.

Even on an area basis the income of families of Rural residence was also found to have been lower than those of the urban families. Therefore, considered area wise, the income level of the students with a rural background is well below than that of their Urban counterparts. The average monthly income of a famiiy of a rural student was Rs. 491/- whereas it was Rs. 702/- for a family of the student from an Urban area.

The state provides financial assistance in the form of loans to University students who are in need of such assistance under the Students Lending Ordinance (Higher Education). 85 percent of Arts Students and 53 percent and 45 percent respectively of Science and Engineering students had availed themselves of such loans. It was found in the survey that most students had been compelled to obtain these loans because of their families poor economic circumstances. It was observed that a good number of students who have resorted to bank loans belong to the Arts Faculty, which confirms the contention that their economic conditions are poorer than those of students of other Faculties.

Educational Attainment of Parents

Nearly all parents of students in all the faculties are proficient in their mother tongue, viz. 99 percent.

The number of parents of Arts students who are proficient in English was found to be lower than the number of parents of students from other Faculties. Only 36 percent of the fathers of Arts students could write and speak English; whereas 79 percent and 85 percent respectively, of fathers of students in the Science and Engineering Faculties were found to be proficient in the English Language. As many as 83 percent of fathers from the Urban areas were

TABLE 3 **Occupation of Fathers of the Students Classified by Faculties and Residences**

Fathers Occupation	Faculties: *Arts Fac.* %	*Science Fac.* %	*Eng Fac.* %	Residence: *Rural* %	*Urban* %	Total %
Unemployed ...	5.0	1.4	4.3	5.3	1.7	4.2
Unskilled Labourers	3.6	1.4	0.0	2.4	2.6	2.5
Skilled Labourers ...	7.2	2.9	2.0	7.0	2.6	5.6
Agricultural ...	46.6	15.9	4.3	45.5	5.2	32.5
Business ...	17.2	20.3	27.1	16.0	27.5	19.7
Clerical/Mechanical ...	8.1	10.2	21.4	5.3	23.4	11.1
Teaching ...	6.3	21.8	22.9	11.0	15.5	12.5
Doctors,Engineersetc	5.9	26.1	17.1	7 4	21.6	11-9
Total ...	100 0	100 0	100 0	100 0	100 0	100 0

proficient in English, while only 42 percent of the fathers of Rural students could speak or write in English.

Size of Family

The average size of the family of a University student was not signi ficant'y different from the national pattern however; while a family in a lower income group has an average of 6 children. There was also a tendency for Urban families to have smaller numbers than rural families. The higher income of the Urban families may have pushed them in this direction.

TABLE 4 Students Family Income (Monthly) Classified by Faculties and Residence

Family (Income Monthly)	Faculties			Residence		
	Arts Fac %	Science Fac. %	Engi Fac. %	Rural %	Urban %	Tota %
Upto Rs. 199 ...	16.4	2.8	4.2	15.1	4.2	11.3
Rs 200–399 ...	33·6	18.4	18.4	35.3	13.6	27.7
Rs 400–599 ...	19.5	15.5	22.5	18.9	20.3	19.3
Rs. 600–799 ...	11.6	15.5	23.9	10.5	23.7	14.9
Rs. 800–999 ...	9.4	18.3	14.1	10.1	15.3	11.9
Rs. 1000 and over ...	9.5	29.6	16.9	10.1	22.9	14.9
Total ...	100.0	100.0	100.0	100.0	100.0	100.0

This survey also attempted to collect data on aspects of student behaviour and attitudes, though they are not crucial to the central problem of this study. These findings may be summarized as follows;

Participation in Sports

Participation in sports appears to have been given up by a greater part of the students, once they gained admission to the University. As many as 75 percent of the students had participated in some form of sports during their school days. However, the percentage of students who practised sports in the Campus had come down to 12 percent, 33 percent and 31 percent in the Arts, Science and Engineering Faculties respectively. The percentage of students engaged in sports in the Arts Faculty is much less than that in the other faculties, mainly because of the low participation in sports by female Arts Faculty students.

The percentage of women students engaged in sports in the Campus is generally below that of male students. As regards the Arts Faculty this percentage is very low. In the Arts Faculty the percentage of female students engaged in sports was 1 percent while it was 20 percent and 24 percent in Science and Engineering Faculties.

The fear that engaging in sports would affect their studies appears to be the main factor for non-participation. Inadequate diet was another reason which students claimed prevented them from engaging in sports.

Participation in Student Politics

Arts students seem to have been more enthusiastic about political activities. About 50 percent of the students in the Arts Faculty showed an active interest in politics, while only 39 percent and 34 percent of the students in the Science and Engineering Faculties respectively had similar interests. The percentage of female students interested in politics is generally much lower than that of the male students.

Considering all three faculties it was found that on the whole 56 percent of the male students and 26 percent of the female students are supposed to have taken an active interest in politics.

Consumption of Liquor and Tobacco

31 percent of the male university students were found to have developed the habit of smoking prior to their entry to the University. It was observed that 33 percent of the male students were smokers while at the University, which revealed that the incidence of increased smoking after admission to the University was minimal. 27.5 percent of the male students had taken liquor before their admission to the University. The incidence of liquor consumption was 27.7 percent within the Campus. There appeared to be no substantial difference between the post-admission and pre-admission liquor consumption pattern. Not many instances were found where after admission students had given up liquor or where students had taken to liquor. There is thus a general tendency to continue habits developed in pre-University days.

At 1975 prices Male students in the Arts Faculty had spent Rs. 17/- per month on smoking while this amount is doubled in the case of Male students in the Science and Engineering Faculty. The amount spent on liquor does not differ very much among students in the three faculties on an average, it can be said that a student spent, about Rs. 15/- per month on liquor.

Desire for University Education

55 percent stated that the main reason for entering the University was to obtain higher education.

40 percent of the students stated that the main reason in entering the University was to obtain a university degree and eventual employment.

A few with little statistical significance, stated that they had entered the university because of the insistence of their parents or out of a desire to experience University life. The majority of girls of all faculties stated that they had entered the University to further their education, while the prime motive of a great number of men students was to qualify themselves for employment.

Students Proficiency in English

The majority of students in the Arts Facu ty were found to have a largely 'insufficient' knowledge of English. Almost all the students in the other faculties were found to be having an 'adequate' knowledge of the English language. The percentage of students entering the Arts faculty who had obtained a pass in English Language as a subject at the G,C.E. 'O' level was 42 percent; while in the Science and Engineering Faculties as many as 99 percent and 93 percent of the students respectively had a similar attainment.

In the University 21 percent of the Science students, 27 percent of the Engineering students and 45 percent of the Arts students were furthering their English education; and this again seems to indicate that there were

a greater number of Arts students without a knowledge of English at the time of their entry to the University. Of the students learning English 65 percent of them were obtaining their knowledge of English within the University itself while the other 35 percent resorted to sources outside the University.

Inquiring into the corelation between the knowledge of English of students and their parents, we found that the parents' knowledge of English has a bearing on their children's know ledge of the language. The relationship between the gradings of the students in the G.C.E. O/L Examination and the ability of their parents to communicate in English was statistically tested using the Chi-squarer technique and found to be significant at a level of 5 percent.

Employment after Graduation

It has been found that almost every student aspires for employment after completion of his or her respective course of studies. 100 percent of students in both Science and Engineering Faculties aspire for employment as against 98 percent of male and 97 percent of female students in the Arts Faculty.

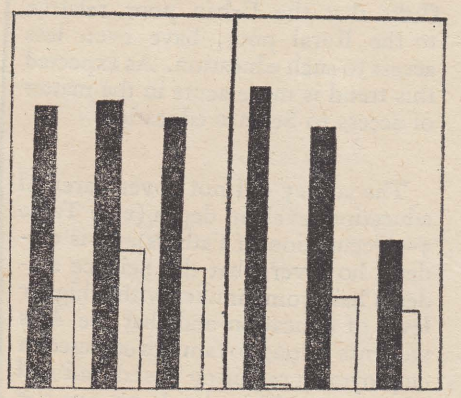
A large number of students expressed their preference for employment in the public sector. The percentage of students in this category in the Arts, Science and Engineering Faculties was 93 percent, 84 percent and 98 percent respectively. (It must be noted, however, that at the time this survey was conducted (1975) the climate in the Private sector was uncertain). The others showed an interest in setting themselves up in self-employment or in the private sector. Security of employment was the main concern of 70 percent of the students, while 17 percent of them were primarily interested in independence in employment and 9 percent and 4 percent approximately appeared to be interested in "high income" from employment and social status derived therefrom.

Conclusion

To sum up the quantitative data analysed it can be stated that a close nexus exists between certain socio-economic characteristics and the ability to enter faculties leading to socially and economically preferable professions and occupations. It is clearly evident that children from urban areas of families with higher incomes with parents in white collar or professional occupations; and proficiency in English have a greater access to science education and the privileges that such an education ensures. A converse set of factors seems to operate in the case of students in the Arts faculty. As the analysis suggests the various socio-economic factors such as of urban residence, higher income etc. have not acted in isolation but in a symbiotic process. All this suggests a marked disparity in the access to socially preferred education among the various socio-economic strata or group and a lack of equitable opportunity for education, contrary to popular belief that free education had ushered in such an opportunity.

The survey data suggests that it is not because they are less intelligent than the Urban students, but for a combination of socio-economic factors that the Rural students have less access to the facilities leading to preferred education. The main cause is the uneven distribution of educational facilities in the Rural regions. Opportunities for Science education in rural areas are comparatively few, and the rural student is deprived of the science education provided in urban schools. The low income of Rural parents is another constraint that prevents them from sending their children to the towns where better facilities for Science education are available.

Percentage of students participation in sports before and after admission to the University



Generally, be it the town or the village the Arts student's economic environment is not as satisfactory as that of the Science or Engineering student. It is therefore, observed that the Rural student has taken to Arts not because it suits his particular talents but because of the economic conditions in which he lives. It is a Hobsons choice. While this is the general pattern, the survey data also suggests that the Urban poor are equally, if not more, handicapped than the Rural poor. This trend is seen if one compares the income groups of the University student families with the national income group patterns as revealed in the Central Bank Consumer Finance Survey of 1973. The bottom income group,

Percentage of Families with Incomes of less than Rs. 200/- per month

	C.F.S. %	This Survey %
Rural ...	34	15
Urban ...	24	4

according to the Consumer Finance Finance Survey (CFS) receives an income of less than Rs. 200/- per month, and comprise 34 percent and 24 percent of the Rural sector and Urban sectors respectively. The University students from the same income groups classified by Rural and Urban residence is 15 percent and

TABLE 5 **Proficiency in English on entry to the University—classified by Faculties and Residence**

Standard of English Education	Faculties			Residence		
	Arts Faculty %	Science Faculty %	Engineering Faculty %	Rural %	Urban %	Total %
G C E O/L passed ...	41.6	98.6	92.9	49.6	90.0	62.8
G.C.E. A/L passed ...	58.4	1.4	7.1	50.4	10.0	37.2
Total No. ...	100.0	100.0	100.0	100.0	100.0	100.0

4 percent respectively. While this confirms the general pattern that higher income groups have greater access to University education, it reflects that the Urban poor, relative to the Rural poor, have even less access to such education. As expected this trend is more acute in the matter of access to Science education.

The survey did not cover parental education levels in depth (vide Table 3—Occupation of Fathers). It is evident, however, that the Science students hail from families with a higher level of education and that the Arts students belong to families engaged in employment requiring less educational attainment. This also bears out the fact that the educational levels of parents has a bearing on those of their children. This is also seen in the knowledge of the English language by the students.

Student life styles though having a blanket pattern to outsiders has its variations as this data suggests. Some of them are related to their socio-economic background—e.g. the differential participation in Sports, capacity to spend more on smoking, etc. among the Science students etc. Possibly the greater interest instudent politics, by Arts students, typical of many universities in the world, is partly caused by the nature of the studies. It can however, also be a method of the protest of the Arts students against the greater odds they face than Science and Engineering students in matters of employment student life styles and familiar socio-economic conditions. Students' consumption of liquor and tobacco belies the popular myth that students acquire these habits during the period of stay at the University. Interestingly there is no significant difference in the consumption of liquor among Arts, Science and Engineering faculty students.

It is also surprising that the excellent facilities available for sports at the Peradeniya Campus had not been utilized by most students; but that they are weaned away from sports after admission to the Universities. Although the Arts students are supposed to have more leisure time, they have taken less interest in sports activities.

The Textile Industry in Sri Lanka

W. G. S. Waidyanatha

With the introduction of the policy of liberalisation of imports the textile industry entered a new phase. The resultant situation is examined here by W. G. S. Waidyanatha of the People's Bank Research Department.

The textile industry occupies an important position in the industrial sector in Sri Lanka, contributing nearly 11 percent of the total value of industrial production of the country, as reflected in the table below.

Available data also show that the production of textiles, wearing apparel and leather products remain a major domestic manufacturing industry, only next to the production of food, beverages and tobacco. The petroleum industry, included in the Chemicals Sector, (though it has the highest value of industrial production) cannot be considered as an accurate indicator of domestic industrial production as it is merely a refinery process, rather than a manufacturing industry proper. Meanwhile, the textiles sector has attracted the largest number of entrepreneurs and has the largest number of employees for any sector of industry.

Further, production of wearing apparel has gone up several fold, particularly with many major garment industries coming up in the FTZ. The growth rate in the f.o.b. value of ready-made garments exports alone amounted to 85 percent in 1979, 235 percent in 1978 and 115 percent in 1979. (see table below)

Textile products today also occupy a prominent place among Sri Lanka's exports, and in 1979 took third position among all exports only after tea and rubber. According to Custom's data, in 1978 exports of all textiles and textile products amounted to Rs. 734 million and was nearly 6 percent of the country's total exports; while in 1979 export values reached Rs. 1,431 million and accounted for nearly 9.5 percent of the total exports.

READY-MADE GARMENTS EXPORTS F.O.B. VALUE Rs. Mn.

1976	77.6
1977	132.1
1978	440.0
1979	950.0

This phenomenon of the textile industry becoming a major component in Sri Lanka's industrial production is of recent origin, and may be traced to the import restriction policy introduced by the government in the 60's and early 70s to conserve foreign exchange. One effect of this policy was that it generated import substitute industries among which the textile industry was by far the largest component. The domestic production of textiles so generated was however, insufficient to meet the increasing demand in the local market. The consequences were that the consumer was starved of textiles. Statistically the pent up demand is well reflected in the fact that the consumer had to put up with 7 metres per annum when

TABLE 1

VALUE OF INDUSTRIAL PRODUCTION 1976–1979

	1976		1977		1978		1979	
	Rs m	%	*Rs m*	%	*Rs m*	%	*Rs. m*	%
1. Food, Beverages and Tobacco	1,715	28.3	2,294	32.8	2,609	29.5	2,856	26.5
2. Textiles, Wearing Apparel and Leather products	680	11.2	698	10.0	1,008	11.4	1,128	10.5
3. Wood and Wood products ...	129	2.2	127	1.8	124	1.4	166	1.5
4. Paper and Paper products ...	203	3.4	270	3.9	376	4.2	445	4.1
5. Chemicals, Petroleum and Coal, Rubber and Plastic products ...	2,336	38.5	2,469	35.3	3,279	37.0	4,501	41.8
6. Non-metalic mineral products	360	5.9	411	5.8	592	6.7	710	6.6
7. Metal products	138	2.3	132	1.8	219	2.5	349	3.2
8. Fabricated Metal products, Machinery and Transport Equipment	474	7.8	571	8.7	590	6.7	569	5.3
9. Other products	26	0.4	34	0.5	55	0.6	50	.5

his minimum needs were in the range of 13–15 metres.

One constraining factor in the textile industry had been the inability to meet the domestic demand as a result of the controls imposed in the import of raw materials, mainly yarn. This was also related to the need to conserve foreign exchange. The import and distribution of raw materials was also handled by two Government institutions, namely the Weaving Supplies Corporation and the National Textiles Corporation with the attendant ills of bureaucratic delays and controls. Industrialists engaged in the manufacture of textiles were always quick to point out that their inability to meet domestic demand, as well as achieve the maximum plant capacity utilisation, was due to the slow flow of raw materials.

With the change of government in 1977 a new economic policy was introduced with the hope of freeing the economy of the country from the various constraints to its growth. An important feature of this policy was the liberalisation of imports in November of that year. In the case of textiles this was also directed to meet the starved demand of local consumers. Apart from the facility afforded to the textile trade to import textiles, and to bring in ready-made garments upto a certain limit; the government also appointed Salu-Sala as the sole importer of a range of fabrics including sarees, sarongs, printed fabrics and trouser materials with a duty of only 25 percent. This factor resulted in a considerable quantity of imported textiles coming into the local market in 1978–79. The trade also resorted to various devices to bring in textiles and garments through incoming passengers and the parcel post. All this led to not only meeting the pent up demand of the consumer but also to a fair stock of textiles piling up, particularly those produced by local manufacturers.

The official view too was that the local textile industry had hence "faced severe marketing problems both in 1978 and 1979; and this was primarily due to the free availability of imported textiles. Smuggling of textiles also added to the situation." As at the end of 1979 stocks that some of the major producers were carrying was as follows:

TABLE 2 **STOCKS OF MAJOR PRODUCERS**

	Quantity in grey form Mn. Mtrs.	*Quantity finished form Mn. Mtrs.*	*Total Value (Approx.) Mn. Rs.*
Department of Textile Industries ...	15.37 Cotton and Polyester)	5.00	175.00
National Textile Corporation	5.01	9.48	110.00
Wellawatte Spinning and Weaving Mills Ltd.	0.89	4.11	59.00
Ceylon Silks	0.28	0.41	6.00
J.B. Textiles Industries	0.06	0.45	5.00
	21.61	19.45	355.00

This situation resulted in severe liquidity problems in the mills. Most of the mills have thus led a hand to mouth existence. Following various pressures, however, it was decided that a 35 percent import duty be imposed on imported fabrics and that the imports of finished textiles should be carefully regulated. The items of textiles which could be brought into the country by passengers was also curtailed, but much of the damage to the local industry had already been done. In view of the liquidity problems faced by the mills there were moves to reduce monthly production from 3 million to 1– million metres.

It is clear therefore that with the Government's import liberalisation policy the textile industry entered a new phase of where it had to produce and sell in a very competitive market, with imported varieties of textiles available in plenty; and in the meantime the necessity to curtail local production had arisen. It is pertinent to observe here that on the other hand in some areas of industrial activity in Sri Lanka e.g. the paint industry or the paper products or base metal products sectors import liberalisation, which permitted the imports of raw material in unlimited quantities, resulted in a steep growth in industrial activity. In the case of textiles one would have anticipated a similar pattern, particularly since (prior to 1977) textile industrialists were complaining about the poor quotas of raw material imports permitted to them. Obviously, the domestic textile industry could not compete with the imported textiles in the market due to their relatively poor quality; since the import liberalisation policy permitted imports of not only unlimited quantity but also of any quality. The imported poor quality textiles, however, had several advantages including that of price. The reason for the poor quality of the textiles produced by the domestic industry was not due to the quality of raw material inputs. One conjecture is that the poor quality was related to poor technical know-how and the type of machinery.

The fact remains, however, that the basic components of technology have been absorbed in the textile industry and large spinning, weaving and finishing capacities were established both in the public and the private sectors. In spinning the country has 269,740 spindles with an output capacity of 40.13 million lbs. of yarn. In weaving the capacity stands at approximately 258 million yards of cottons and non-cottons, which includes 93 million yards expected from handlooms. There is also an established finishing capacity of approximately 147 million yards.

On the basis of the type of technology, organisation and mode of operation, the installed textile production capacity can be classified as follows.

(a) Integrated large cotton textile mills ... 61.66 m. yds.
(b) Synthetic mills ... 31.0 m. yds.
(c) Decentralised powerloom workshops ... 72.7 m. yds.
(d) Handlooms ... ... 93.0 m. yds.

When compared with the capacities available, the actual production during the past few years has been below expectations. In 1976 the total production was 124.42 million yards (cotton 93.12 million yards) and (non-cotton 26.3 million yards); while in 1977 the total production had been 122.23 million yards (cotton 95.28 million yards and non-cottons 26.95 million yards). The poor performance has been attributed largely to the imbalance and bottlenecks in production facilities, intermittent shortages

of inputs with centralised state imports and attendant rigidity and inefficiencies due to poor quality (particularly handloom production) and unnecessary and undesirable restrictions in regard to production, marketing and distribution of textiles.

In the face of this situation it appeared that an unrestricted flow of imports would ease many of the problems of the industry. But this was not to be. According to the Customs Returns for 1978 the import value of textiles and textile articles which was Rs. 458.7 million in 1977 increased to Rs. 1,218 million in 1978; and to Rs. 2,323 million in 1979. This indicates a growth of 165.4 percent in 1978 and about 100 percent in 1979. It appears that much of this was not raw materials for local production as the increase in local textile inputs was not considerable. The import of finished products, however, increased substantially; imports of made up textiles articles went up by 2,600 percent in 1978. The following table on imports of textiles and textile articles illustrates the position more clearly.

One may also note in this conftext that the 44 percent growth in the local textile industry from a value of production of Rs. 698 million in 1977 to Rs. 1,008 million in 1978 was largely due to the increase in production of ready-made garments.

The implications of all this was that there had to be a decline in the production of textiles, together with the creation of unfavourable conditions for the disposal of locally manufactured textiles. Prior to 1977 the general pattern was that both the industrialists and traders held stocks of locally manufactured textiles which they released to the market in small quantities, thereby creating an artificial scarcity and maintaining high prices. This whole pattern had to change after 1977 and now contrary to the earlier pattern large stocks of locally produced textiles were available but could not be easily disposed off due to poor demand for such textiles. The consumer preference was clearly for the imported product.

Table 4, below, gives an overview of the textile trade and consumption over the last decade which substantiates the trend already mapped out.

It reveals that with the tightening import control there was a diminishing trend in imports. We see that in 1975 there was a 100 percent import ban. One would have anticipated that with such a trend local production would have increased to meet the gap created by a reduction of imports. But as tables 7 and 8 (on page 31) indicate domestic production did not meet this gap. While the quantity imported decreased from 38.6 million metres in 1972 to *nil* in 1975 domestic production during the same period increased only from 98.7 million metres to 103.1 million metres, namely an increase of only 4.46 percent paving the way for corruption and irregularities in the distribution of textiles. A more detailed analysis of the trends in the four major areas of the textile industry namely, spinning, weaving, finishing and handlooms will provide a clearer insight into how and why local production was not able to cope with domestic demand.

TABLE 3

IMPORTS OF ALL TEXTILES AND TEXTILE ARTICLES IN 1977 AND 1978 (Rs.)

	1977	1978	*Percentage Increase*
Silk and waste silk	16,375	209,460	179.15
Man-made fibres—continuous	51,685,493	181,628,017	251.40
Metalised textiles	200,012	704,188	241.82
Wool and other animal hair	132,403	726,655	448.82
Flax and Ramie	144,956	1,299,676	796,60
Cotton	325,971,772	718,485,827	120.41
Man-made fibres—discontinuous ...	48,303,329	192,371,069	298.26
Other vegetable textile materials, paper yarn and woven fabrics of yarn ...	334,108	1,725,954	416.59
Carpets, mats, matting and tapestries-pile and chenille fabrics—narrow fabrics—trimmings—tulle and other net fabrics, lace embroidery	1,658,505	9,573,090	477.21
Wadding and felt-twine, cordage ropes and cables—special fabrics impregnated and coated fabrics, textile articles of a kind suitable for industrial use ..	25,462,290	83,129,519	226,48
Knitted and crocheted goods	987,063	2,715,215	175.08
Articles of apparel and clothing accessories of textile fabric other than knitted or crocheted goods	745,948	939.3 47	25.93
Other made up textile article	847,052	23,013,065	2616.84
Old clothing and other textile articles—rags	2,251,589	1,102,554	51.03
	458,747,895	1,217,553,639	2616.84

TABLE 4

IMPORTS OF CONSUMER TEXTILES

	Quantity (Mtr.) (Mn.)	*Value (Rs. Mn.)*
1968 ...	51.7	77.7
1969 ...	56.6	87.5
1970 ...	58.7	78.8
1971 ...	39.9	58.3
1972 ...	38.6	58.0
1973 ...	12.7	20.3
1974 ...	5.0	19.1
1975 ...	Nil	Nil
1976/77 ...	30.0	153.3
*1978	—	—

*Fgures not divulged by Salu Sala.
Source! *Ministry of Textiles and Customs Returns.*

Spinning

The installed capacity for spinning of cotton and blended yarn at present is 17.27 mn. kgs. while the figure for 1977 had been 13.42 mn. kgs. The following table shows the production targets, actual production, operation and capacity utilization relating to the spinning sector in the years, 1977, 1978 and 1979 (1 st half). The target for 1979 is 12.64 mn. kgs.

TABLE 5

PRODUCTION AND CAPACITY UTILIZATION FOR SPINNING

	1977	1978	1979 1st half)
Production target (Kgs. Mn.)	8.77	11.6	6.32
Production ...	6.95	7.87	4.26
Operation ...	79.2%	67.5%	47.4%
Capacity Utilization ...	51.8%	45.6%	49.3%

The figures indicate that the production in 1978 had exceeded the quantity produced in 1977 and in the first half of 1979. alone it was 4.26 mn kgs This shows a higher capacity utilization for spinning in 1979. At present there are 6 government establishments and 2 private firms engaged in spinning. Table 5 gives statistics relating to production targets, actual production, operation and capacity utilization of these particular institutions in 1977 and 1978.

The table shows that the production in 1978, had been only 67.1 percent of the targeted production for the year. This is only 45.6 percent of the total production capacity

It is somewhat difficult to produce textiles to meet the maximum requirements as indicated in the above table. Yet, the production can exceed the medium requirements, if the total capacity is effect vely utilized. However, no local institution has so far been able to utilize its total capacity for the production of textiles Table No 7 indicates that the local production for several years, has increased marginally. Plant capacity data over a long period is not available to ascertain the trend of percentage utilization, However, in 1978 the plant capacity was 248 million metres, while production was 115.9 million metres. The capacity utilization was only 46.71 percent.

TABLE 6

SPINNING OF COTTON AND BLENDED YARN (kgs. Mn.)

Institutions belonging to the National Textile Corp.	*Total Annual Capacity*	*Production in 1977*	*Targets in 1978*	*Production in 1978*	*Operation %*	*Capacity Consumption%*
1. Veyangoda	1.45	1.09	1.32	1.35	102.3	93.1
2. Thulhiriya	7.36	2.60	4.45	1.95	43.8	26.5
3. Pugoda	1.45	1.01	1.23	1.18	95.9	81.4
4. Mattegame*	2.00	0.14	1.69	0.91	53.8	45.5
5. Minneriya**	1.60	—	0.45	0.37	82.2	23.1
6. Wellawatta	1.23	0.98	0.89	0.84	94.2	68.3
Private Firms						
1. Asian Cotton Mils ...	1.32	0.64	0.95	0.67	70.5	50.8
2. United Spinnings	0.86	0.50	0.68	0.60	88.2	69.8
Total	17.27	6.97	11.66	7.87	67.05	45.6

*Source / *Ministry of Textiles*

* Production commenced — July 1977

** Production commencec — May 1978

Weaving

The total capacity for weaving of cotton and symthetic textiles in 1977 was 247.0 million metres, while the figure for 1978 stood at 248.1 million. This can be regarded as the total capacity of all powerlooms including those of the National Textiles Corporation, Wellawatte Textile Mills, Kandy Textiles and the entire Handloom Textile sector in the island.

When compared with the local textile requirements, the installed weaving capacity appears adequate to meet the demand for textiles in the local market. This will be clear, when the capacity is compared with estimated local demand in the following table.

TABLE 7

ESTIMATED ANNUAL DEMAND FOR TEXTILES (Metres Mn.)

	Medium	*Maximum*
1977 ...	157.0	263.3
1978 ...	161.1	270.1
1979 ...	164.3	274.6
1980 ...	168.1	279.5

Source: *Ministry of Textiles*

TABLE 8

PRODUCTION OF COTTON AND SYNTHETIC TEXTILES

(Mn. Metres)

Year	*Cottons*	*Synthetic*	*Total*
1972 ...	85.69	12.96	98.65
1973 ...	76.97	11.19	88.17
1974 ...	85.37	10.92	96.28
1975 ...	88.12	14.95	103.07
1976 ...	84.06	24.13	108.76
1977 ...	82.00	25.38	107.38
1978 ...	85.16	30.71	115.87

Source: *Ministry of Textiles*

Though the constraining factor of inadequate raw material inputs may have been removed by the new liberalized import policy the problems still remained. The major constraint, as stated earlier was the poor demand for locally produced textiles in the face of competition from the imported textiles.

TABLE 8

PRODUCTION AND CAPACITY UTILIZATION FOR WEAVING

Production targets ...	208.28	161.45	76.94
Production ...	107.38	115.87	53.16
Operation ...	51.6%	71.8%	69.08%
Capacity Utilization ...	43.4	46.7	42.08

The above table shows that the weaving production in 1978, has increased upto 71.8 percent exceeding the figure 51.6 percent for 1977. But this cannot be treated as a considerable increase when compared with the total capacity. The capacity utilization of the first half of 1979 has gone down to 42.8 percent from 46.7 percent in 1978. This is once again related to the domestic sectors inability to compete with the imported products.

Finishing

Finishing is the process of making woven fabrics ready for final use. In 1978, the public sector possessed an annual total finishing capacity of 80.74 million metres. But the capacity utilization pattern was the same as in spinning and weaving. The statistics in the following table relating to finishing in 1978, illustrates this.

The above table shows that the total production capacity remained at 80.74 million metres while the real production has been only 55.84 million metres. This is only 69.1 percent of the total capacity utilization and 79 percent of the targeted production.

A comparison of the targets, performance and capacity utilization of textiles finishing could be made in the figures given below for the whole of 9178 and 1979.

TABLE 10

Coton and Synthetic Textiles—Local Production—All Sources

(Million Metres)

	1978	1979
Target	161.45	151.98
Production	115.87	105.72
Performance ...	71.8%	69.5%
Capacity Utilisation ...	46 7%	42 6%

Source : *Ministry of Plan Implementation "Performance"*

These figures are revealing. According to this data textile production (finishing) has declined by over 10 million metres when compared with 1978. Furthermore, capacity utilization in the local textile industry had fallen from about 47 percent to about 43 percent, while performance levels also dropped. This again reflects the decline in

TABLE 11

PRODUCTION AND CAPACITY UTILIZATION FOR FINISHING

	Annual Production Capacity Metre (Mn.)	*Production targets in 1978* Metre (Mn.)	*Real Production* Metre (Mn.)	*Operation as per target* %	*Capacity Utilization* %
Veyangoda ...	31.20	24.77	21.68	87.52	69.48
Thulhiriya ...	36.70	33.03	21.69	65.66	59.10
Wellawatta ...	12.84	12.81	18.47	79.11	97.11
Total ...	80.74	70.64	55.84	79.04	69.16

Source; *Ministry of Textiles*

domestic production and the problems arising from the inability to compete with imported textiles and textile articles.

Handloom Sector

There are about 111,000 handlooms belonging to both public and private sectors and about 150,000 persons are employed in these looms. The industry possesses an annual production capacity of 93 million yards. The table below shows total production upto 1978.

TABLE 12

Production of Handloom Textiles

(Metres Million)

1973 ...	28 44
1974 ...	33 25
1975 ...	29 41
1976 ...	25.63
1977 ...	24.71
1978 ...	24.39 (Est.)

Source : *Ministry of Textiles*

The above table shows a gradual decline in production. At least, an average of 30,000 looms have ceased to function and this is about one-third of the total production capacity.

Meanwhile, textiles produced by the remaining looms are being accumulated due to lack of market facilities . Another unfortunate consequence is that those who are employed in handlooms face the threat of losing their employment. The table below indicates the declining trend of the handloom industry due to its inability to compete with imported textiles and the locally milled textiles. Actual production has declined from 24.62 million metres in 1977 to 24 million metres in 1979.

As mentioned earlier, the handloom industry has been facing severe problems and struggled for survival over the past several years. Though 93,000 handlooms are supposed to be registered (while another 30,000 handlooms in the country are registered) the actual number of handlooms in operation

TABLE 13

Handlooms Production and Capacity

(Million Metres)

	1978	1978
Rated annual capacity ...	81.65	81.65
Target Production ...	33 02	35.00
Actual Production ...	24.39	24.00
Performance Target ...	73.9%	86.5
Capacity Utilization ...	29.9%	29.3%

Source: *Ministry of Plan Implementation "Performance".*

at present does not exceed 30,000. The main reasons for this situation were:

(a) shortage of yarn,

(b) marketing problems due to competition from powerloom mills products and imports.

To overcome these bottlenecks the National Textile Corporation, while producing some of the counts of yarn required by handlooms has placed urgent orders for the importation of handloom yarn. Meanwhile, arrangements have also been made to use some of the CWE and Salu Sala outlets outside Colombo to serve to handloom weavers in the outstations. Further a textile co-ordinating committee was set up by the Ministry to co-ordinate all activities in this sub-sector to assist the handloom industry. The measures it has adopted are:

1. Importation of a few proto-types of semi-automatic handlooms from India for adaptation. These semi-automatic handlooms are expected to give a higher output and better quality.
2. Making available yarn freely.
3. The Departmeht of Textile Industry to open up Handloom Servicing Centres; a minimum of one in each electorate.
4. Advising handloom weavers to shift to the use of higher counts of yarn in order to produce a quality product which could even be exported.

Employment in Textiles

Apart from the ready-made garment industry, in 1979 employment in the spinning and weaving and finishing sectors according to the major production institutions was as follows :

TABLE 13

Employment in the Textile Industry

Veyangoda	3,424
Minneriya	918
Wattegama	857
Thulhiriya	5,423
Pugoda	2,543
Dept. of Textiles	5,458
Wellawatta	3,024
J.B. Industries	798
Ceylon Silks	738
Kandy Textile Industries ...	600
Co-ops. and Private Powerlooms	937
Private Synthetic Mills ...	4,259
Handloom	150,00
	179,179

Source : *Ministry of Textiles*

On the basis of the above information direct employment in the textile industry constitutes about 179,179. A significant feature in the employment pattern in this sector is that a major proportion is reported to be engaged in the handloom industry. It is about 83.7 percent of the total employment in the textile industry sector. Generally, about 3 shifts per day are worked in most of the textile industries except the handloom industry. When one considers the actual working days and the number of shifts per day the potential for employment in the textile industry appears greater than other industries. One survey of employment in industry by sectors, in 1978, showed the textile sector employing the largest number, namely 38,832; followed by the food sector 31,024; the metal products sector 16,176; the chemicals sector 16,035; the non metalic products sector 14,930; paper products sector 8,903 and wood products sector

6,608. (This data which was collected from 1,475 establishments in the 1978 Annual Central Bank Survey gives an indication of the proportion of employees in the major industrial sectors.

It is apparent that the textile industry in Sri Lanka has faced a number of problems such as under-utilization of production capacity, poor technical know-how, administrative obstacles reduction of employees' efficiency, poor maintenance of machinery and equipment, and the problem of having to cope with the imported product. The following official view of the Ministry of Textiles as quoted in "Performance" (1979) reveals to a large extent where the main problems lie.

"It is generally argued that local material should be in a position to compete with imports, qualitywise and pricewise. However, when considering the various constraints under which the local industry functions, such as old equipmeht and low efficiency, this argument looks fallacious. Material that is imported comes from highly sophisticated mills using machinery automated to such an extent that any defective material is not produced in their production lines. Further, most manufacturers now use air jet and water jet looms or Rapier looms which work at a speed of 400 picks per minute weaving two or three fabrics side by side compared to our looms weaving a single width fabric at about 180 picks per minute. Here, while one worker looks after four powerlooms automation has resulted in one worker looking after about 20 looms in foreign mills. Due to automation, reduction in the number of processes involved have also resulted in the cost of the fabrics being cut down. For all these reasons, it is not poss ble for local fabrics to compete with the imported as far as quality and price are concerned."

This is a stark fact that the local industry has to face. Quality of the local product must be raised and pricewise too it has to be competitive. Since 1977 many sweeping steps have been taken by the authorities with the hope of remedying the situation, the liberalisation of import control has enabled the importation of machinery and equipment to the value of Rs. 700,000 and also the freedom to import yarn. Also a decision was taken to use the management expertise in the private sector to run the large textile mills of the public sector (N.T.C.). Management Agencies were brought in to manage the mills and right now the 5 mills of the N.T.C. are managed by the following Management Agencies: Veyangoda: Lakpili Ltd; Thulhiriya: Industrial Managing Agencies Ltd; Pugoda: National Management Agencies Ltd; Mattegama: Lankatex Ltd; and Minneriya: A.M.S. Consultants Ltd. The management of the mills was handed over to these Management Agencies with effect from 1st March, 1978. On the results of their performance will depend the future of Sri Lanka's textiles industry.

(*contd. from page 23*)

IRRIGATION.....

all farmers in the turnout area. Nobody should dominate the others or be of superior social status (class or castewise).

(b) The water management officers must have a solid understanding of the farmers, and they must tactfully but firmly take remedial action when unexpected problems arise.

(c) Farmers should be motivated to organize to improve the water course and to solve their water problems.

(d) Even though a farmer's organization is established it will also be necessary to introduce certain penalties for farmers to prevent mismanagement of irrigation water, inappropriate land preparations, channel maintenence and cleaning, etc.

Organizing farmers in this way could improve water use and maintenance as well as provide immediate and tangible benefits for both the farmers and the nation.

Registered as a Newspaper at the G. P. O.

ECONOMIC REVIEW

PEOPLE'S BANK RESEARCH STUDIES

The People's Bank Research Division has over the last two years produced several studies. Some of these are now being made available to the general public. Listed below are the publications available at the moment.

	STUDY	Sale Price
1.	Multi-purpose Co-operative Societies after reorganisation (85 pages) ...	Rs. 18.00
2.	Credit and other government support for small farmers : History and present status (66 pages)	Rs. 12.00
3.	The external markets for ready-made garments (1978) (54 pages)	Rs. 25.00
4.	Capacity expansion and market potential in the export oriented made-up garments industry of Sri Lanka—the situation for 1979 (46 pages)	Rs. 25.00
5.	A study of the socio-economic conditions and investment potentialities of the settlers of the Mahaweli Development Project (32 pages)	Rs 7 00
6	Survey on household budgets and household surplus in the Mahaweli through the viewpoint of women (71 pages)	Rs. 20.00
7.	Trade and formation of sectors of production. The build-up of a Mahaweli Economy (86 pages)	Rs. 15.00
8.	Repayment of Cultivation Loans in the Polonnaruwa District 77/78 Maha (Sinhala only) (25 pages)	Rs. 12.50
9.	Study on the University Loan Scheme (16 pages)	Rs. 7.50
10.	Repayment of Cultivation Loans Maha 77/78 Vavuniya District (18 pages) ...	Rs. 12.50

All publications could be purchased at the Research Department, People's Bank, 11th Floor, Head Office Building, Sir Chittampalam Gardiner A. Mawatha Colombo 2.

A People's Bank Publication

Price Rs. 2/25

Printed at Tisara Press, 135, Dutugemunu Street, Dehiwela.